Pre Clovis at Topper (38AL23): Evaluating the Role of Human versus Natural Agency in the Formation of Lithic Deposits from a Pleistocene Terrace in the American Southeast

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ABSTRACT

This dissertation provides a detailed analysis of the lithic materials from the presumed pre Clovis deposits at the Topper Site (38AL23), a Paleoindian quarry and stone tool manufacture site in Allendale County South Carolina, U.S.A. Prior research at Topper identified flakes and possible chipped stone tools from Pleistocene-aged sediments that predate Clovis, traditionally considered the earliest culture complex in the region. The goal of this study is to document the nature of the pre Clovis assemblage at Topper, and to explore possible ways it may have formed. Did human or natural processes play a role in the production of a bend break assemblage, and does the occurrence of flakes from the lower deposits reflect a legitimate pre Clovis occupation, or the product of displacement from the overlying sediments? Lithic items from a sample of mapped and screened materials were examined for this study. Technological and experimental analyses were conducted to differentiate between the attributes of human and natural agency.

The Clovis and pre Clovis assemblages are composed of different frequencies of debitage and tool categories and reflect dissimilar reductive technologies. Technological attributes consistent with human agency were identified on bend breaks. This evidence supports the proposition that bend breaks were used as expedient tools and therefore served a functional role for pre Clovis occupants at Topper.

The experimental analyses demonstrate that chert is susceptible to fracture when exposed to prolonged episodes of weathering. Natural processes can result in the formation of detachments that resemble the morphological properties of flakes and bend breaks but lack the technological attributes that are characteristic of human lithic manufacture. A spatial analysis found that postdepositional processes have had minimal influence on the stratigraphic integrity

of the pre Clovis deposits and the occurrence of flake tools from these contexts is not the product of downward migration of artifacts from the Clovis deposits. The results of this study present a unique record of the behaviors of Late Pleistocene hunter-gatherers of the American Southeast. Support for the presence of human cultures that predate Clovis in North America should consider the inclusion of a broad range of reductive technologies.

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CHAPTER I

INTRODUCTION

Between 1983 and 2012, archaeological excavations conducted at the Topper Site (38Al23) in Allendale County, South Carolina, revealed a substantial assemblage of chipped stone tools and the byproducts of stone tool production. The Topper Site (Figure 1–1) is a prehistoric quarry, having buried archaeological deposits that span the entire known cultural sequence from the region. The site is located near multiple resources that would have provided an excellent location for prehistoric peoples to establish base camps while procuring chert for the manufacture of stone tools.

The chipped stone assemblage recovered from Topper derives from stratified alluvial contexts and includes dense Clovis deposits, the earliest widely accepted culture complex to have inhabited North America approximately 13,250–12,850 cal yr B.P. (Waters and Stafford 2007). Excavations into deeper sediments at the site, below the Clovis deposits, revealed an assemblage of lithic items that some claim is evidence of an earlier pre Clovis occupation (Goodyear 2005). This older "pre Clovis assemblage" has been characterized as a smashed core and microlithic industry technologically distinct from traditional biface or unifacial flaking, although there are also flakes in the deposits from these more traditional lithic reduction strategies whose origin and presence must also be noted and explained (Goodyear 2005).

The Topper pre Clovis assemblage is thought to have been formed from a bipolar lithic reductive technology. Bipolar technologies produce lithic detachments through the application of compressive or wedging force to a core. Bipolar flaking is accomplished by placing the nucleus of stone to be struck, referred to as the objective piece, on a larger stone object referred to as an anvil, and subsequently striking the nucleus from above (Cotterell and Kamminga 1987). Lithic

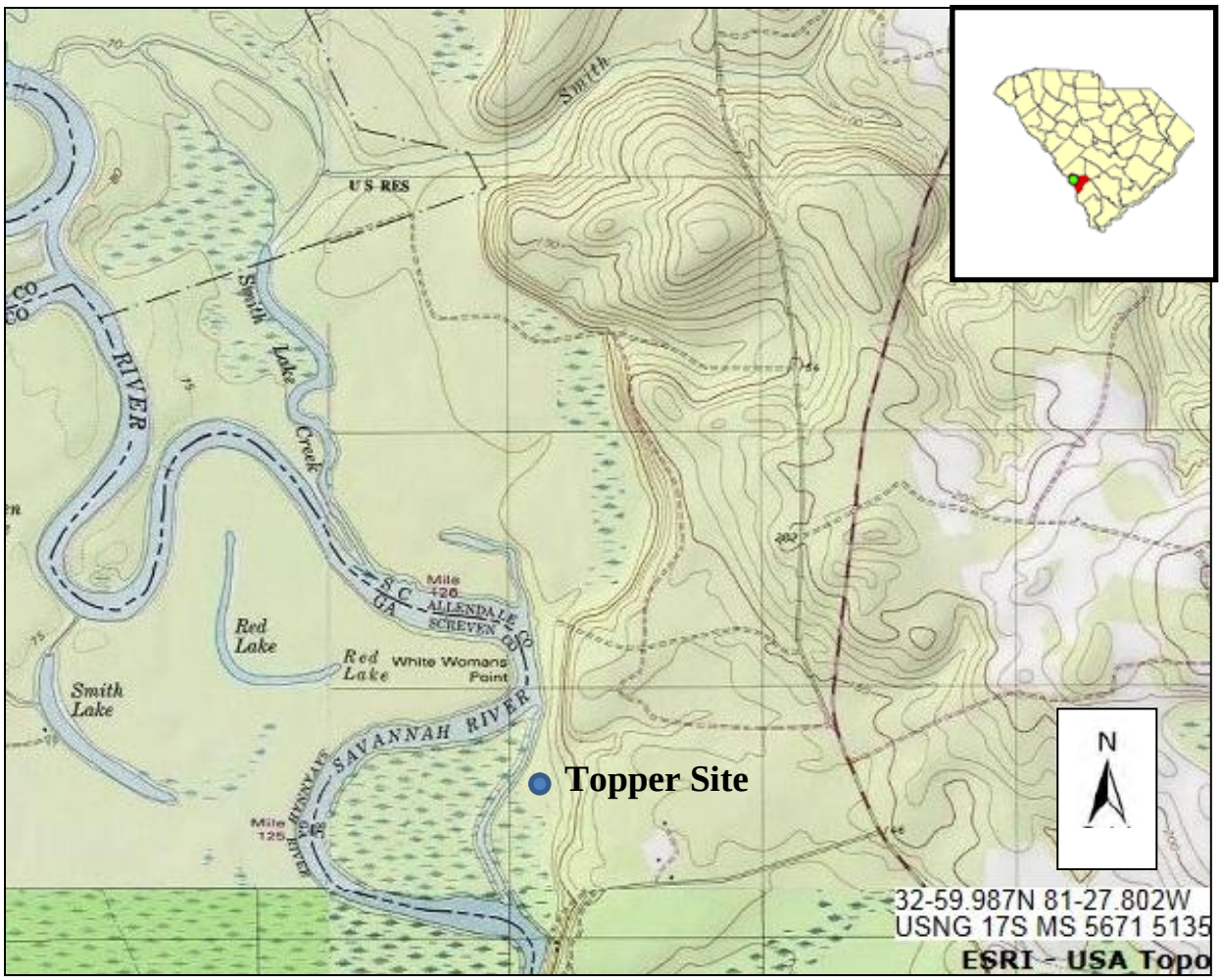


Figure 1–1
Topographic map showing location of the Topper Site (38AL23). Allendale County, South Carolina. (Image courtesy of ESRI).

detachments formed by compression or bending fracture initiation in this way create multiple sharp edges that could serve as multifunctional "bend break" tools, and can therefore be distinguished from flakes produced using hertzian fracture initiation. Hertzian fracture occurs when a hard round percussor is struck perpendicular into the surface of a brittle solid (Cotterell and Kamminga 1987:685). Research has shown that the material byproducts of bipolar technologies often result in angular shatter, and assemblages with high percentages of such byproducts are often considered to be the result of non-human processes (Andrefsky 2013). Therefore, the designation of Topper as a legitimate pre Clovis site is problematic since the role of human agency in the creation of this lithic assemblage is in doubt. Although radiocarbon and Optically Stimulated Luminescence (OSL) dating of the sediments containing this assemblage have confirmed that they predate Clovis (Waters et al. 2009), the specific agent(s) of production and deposition, whether by natural or human processes, remains to be thoroughly tested.

An initial technological analysis of the lithic materials recovered from six 1m x 1m column test units at Topper demonstrated the presence of cultural artifacts in contexts that underlie the Clovis–bearing deposits at the site (King 2012). Using Sullivan and Rozen's (1985) Interpretation Free Model (IFM) of flake analysis, King (2012) was able to show that conchoidal flakes typically produced by biface technologies do occur in the pre Clovis components at Topper. The concept of the IFM is that the interpretation of debitage variability is improved by the formation of analytic categories that describe assemblages as a whole as opposed to individual artifacts, and therefore does not depend on making technological inferences at the artifact level (Sullivan and Rozen 1985:755). King performed statistical analyses to test whether or not the presumed pre Clovis assemblage was similar in form to the attributes of known cultural assemblages. King found no significant difference between the physical attributes of

lithic debitage recovered from the Archaic and Clovis deposits, and the lithic items recovered from the reported pre Clovis aged deposits below (King 2012). She developed two alternative hypotheses to account for these results. Either the extant distribution of pre Clovis conchoidal flakes does reflect a legitimate human occupation at the site, or these flakes are the result of postdepositional disturbances resulting from downward movement by bioturbation or fluvial processes (King 2012).

The analytic framework King (2012) used to identify flakes was designed to distinguish between the attributes of conchoidal flakes and non-flake debitage. Her goal was to look for obviously flaked artifacts and to evaluate their distribution relative to the known cultural deposits. As such, the analyses were not developed to account for attributes that may form because of bipolar, bending, or compression initiation and therefore the approach does not consider the potential variability inherent in alternative strategies of chipped stone tool production. Because it is possible that flakes resulting from bipolar production may be present among the pre Clovis deposits at Topper, any research strategy geared toward establishing the legitimacy of the pre Clovis deposits at the site must incorporate a methodology that can account for the full realm of chipped stone technologies *as well* as the attributes that distinguish between them. Here I will examine the lithic contents of the Topper Site in detail, with the ultimate goal of determining the process(es) responsible for the production or deposition of the lithic items from the pre Clovis deposits at the site.

While excavations into the Topper hillside Clovis deposits have been partially documented (Miller 2010; Smallwood 2010, 2012; Sain 2011), much less has been published on the results of the Topper terrace excavations. Goodyear provided yearly accounts that summarize the fieldwork at the site through popular South Carolina Institute of Archaeology and

Anthropology (SCIAA) *Legacy* articles. Derek T. Anderson documented work conducted in the Early Archaic and Clovis 4m x 4m excavation block as an ongoing project to record artifact refits and examine the spatial integrity of the deposits in this part of the site (D. T. Anderson 2011). Sarah Walters conducted paleoethnobotanical work on materials recovered from the Holocene and Late Pleistocene deposits of the Topper hillside and colluvial terrace deposits. This work was documented in a number of poster and conference presentations and resulted in the first Clovis date at the site from an assay on a charred piece of wood (10,958 +/– 65 ^{14}C yr B.P.) (AA100294) (or 12,841 +/–62 cal yr B.P.).

The geoarchaeological work at Topper conducted by Waters et al. (2009) has provided the most rigorous analysis to date on the geostratigraphy and geoarchaeological components of the site. The pre Clovis component of the Topper Site has been incompletely documented at present. One MA thesis (King 2012), short popular articles, and several online publications have been produced giving an overview of the assemblage. A book chapter provides a brief technical summary of the work, in general terms (Goodyear 2005). The chapter highlights the major pre Clovis discoveries in the southeastern U.S. and includes two pages of discussion of Topper, making reference to the unusual microlithic artifacts associated with a bipolar core technology as well as an emphasis on choppers (Goodyear 2005).

The MA thesis research by King (2012) is to date the most comprehensive investigation on the pre Clovis component at Topper. Apart from the thesis and the short reports, little else has been published regarding the pre Clovis component at Topper. This stems largely from the general absence of a large scale, yet systematic analysis conducted on the materials recovered from the hypothesized pre Clovis lithic deposits. A recent analysis conducted by Goodyear and Wilkinson (n.d.) to examine the attributes of a sample of bend breaks recovered from the pre

Clovis deposits yielded some preliminary results regarding these possible artifact forms. Most items examined were tertiary, had between two and four snapped or broken edges that formed isosceles angles, and had one or fewer utilized edges. Moreover these items typically lack thermal alteration, and of 322 total snap angles examined, 17% exhibit utilization. The current study examined a larger sample of bend breaks from Topper in greater detail to determine how they were formed (Chapter 7).

Although prior archaeological studies of the Topper assemblage demonstrated the presence of humanly produced artifacts from the pre Clovis deposits, these findings did not establish whether the debitage in the deeper levels could have been produced by people living at the site prior to arrival of Clovis populations. To date, no formal investigation at Topper has examined the potential depositional processes that could have been responsible for the introduction of lithic materials into older deposits nor have analyses been conducted to examine the role of human agency in the production of the chipped stone artifacts that have been claimed to represent a pre Clovis assemblage at the site. This study attempts to resolve these issues.

Research Objectives

The primary objectives of my research are: (1) to establish the origin of lithic items that have previously been identified as flakes from the pre Clovis deposits at the Topper Site, and (2) to test the role of human agency in the production of the materials preliminarily identified as bend break flakes from the site. With regard to point (1), natural processes including weathering, eluvial downdrift, bioturbation, and fluvial transport can redeposit flakes from original contexts of deposition, or can form flakes that appear cultural. In addition to the flakes King reported from pre Clovis contexts, Goodyear also noted the presence of a possible tool assemblage consisting of chert cores, choppers, and scrapers in contexts associated with the pre Clovis

microlithic assemblage (Goodyear 2005). Is the pre Clovis flake assemblage related to the production of these tools, or have the flakes been redeposited from overlying cultural Archaic or Clovis contexts? Are the reported tools a legitimate cultural assemblage, or have they been formed by natural processes?

With regard to point (2), is there demonstrable evidence for bend break flakes among the contents of the Topper pre Clovis deposits, and were such flakes the product of bipolar production? In other words, is the bipolar and bend fracture lithic technology at Topper the result of intentional human lithic reductive episodes, conducted for the purpose of the production of stone tools, or are the materials found in the pre Clovis deposits created by other geological or natural means such as mechanical weathering, sediment consolidation, or freeze thaw processes?

To address these questions I undertook a thorough examination of the lithic attributes of a large sample of items recovered from the pre Clovis assemblage at Topper was undertaken. Of 392 m^2 of excavation from the Floodplain portion of the site where the pre Clovis deposits are located, materials from 52 m^2 of Holocene and Pleistocene – age Sands and 12 m^2 of materials from a Pleistocene-age Terrace were analyzed. These materials comprise 140 m^3 of excavated sediments. Of these units, 54 m^3 of Holocene and Clovis deposits were examined, only 33 m^3 of which have data on screened materials. In addition to these deposits, 44 m^3 of pre Clovis Pleistocene-age sands, and 42 m^3 of the underlying Pleistocene-aged Terrace deposits were also examined.

Table 1–1 presents the yearly distribution in terms of square meters of excavated units opened on the Alluvial terrace at the Topper Site, whereas Table 1–2 presents the total extent of excavated materials in cubic meters that comprise the study sample. Table 1–3 presents the analysis sample highlighting the number of mapped and screen items recovered from each

Table 1–1

Square meters of excavated units opened on terrace by year at the Topper Site (38AL23, Allendale County, South Carolina). Screen artifacts includes those recovered from the screen, identified as specific artifacts in the field, and recorded in the level records, yet do not have any three dimentsional provenience information.

Year Excavated	New m² opened	Mapped Artifacts	Screen Artifacts
1984	2	–	–
1985	28	404*	–
1986	18	–	–
1998	32	–	–
1999	48	430	77
2000	40	471	46
2001	86	436	107
2002	52	829	107
2003	36	592	12
2004	0	384	0
2005	16	597	0
2006	0	264	0
2007	0	314	0
2008	0	510	0
2009	18	722	0
2010	16	1111	0
2011	0	1642	0
2012	0	743	0
Total	**392**	**9,449**	**349**

*Mapped artifacts plus artifacts recovered in screen.

Table 1–2
Units selected for analysis in present study showing starting and ending elevations and total cubic meters examined

Northing	Easting	Quad	Beginning Depth	Ending Depth	Meters² Examined per unit
240	130	SE	98.75	96.4	2.35
240	130	SW	98.75	96.4	2.35
240	130	NW	98.75	96.4	2.35
240	130	NE	98.75	96.4	2.35
240	132	SE	98.75	96.8	1.95
240	132	SW	98.75	96.8	1.95
240	132	NW	98.75	96.8	1.95
240	132	NE	98.75	96.8	1.95
242	130	SE	98.75	96.4	2.35
242	130	SW	98.75	96.4	2.35
242	130	NW	98.75	96.4	2.35
242	130	NE	98.75	96.4	2.35
242	132	SE	98.75	96.7	2.05
242	132	SW	98.75	96.7	2.05
242	132	NW	98.75	96.7	2.05
242	132	NE	98.75	96.7	2.05
244	130	SE	98.75	96.4	2.35
244	130	SW	98.75	96.4	2.35
244	130	NW	98.75	96.4	2.35
244	130	NE	98.75	96.4	2.35
242	138	SE	98.50	97.20	1.3
242	138	SW	98.50	97.20	1.3
242	138	NW	98.50	97.20	1.3
242	138	NE	98.50	95.40	3.1
242	140	SE	98.75	95.35	3.4
242	140	SW	98.75	95.35	3.4
242	140	NW	98.75	95.35	3.4
242	140	NE	98.75	95.35	3.4
242	142	SE	98.75	95.45	3.3
242	142	SW	98.75	95.45	3.3
242	142	NW	98.75	95.45	3.3
242	142	NE	98.75	95.45	3.3
244	138	SE	98.75	95.60	3.15
244	138	SW	98.75	97.15	1.6
244	138	NW	98.75	97.15	1.6
244	138	NE	98.75	97.15	1.6
244	140	SE	98.50	95.35	3.15
244	140	SW	98.50	95.35	3.15
244	140	NW	98.50	97.15	1.35
244	140	NE	98.50	97.15	1.35
244	142	SE	99.00	97.25	1.75
244	142	SW	99.00	97.25	1.75
244	142	NW	99.00	97.25	1.75
244	142	NE	99.00	97.25	1.75
246	138	SE	99.00	96.65	2.35
246	138	SW	99.00	96.70	2.3
246	140	SE	99.00	96.55	2.45
246	140	SW	99.00	96.55	2.45
246	140	NW	99.00	96.85	2.15
246	140	NE	99.00	96.55	2.45
246	142	SE	99.00	96.55	2.45
248	140	SE	99.00	96.45	2.55
248	140	SW	99.00	96.50	2.50
263	145	S	97.95	96.80	1.15
263	145	N	97.95	96.80	1.15
BHT 17	(6sq.m)		97.25	95.25	12
					140

Table 1–3
The total number of lithic items analyzed for each unit from the study sample at the Topper Site (38AL23).

Unit	Total Lithic Items	Total Lithic Items (mapped)	Cubic Meters of Excavation
	n	n	
N240 E130	*	20	9.4
N242 E130	9080	64	9.4
N244 E130	9659	21	9.4
N240 E132	*	12	7.8
N242 E132	*	47	8.2
N242 E138	6,704	254	7
N244 E138	832	185	7.95
N246 E138	4,682	257	4.65
N242 E140	14,121	628	13.6
N244 E140	352*	42	9
N246 E140	9,846	730	9.5
N248 E140	3,588	319	5.05
N242 E142	13,179	700	13.2
N244 E142	187*	81	7
N246 E142	765	276	2.45
N248 E142	*	30	2.1
N263 E145	1,375	12	2.3
BHT 17	–	–	12
Total	74,370	3678	137.9

provenience unit examined. Accordingly, 74,370 lithic items were recovered, identified, and classified as part of this project and include over 11,000 complete flakes (nearly 6,500 of which derive from pre Clovis contexts) as well as nearly 300 bend breaks and 653 chipped stone tools and production implements from pre Clovis deposits (Tables 1–4 and 1–5). Table 1–6 presents the attributes of the sample of bend breaks from the Goodyear and Wilkinson study.

The assemblage was evaluated with regard to the site stratigraphy to establish whether postdepositional processes have created or altered the lithic deposits. In addition to these analyses, an experimental program was developed to determine the visible effects of mechanical weathering on chert cobbles. Mechanical weathering influences such as air temperature, moisture level, and water temperature were replicated in the lab on a sample of Allendale chert cobbles. The goal of this procedure was to determine if chert exposed to prolonged and cyclic weathering processes can yield detachments that might mimic the attributes found on the lithic byproducts of chipped stone technologies. Lithic byproducts formed as a result of these experiments were then compared to the bend breaks and flakes from the Topper pre Clovis assemblage, and to a control assemblage of chert items that appear similar to bend breaks that were recovered from off-site, presumably natural contexts. The items that comprise the control assemblage are a product of Fort Payne chert and were recovered in 2012 from alluvial clay and colluvial silt loam deposits from a field in Williamson County, Tennessee. Analyses were designed and conducted to assess whether the attributes on bend breaks from Topper exhibit the same or similar morphological and technological attributes as those from the experimental and controlled assemblages. If the assemblages differ with respect to a set of specified attributes, it follows that they were likely formed under different processes.

Table 1–4
Distribution of chipped stone tools and debitage by type at the Topper Site (38AL23).

	Holocene and Clovis	**Pleistocene Sands pre Clovis**	**Pleistocene Terrace pre Clovis**	Total
Bend Breaks	8	39	236	283
Biface Tools	75	2	1	78
Core Tools	48	109	64	221
Flake Tools	79	188	255	522
Production	26	20	17	63
Debitage*	11,843	43,270	19,257	74,370

*Includes all unmodified flakes, broken flakes, flake fragments, debris, amorphous debris, and bend breaks.

Table 1–5
Distribution of mapped lithics by type at the Topper Site (38AL23) based on the interpretation free analysis. The number of piece plotted artifacts and materials recovered from the screen by type for each depositional unit.

Piece Plotted Items				
	Clovis	**Pleistocene Sands**	**Pleistocene Terrace**	**Total**
Complete Flakes	27	44	122	193
Broken Flakes	21	28	67	116
Flake Fragments	77	103	164	344
Debris	17	166	546	729
Amorphous debris	30	221	1,346	1,597
Pebbles	23	224	1,060	1,307
Total	**195**	**786**	**3305**	**4,286**
Materials recovered from screen				
Complete Flakes	4,538	5,248	1,047	10,833
Broken Flakes	1,842	4,954	647	7,443
Flake Fragments	2,143	12,278	3,254	17,675
Debris	2,305	11,261	4,862	18,428
Amorphous debris	810	8,743	6,142	15,695
Total	**11,638**	**42,484**	**15,952**	**70,074**

Table 1–6

Results of study by Goodyear and Wilkinson (n.d.) showing attribute conditions for a sample of bend breaks recovered from Pleistocene contexts at the Topper Site. Sample obtained from bend breaks recovered from artifact and screen bags. (Data courtesy of Goodyear and Wilkinson unpublished).

Reduction stage	**Primary**	**Secondary**	**Tertiary**			
Amount	33	8	59			
Number Snaps	**Two**	**Three**	**Four**	**Five**	**Six**	
Amount	31	31	28	5	5	
Utilized Edges	**Zero**	**One**	**Two**	**Three**	**Four**	**Five**
Amount	67	24	2	2	4	1
Shape	**Isosceles**	**Equilateral**	**Square**	**Rectangle**		
Amount	52	15	15	18		
Utilized by Shape	**Isosceles**	**Equilateral**	**Square**	**Rectangle**		
Amount	19	3	5	6		
Thermally Altered	**Yes**	**No**	**Maybe**			
Amount	1	97	2			
Total Snaps	**Two**	**Three**	**Four**	**Five**	**Six**	
Amount	62	93	112	25	30	
Amount	**% Utilized Edges in 322 snaps**					
		17%				

Recent reports from a number of archaeological sites in the Americas have documented the occurrence of chipped stone tools and debitage from contexts that predate Clovis. (e.g. Meadowcroft, Pennsylvania. (Adovasio et al. 1999), Monte Verde, Chile (Dillehay 1997; 1999), Cactus Hill, Virginia (McAvoy and McAvoy 1997), Debra L. Friedkin, Texas (Waters et al. 2011), and Page Ladson, Florida (Webb 2006). Considerable scrutiny has been given to the geomorphological and technological integrity of these discoveries, and to date, only Monte Verde has been accepted by professionals working on the peopling of the Americas (Wheat 2012). A 2012 survey geared to assess professional opinion regarding the legitimacy of pre Clovis sites in North America found that only 15% of respondents are convinced of Topper's acceptance as a pre Clovis site. By contrast, a total of 37% reject the age of the site as pre Clovis whereas 48% of respondents are undecided (Wheat 2012).

To be considered acceptable, pre Clovis sites must be held to extraordinarily high standards, and often undergo meticulous inspection. Artifacts of human origin must exhibit specific diagnostic attributes; specifically, those that establish behavioral intent, to be classified as a product of human lithic manufacture (Dincauze 1984; Haynes 1969). Likewise, the deposits containing these assemblages must be found in good stratigraphic context, without evidence of having been disturbed during or after formation.

The results of a geoarchaeological analysis of the Topper sediments have confirmed the separation of Clovis from the older assemblage by a "moderately well-developed paleosol" (Waters et al. 2009:1305). This separation spans approximately 60 cm of sediment, and may reflect a few hundred to a few thousands of years of deposition and pedo–genesis that stratigraphically distinguish the Clovis (13,250 cal yr. B.P.) from pre Clovis (>13,500 cal yr. B.P) deposits.

Chapter two provides a brief summary of the timing and origin of humans in North America, with particular emphasis given to the requirements necessary for identifying sites of great antiquity. A detailed outline of the culture history of the Savannah River Valley is presented in Appendix 1 giving the major cultural trends, settlement/subsistence strategies, and types of artifacts that are considered diagnostic of each period. Appendix 1 also serves as a guide to place the archaeological components at Topper into cultural and temporal context.

Chapter three provides a description of current understanding of the paleoenvironmental and geomorphological history of Topper. Change and variation in the environment during the Late Pleistocene likely influenced the pattern and distribution of resources available for human acquisition. Therefore, a regional and site-level paleoenvironmental reconstruction may provide a better understanding of the conditions under which people may have lived over time. A description of locally available raw material resources is provided in Appendix 2. This section is followed by an account of the site stratigraphy, geochronology, and geomorphology, which places the archaeological assemblages at Topper into temporal context.

Chapter four presents a comprehensive history of all excavation conducted at Topper. This section outlines the results of yearly excavations at the site and also describe all data entry and recording methods employed over the course of site investigation. A significant contribution of this research is an in – depth description of the lithic materials that have been recovered from the site and an overview of the extensive excavation history of one of the largest Paleoindian quarry sites in North America.

Chapter five discusses the various approaches to stone tool analysis employed herein. Included in this chapter are descriptive accounts that illustrate basic lithic terminology, flake formation and fracture mechanics, and the role of flake taphonomy in the formation and

distribution of lithic assemblages. A specific point of emphasis are the methods and attributes used to distinguish natural versus cultural transformation processes, and how lithic materials can be affected by physical and chemical processes. The explicit project research design is presented in chapter six. This chapter summarizes the goals of the study, followed by a brief review of the methods and results of prior lithic analyses of the pre Clovis assemblage at Topper. This discussion is followed by an outline documenting how the research sample was selected, and what criteria were employed in choosing the attributes for analysis. As stated, the goals of this project are to determine the origin of the lithic materials identified as conchoidal flakes from the Topper pre Clovis deposits and to test the role of human agency in the manufacture of materials that were classified as bend break in the field.

Five separate lithic analyses were conducted to evaluate the Topper assemblages and are presented in Chapter 7. First, Sullivan and Rozen's (1985) interpretation free model was employed to characterize the nature of all lithic materials from the research sample. Second, Cotterell and Kamminga's (1987) model of flake formation was used to assess lithic technology, and to determine the techniques applied in stone tool production at Topper. Potential strategies of tool production considered for this analysis include: biface and flake core manufacture by conchoidal hertzian flaking; bipolar core reduction by compression flaking; and bend fracture flaking by either bending or compression forces. Third, all tools were classified by type according to Andrefsky's (2005) morphological typology for chipped stone artifacts. This approach was employed to identify the types of tools that were manufactured or used in specific locations onsite. The methodology was also used to distinguish whether or not there are any differences in technological strategies of tool production through time. Fourth, a microwear and edge modification analysis was conducted to evaluate whether the lithic items, both potential

bend breaks and flakes recovered from possible pre Clovis deposits at Topper exhibit patterns of use. To perform this examination a sample of potential bend break and flake tools were subjected to microscopic analysis. Patterns of use considered for this analysis include polish, striations, residue, and micro-chipping. Finally, a refit analysis examines the distribution of artifacts that conjoin to assess site integrity, particularly as it relates to the potential for postdepositional vertical and horizontal displacement of artifacts across the site.

Chapter 8 presents the results of the weathering simulation. An experimental research program was developed to evaluate whether natural processes can result in lithic detachments that resemble artifacts of human agency. Accordingly, a sample of local chert cobbles was subjected to a series of simulated weathering procedures to determine if variation in moisture or temperature might result in lithic fracture events. The results were subsequently compared to the attributes of the possible bend break and flake assemblage from the pre Clovis deposits at Topper. Moreover, the attributes of a sample of items resembling bend breaks recovered from an off-site locale were also compared to the experimental and Topper assemblages. This off-site sample (recovered from an area lacking archaeological deposits) presumably serves as a control for items formed from natural processes.

Chapters 9 –11 present the results of three distributional analyses. These analyses include a cortical analysis (Chapter 9), a mass and size grade analysis (Chapter 10), and a spatial analysis (Chapter 11). These analyses were carried out to evaluate if postdepositional disturbances have altered or disturbed the distribution of lithic items at the site. The cortical analysis examines the distribution of cortex throughout the stratigraphic profile. Lithic byproducts resulting from bipolar lithic reduction are thought to produce high quantities of angular shatter, cortical pebbles, and cortical debris. These items resemble cortical pebbles that also could have formed by way of

natural weathering or erosional processes, but can be distinguished from such processes by their occurrence in association with anvils, compression flakes, bend breaks, and other items related to bipolar production. Therefore, high concentrations of cortex are expected in deposits where bipolar reductive activities may have been carried out. A mass and size grade analysis was carried out to determine if smaller items were being reworked from original contexts into deeper deposits across the site. The spatial analysis incorporates nearest neighbor and cluster analysis to evaluate if non-random horizontal or vertical patterns exist within the Topper Clovis and pre Clovis assemblages, and to aid in establishing the processes responsible for their location of deposition. Chapter 12 presents a discussion and interpretation of the results. This chapter is followed by Chapter 13, which presents the conclusions of the study and areas where future research may be beneficial.

In addition to the individual chapters, a total of 45 appendices document the results of this dissertation. Appendix 1offers a comprehensive culture history of the Savannah River Valley. Appendices 2–7 present data on the environmental and geochronological history of the Topper Site. Data specific to chert type and condition, site geomorphology, particle size analysis, geochronology, and pollen research are documented in these appendices. Appendices 8–16 offer data pertinent to the site excavation history. Specific appendices include the results of yearly excavations (Appendices 10,11,13,15,16), list of backhoe trench excavations (Appendix 14), and artifacts recovered from nearby quarry sites (Appendix 8). Appendices 17–21 present data relevant to site feature and level record information. Appendices 22 and 23 present site excavation maps for yearly block excavations as well as associated artifact planview and profile maps. Appendices 24–28 present site field shots as well as photographs specific to each artifact type recovered onsite. Finally Appendices 29–45 present the data acquired from and used in the

present study. Figures and tables that appear in the appendix are referenced in the text with the preceding letter “A” followed by the appendix and associated figure or table number (e.g. A1–2). The following chapter offers a discussion of the peopling of the Americas with specific emphasis on the criteria essential to substantiate or disprove such claims.

CHAPTER II

PALEOAMERICAN ORIGINS AND THE PRE CLOVIS DEBATE

One of the most contentious debates in North American archaeology concerns the timing and origins of human entry into the North American continent. Until recently, most Paleoindian scholars have fallen into one of two camps: 1) those who favor the traditional Clovis First hypothesis, and 2) those who argue that humans were in North America well prior to Clovis, perhaps several thousand years or more prior to ca. 13,250 cal yr B.P. The Clovis first hypothesis suggests that groups of Paleoindian hunter-gatherers migrated from Siberia to North America by way of the Bering Strait land bridge into Alaska, and moved through a narrow passage that had been exposed between the Laurentian and Cordilleran ice sheets at the end of the Pleistocene (Haynes 1969, 2005; Martin 1973). The Clovis culture has long been considered by many to be the oldest well-documented culture complex to inhabit North America (Haynes 1964, et al. 2004; Bonnichsen and Turnmire 1991). Clovis hunters are assumed to have followed the distribution of megafauna or migrating fowl into North America, rapidly populating the continent, and extending as far as the southern tip of South America within a millennium (Fiedel 2000; Haynes 1966, 1980, 1982; Martin 1973).

The Clovis First hypothesis stems in large part from early to mid-twentieth century discoveries of distinctive fluted lanceolate projectile points found associated with the remains of extinct megafauna (Figure 2–1). During this time the debate over the antiquity of humans in North America was a primary topic of interest among many anthropologists. Were people in North America during the Late Pleistocene or did they arrive at some point later during the Holocene? One of the earliest documented cases of a Pleistocene human presence in the New World comes from the 12 Mile Creek site in Kansas excavated during the summer of 1895 where

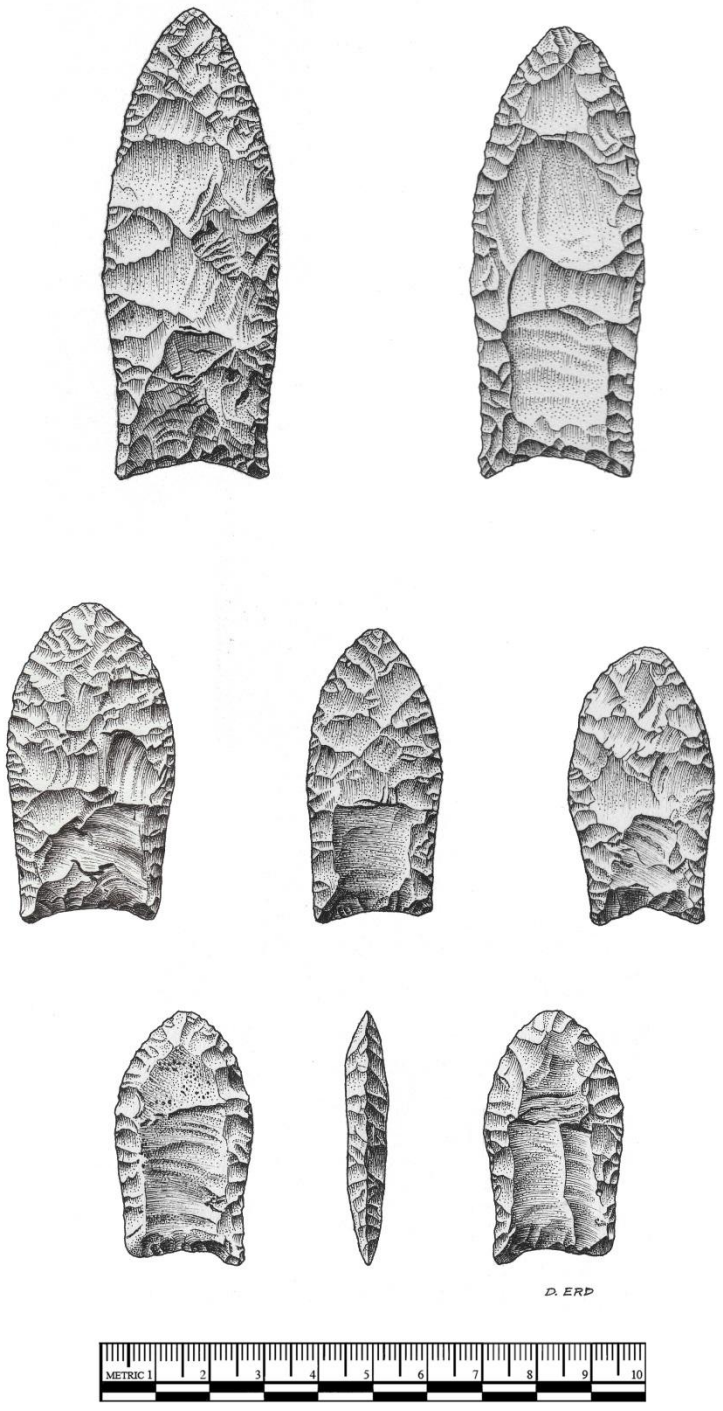


Figure 2–1
Examples of Fluted Clovis Projectile Points from the southeastern U.S. (Image courtesy of Albert C. Goodyear).

a fluted projectile point was recovered in context with the remains of *Bison antiquus* skeletons (Hill 2006). At the time, this discovery went largely overlooked. Archaeological sites such as 12 Mile Creek were rooted in issues dealing with chronology. During the late nineteenth century, artifacts thought to be cultural in origin were being reported from deposits thought to be glacial gravels, loess of purported Pleistocene – age , and from deposits containing extinct fauna (Meltzer 2009:70–72. 80,81). In spite of these reports, a number of scholars including William Henry Holmes of the Bureau of American Ethnology and Thomas Chamberlin of the United States Geological Survey challenged claims for an early Pleistocene human presence. Ales Hrdlička, a physical anthropologist with the Smithsonian Institution, also held this viewpoint into the 1920's. Hrdlička argued that a Pleistocene human presence in the New World must be based on incontestable stratigraphic evidence and that archaeological remains must be found in geological deposits whose age is established by association with faunal remains (Hrdlička 1907). Although a number of potential sites of Pleistocene – age were identified during the late nineteenth and early twentieth century, none was found to positively fit these requirements.

Widespread acknowledgement of an early human presence in North America first occurred with the 1926 discovery of fluted projectile points in direct association with *Bison antiquus*, an extinct form of bison, at Folsom, New Mexico, (Brown 1928, 1929; Cook 1927, 1928; Figgins 1927). The first excavated Clovis point found in primary context was recovered from Burnet Cave, New Mexico in August of 1931 (Boldurian and Cotter 1999:73). In 1932 Clovis points were found at the Dent site in Colorado, although the projectile points recovered were initially assumed to represent Folsom varieties (Haynes and Huckell 2007). Clovis was first acknowledged as a definitive culture complex from the results of excavations at the Blackwater Draw Site near Clovis, New Mexico, in 1934 (Boldurian and Cotter 1999). At Blackwater Draw,

fluted projectile points were found associated with the disarticulated remains of mammoth and other extinct Pleistocene-age animals. Moreover, the discovery of blades at Blackwater Draw suggested a dependence on other artifact forms apart from projectile points. The presence of Clovis artifacts in strata below that of the Folsom artifact-bearing deposits implied that the site had been occupied by multiple culture complexes.

The discoveries of fluted projectile points in contexts associated with extinct megafauna at Folsom and Blackwater Draw disproved the then widely accepted idea of a relatively "late" (e.g. 5,000 cal yr B.P.) arrival of human populations to the Americas. Since the 1930's Clovis sites have been identified through much of North America, and include habitation sites, quarry sites, kill sites, and cache sites (Smallwood et al. 2015). Figure 2–2 presents the distribution of known Clovis and Paleoindian sites throughout North America. By the 1960's, advancements in radiometric dating allowed more precision in age determination and seemed to indicate that the Clovis culture not only provided the earliest evidence of Paleoindians (Meltzer 2009:5), but appeared suddenly about 13,000 B.P. A recent analysis of radiocarbon dates taken from a sample of well-dated sites suggests that Clovis, as a cultural complex, may have existed for as little as 250 years, from ca. 13,050 to 12,800 cal yr B.P. (Waters and Stafford 2007). According to Miller et al. (2013:215), who also examined the radiocarbon evidence, classic Clovis sites in North America likely range from "~13.4k to ~12.7k cal yr B.P. (11,600 to 10,800 ^{14}C yr B.P.)". Regardless of timing, it is conventionally believed as a result of genetic research that the initial colonizing populations ultimately had their origins in Asia, and are directly related to contemporary Native Americans (Goebel et al. 2008; Rasmussen et al. 2014). Support for the Clovis First model during the mid-twentieth century was due largely to a lack of irrefutable evidence for cultural materials that reliably predated Clovis in North America.



Figure 2–2
Selected North American Paleoindian Sites (Map courtesy of PIDBA.org).

Pre Clovis

During the late 1960's, the Clovis First model was challenged by the discovery of an increasing number of sites having evidence of cultural materials that significantly predated Clovis, such as Valsequillo in Mexico, (Irwin Williams 1967a, 1967b; Williams et al. 1969) and Calico Hills in California (Leaky et al. 1968). At the Hueyatlaco Site in the Valsequillo Basin of Mexico human habitation was indicated by the presence of stone tools recovered from deposits dated to 250,000 cal yr B.P. (Irwin Williams 1967a). At Calico Hills California objects described as chipped stone artifacts were dated at or older than 200,000 cal yr B.P. using uranium series and fission track dating techniques (Irwin Williams 1981; Malde and Steen-McIntyre, 1981; Steen-McIntyre et al.,1981; Szabo et al. 1969). If discoveries such as Valsequillo and Calico did pre-date Clovis, then the long-held Clovis First colonization model would need to be reassessed. Critics of the legitimacy of these sites cited questionable dating techniques, geologic context, and artifact legitimacy as bases for skepticism, thus leading many in the scientific community to refute the findings (Dincauze 1984; Haynes 1973). At Calico Hills, Haynes (1973:307) questioned the character of the lithic assemblage, noting that natural processes such as rock fracturing, tectonic stresses and weathering could have produced specimens indistinguishable from artifacts. Proponents for pre Clovis sites often argued that their merits were being held to standards far beyond those given to less controversial or younger sites (Dincauze 1984).

In response to the continuing debate concerning the legitimacy of a growing body of pre Clovis sites, it became evident that a set of standards were necessary by which to objectively examine the validity of archaeological sites with reported ages greater than Clovis. Haynes (1969:714) proposed minimum criteria necessary to demonstrate pre Clovis occupations. These included: at a minimum human skeletal remains or an "assemblage of artifacts" that were

irrefutably the work of human agency (Haynes 1969:714). Furthermore, such materials must "lie *in situ* within undisturbed geological deposits" to verify "primary association between artifacts and stratigraphy" (Haynes 1969:714). Finally the minimum age of the site must be "confirmed by the primary association of fossils" or artifacts of known age with material suitable for reliable radiometric dating (Haynes 1969:714).

Other scholars focused on theoretical aspects of the Clovis/pre Clovis debate (Dincauze 1984). In a classic paper entitled "An Archaeological Evaluation of the Case for Pre–Clovis Occupations", Dincauze suggested that "it is necessary to construct a logical framework from which data must undergo some form of evaluation" (Dincauze 1984:297). According to Dincauze, this could be accomplished through rigorous examination of multiple hypotheses, and subsequent testing of the implications of such propositions. This framework must also conform to an expected standard that all potential pre Clovis sites must follow (Dincauze 1984:297). According to Dincauze, many proposed pre Clovis sites were not being examined with the logical framework required to make such claims. Proponents of early sites were criticized for practicing erroneous styles of argumentation rather than providing demonstration though a framework of analysis and deduction. Dincauze suggested that any claim for pre Clovis, as with any "argument of demonstration", must be held to scientific standards, a process of demonstration through a framework of deduction (Dincauze 1984:297). Therefore sufficient demonstration of dating, geological contexts, and artifact status above all, must be carefully considered amid the "burden of developing, testing, and disproving/accepting hypotheses" (Dincauze 1984:310).

During the 1970's and 1980's an increasing number of sites were discovered that provided evidence for a pre Clovis occupation of North America. At Meadowcroft Rockshelter

in Pennsylvania, excavations conducted by James Adovasio from 1973–1979 revealed an assortment of lithic artifacts including an unfluted projectile point and blades from deposits radiocarbon dated at minimum to 16,000 B.P. and possibly as early as 19,000 B.P. (Adovasio et al. 1990). Criticism of the early radiocarbon dates at Meadowcroft focused on the potential for contamination by ancient carbon from coal-bearing strata in the watershed, in addition to Holocene biota in the early deposits (Tankersley and Munson 1993), although this argument has since been refuted (Goldberg and Arpin 2000; Meltzer 2002:52).

Using the criteria set forth by Haynes (1969) and Dincauze (1984), nearly all pre Clovis sites proved flawed in some capacity (Dincauze 1984; Meltzer 2004). However, beginning in the mid 1970's, the Monte Verde Site in southern Chile was excavated over two decades by an interdisciplinary research team, leading to the discovery of a diverse array of preserved organic materials and lithic items from a component that dated to ca. 14,500 B.P. (Dillehay 1997, 1999). Following a site visit by leading members of the scientific community in 1997, participants agreed that the site was archaeological and that the dates were accurate, making it the first indisputable evidence for pre Clovis on the continent (Meltzer et al. 1997).

The discovery at Monte Verde posed significant problems for the traditional Clovis First model. If Clovis people spread south upon entering the New World by an "ice free corridor", eventually reaching the southern tip of South America by 14,800 cal years ago, then this would leave an extremely short period of time in which to populate the entire hemisphere. As a consequence, with the acceptance of Monte Verde as a legitimate pre Clovis occupation by most scholars (Wheat 2012), conventionally held colonization models have been increasingly challenged (Bradley and Stanford 2004; Fladmark 1979; Waters et al. 2011). Stanford and Bradley (2002, 2012) proposed a colonization model whereby initial populations employed the

use of boats to skirt the North Atlantic ice caps during the Late Pleistocene, eventually arriving in North America from Western Europe (Bradley and Stanford 2004). Alternatively, a coastal migration model, widely credited to Knut Fladmark (1979), postulates that coastally adapted human groups moved rapidly down the Pacific coast from Northeast Asia, arriving in South America prior to substantial migration into the North American interior. The discovery of Late Pleistocene coastal sites including human skeletal remains at Arlington Springs on the Channel Islands of California (Orr 1962) is potential evidence for Paleoindian use of watercraft in the New World, although, as yet, no direct evidence of such craft have been recovered (Engelbrecht and Seyfert 1994; Jodry 2005). Other sites on the U.S. west coast also provide evidence for human habitation prior to Clovis. At the Paisley Cave Site in Oregon, the recovery of mtDNA from human coprolites directly dated to 14,300 cal yr B.P. marks the earliest example of genetic -based directly obtained pre Clovis evidence in North America (Gilbert et al. 2008). Like many other claims for pre Clovis, the findings at Paisley Cave are controversial and have been met with skepticism by some scholars (Fiedel 2014; Fiedel and Morrow 2012).

While the search for additional sites and more dating is warranted to corroborate claims of a pre Clovis occupation in North America, it is also beneficial to continue to scrutinize the material culture and data that archaeologists already have accumulated. One of the most interesting characteristics of North American pre Clovis sites is the apparent inter-site variability among the technologies of reported artifact assemblages. Whereas Clovis sites are typically identified by a suite of iconic chipped stone reduction strategies that include the manufacture of fluted bifaces and prismatic blades, earlier assemblages appear to lack evidence of any pan-regional diagnostic production strategies. The extensive list of pre Clovis artifact forms includes stemmed projectile points, bipointed bifaces, crescents, modified bone, flake and pebble tools,

bipolar cores, and bend and radial break flakes, in addition to unfluted bifaces and prismatic blades and bladelets (Collins et al. 2013; Jenkins et al. 2012; McAvoy and McAvoy 1997; Waters et al. 2011). The assemblage variation suggests that several terminal Pleistocene socio-economic adaptations were present and that no single highly distinctive material culture may have been in North America prior to Clovis. Given the variety of assemblages presumed to predate Clovis, studies geared toward discerning the degree to which these groups may have interacted have proven problematic.

In light of the prospect of significant variation among pre Clovis assemblages, Collins et al. (2013) examined the spatio/temporal variance in cultural patterns from 27,000–13,000 cal B.P., and identified seven cultural manifestations distinct from Clovis over this interval. These patterns (Table 2–1) are based primarily on toolkit composition and the geographical placement of sites on the landscape. In brief, Collins et al. argued that the eastern margin of North America was inhabited significantly earlier than the western margin (Collins et al. 2013). Collins et al. also brought to attention important questions regarding terminology. Until recently, the popular term for the period of North American habitation prior to the advent of Clovis lithic technology has been "pre Clovis". However, this term implies that all early cultures eventually led to Clovis, which is presently unverified. Contrary to what the name implies, the term pre Clovis should not be employed to denote a direct, genetic, or technological connection to Clovis, but simply that such sites predate the traditionally held timing for initial human entry into the continent. As a result, recent publications have presented alternative terms such as Older than Clovis (OTC) (Collins et al. 2013), Discovery Period (Waters and Stafford 2013), or Early Paleoindian

Table 2–1
Early Cultural Patterns Across North America based on data from Collins et al. 2013.

Location	Technology	Number
New England	Bipointed bifaces	12
Atlantic Seaboard	Thin Bifaces, blades	4
North American Grasslands	Modified Mammoth bones	10
Glacial Margin	Modified bones and artifacts	5
Southern Plains	cultural materials beneath Clovis	2
Pacific Margin	Thick, narrow projectile points, no blades	Numerous
Maritime Channel Islands	Stemmed points and crescents	Several

(Anderson et al. 2015) that do not have the connotation of a direct or genetic relationship to Clovis. Other terms such as proto Clovis have been used to imply a cultural affinity based on technological relatedness (Haynes and Huston 2014).

Fiedel (2013) suggested that many archaeologists have uncritically accepted the material culture recovered at sites dating prior to 13,200 cal yr B.P. as artifactual without consideration of the potential natural processes that could have also created or redistributed these purported assemblages. At Cactus Hill, the zone separating the Paleoindian from apparently older pre Clovis deposits has been intersected by artifacts from Archaic deposits resulting from down-drift from the overlying deposits (Fiedel 2013:244). At the Debra L. Friedkin Site, the Clovis and reportedly older pre Clovis deposits are separated by a thin layer of sediment, a few centimeters in thickness, and critics argue that artifacts have migrated downward through small cracks in a vertisol matrix resulting in artifact displacement from original context over time (Fiedel 2013). Fiedel (2013:344–345) describes the bend break and microlithic items at Topper as an assemblage that could have formed as the result of natural processes. Accordingly, the numerous chert fragments from these deposits could have formed by natural breakage events that mimic human manufacture or as the result of down-drift. Using this logic, the best evidence for legitimate pre Clovis assemblages are those assemblages that consist of readily identifiable tool types such as bifaces and blades that are similar to Upper Paleolithic assemblages and are found in contexts that pre-date Clovis. Unfortunately, because such artifacts are also common to Clovis assemblages, any determination as to what artifacts reflect pre Clovis and what do not from a mixed assemblage cannot be ascertained. Because of the potential similarities in toolkit composition and the potential for mixing, Bryan (2004) has argued that archaeologists should abandon their dependence on finding diagnostic tools when seeking evidence of early sites.

However, because there are no diagnostic pre Clovis artifact forms, or assemblages that would allow meaningful comparisons, this solution is also problematic as it offers no method to qualify the materials as legitimately pre Clovis. One objective of this dissertation is to differentiate between the byproducts of naturally produced lithic assemblages from the potential byproducts of bipolar and biface technologies using technological attribute analysis.

One common characteristic of many pre Clovis sites is that the reported assemblages either consist of numerous presumably naturally fractured items that lack evidence of cultural attributes or when the tools from such sites do exhibit such attributes, the associated assemblages also consist of much less debitage than would be expected to have occurred in their production. As Fiedel (2013:344) notes, "Why do pre Clovis tool-making activities produce so much less debitage" than their later counterparts? If similar tool forms were being produced by these cultures then the expectation favors similar debitage patterns. However, the production of a pre Clovis toolkit that is dissimilar to Clovis in composition should also result in debitage patterns that are unlike Clovis. Moreover, lithic production activities that were focused on the manufacture of bipolar or non-bifacial tool forms could result in lithic byproducts that have attributes consistent with debris as opposed to flakes. By this reasoning, it might be more beneficial to examine each assemblage, noting the ratio of potential pre Clovis tools to debris, and subsequently comparing the results to the ratio of Clovis tool/flake patterns.

It is essential that any potential pre Clovis site must undergo a rigorous standardized set of investigations to assess claims of pre Clovis occupation. Haynes (1969:714), Stanford (1983:65), and later Dixon (1999:48) have proposed five questions that must be answered if a site is to be considered a legitimate pre Clovis occupation.

1. Are there artifacts that are clearly the product of human manufacture?

> Artifacts of anthropogenic origin must exhibit specific diagnostic attributes, those that establish behavioral intent, in order to be classified as a product of human lithic manufacture.

2. Is the recovered material within clear stratigraphic context?

> The deposits containing the proposed assemblages must be shown to be stratigraphically intact, without evidence of having been disturbed by post depositional or natural site formation processes.

3. Are there reliable, concordant, and stratigraphically consistent radiocarbon or other absolute dates from the deposit?

4. Are paleoenvironmental studies consistent with ages assigned to the site?

5. Are there human remains that are reliably dated older than 13,500 B.P. (Dixon (1999:48)?

If there are no human skeletal remains at a proposed pre Clovis site, then the first four questions must all be answered positively if a site is to be credibly considered pre Clovis in age and of human origin. The present study examines the Topper assemblage with consideration of the preceding questions. Since no human skeletal materials have been recovered from the Topper that predate 13,500 cal yr B.P., this dissertation examines the assemblage in relation to questions 1 through 4.The following chapter provides a description and reconstruction of the paleoenvironmental and geological history of the Topper Site with emphasis placed on the stratigraphy and depositional history.

CHAPTER III

GEOMORPHOLOGY AND PALEOENVIRONMENT

Topper's Geography and Physiography

The Topper Site (38AL23) is situated at 33º N latitude within the central Savannah River valley of the Atlantic Coastal Plain approximately 80 km from the Atlantic coast (Figure 3–1). The site is located in the Upper Atlantic Coastal Plain physiographic province, which is bounded to the north by the Piedmont physiographic province and the Orangeburg Scarp to the south (Nystrum et al. 1991). Topper is part of a larger prehistoric quarry complex identified on the property of the Archroma Corporation, formerly owned by the Clariant and Sandoz Corporation in Allendale County, South Carolina (Goodyear et al. 2007) (Figure 3–2). More specifically, Topper is one of thirteen terrestrial chert quarries having Tertiary-age lithic deposits discovered in this part of the drainage that are situated along the bluffs that overlook the river (Figure 3–3). The site occupies multiple topographic features of the landscape, including a floodplain, an alluvial first terrace (T1) formed by the entrenchment of the Savannah River and lying approximately 99m above sea level, a second terrace (T2) situated at 101.5m above sea level composed of colluvial slopewash sands, a hilltop above the terrace that is part of the Coastal Plains uplands, and a hillside slope located between the terrace and the hilltop, and to the North of Little Sweet Water Creek (Goodyear et al. 2007; King 2012; Miller 2007, 2010; Waters et al. 2009). Above the terraces, the hillside slope is covered by late Quaternary colluvium and eolian sediments.

Archaeological components at Topper have been recovered from the second terrace, the hillside and hillside slope. The floodplain and terrace portions of the site were originally assigned a site number of 38AL23, with the adjacent outcrop and hilltop designated 38AL139.

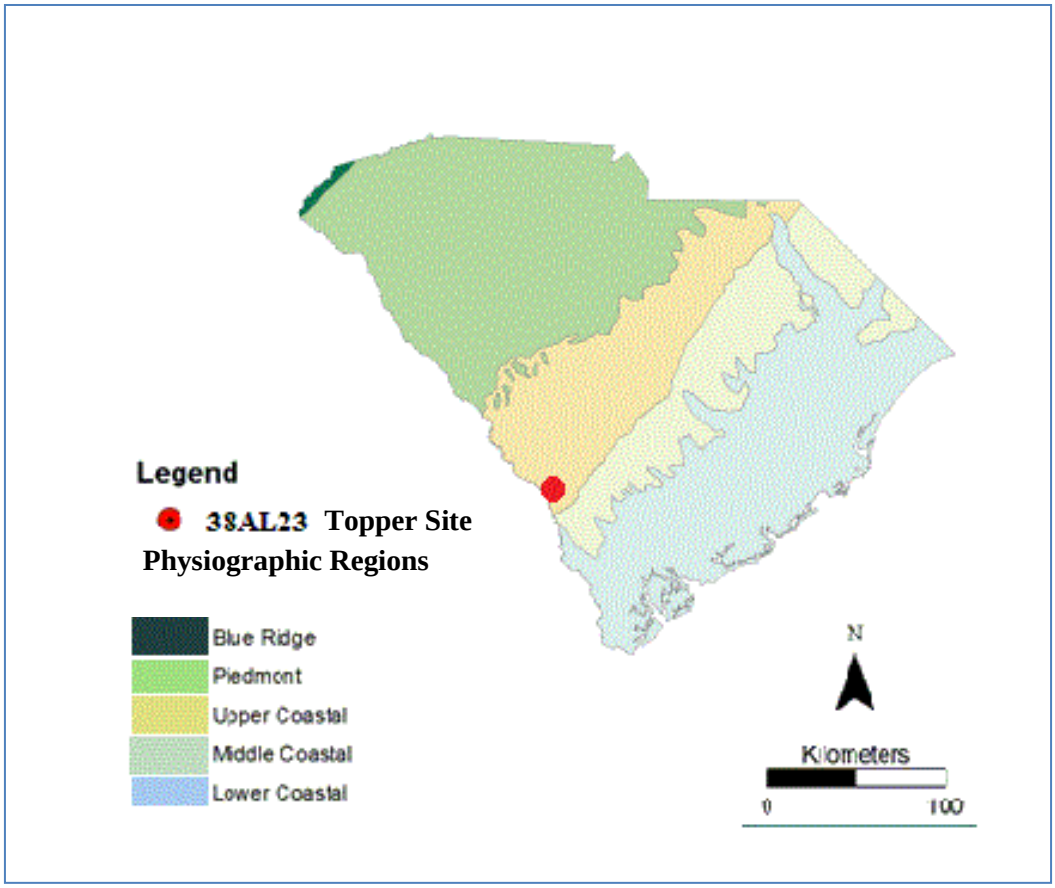


Figure 3–1
Physiographic regions of South Carolina. Source: South Carolina Department of Natural Resources, http://www.dnr.sc.gov/gis.html (accessed 8/2014).

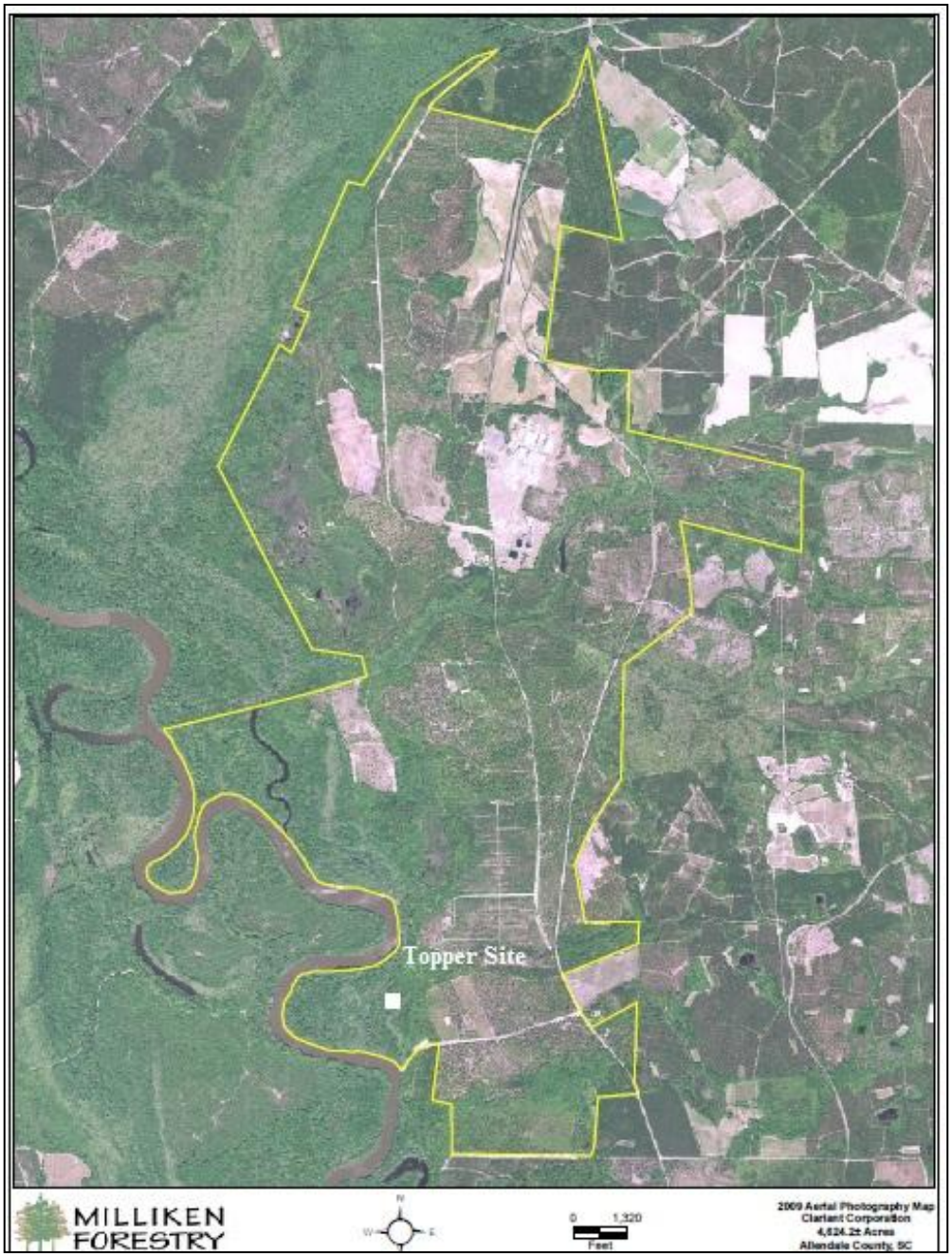


Figure 3–2
Location of the Topper Site (38AL23) relative to the Archroma corporation property boundary (highlighted in yellow), Allendale County, South Carolina.

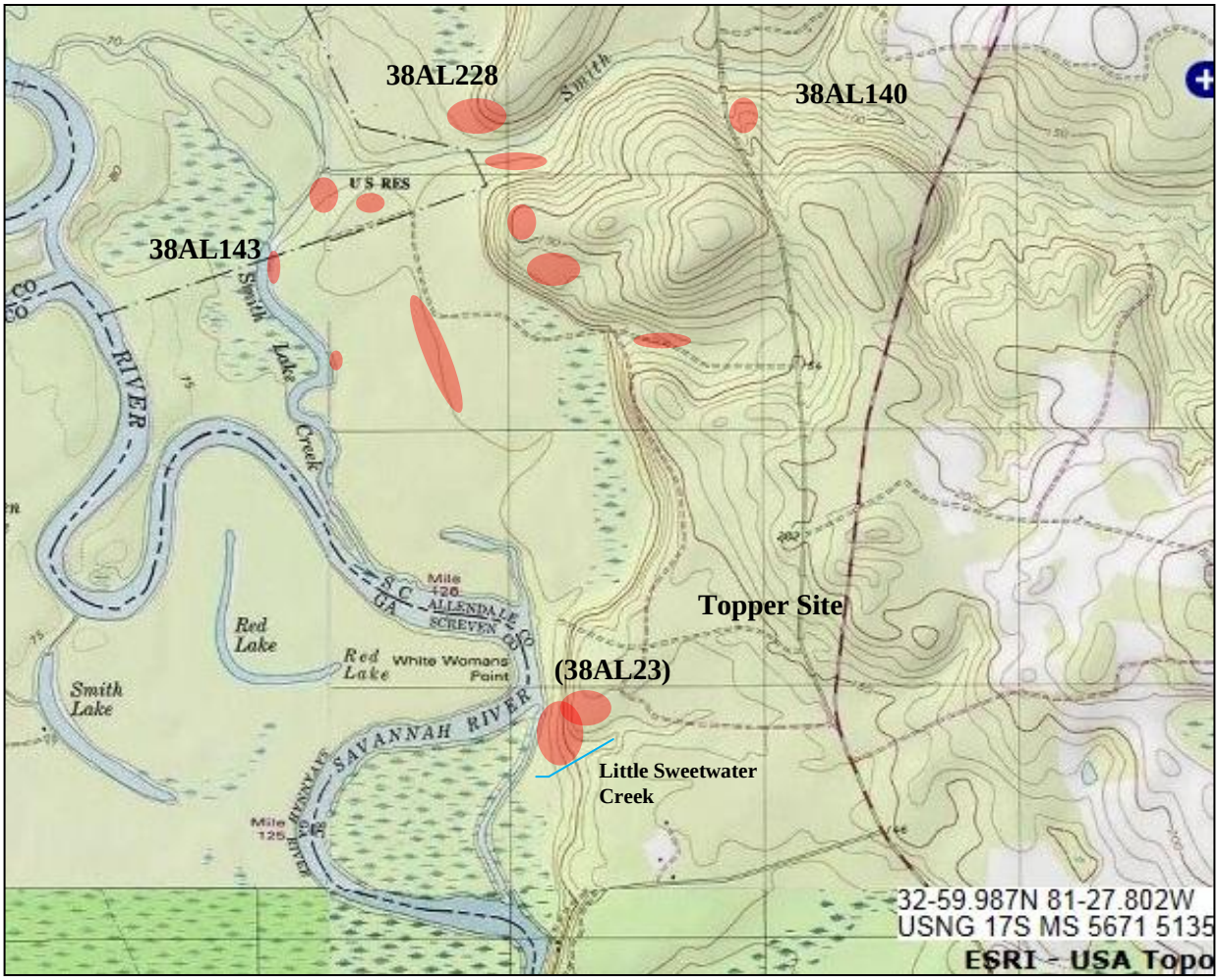


Figure 3–3
Location of the Topper Site (38AL23) and associated chert quarry locations identified by Goodyear and Charles (1984) and discussed in the text (figure adapted from Goodyear and Charles 1984).

However, extensive investigations revealed that the archaeological components were likely related. As a result, the site number formally given as 38AL139 for the hilltop was eliminated and all areas were subsumed under the designation 38AL23.

The focus of this dissertation is on lithic materials buried within the first and second terrace and overlying sediments adjacent to the floodplain. This area of the site measures approximately 300m north to south and 200m east to west. The second terrace in this location consists of eroded tertiary bedrock, and a dark Pleistocene overbank unit composed of silty clay that is referred to by Goodyear as the Pleistocene Terrace. This is overlain by Pleistocene-aged alluvial sands, referred to as the Pleistocene Sands. Above the Pleistocene Sands and extending to the surface is the Holocene colluvium, otherwise referred to as the Holocene Terrace (Figure 3–4).

Geology and Lithic Resources

Southeast

Raw material for the production of stone tools was a valuable commodity for prehistoric peoples. One raw material type that has been found to be suitable for chipped stone tool production is chert. Chert is a form of sedimentary rock that is composed of microcrystalline quartz. The cherts that are common in the southeastern U.S. Coastal Plain consist of two distinct forms that result from two different processes of silicification (Upchurch, et al. 1982: 38–40). One type of chert is composed largely of opaline, and is formed in marine sediments by the breakdown of diatoms, which secrete silica leading to the formation of chert (Goodyear and Charles 1984:2). These cherts are inferior in tool-making quality as they are "brittle and weak when flaked" (Goodyear and Charles 1984:2). As a result, opaline cherts were not typically used by the prehistoric peoples of the area. A second type of chert, and preferred by prehistoric peoples of the region for the manufacture of stone tools, is formed from replaced limestone

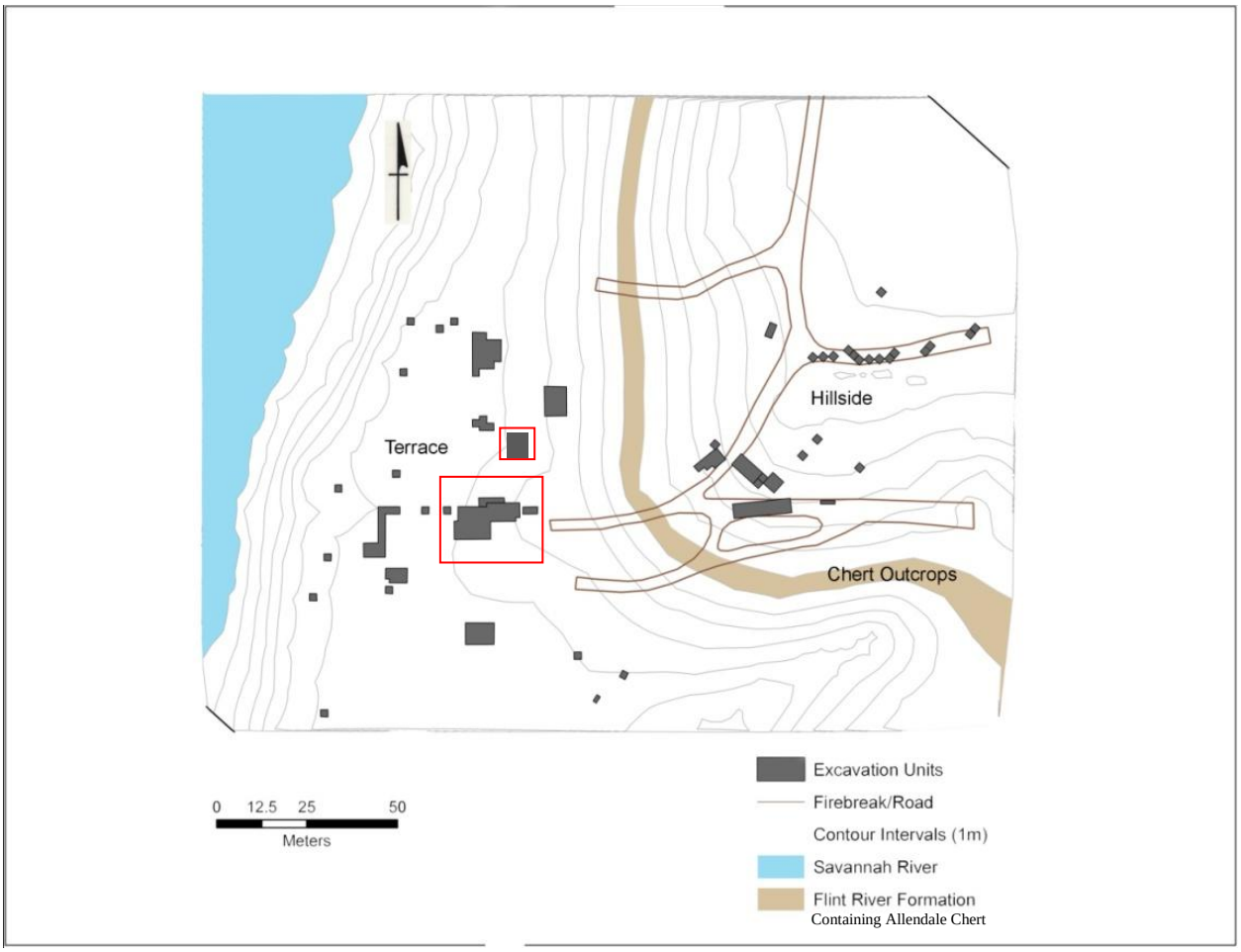


Figure 3–4
Topographic map of the Topper Site showing excavation areas in relation to chert outcrops at the Topper Site (38AL23), Allendale County, S.C. (Image courtesy Shane Miller 2010:6). Highlighted areas reflect provenience from which study sample was selected.

(Goodyear and Charles 1984). Such cherts are described as developing when groundwater transports silica that formed in diatoms, and are physically stronger because "the silica was in the form of quartz during the replacement process" (Goodyear and Charles 1984:2). The cherts from the Savannah River Valley, including those local to the western Allendale County, area are examples of this process and would have been preferred raw materials of choice by prehistoric peoples of the area.

Chert from the Savannah River Valley

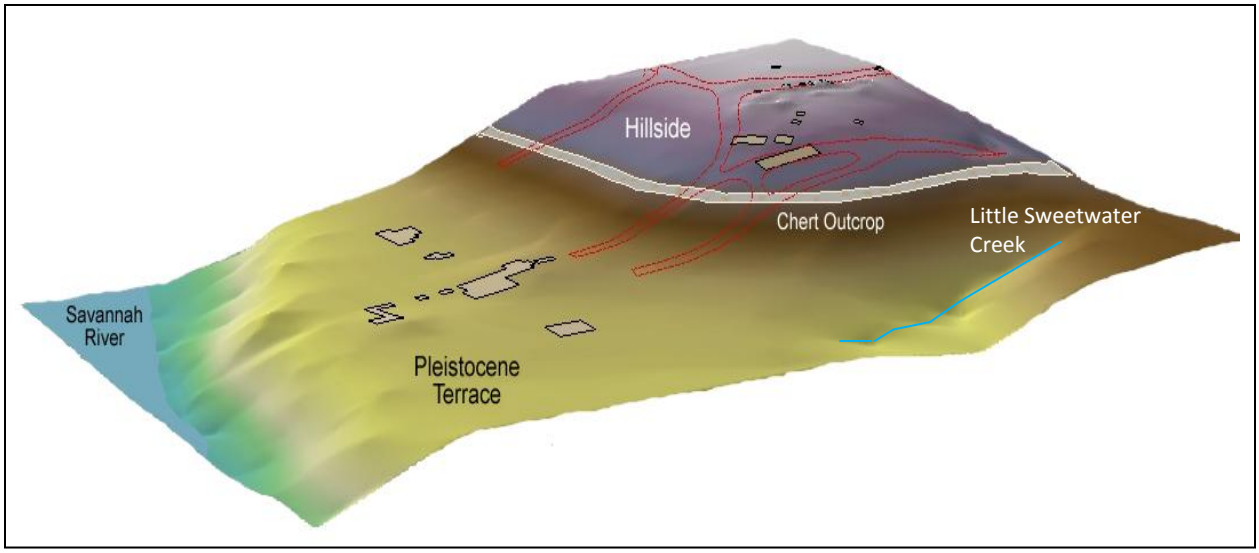
A significant number of chert quarries occur within the Middle Coastal Plain of South Carolina along the eastern boundary of the Savannah River. The chert outcrops that exist in this region are defined as Tertiary-aged, belonging to the Flint River Formation, and are classified as a silicified grainstone (Goodyear and Charles 1984; Upchurch 1984). Chert outcrops of this formation stretch northeast from Florida, across the Coastal Plain of Georgia, and terminate near Allendale County, South Carolina, at the intersection of the Savannah River. The Flint River Formation served as the primary source of high quality chert in South Carolina. Locally, chert from this formation is referred to as Allendale.

Localized deposits of chert from the Savannah River Valley are often referred to as Allendale, and are described as a "yellow, brown, waxy homogenous chert" (Upchurch 1984:15). Four characteristics are recognized in the classification of Allendale chert 1) a homogenous structure with limited evidence of fossils that would disrupt isotropy, 2) a range of colors including dark brown, tan, red orange yellow white and frequently translucent, 3) a change in colors to pink, red, and blue when after thermally altered specimens have been flaked (Anderson 1979:223), and 4) a strong predisposition to weathering resulting in a loss of silica and color, resulting in the formation of a yellow-white cortical surface (Goodyear and Charles 1984:5).

Thermoluminescence analysis has been offered as a valuable means of identifying whether or not a sample of chert has been heated, although the method cannot differentiate intentional from unintentional thermal alteration (Anderson 1979:224). Allendale chert is typically found along the eroded margins of bluffs, exposing the outcrop. Because of its properties, Allendale chert was a key source of tool-stone for prehistoric knappers of the region, and was geographically limited to the surrounding counties, primarily within a few miles of the Savannah River (Goodyear 1984).

Allendale Chert at Topper

The terrestrial chert outcrop at Topper is situated along the hillside slope exposed on the escarpment that overlooks the alluvial terrace (Figure 3–5). This outcrop is exposed as a result of erosion, and having been used as a prehistoric quarry. At Topper, Allendale chert seems to have been the preferred lithic material, having been identified from Paleoindian, Archaic and Woodland deposits at the site. Allendale chert can form in at least two morphological varieties: as nodules or as tabular slabs. The exposed chert outcroppings at Topper are typically nodular rather than tabular in form, with nodule maximum diameters having been found to range in size from 300–500 mm" (Smallwood 2010:84). According to Smallwood, nodules often have "voids and flaws of cortical-like material that have never silicified" (Smallwood 2010:84). Specimens greater than 500 mm in diameter may not have been available in abundance at Topper, thus preventing prehistoric knappers from producing lithic tools of this size. Moreover, the occurrence of voids in Allendale chert limits the successful detachment of decortication flakes of significantly large sizes. Appendix 2 presents various forms of chert recovered at Topper, the adjacent riverbed, and the results of a material condition assessment to determine the quality of each variety identified.



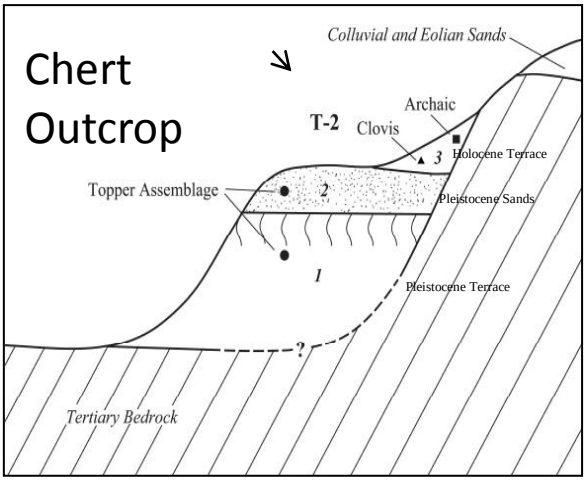




Figure 3–5
Location and characteristics of chert outcrop at the Topper Site (38AL23), Allendale County, S.C. Top: Map of site (courtesy of Shane Miller). Bottom left: Site stratigraphy (adapted from Waters et al. 2009:1302). Bottom right: exposed chert cobbles on the hillside slope.

Apart from the terrestrial cobbles, additional sources of raw material at Topper were chert cobbles from the Savannah riverbed, and eroding from the bank of Little Sweetwater Creek, an ephemeral stream that drains the upland Coastal Plain and forms the southern margin of the site (Figures 3–3, 3–5)(Goodyear 1986:3). Little Sweetwater Creek travels perpendicular to the river, carving through the terrace along the southern margin of the site. The creek forms a small floodplain between the terrace and the uplands (Goodyear 1986:3). During a 1984 survey, an abundance of chert cobbles was found eroding from the bank of this drainage (Figure 3–6). It is thought that by the time Clovis populations arrived in the Coastal Plain of South Carolina, the elevation of the Savannah River had already dropped and exposed the chert cobbles from the river drainage (Goodyear 2000). The cobbles recovered from the river contain a "distinctive butterscotch colored cortical surface, unlike those items recovered from terrestrial sources" (King 2012:18). The difference is assumed to have been caused by repeated polishing by way of water action, which erodes the cortex revealing the glossy outer rind (Goodyear 2007b:14). Such processes result in the formation of patination on the exterior surfaces of lithic items when subjected to submerged fluvial contexts. The patina is formed when the material is exposed to the chemical "leaching of soluble constituents leaving behind the more resistant quartz grains" (Parish 2010:9). According to Howard (1999:293), river patination does not result directly from silica abrading silica, but is a more complex process involving the initial abrasion of the lithic surface topography and subsequent accelerated dissolution. Therefore lithic nodules that have been exposed to more pronounced stages of patination typically have a minimal surface topography, and are extremely smooth (Howard 1999:293). Moreover, because river patina does not display evidence of stages of development or polishing, an artifact's age cannot be established from the extent or degree of river patina (Howard 1999). Unlike terrestrial chert,

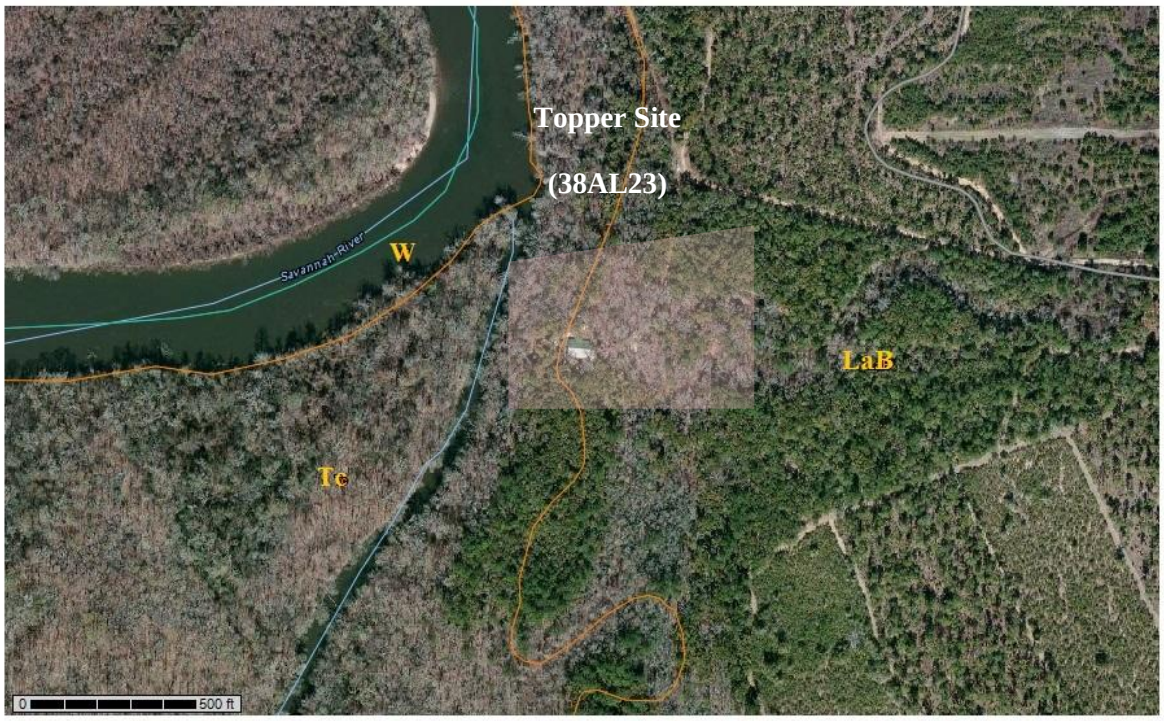


Figure 3–6
Exposed chert cobbles eroding from the bank and creek bed of Little Sweetwater Creek along the Southern margin of the Topper Site (Image courtesy of Albert C. Goodyear). The location of Little Sweetwater creek is shown in Figures 3–3 and 3–5.

which typically forms in nodules, chert that is exposed by the river (river stained chert) will occasionally occur in tabular form. The tabular examples could have formed as a byproduct of erosional processes resulting from the river or when silica layers were covered by sediments and subsequently subjected to significant pressures.

Regional Soil Classification

Soils at Topper are classified as belonging to one of two formations: the Lakeland B series, and the Tawcaw Chastain complex (Figure 3–7). The Lakeland series consists of well drained soils that formed in sandy marine sediments (Eppinette 1993:74). These soils are typically found along the tops and slopes of upland ridges, are moderately to strongly acidic and have an argillic horizon (Eppinette 1993).The soil series in the region are made up of three horizons; an Ap from 0–6 inches that is composed of loose sand with a smooth, clear boundary; a C1 horizon from 6–70 inches composed of reddish yellow single-grained loose fine to medium-grained sand; and a C2 horizon from 70–85 inches with reddish yellow single-grained loose sand (Eppinette 1993). Lakeland series soils form the hilltop and hillslope portion of the Topper Site. The floodplain deposits at Topper are composed of soils that make up the Tawcaw Chastain complex. Tawcaw soils are described as poorly drained soils that formed in fluvial sediments typically found on the flood plains of the Savannah River, where there is less than 2% slope (Eppinette 1993:81). They are characterized as having an Ao horizon from 0–15 inches that is composed of silty clay loam. A Bw1 horizon occurs from 15–20 inches and consists of yellowish brown silty clay loam. An underlying Bw2 from 20–55 inches has been classified as comprising strong brown clay with fine dark concretions (Eppinette 1993:81). The base of the soil ranges in depth from 55–65 inches and consists of light grey silty clay loam.



Legend		Acres/ County	%Acres County
La B	Lakeland Series	704.6	.3%
Tc	Tawcaw-Chastain complex	15,784.6	6.1%
W	Water	2,520.7	1.0%

N

Figure 3–7

Map showing major soil classifications at the Topper Site. Image adapted from USDA Web Soil Survey (www. websoilsurvey.sc.egov.usda.gov), accessed August 12, 2014

Fluvial geomorphic systems of the Lower Southeast and impact on human life-ways

Paleovegetational changes during the Pleistocene were influenced by changes in the structure of riverine systems. The Topper Site is situated adjacent to a chute channel of the Savannah River, one of the major fluvial systems that drain the southeast Coastal Plain. Throughout the Late Quaternary, episodic changes in paleoenvironmental conditions caused major rivers in this region to transition from braided to meandering (Leigh 2006; Leigh et al. 2004). Based on radiocarbon and luminescence dating, Leigh suggests that these systems transitioned to meandering from 15,000–16,000 cal yr B.P., and reflect "shifts in regional vegetation patterns towards warmer and wetter conditions than during the preceding Late Pleistocene full glacial" (Leigh 2006:159). A transition from cold dry Savannah biomes to moist cool mixed forests at 16,000–15,000 years B.P. corresponds with change in the pattern of river structure (Leigh 2008). The development of dense vegetation coinciding with warming climate during this period reduced erosion and sediment yield in the drainage systems of the southeastern Coastal Plain. The rivers subsequently down-cut to the level of the modern floodplain by 15,000 cal yr B.P. If peoples were occupying areas of the southeastern Coastal Plain during this period, then changes in climate and hydrology could have affected prehistoric settlement/subsistence systems, specifically by altering the placement and distribution of plant resources that were part of the diet and technological toolkit. Leigh suggests that archaeologists interested in identifying Paleoindian and pre Clovis sites should focus search efforts to areas of the landscape where Pleistocene terraces are adjacent to braided river channels or large paleomeanders (Leigh 2008). Figure 3–8 presents a map showing the location of the Topper Site relative to the modern Savannah River and the location of former braided river channels formed during the Late Pleistocene.

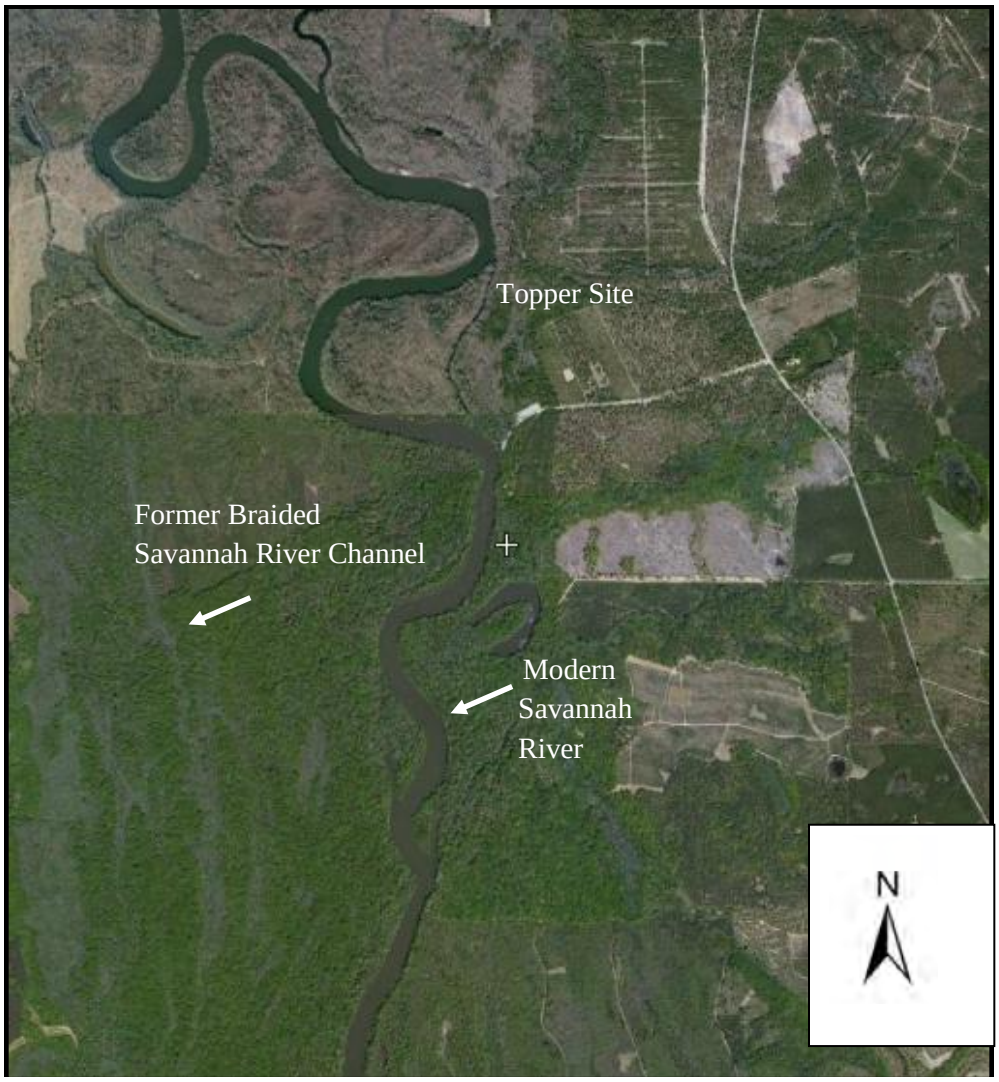
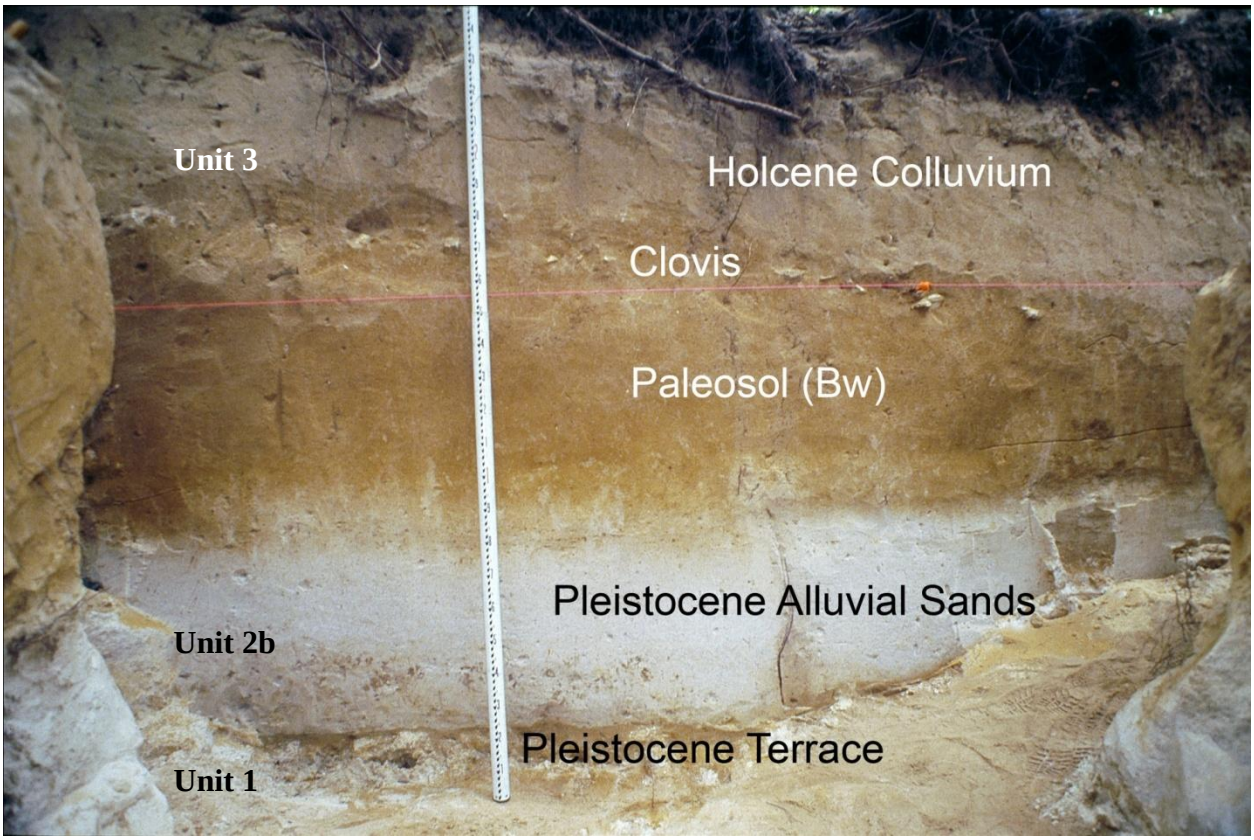


Figure 3–8
Map showing the location of the Topper Site and former braided Savannah River Channel.

Topper Site Geomorphology

Although prior geological studies define the stratigraphy of the Topper Site (Goodyear and Foss 1993), work began in 1999 to document the strata containing the pre Clovis component at the site. This work was conducted by a team of scientists led by Dr. Michael Waters and ultimately resulted in a detailed description of the site stratigraphy and geomorphological contexts. Waters et al. (2009) defined three major stratigraphic units (1–3) at Topper, which comprise the Late Quaternary alluvial and colluvial deposits (Figure 3–9). Appendix 3 presents a generalized profile of the Topper stratigraphy. The appendix offers an illustration of the alluvial stratigriphy, highlighting each geological unit defined by Waters et al. 2009. These units are referenced throughout the dissertation when discussing the contents of assemblages recovered from different elevations within the profile. All archaeological materials at Topper rest within these units, which lie unconformably against a weathered tertiary bedrock, consisting of red colored deposits of sand silt and clay (Waters et al. 2009:1303). Each of the three units is further subdivided into minor units.

Unit 1, lying atop the eroded bedrock, is the oldest unit and consists of sand (1a) superimposed by gray silty clay sand (1b). This unit is described as a "fining up sequence", composed of sediments that were periodically deposited by the meandering channel of the Pleistocene Savannah River (Waters et al. 2009:1303). The characteristic fining up of Unit 1 was also documented by Harris et al. (2010), who conducted a particle size analysis of the alluvial and colluvial deposits. The fining up sequence is evident in Figure 3–10 as a decrease in mean particle size indicated in the right column of the lower profile. The results of the particle size analysis are summarized below and detailed in Appendix 4.



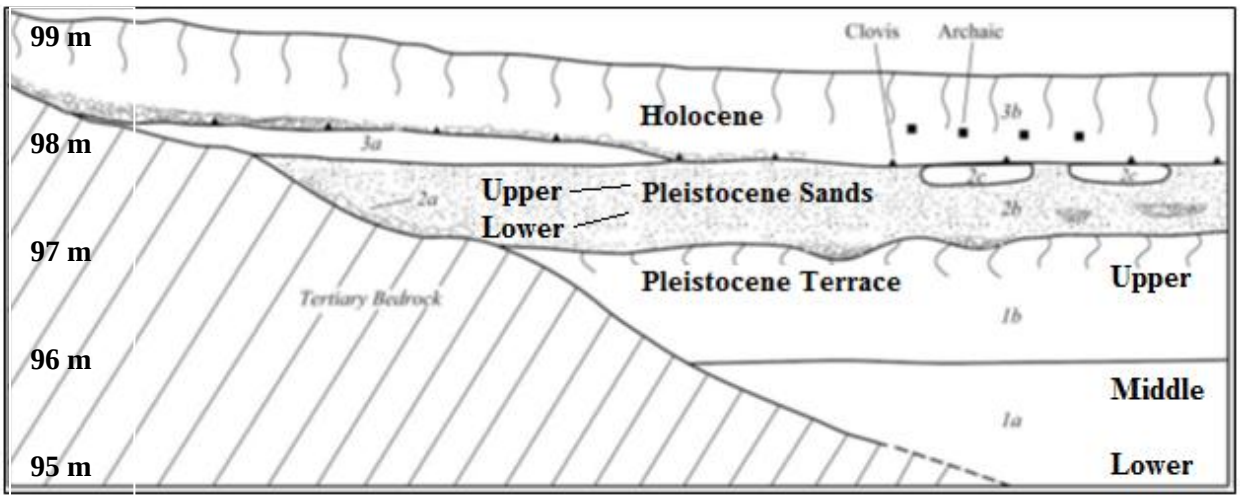


Figure 3–9
Three major stratigraphic and arbitrarily assigned units at Topper. Stratigraphic units defined by Waters et al. 2009:1304 (at bottom and indicated by numerals). Image at top courtesy of Albert C. Goodyear.

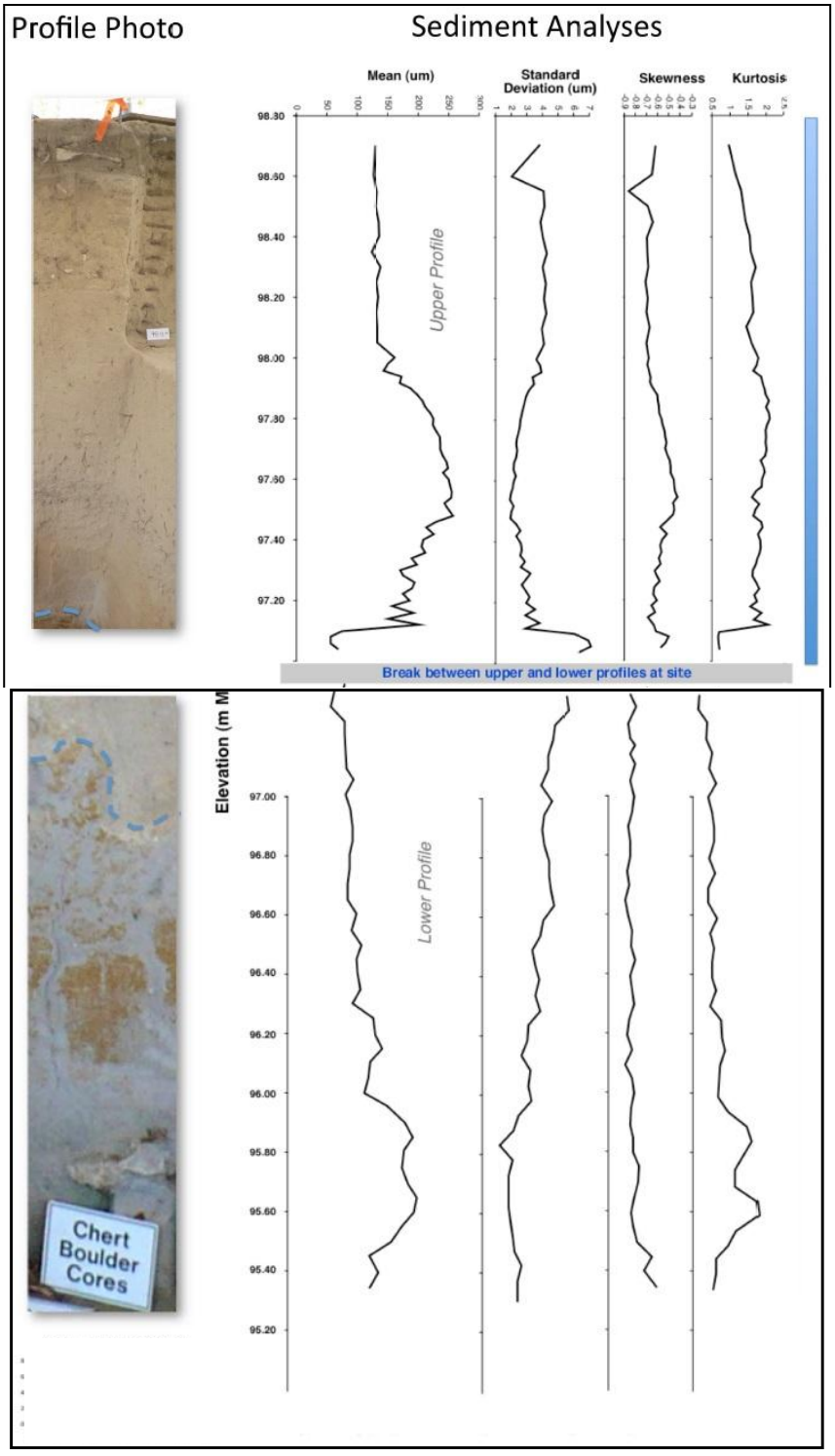


Figure 3–10

Results of particle size analysis of Pleistocene Sands and Pleistocene Terrace at Topper Site Top profile (Pleistocene Sands) Western profile wall of N246 E138. Bottom profile (Pleistocene Terrace) Western profile wall of the N45 E142 gridline. Results demonstrate a fining up sequence for the Pleistocene Terrace indicated by the decrease in mean sediment particle size illustrated in the column at right. (Image adapted from Harris 2010:1).

Unit 1 comprises the sediments referred to by Goodyear as the Pleistocene Terrace. The older subunit 1a represents periods when fill was deposited within the channel itself. A palynological analysis of a sediment core recovered from the base of unit 1b and intruding into unit 1a, documented below and in Appendix 7, resulted in the identification of multiple plant taxa with evidence for change in the distribution and occurrence of each type through the core profile. However, no evidence of cultural materials has been observed within the sediments from unit 1a. Unit 1b represents a younger sequence of overbank deposition (Waters et al. 2009). Unit 1b consists of the Pleistocene Terrace deposits from which Goodyear observed a presumed hearth feature that predates 50,000 cal. yr. B.P., and has claimed artifacts produced by human agency also occur in these deposits (Goodyear 2005).

Unit 2 is divided into three subunits (Figure 3–9). Unit 2a is composed of gravel and sand deposited by colluvial processes, and occur at the margin of the erosional scarp of the hill-side slope (Waters et al. 2009:1303). The deposits that make up unit 2a potentially accumulated at the base of the erosional scarp as weathered chert cobbles that were dislodged and transported down the side of the slope that formed the edge of the channel (Waters et al. 2009:1303). Unit 2a, for the purpose of this study, is referred to as the Lower Pleistocene Sands.

Unit 2b consists of sand with interspersed gravel lenses, and overlies the weathered surfaces of the tertiary bedrock that forms unit 1b (Waters et al. 2009:1304). Waters et al. (2009:1304) found that the north-south trending gravels in unit 2b occur within small channels (50–140cm wide) that were deposited in a fluvial environment when the braided paleo Savannah River flowed parallel to its present course. Goodyear reported chert artifacts of pre Clovis age within the sands of unit 2b (Waters et al. 2009:1304). Unit 2c consist of gray silty clay that forms irregular “lenticular masses” that are 1–2m in length and 0.5m in thickness (Waters et al.

2009:1304). Waters et al. (2009:1304) suggest that these masses of sediment either represent overbank flood deposits that formed a more or less continuous floodplain that was disturbed by natural taphonomic processes, or represent isolated sediments that accumulated in channels that once served as the sandy Pleistocene floodplain surface. Unit 2c represents the last time sediments were deposited on the site as a result of fluvial processes. For the purpose of this study, units 2b and 2c are otherwise referred to as the Upper Pleistocene Sands.

Unit 3 overlies unit 2, and was produced by colluvial processes resulting from the erosion of sediments from the adjacent hillside slope and their deposition onto the terrace surface. Unit 3 is composed of two subunits. Subunit 3a, the oldest, occurs in two places at Topper: at the base of the hillside slope, and immediately below subunit 3b 10m to the west where the flood plain begins to level out. Subunit 3a is composed of brown silty sand with approximately 70cm of soil development. This soil horizon is described as having "weak structure with clay films on the ped faces", and represents the local deposition of sediments on the "terrace tread" (Waters et al. 2009:1304). For the purpose of this study, unit 3a is referred to as an indurated pedogenic feature that separates the Holocene and Pleistocene deposits at the site. In 2012 Dr. John Foss of the University of Tennessee took sediment samples from unit 3a in an effort to determine how it originated as well as its age. The pedogenic feature is thought to have formed as a result of the river scouring much of the alluvial deposits from the terrace tread, and thus leaving behind the remnant of an old surface. The presence of high quantities of clay coatings on the sand grains present within the feature imply the presence of soil formation (pedogenesis), and indicate that the feature originally formed during a period of landform stability. These findings suggest that the pedogenic feature represents a period of long-term landform stability that separates the

sediments resting on the Pleistocene Terrace surface from the sediments contained within the Holocene colluvium above.

Subunit 3b is a ubiquitous layer of silty sand with occasional angular gravels that become more frequent toward the hillside-slope. The uppermost portion (60cm) of subunit 3b is composed of a "pedogenically altered Bw horizon" below a 20cm-thick A horizon (Waters et al. 2009:1304). Goodyear identified Clovis artifacts at the base of subunit 3b with an overlying stratigraphically intact cultural sequence above (Goodyear 2001). For the purposes of this study, subunit 3b is otherwise known as the Holocene Terrace.

The sedimentological contexts of the Quaternary deposits at Topper, as noted, have been described in detail by Harris et al. (2010) based on particle size analysis of a column sample from the ground surface to the base of the archaeological excavation (Figure 3–10). This analysis found two clear stratigraphic units: a lower alluvial phase represented by a fining upwards sequence that rests below a colluvial phase. The alluvial phase corresponds with the Pleistocene Terrace and Pleistocene Sands, whereas the colluvial phase represents the Holocene Terrace. According to Harris, the base of the alluvial profile (beginning at 95.40m) is coarse, with fining upwards through the alluvial deposits (Harris et al. 2010:1). This profile indicates a lowering of energy through time. A break is evident between the lower floodplain deposits and upper colluvial deposits at elevation 97.10m. This break forms a transition between the Pleistocene Terrace and the overlying Pleistocene Sands above, and forms the surface on which large chert boulder clusters have been observed. Immediately above this break are graded beds evident as jagged features in the mean particle size profile at 97.20m. Within these beds and gravel lenses, King (2011:112) identified chert flakes that were recovered below the Clovis deposits and could

represent an older occupation at the site. Above the bedding layer and extending into the Clovis deposits above, the sediments are relatively "homogenous in nature" (Harris et al. 2010:1).

In 2004 Larry West (n.d:1) conducted a detailed geomorphological analysis of a backhoe trench known as BHT17 that had been excavated into the Pleistocene Terrace drainage the prior season. The southwest corner of this trench was located at the intersection of the N243 E140 gridline and is approximately 2m x3m x 4m in size (Figure 3–11). Figure 3–11 offers a map that shows the location of backhoe trench 17 and also gives the provenience location for all materials analyzed for this dissertation with the exception of the 2010 4m x 4m block. West conducted a geomorphological study to provide the context for a presumed hearth feature (F91) that had been encountered at the base of the Pleistocene Terrace excavation at elevation 97.35m. For this analysis, nine sediment samples were taken along the gridline from N246 E142 and extending from the top of the alluvial terrace to the base of Feature 91. According to West, the upper two horizons from 97.32–96.93m reflect a paleosol with weak structural development and evidence of clay translocation. The top four sediment samples examined (97.32–96.37 m) include evidence for redox concentrations. Also referred to as redoximorphic features, these concentrations are sediments that form under oxygen – reduced conditions such as aquatic environments. At Topper the concentrations are typically yellowish brown in hue, and are sandier than the surrounding clayey sediment matrix. Figure 3–12 shows the redoximorphic features in the uppermost portion of the terrace profile. The sediment samples taken from 96.37–95.76 m in depth consist of light grey, massive friable sandy loam at the top to loamy sand toward the bottom. Redox features are again present in the deepest three sediment samples (95.76–95.33 m). These sediments consist primarily of sandy clay loam. From 95.41–95.33 m, the deepest sample, the sediment transitions to a relatively coarse, light yellowish brown sand.

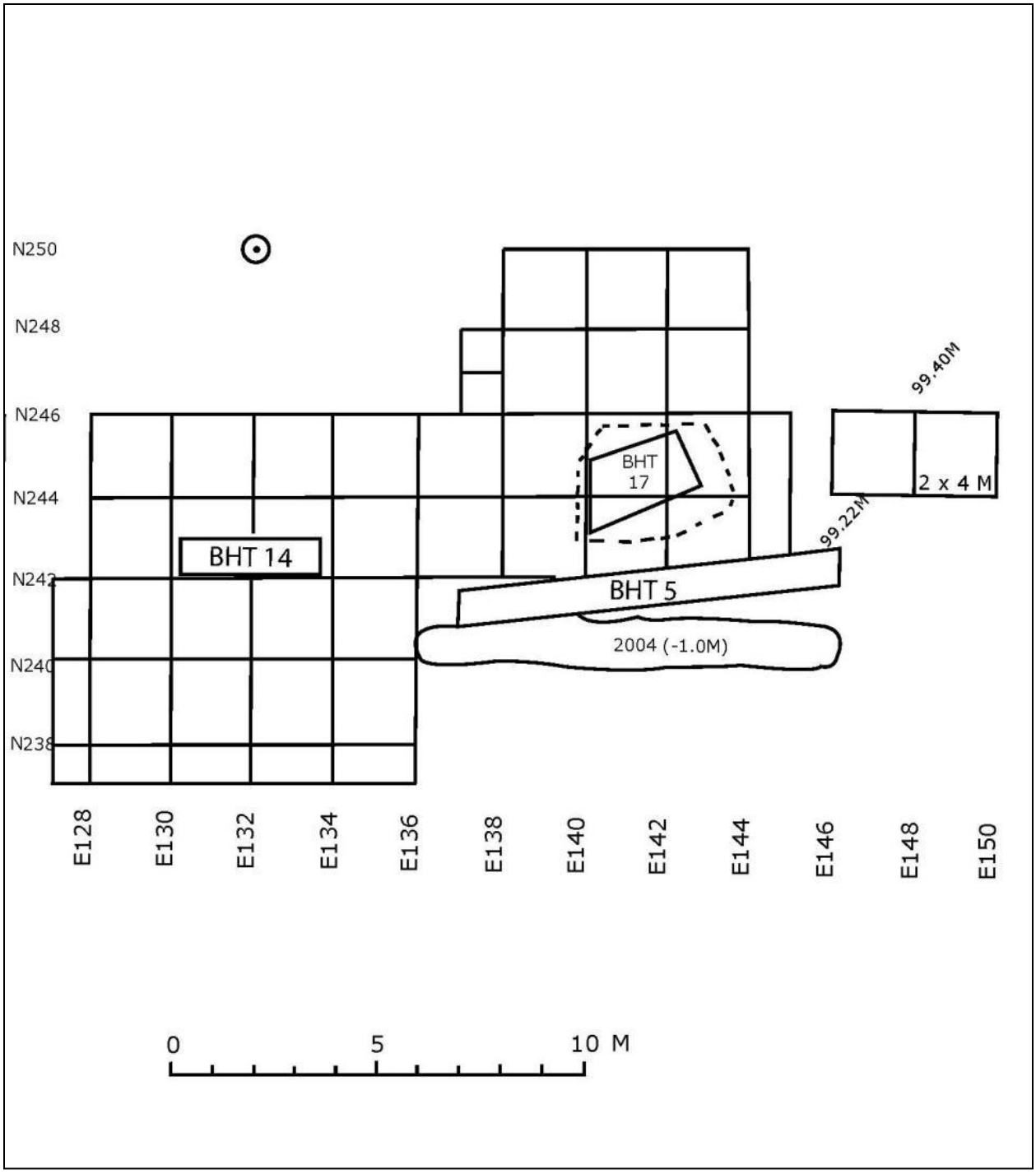


Figure 3–11
Map of the Holocene Terrace excavation showing the location of BHT 17.



Figure 3–12
Redoximorphic features in upper meter of alluvial terrace as evidenced by strong brown staining. (Provenience N243 E 143 West Profile Wall). Flagging strips represent selected sediment sample locations.

Based on the geoarchaeological and sediment analyses, the Topper stratigraphy has been well-defined. The stratigraphic units and sub-units discussed above are defined based upon sediment composition and depositional history. However, because excavations at Topper were not carried out according to geological units, but were arbitrarily defined in 5 or 10cm levels within the Holocene and Pleistocene deposits, a separate nomenclature was incorporated and is presented in Figure 3–9. For the purpose of this study the alluvial terrace at Topper (from top to bottom) includes the Holocene Terrace, the Pleistocene Sands, and the Pleistocene Terrace. The Holocene Terrace ranges in depth from 99.0 m to 98.0 m in depth and includes Waters unit 3. The Pleistocene Sands underlie the Holocene Terrace and are sub – divided into the Upper Pleistocene Sands (98.0 m–97.60 m), and Lower Pleistocene Sands (97.60 m – 97.0 m). The terms Upper and Lower should not be confused with, and do not reflect specific geological time periods, but instead are employed to differentiate the vertical location and placement of the deposit in the ground. The Pleistocene Terrace underlies the Pleistocene Sands and is separated into three sections: the Upper Pleistocene Terrace (97.0 m – 96.50 m), the Middle Pleistocene Terrace (96.5 m – 96.0 m) and the Lower Pleistocene Terrace (96.0 m – 95.25 m). Likewise, the terms Upper, Middle and Lower do not reflect chronological periods, but serve to arbitrarily differentiate the deposit with regard to the vertical site grid.

Attempts at dating the Topper sediments have met with a number of difficulties. Because of the acidic nature of the sandy sediments, organic materials such as bone and wood, do not often survive in large quantities at Topper (Goodyear 2000). Moreover, where such materials are present, the probability is high that they, in addition to charcoal, could have been introduced by bioturbation or movement by way of translocation through the sandy sediment from modern or recent contexts into older sediments. Waters (et al. 2009:1304) found that organic materials can

form as *in situ* lignified plant remains that were preserved in rare reducing environments that escaped oxidation by the vertically fluctuating water table. In the section that follows the chronological history of the Topper Site is given based on radiometric and Optically Stimulated Luminescence (OSL) dating.

Topper Site Geochronology

Initial research endeavors to date the sediments of the alluvial Terrace at the Topper Site were carried out in 1998. In an effort to find charcoal suitable for radiocarbon dating, the Pleistocene Sands at 2m below ground surface were screened through window mesh and any charcoal fragments observed were collected for dating. This process resulted in the recovery of four samples that each returned dates of less than 2900 ^{14}C yr B.P. (Goodyear 2001:11). Appendix 5 presents published Accelerated Mass Spectrometry (AMS) and OSL dates from Topper. Given the complete Holocene stratigraphic sequence above, it was likely that the charcoal recovered derived from bioturbated or translocated sediments from the overlying Holocene deposits. According to Goodyear (2001) these results indicated, at least at the time, that there was "essentially no old *in situ* charcoal available for dating" (Goodyear 2001:11). In 1999 a team of geoscientists led by Dr. Michael Waters undertook research to define and date the stratigraphy at the site using radiometric and luminescence dating techniques. A series of backhoe trenches was excavated to expose the stratigraphy of the terrace. Figure 3–13 gives the location and cross sections of these backhoe trenches. From these excavations Waters et al. (2009) was able to identify a series of stratigraphic units that they correlated with the site's archaeology (Waters et al. 2009; King 2012). Sediment samples were subsequently collected from the profile walls of these trenches to provide the age estimates of the geological deposits

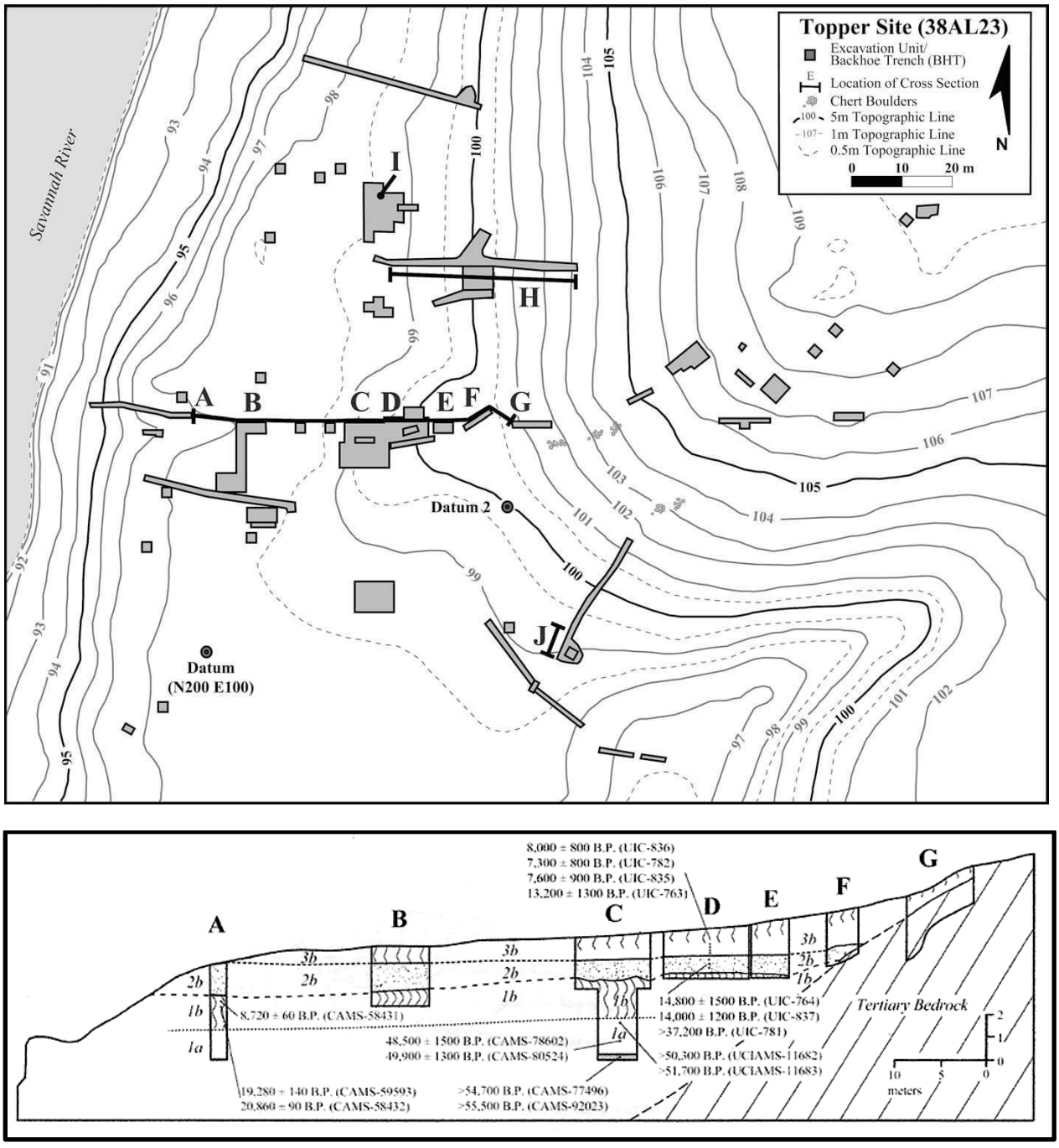


Figure 3–13
Map of the Topper Site showing the location of unit excavations and test trenches. Letters A–G in figure above correlate with the location of specific profile cross-sections as shown in figure below. Image courtesy of Waters et al. 2009:1303.

(Waters et al. 2009:1302). Figure 3–14 shows the provenience locations of AMS radiocarbon dates from the Alluvial Terrace at Topper Site.

Waters et al. (2009) provided a detailed assessment of 13 radiocarbon and 18 luminescence dates obtained from the geologic units at the site (Tables 3–1 and 3–2). The radiocarbon dates were obtained from organic materials that derive from three sources: charcoal that represents modern plant material that was moved downward by bioturbation (n=1); wood and plant macrofossils recovered from unit 1a that are at minimum 51,000 ^{14}C yr B.P. (n=4), and from humic acids recovered from floodbasin sediments and paleosols from units 1 and 2c that range in age from 6,500–20,000 ^{14}C yr B.P. (n=8) (Waters et al. 2009:1305). According to Waters et al., all samples were "processed for radiocarbon dating by using either standard pretreatment methods or modified techniques that evaluated diagenesis" (Waters et al. 2009:1305).

Unit 1a returned four dates in excess of 51,000 ^{14}C yr B.P. years based on woody plant material, and hickory nut shell. An additional four humic acid samples resulted in dates ranging between 44,000 and 50,000 ^{14}C yr B.P., and represent a minimum age for this unit. Two humic acid samples taken from unit 1b returned dates of 20,860+/–90 and 19,280+/–140 ^{14}C yr B.P. and are also thought to represent a minimum age for this unit as well (Waters et al. 2009:1305).

In addition to the radiocarbon dates, 18 luminescence dates were acquired from sediments from the Topper terrace (Table 3–2). Luminescence dating is used to date the last time a given sediment sample was exposed to sunlight, and is employed to establish the timing of burial events. The technique has been used to obtain an age for sediments that are less than 200,000 years old (e.g. Forman et al. 2000). Accordingly, sediments, when exposed to solar light for a period of 10–60 minutes, results in the discharge of much of the previously stored

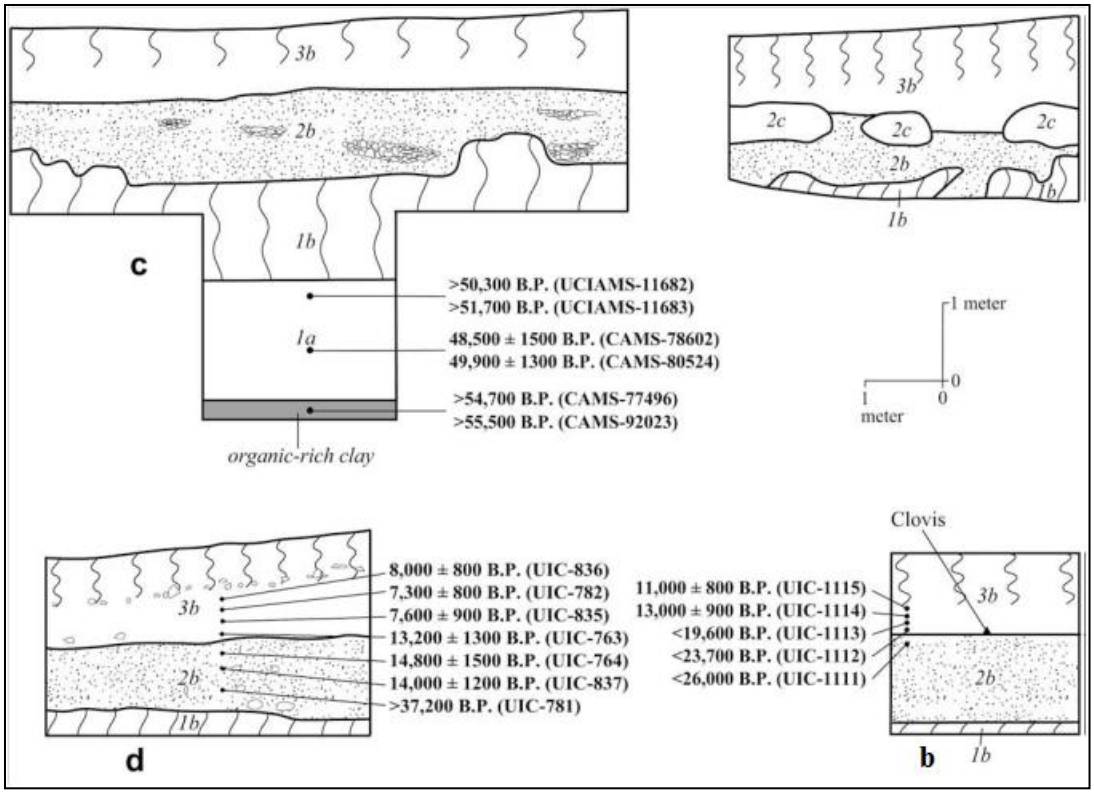


Figure 3–14
Provenience Locations of AMS Radiocarbon Dates from Alluvial Terrace at Topper Site. Adapted from Waters et al. 2009:1303. The location of sections in this figure corresponds with those in Figure 3–13.

Table 3–1
Radiocarbon dates obtained for Topper Site Stratigraphy in 1999 (adapted from Waters et al. 2009).

Strat. Horizon	^{14}C yr B.P.	AMS Lab#	Material Dated	Comments	D.B.D.	D.B.S.
Unit 3b	2170+/– 40	CAMS66100	Charcoal	Rejected	98.15	1.25
Unit 2c	6670+/–70	CAMS58430	Humic Acid	Contamination	97.70	.7
Unit 1b	8270+/– 60	CAMS58431	Humic Acid	Contamination	96.25	1.75
Unit 1b	20860+/–90	CAMS58432	Humic Acid	Contamination	95.75	1.5
Unit 1b	19280+/–140	CAMS59593	Humic Acid	Contamination	94.25	1
Unit 1a	44300+/–1700	CAMS77496	Humic Acid	Min. age	94.55	4.2
Unit 1a	45800+/–1000	CAMS78601	Humic Acid	Min. age	94.55	4.2
Unit 1a	48700+/–1500	CAMS78602	Humic Acid	Min. age	94.55	4.2
Unit 1a	49900+/–1300	CAMS80534	Humic Acid	Min. age	94.55	4.2
Unit 1a	>54700	CAMS79022	Carya	Min. age Plant	93.60	4.95
Unit 1a	>55500	CAMS79023	Abies	Min. age Plant	93.60	4.95
Unit 1a	>50300	UCAMS11682	Red woody	Min. age F91	95.54	3.45
Unit 1a	>51700	UCAMS11683	Red wood	Min. age F91	95.54	3.45

Table 3–2
OSL ages obtained for Topper Site Stratigraphy in 1999 (adapted from Waters et al. 2009).

Horizon	Field ID	Lab Number	D.B.D.*	D.B.S.	Age
2/Alluvium	TP99–03	UIC695	–	–	<37.2
2/Alluvium	TP99–03	UIC695	–	–	–
3b/Colluvium	TS0–01	UIC763	98.21	1.19	13.2 +–1.3
3b/Colluvium	TS0–02	UIC835	98.4	1	7.6+–0.9
3b/Colluvium	TS0–02	UIC835b	98.4	1	7.6+–0.9
3b/Colluvium	TS0–04	UIC836	98.68	.72	8.0+–.8
3b/Colluvium	TS0–03	UIC782	98.51	.89	7.3+–.8
2b/Alluvium	TS0–05	UIC764	98	1.4	14.8+–1.5
2b/Alluvium	TS0–06	UIC837	97.73	1.67	14.0+–1.2
2b/Alluvium	TS0–07	UIC781	97.45	1.95	
Modern Soil	TS0–010	UIC762	99.4	0	<.4
3b/Colluvium	TL–54	UIC1115	98.13	.7	11.0+.8
3b/Colluvium	TL–53	UIC1114	98.03	.8	13.0+–.9
3b/Colluvium	TL–52	UIC1113	97.93	.9	<19.6
3b/Colluvium	TL–51	UIC1112	97.81	1	<23.7
2b/Alluvium	TL–50	UIC1111	97.68	1.15	<26
3b/Colluvium	TS03–01	UIC1229	–	–	4.3+–.3
3b/Colluvium	TS03–02	UIC1228	–	–	8+–.5

*D.B.D.refers to Depth below datum (m); D.B.S. refers to Depth below surface.

luminescence in a given mineral grain (Waters et al. 2009:1306). After burial, sediments do not absorb additional ionizing light. The decay of naturally present radioisotopes of U, Th, and K lead to the formation of "free electrons that are trapped in crystallographic charge defects in silicate minerals" (Waters et al 2009:1306). The strength of luminescence emissions produced from the stimulation of minerals when light recombines with the stored charge can subsequently be calibrated and measured in the lab, yielding a comparable dose and ultimately a luminesesnce age (Waters et al:1306).

At Topper, luminescence dating was undertaken on samples from Units 2 and 3. Single aliquot methods were employed to determine the age of the coarse grain fraction whereas the multiple aliquot technique was used to date the fine-grained fraction (Waters et al. 2009). Of the samples obtained, four "finite" ages were produced for the colluvium of Unit 3, and returned dates ranging from 13,200+/–1,300 to 7,300+/–800 yr B.P. (Waters et al. 2009:1306). Samples from the Unit 2a alluvium produced an age of 37,200+/– 3,300 years, whereas Unit 2b produced two dates that range from 14,000 +/– 1,200 years to 14,800 +/– 1,500 years ago.

Based on the combined stratigraphy and dates obtained from the sediment samples from the analysis of Waters et al. (2009) dates, the Late Quaternary history of the Topper was reconstructed. To summarize Waters et al. (2009:1309), sometime prior to 55,000 years ago the Savannah River deposited alluvium atop the tertiary bedrock, forming the overbank sediments that comprise Unit 1. This was followed by a period of soil formation (1b) and subsequent "fluvial scouring and erosion of these soils as Unit 1b was "truncated" (Waters et al. 2009:1308). Unit 2a then formed sometime between 15,000 and 55,000 years ago atop this scoured terrace as a result of colluvial accumulation adjacent to the channel edge, followed by alluvial deposition by the braided Savannah River system "across much of the site" (Waters et al. 2009:1308). The

top of Unit 2c formed as the result of overbank deposition and represents the last time flooding occurred onsite approximately 15,000 cal yr B.P. Evidence for soil formation in Unit 2c reflects a 2000-year period of pedogenesis once the Savannah River "down cut and abandoned the floodplain" (Waters et al. 2009:1308). During the Terminal Pleistocene and Early Holocene, colluvial processes were the dominant form of deposition at Topper, resulting in the formation of Unit 3. According to Waters et al. (2009:1308), the luminescence ages obtained from Unit 3, and taken from sediments containing Clovis artifacts, are an indication that initial colluvial processes began at the site approximately 13,000 cal yr B.P., and have continued through the Holocene.

Recent developments in luminescence dating have allowed for greater control over the number of individual grains luminescence dating can measure. Rather than measuring many grains and taking an average date, it is now possible to lessen the variability through single aliquot analysis, also known as the single aliquot regenerative dose (SAR) and first recommended by Murray and Roberts (1998:503–515). The technique is considered robust compared with traditional multiple aliquot techniques (Murray and White 2000).

Prior to 2002, OSL dating attempts of the Topper deposits were conducted predominantly using multiple aliquot methods. These techniques are "not sensitive enough to reliably date populations of sand grains" and can result in relatively large age brackets (Goodyear 2011: 6). A recently developed, single grain technique is more robust, provides an improvement over older luminescence techniques, and is used to provide a more refined chronological history of the Topper deposits.

In 2010 and 2012, 23 sediment samples were extracted from the ground surface to the base of the Pleistocene Terrace by Dr. Chris Moore, and were submitted for OSL dating using single aliquot analysis. This study provides new insight into the geochronology at Topper,

leading to an updated, if not complex chronology for the age of the pre Clovis deposits. The locations, methods employed, and initial results obtained from this analysis are presented in Appendix 5. Seven samples were taken from the Holocene Terrace deposits of a 4m x 4m unit along the East Wall of N263 E144. An additional five samples were taken from the three units of the Pleistocene Terrace excavation (N246 E138 West profile wall, N248 E140 North profile wall, and N243 E142 East profile wall).

The results of the OSL dating (Albert C. Goodyear, personal communication December 2014) confirm the prior radiocarbon analyses results that place the age of the Pleistocene Terrace as older than 50,000 cal yr B.P. However, the new dates place the age of the Pleistocene Sands and to a lesser degree the Pleistocene Terrace at an older age than previously had been shown. The two OSL samples taken from the Middle and Lower Pleistocene Terrace returned dates of 59,400 cal yr B.P. and 70,700 cal yr B.P., implying that the potential pre Clovis deposits are no older than the basal date. More interesting were the OSL results from the Pleistocene Sands which present a much older age for this depositional unit. Based on the single grain OSL analysis, the Pleistocene Sands range in age from 34,000 cal yr B.P. for the Upper alluvial sands associated with the top of unit 2b, to 62,000 cal yr B.P. at the contact with the Pleistocene Terrace. A third sample extracted from the middle of unit 2b returned a date of 53,800 cal yr B.P. Overall, these results indicate comparatively little time elapsed between the terminal accretion of low-energy floodplain Pleistocene Terrace deposits (59,400 cal yr B.P), and the onset of higher energy rapid deposition of the white Pleistocene Sands (62,000 cal yr B.P). By contrast, prior dates for the Pleistocene Sands deposits using the combined multiple and single aliquot method (Waters et al. 2009) were found to range in age from 14.0+–1.2ka B.P. to <37.2ka B.P. Foreman

(2002) returned a date of 15.2 cal B.P. for these same deposits using the multiple aliquot technique.

Although the OSL dates give similar age determinations for the Pleistocene Terrace, there are considerable differences between the two studies regarding the age of the Pleistocene Sands. One study, using both multiple and single aliquot techniques, produced a younger age range for the deposit, whereas a subsequent, more recent study employing only the single aliquot method produced a much older date range for the Pleistocene Sands. Future research may be necessary to resolve these differences and to determine the age of the Pleistocene Sands at Topper.

Paleoenvironment

The lithic outcropping at Topper was a valuable commodity for Paleoindian hunter-gatherers, serving as a source of raw material for the production of stone tools. Along with this rich resource, Topper's environmental setting, located along the banks of the Savannah River, was likely significant in creating the extensive Paleoindian record at the site (Goodyear et al. 2007). As such, reconstructing the environment in which these early inhabitants lived is important for understanding resource procurement strategies inherent in Paleoindian life-ways. Plants provide a detailed record of the past, and researchers often use plant remains such as pollen, phytoliths, or charcoal as environmental proxies to examine change in the structure of climate, vegetation, and environmental parameter through time. Because researchers have noted that sudden environmental changes in the past might have had significant implications to human populations, it is important to provide the climate and paleoenvironmental context for the Topper Site and surrounding region to better understand the conditions under which past peoples may have lived.

Late Pleistocene Climate Dynamics

The Late Pleistocene is defined as the part of the Quaternary that began with the Last Glacial Maximum (21,000–18,000 cal yr B.P.) and encompasses the Last Glacial Interglacial Transition (LGIT), ca 14,500–12,200 cal yr B.P. (Hoek 2008:226) through 11,700 cal yr B.P., the beginning of the Holocene. In North America, deglaciation began at 18,000 cal yr B.P. and lasted until 6,000 cal yr B.P. (Gill 2009). In North America, the climate of the Late Glacial may be characterized as dynamic, fluctuating from periods of cold, dry, stabilized regimes, to those consisting of moderate but regionally unstable temperature and moisture patterns. These major climate changes are noted in the $^{18}O/^{16}O$ oxygen isotope readings for temperature and moisture in Greenland ice cores. The Late Pleistocene period is further subdivided among a number of smaller intervals (stadials and interstadials) based upon world-wide abrupt oscillations in temperature. These include the Bølling (14,650 –14,000 cal yr B.P.), the Older Dryas (14,000–13,700 cal yr B.P.), the Allerød (13,700–12,900 cal yr B.P.), and the Younger Dryas (12,900–11,700 cal yr B.P.) respectively (Anderson et al. 2015).

Pollen Analysis and Reconstructing Vegetation change at the Topper Site

Pollen is typically the most abundant plant remain preserved in Quaternary sediments, and as such the analysis of pollen grains is the principal technique used to reconstruct prehistoric environments (Birks and Birks 2004). Appendix 6 presents a discussion on the history of pollen research in the southeastern U.S. The results of pollen analysis may be used to form expectations about the paleovegetation history at the Topper Site in South Carolina.

A number of preliminary studies have documented the modern and prehistoric vegetation communities present in the areas surrounding the Topper Site. In 1985, John B. Nelson conducted an initial survey of the modern vegetation and found that four natural plant

communities are present within the site's boundaries. Nelson identified a dry upland white oak, beech, and hickory community situated on the hilltop portion of the site; a hillslope community dominated by laurel oak; and a floodplain community along the oxbow of the Savannah River. A fourth less visible upland spring community may exist along the hilltop bluffs associated with various spring seepages. Most plants were found to be restricted to the wetland areas adjacent to the river. A full list of the plants identified by Nelson is provided in Table 3–3.

A study by Smallwood in 2008 attempted to recover plant microfossils from sediment samples collected from the upland contexts at the Topper Site to evaluate how they compare to the climatic sequences developed for the greater Southeast. Smallwood collected and analyzed four samples. A single sample was collected from underneath an artifact 10cmbs that served as a comparative control to represent the modern vegetation communities at the site (Smallwood n.d.). Three additional samples (2–4) were collected from "directly under Clovis artifacts lying flat in a buried archaeological component approximately 60 centimeters below surface" (Smallwood n.d.:8). Microscope slides from the four samples were analyzed, and the number of pollen grains for each type observed was counted. A Lycopodium tablet containing an average of 10,680 Lycopodium spores was added to the sample prior to observation to serve as a marker grain that permitted tabulation of pollen concentration values and functions as an indicator for unintended destruction of pollen during the lab protocol. Smallwood then considered the results relative to the number of observed *Lycopodium* spores in the sample (Smallwood n.d.).

The results of the analysis show that pollen is poorly preserved from the upland contexts at Topper, with pollen counts extremely low. According to Smallwood, the highest pollen concentration was obtained from sample 3 and contained a "mere 60.75 pollen grains per gram" (Smallwood n.d.:13). Based on this initial analysis of the identified pollen grains from the Clovis

Table 3–3
Modern Plants Native to the Topper Site as Reported by a 1985 Survey by John B. Nelson.

Trees	Shrubs	Herbs/Ground Cover
Acer rubrum	*Aesculus pavia*	*Arisaema triphyllum*
Betula nigra	*Aralia spinosa*	*Arundinarta gigantea*
Carpinus caroliniana	*Berchemia Scandens*	*Athyrium* sp.
Carya glabra	*Bigonia capriolata*	*Botrichium* sp.
Carya tomentosa	*Calicarpa americana*	*Carex* sp.
Celtis laevigata	*Crataegus* sp.	*Chasmanthium latifolium*
Cercis canadensis	*Itea virginica*	*Chrysogonum virginianum*
Cornus florida	*Rhus radicans*	*Euonymus americana*
Fagus grandifolia	*Rubus* sp	*Hexastylis virginiana*
Ilex opaca	*Sebastiania ligustrina*	*Mitchella reopens*
Juniperus virginiana	*Symplocos tinctoria*	*Myriophyllum* sp.
Liquidambar styraciflua	*Vaccinium* sp.	*Monarda punctata*
Magnolia grandiflora	*Vitis spp.*	*Onoclea sensibillis*
Nyssa aquatica	*Yucca* sp.	*Orontium aquaticum*
Persea borbonia		*Sanguinaria canadensis*
Pinus palustris		*Silene aroliniana*
P. taeda		*Smlax pumila*
Platanus occidentalis		*Solidago* sp.
Prunus		*Tipularia discolor*
Quercus alba		*Trichostema dichotomum*
Quercus. laurifolia		*Trillium cuneatum*
Quercus michauxii		*Viola* sp.
Q. velutina		*Woodwardia areolata*
Taxodium distchum		
Ulmus alata		

deposits, oak was found to be the most predominant species from the upland contexts at Topper, occurring in all four samples examined. Hickory and pine were present in lesser abundances. Pollen was better "preserved in the modern sample collected at 10 centimeters below the surface" (Smallwood n.d.:13). Smallwood concluded that "pollen concentrations identified at Topper were far too minimal to make any direct conclusions", and the samples examined were from only two locations within the sediment profile (Smallwood n.d.).

In addition to pollen, Smallwood identified a number of phytolith types. Accordingly, phytoliths were better preserved than the pollen at the site, and samples contained distinctive forms of grass phytoliths that retained cell shape after decay or burning of the organic tissue (Smallwood n.d.:14). Most types were identified as examples from the grass family (Gramineae). According to Smallwood, the Pleistocene-age samples also "have dumbbell-shaped phytoliths representing the Panicoid class of native tall grasses, and saddle-shaped Chloridoid phytoliths indicating short grasses" (Smallwood n.d.:14).

Smallwood's study provides an initial depiction of the fossil pollen and phytolith records from the upland contexts at Topper. However, additional analyses were needed to determine if the same or similar patterns were present in the distribution of pollen from the Holocene Terrace portion of the Topper Site. Since soils types are different on each landform, the possibility exists that vegetation may differ as well. Therefore the present study conducted additional tests to reconstruct the paleovegetational history at the site. This study incorporated two separate analyses:

1. A microscopic examination of individual pollen grains collected from Holocene and Pleistocene sediment samples from a test unit on the Holocene and Pleistocene Terrace at Topper.

2. Pollen analysis of a sediment core recovered from the base of the alluvial terrace at Topper.

For the first study, two separate sediment samples were examined for fossil pollen. These samples were both collected from colluvial deposits within the Holocene and Pleistocene Terrace of the Savannah River and down-slope from the Hillside portion of the Topper Site. The first sample was collected from the Holocene sediments from the East profile wall of a 4m x 4m block excavation carried out in 2010 and 2011.The provenience for this sample is N263.01 E148.00 at an elevation of 98.86m (Figure A5–7). This elevation equates to the top of level three at 51cmbs and is beneath the plow zone. A single sediment sample was extracted from this location for examination. Slides were prepared and analyzed in the Laboratory of Paleoenvironmental Research at the University of Tennessee using a binocular compound microscope under a 400x magnification. Diagnostic pollen grains were counted by type. The results of the pollen analysis for this sample are presented in Table 3–4.

The pollen analysis of the Holocene sample indicates the presence of pollen from the sample. The majority of the pollen detected was oak (*Quercus),* with lesser occurrences of pine (*Pinus*) and hickory (*Carya*), suggesting a mixed deciduous forest at the time the pollen was deposited. The presence of water tupelo (*Nyssa aquatica)* indicates that wetland taxa were also present at the time of deposition. The second sediment sample was collected from directly under a biface preform of presumed Paleoindian age, artifact number 32, lying in a buried archaeological context at an elevation of 98.20m or 116cmbs, and from the provenience N263.46 E146.28. Pollen counts for this sample were very low, and most grains detected were incomplete or had torn exines, suggesting that conditions were poor for pollen preservation in this sandy context. Of the taxa identified, oak pollen (*Quercus*) was most common, with minor

Table 3–4

Results of Pollen Analysis from Two Sediment Samples Obtained from the Topper Site Showing Pollen Counts by Taxa. The Holocene Sample is from N263.01 E148.00 98.86m, the Pleistocene Sample is from N263.46 E146.28 98.20m.

Pollen Type	**Holocene grains (n)**		**Pleistocene/Clovis grains (n)**	
Oak	86		41	
Pine	22		6	
Undifferentiated Pinaceae Bladders	75	*n /2 = 37.5	19	*n /2 = 9.5
Hickory	4		1	
Water Tupelo	2		–	
Total	152		58	

*Undifferentiated Pinaceae Bladders divided by two.

occurrences of pine (*Pinus*). Hickory (*Carya*) only occurred in minute amounts, suggesting that conditions may have not been suitable for the widespread distribution of this species at the time.

Based on the available fossil pollen record at the site, Topper during the terminal Pleistocene probably consisted of an oak/hickory forest interspersed with stands of pine. These results largely corroborate Smallwood's findings for the pollen sequence on the hillside portion of the Topper Site. It should be noted that pollen concentrations are far too low to make precise conclusions.

A second analysis was conducted to determine the preservation potential for fossil pollen from the Pleistocene Terrace at Topper. This analysis involved the examination of a sediment core obtained by Scott Harris using a vibracore starting at the base of the excavated Pleistocene Terrace at Topper of a surface unknown but of presumably great age, >60,000 B.P. The analytic protocol and results of this study are presented in detail in Appendix 7. The core was obtained from beneath the known cultural component at the site and the results are therefore best suited to simply provide an environmental reconstruction as opposed to the conditions under which a pre Clovis population necessarily lived. Based on the palynological analysis of two slides, taxa associated with both cool and warm climate are represented consecutively (Table 3–5). The results indicate a pattern of general cooling recognized by the greater abundance of coniferous taxa (*Pinus* 7%, *Picea* 6%) compared to the older, deeper sample which was found to have a lower percentage of *Picea*. The results of this analysis potentially suggest show a change in vegetation at Topper during the Quaternary from temperate, moisture-thriving taxa, including a number of aquatic plant species, to that of boreal species that thrive in cooler environments. However, the samples are too similar to demonstrate this claim and require an examination of

Table 3–5
Pollen Counts by Type from Two Slides Examined from a Sediment Core Taken from the Base of the Pleistocene Terrace Excavation at Topper.

Taxa	Sample HCL 91–92		Sample HCL 114–115	
	Count	Percent	Count	Percent
Picea	22	6	3	2
Pinus	24	7	12	9.5
Abies	2	0.5	0	0
Ind. Bladder	99 (n/ 2 =49.5)	29	36 (n /2 =18)	28.5
Larix	1	0.2	1	0.7
Fraxinus	3	0.8	1	0.7
Carya	1	0.2	–	0
Nuphar lutae	1	0.2	–	0
Cornaceae	1	0.2	–	0
Quercus	109	32	41	32.5
Castanea	2	0.5	0	0
Ostrya	7	2	0	0
Liquidambar	10	3	1	0.7
*Charcoal	3	–	12	–
Grass	19	5.5	6	4
**Lycopodium*	19	5.5	13	10.3
*Spores	18	–	4	–
Acer	7	2	1	0.7
*Fungal spore	8	–	9	–
Ambrosia	4	1.1	7	5.5
Asteraceae	2	0.5	3	2
Artemesia	1	0.2	1	0.7
Urticaceae	1	0.2	0	0
*Moss	13	3.8	9	0.7
Myriophyllum			1	0.7
Nyssa			1	0.7
Nymphacae			1	0.7
Carpinus			1	0.7
Fraxinus			3	2
Sage			1	0.7
Total	**267**		**103**	

* Not included in total. Total counts include undifferentiated Pinaceae bladders / by 2.

additional pollen to make more robust interpretations about past climate at the site. Although no age brackets can as yet be conclusively assigned to this transition, based on the combined depth of the core and prior dating of the overlying sediments, both samples likely predate 60,000 years B.P. Future work should include the extraction and examination of sediment cores from the Holocene and Terminal Pleistocene deposits to gain a better understanding of the environment at the time of possible cultural occupation at the site. The chapter that follows provides the history of excavation at Topper.

CHAPTER IV

EXCAVATION HISTORY

The Topper Site (38AL23) was a prehistoric chert quarry located on a terrace of the Savannah River in Allendale County, South Carolina. Archaeological investigations at Topper beginning in 1985 and held continuously each summer from 1998–2012 have revealed evidence of a cultural sequence that covers 13,500 years of prehistory and potentially much more (Goodyear 2005a; Goodyear and Steffy 2003; Goodyear et al. 2007; Miller 2011). Excavations at Topper have primarily been carried out in two locations; a hilltop above the quarry where a dense Clovis occupation was discovered in 2004, and the alluvial terrace initially tested in 1985, and where potential evidence of a pre Clovis occupation overlain by Clovis and Holocene aged material culture was discovered in 1998. For the purpose of this study, the term alluvial terrace is employed to distinguish this area of the site from the hilltop excavation. Moreover, the term should not be confused with Pleistocene Terrace, which is used to describe a specific geological unit of the Alluvial terrace formation itself. The focus of this dissertation is on the materials recovered from the alluvial terrace. Figure 4–1 presents a map showing the ordinance and provenience location for all excavations on the alluvial terrace. Since 1984 a total of 392m^2 have been excavated in this area of the site resulting in the recovery and identification of 10,583 individually mapped artifacts (2.5cm in diameter or greater) weighing over 110kg., in addition to a substantial quantity of lithic materials from the 1/4 inch and 1/8 inch screen. Tables 4–1–2 present the number and distribution of mapped items by year and level for each unit excavated on the terrace. The present study examines a sample of the excavated units on the alluvial terrace, and as noted in chapter 1 includes 52$m^2$of Holocene and Pleistocene Sands and 16$m^2$of Pleistocene Terrace materials.

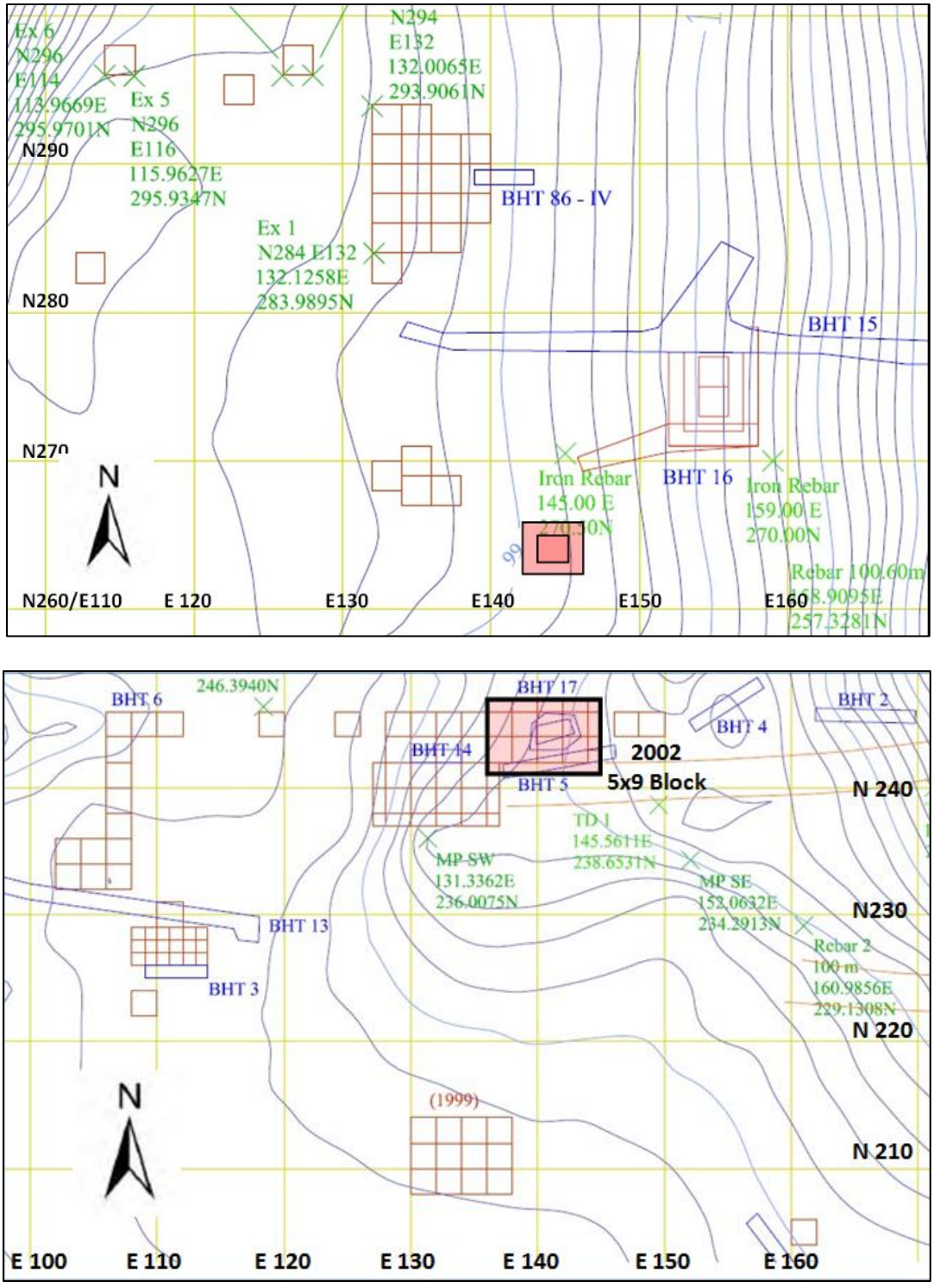


Figure 4–1

Map showing all excavations conducted on the alluvial terrace at the Topper Site (excluding the hilltop) and the selected provenience locations for the study sample.

Table 4–1

Square Meters of Excavated Units Opened on the Terrace by Year at the Topper Site. Screen Artifacts Include Those Recorded in the Level Records. Excludes data from 1984 and 1986 Field Seasons.

Yr. Excavated	m^2 Opened	Mapped Artifacts	Unmapped Screen Artifacts >2.5cm
1984	2	–	–
1985	28	178	349
1986	18	–	–
1998	32	*181	–
1999	48	430	77
2000	40	471	46
2001	86	436	107
2002	52	829	107
2003	36	592	12
2004	0	384	0
2005	16	597	0
2006	0	264	0
2007	0	314	0
2008	0	510	0
2009	18	722	0
2010	16	1111	0
2011	0	1642	0
2012	0	743	0
Total	**392**	**9,449**	**698**

*From four of eight total units.

Table 4–2
Number of Artifacts Mapped for Each Unit of Excavation on the Alluvial Terrace at the Topper Site.

2m x 2m Units	Art	2m x 2m Units	Art	2m x 2m Units	Art
N188 E090	17	N240 E126	1	N264 E142	21
N204 E160	17	N240 E128	21	N264 E144	51
N208 E106	10	*N240 E130	16	N264 E146	251
N208 E130	22	*N240 E132	119	N265 E134	14
N208 E132	81	N240 E134	21	N266 E132	146
N208 E134	23	N240 E136	2	N267 E134	7
N210 E130	23	N242 E106	6	N267 E136	45
N210 E130–36	16	N242 E128	60	N268 E132	22
N210 E132	75	*N242 E130	72	N269 E134	14
N210 E134	13	*N242 E132	63	N270 E152	7
N210 E136	10	N242 E134	90	N270 E154	21
N212 E134	3	N242 E136	42	N270 E156	40
N212 E130	9	*N242 E138	316	N272 E152	1
N212 E132	3	*N242 E140	1,219	N272 E154	6
N212 E136	1	*N242 E142	910	N272 E156	40
N220 E087	16	N242 E144	1,046	N274 E152	4
N222 E108	27	N244 E106	90	N274 E154	57
N229 E110	60	N244 E108	5	N274 E156	50
N230 E106	4	N244 E110	43	N282 E132	8
N231 E091	12	N244 E118	32	N284 E132	21
N232 E102	48	N244 E124	16	N284 E134	3
N232 E104	1	N244 E128	10	N284 E136	40
N232 E106	4	N244 E132	19	N285 E135	0
N234 E102	0	N244 E134	62	N285 E137	0
N234 E104	0	N244 E136	40	N286 E132	27
N234 E106	81	*N244 E138	400	N286 E134	15
N236 E106	35	*N244 E140	120	N286 E136	40
N236 E126	0	*N244 E142	164	N286 E138	20
N236 E128	5	N244 E144	598	N288 E132	21
N236 E130	1	N244 E146	85	N288 E134	65
N236 E132	0	N244 E148	211	N288 E136	60
N236 E134	0	N246 E136	111	N288 E138	17
N236 E136	5	*N246 E138	290	N290 E132	15
N237 E136	6	*N246 E140	715	N290 E134	25
N238 E106	21	*N246 E142	301	N290 E136	24
N238 E126	0	N246 E144	3	N290 E138	38
N238 E128	17	N248 E136	6	N292 E132	17
N238 E130	2	N248 E138	16	N292 E134	43
N238 E132	0	*N248 E140	490	N292 E136	26
N238 E134	20	N248 E142	29	N294 E122	10
N238 E136	0	N262 E142	8	N296 E114	15
N238 E138	31	N262 E144	233	N296 E126	6
N240 E106	1	N262 E146	387	Uncategorized Feature	22
Total					**10,583**

The provenience locations for the study sample are illustrated as highlighted boxes in Figure 4–1. In addition to the mapped artifacts, a sample of screened materials from 14 2m x 2m units from the ground surface to the top of the Pleistocene Terrace (elevation 97.05m) and 16 1m x 1m units from the top of the Pleistocene Terrace to its base at 95.25m have been examined in the present study. This sample includes well over 600,000g of quartz pebbles, cortical pebbles, debris, and flake debris, and is the focus of the analyses in the following chapters. The incidence of these materials recovered from the screen, by count and/or weight, is presented in Appendix 41. In the section that follows the excavation protocol at the site and results of excavation for each field season are briefly summarized, with a more detailed site history presented in Appendix 8.

The Topper Site was first discovered in 1971 and archaeological investigations were briefly carried out in 1984–1986 as part of a survey to locate prehistoric chert quarries in western Allendale County (Goodyear and Charles 1984:80–93). From 1998 through 2012 the site was extensively excavated as part of the Allendale Paleoindian expedition and since 2005 the site has been investigated through the Southeastern Paleoamerican Survey (SEPAS), an organization whose purpose is to support scientific research and to advance archaeological knowledge and carry out archaeological projects through the involvement of members of the public. Dr. Albert C. Goodyear has been the principal Investigator for the Topper project and has made or overseen all archaeological decisions with regard to the placement and method of excavations. From 2005 to 2012, Tom Pertierra, founder of SEPAS, held the role of logistics coordinator. In this role, Pertierra oversaw the day-to-day operations at the site and provided equipment necessary for excavation, analysis, and material transport. Scientific protocol on a day–to–day basis was overseen by the Senior Science Supervisor, who was in charge of all excavation in the absence of

Dr. Goodyear. From 1998–2004, Kenn Steffy held the position of Senior Science Supervisor at Topper, and oversaw all excavation on the Holocene and Pleistocene Terrace. After 2004, the role of Senior Science Supervisor was held by graduate students. Three individuals, Shane Miller (2006–2008), Ashley Smallwood (2009–2010), and Derek Anderson (2010–2012) have held the position of Senior Science Supervisor, and have been in charge of overseeing all facets of excavation on the hilltop and hillside areas of Topper. In addition to these positions, undergraduate and graduate students have been assigned as individual unit supervisors since 2005. Prior to this date, unit supervisors were both avocationalists and professional archaeologists. A list of all unit supervisors by year is presented in appendix 21. From 2005–2012, Douglas A. Sain supervised all work conducted on the Holocene and Pleistocene Terrace excavations at the site, including excavations into the pre Clovis deposits.

Excavations at Topper from 1998–2012 were conducted using a consistent series of procedures. The Holocene deposits on the Hilltop and Terrace were excavated in 2m x 2m units in 10cm arbitrary levels to a depth of 60cmbs, unless Paleoindian deposits were encountered first. Below 60cmbs units were excavated with trowels in 1m x 1m unit quads at 5cm intervals until two successive sterile levels, devoid of flakes, were encountered. All Pleistocene Sands and Terrace sediments were excavated in 1m x 1m units in 5cm arbitrary levels. During excavation, all sediment was recovered and water screened through 1/4 inch screen mesh to a depth of 60cmbs, and 1/8 inch screen mesh below 60cmbs. All materials recovered from the screen were subsequently bagged and assigned a corresponding level number. All items encountered that were 2.5 cm in diameter or greater were left *in situ* to be mapped, (three dimensionally piece plotted), and the unit was photographed prior to and after the mapping and removal of artifacts. All artifacts were removed only after having been properly recorded and photographed. Plotted

materials w subsequently assigned artifact numbers and were bagged separately from the screened materials. Because the weight by size grade of all recovered artifacts and screen materials was recorded, it is possible to evaluate the percentage of materials that were missed in the field and subsequently ended up in the screen. Appendix 13 presents these data; as documented below, few such artifacts were missed over the course of the excavations from the pre Clovis excavation proveniences.

In addition to the excavation protocol, a backhoe was also used occasionally to test for the presence of cultural materials, and to examine the geostratigraphy of the site. As of 2012, a total of 20 backhoe trenches (BHT) have been excavated at Topper. Figure 4–2 presents the location of all backhoe trenches relative to unit excavation through the 2005 field season. A list of all Backhoe Trenches is provided in Appendix 14. The majority of the trenches were excavated in 1999 and 2000 in conjunction with the geoarchaeological investigations by Waters et al. (2009) to investigate the stratigraphic profile of the Pleistocene deposits at the site and to obtain materials suitable for radiometric or OSL dating. No backhoe trenches have been excavated since 2005. A total of 18 of the 20 backhoe trenches were excavated on the alluvial terrace, while the remaining two trenches were situated on the Hillside and Hilltop respectively. When backhoe trenches were opened, a small sample of fill from each trench was screened through 1/4 inch mesh.

Another issue concerning site recovery protocol involves the percentage rate of inter observer error in artifact recovery. According to procedure, all items 2.5cm or greater are three dimensionally mapped within the site grid. If items smaller than 2.5 cm were deemed to be of cultural origin or appear to take the form of chipped stone debris, such materials were also mapped. However, the potential exists that some items that meet this size criterion ($\geq$2.5cm)

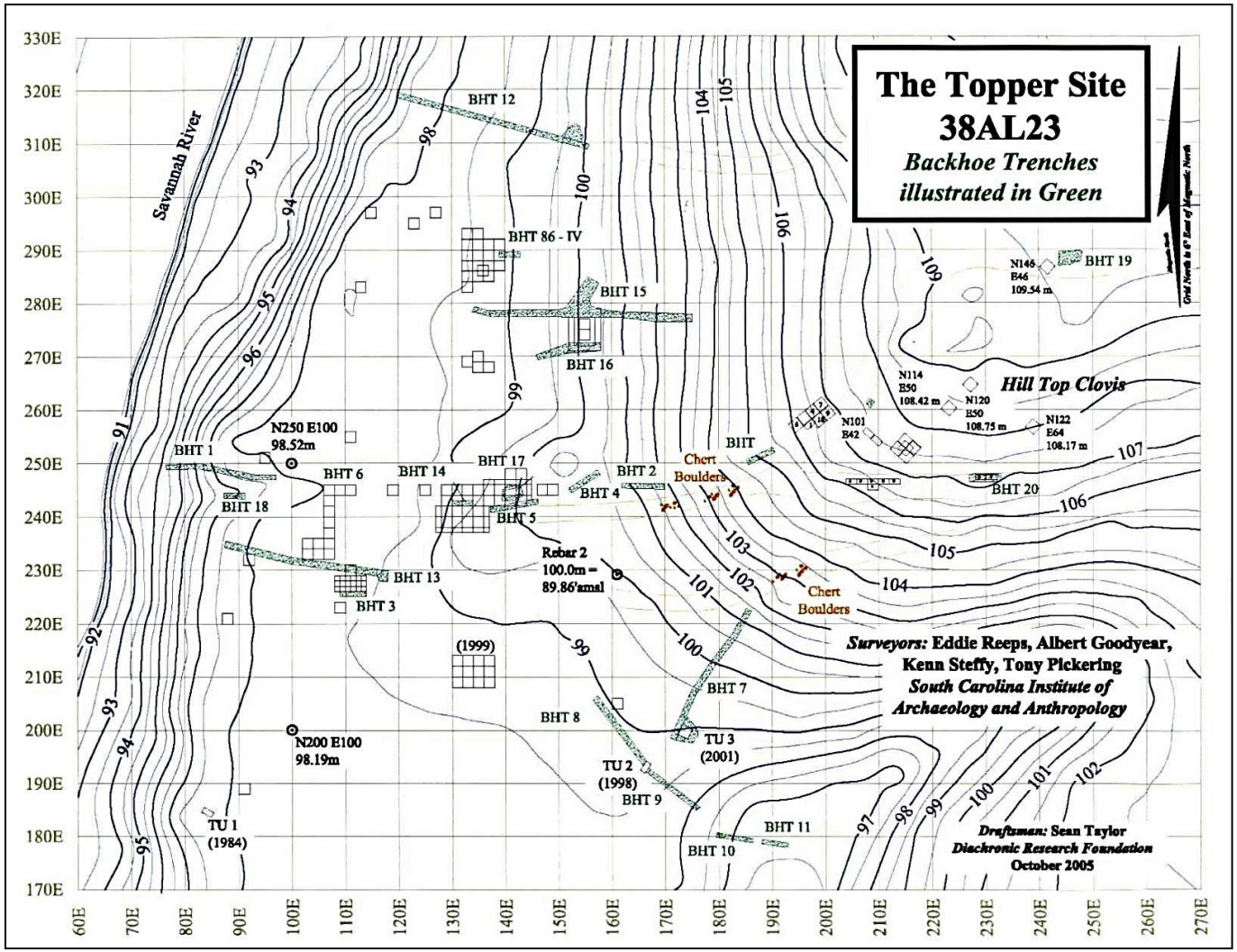


Figure 4–2
Location of Backhoe Trenches (BHT) at Topper Site relative to Excavation Units. A total of 20 Backhoe Trenches have been excavated between 1984–2012.

were missed in the field and subsequently placed in the screen. To determine the rate of error in the mapping protocol, and to ascertain if the spatial array of artifacts has been preserved, all materials from the screen were subjected to a size grade analysis. Accordingly, the combined weight of all screened and plotted items greater than 2.5cm was recorded for each level, the total for which comprises 100% of the materials per level for the given size grade. By comparing the percentage of 2.5inch artifact screen weight to the percentage of 2.5 inch plotted artifact weight, it was possible to determine the error/artifact recovery rate for each level by stratigraphic deposit. The results of this analysis are presented in Appendix 13 and in Table 4–3. Based on the analysis, the average percentage of flaking debris greater than 2.5cm that was missed in the field ranges from a high of 8.6% for the Clovis deposits to a low of 4.1% for the Pleistocene Terrace. On average, 4.9% of chipped stone tools and debris from the Pleistocene Sands were missed and not mapped in the field. These findings imply that at least a small portion of the larger artifacts from the site were not mapped. Although the percentages are not high, the presence of screened artifacts larger than 2.5 cm illustrates one shortcoming of the current method.

Unless otherwise noted, a comprehensive analysis of the lithic materials recovered from these units other than those in the present sample have not been undertaken. The data presented has been tabulated directly from the unit level and feature forms. While the distribution of three-dimensionally mapped items from each unit is available, data pertaining to the bulk 1/4 and 1/8 inch screen materials have been inconsistently reported on the level records.

1998 Excavations

In May 1998 excavations at the Topper Site resumed after a 13-year hiatus. Eight 2m x 2m test units were excavated (N244 E106 – N244 E130) in 10cm arbitrary levels to 70cm in

Table 4–3

Weight and Percentage of Flakes Missed per Level During Excavation and Recovered from Screen. Data Presented in Appendix 13.

	% Flakes Missed All Levels	**% Flakes Missed for Levels with Flake Occurrence**	**Average Flake Weight**	**Average Flake Weight for Levels with Flake Occurrence**
Clovis	8.6	20.64	28.96	84.13
P. Sands	4.93	9.56	8.85	59.09
P. Terrace	4.07	9.9	1.82	27.19

depth with 5cm arbitrary levels commencing at depths below 70cm. A map of the 1998 excavations is presented in Figure 4–3. The 1998 excavations include a series of 5 2m x 2m units oriented along the N244 grid line from E106–E130, and three additional test units to the north along the N250, N254, and N282 gridlines. Figure 4–4 shows the 1998 test units undergoing excavation. The 1998 investigations resulted in the discovery of an abundance of lithic material of Archaic and probable Clovis age from the manufacture of chipped stone tools. A list of the recovered mapped items by type for the 1998 field excavation is provided in Tables A15–1 and A15 –2. A Woodland component was also identified based on the presence of Refuge and Deptford pottery.

Prior to 1998, all excavations at Topper had ceased at sterile sediment at the base of the Paleoindian or Clovis levels (110cmbs). However, due to reports of "pre Clovis" discoveries at a number of sites (notably Cactus Hill, Virginia; Monte Verde, Chile; and Meadowcroft Rockshelter, Pennsylvania), Goodyear decided to take each excavation unit deeper to evaluate whether a pre Clovis occupation was present at Topper. Approximately 1 meter of sterile sediment was excavated by trowel in 5cm incremental levels beneath the Paleoindian levels in each of the eight 2m x 2m units. At two meters below the surface in unit N244 E130, Goodyear encountered a presumably cultural component consisting of what he described as a smashed core technology (Goodyear 2005). Possible artifacts recovered from these deposits included small prismatic blades, microlithic flake tools, cores, and debitage from the manufacture of these items. Examples of debitage recovered from the pre Clovis deposits of unit N244 E130 are presented in Figure 4–5. The pre Clovis items were recovered beneath stratigraphically intact deposits consisting of a Woodland Deptford ceramic zone from 10–20cmbs and a possible Paleoindian component consisting of utilized flakes, unifaces, and endscrapers from 70–80cmbs.

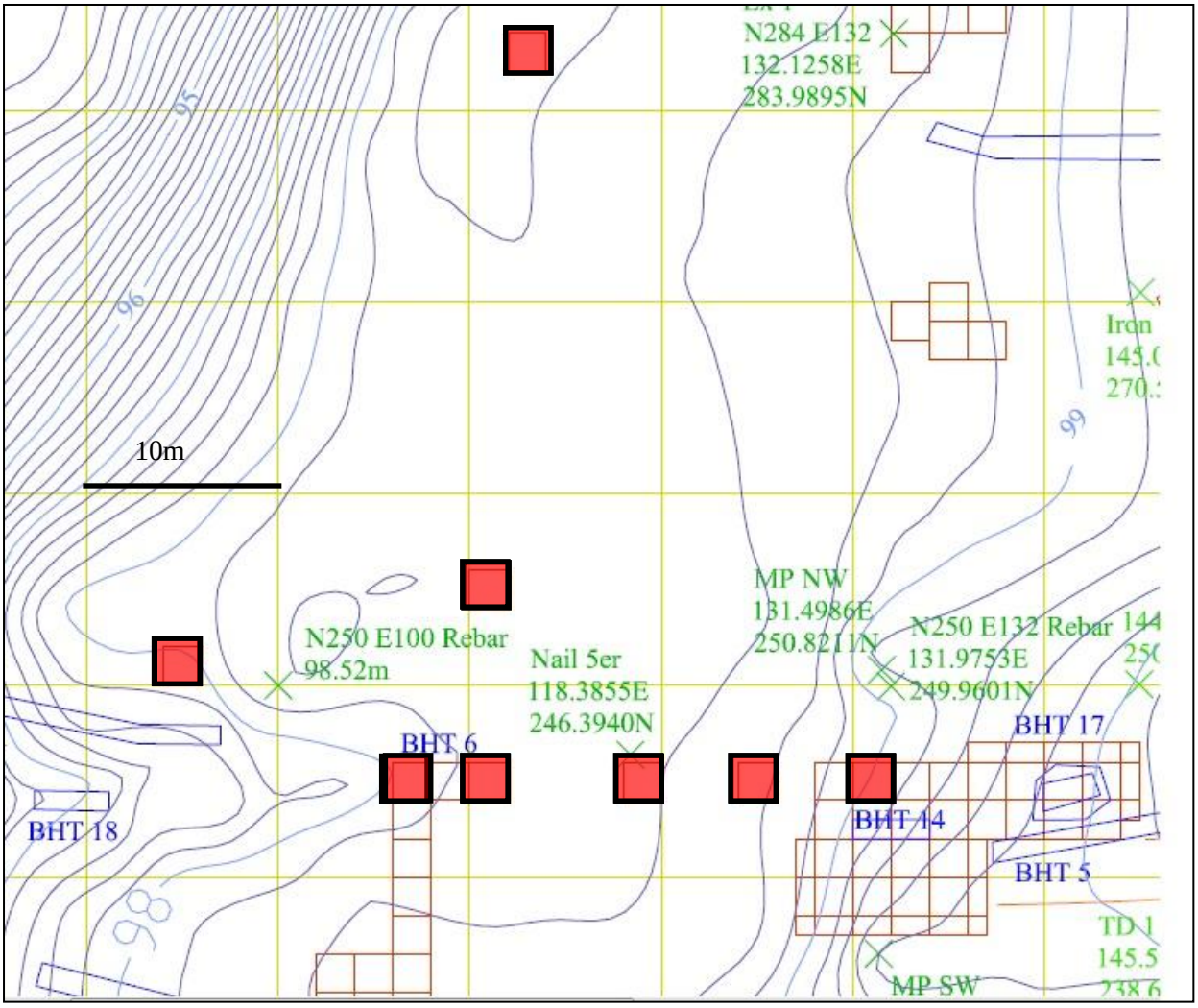


Figure 4–3
Locations of 1998 Excavations at Topper. Eight 2m x 2m units: A; N282 E112, B; N254 E110, C; N244 E110, D; N244 E118, E; N24 E124, F; N244 E130, G; N250 E092, H; N244 E106. Initial pre Clovis discovery made in unit N244 E130.



Figure 4–4
1998 Unit Excavations at the Topper Site (38AL23).

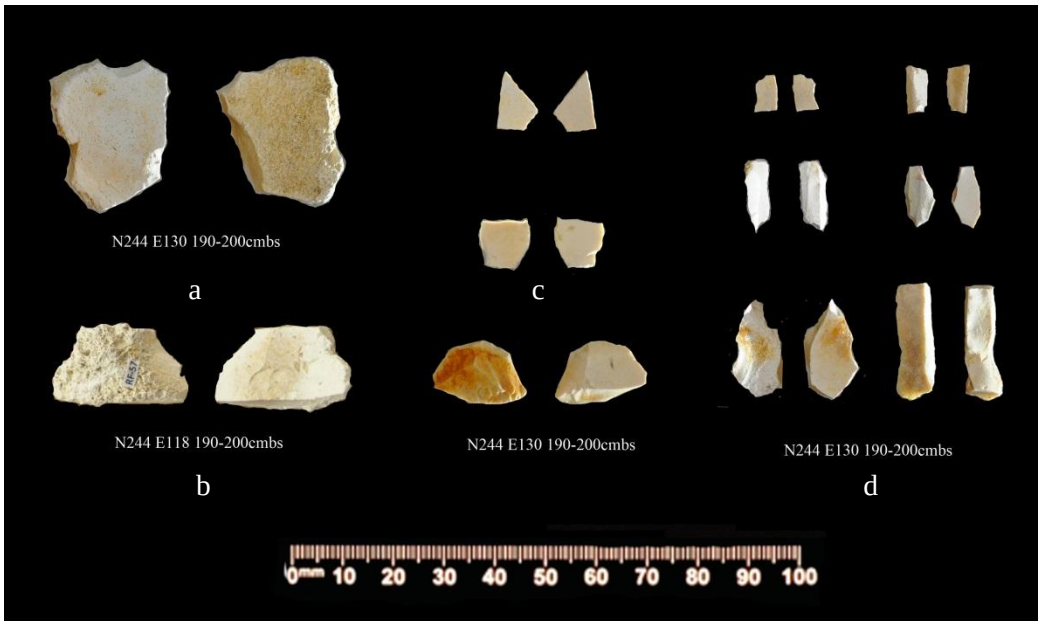


Figure 4–5
Examples of chert bend breaks (a,c), flake fragment (b) and small blades (d) recovered from the screen of the Pleistocene Sands deposits from units N244 E130 and N244 E118 at the Topper Site in 1998 (at bottom).

Figure 4–6 shows an *in situ* chert core from the pre Clovis deposits at 160cmbs in unit N244 E130.

One of the most common artifact types recovered from the pre Clovis deposits in 1998 was what Goodyear identified as a bend fracture or bend break flake. Bend breaks are flakes that are broken on an anvil that result in hard, burin-like edges and tips (Crabtree 1977; Cotterell and Kamminga 1987; Jennings 2011; Titmus and Woods 1986). An example of a bend break reproduction is presented in Figure 4–7 alongside an example recovered from the pre Clovis Pleistocene deposits at Topper. Bend breaks usually exhibit a lip on one face of the break indicating they are broken (snapped) and not struck by way of conventional percussive techniques. They are known to occur in North American Clovis and Folsom assemblages as a minor component in the flake tool assemblages, although skeptics (e.g. Morrow et al. 2012) argue that such flakes can also occur by natural processes or incidental breakage as well. Using experimental archaeology, Jennings (2011) compared the attributes of bend breaks from an experimental assemblage resulting from trampling to an assemblage of replicated examples to determine if bend breaks were intentionally produced to serve as tool edges, or were broken incidentally. Jennings found significant differences in the break types produced when the trampling assemblage was compared with the flakes that were intentionally fractured. The results of this study are discussed in detail, together with an analysis of similar materials from Topper, in chapters 7 and 8.

In addition to bend breaks, other artifacts and artifact associations of potential pre Clovis origin were identified at Topper in 1998 including chert scrapers, blades, utilized flakes, and boulder cores. The lithic items from pre Clovis contexts were most frequently recovered in

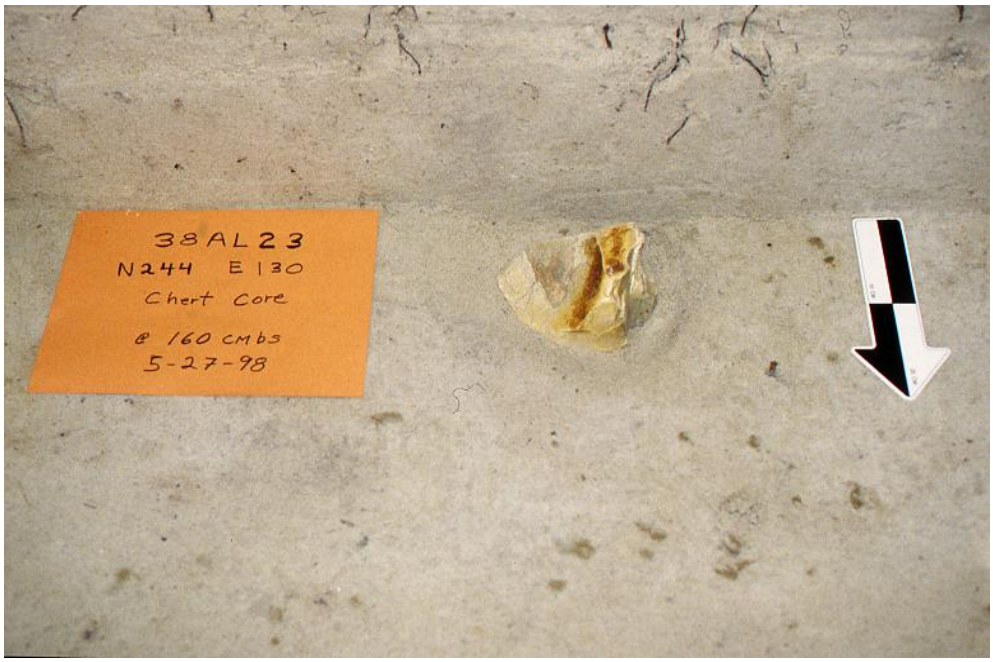


Figure 4–6
Chert core partially exposed from the Pleistocene Sands at the Topper Site, (38AL23). Photo by Al Goodyear.



Figure 4–7
Example of replicated bend break flake at top showing 90 degree burin–like edges and tips. At bottom, example of a bend break from the Pleistocene Terrace at the Topper Site. (Image courtesy Albert C. Goodyear).

association with concentrated clusters of large lithic debris that have been described as possible anvil stones.

One lithic concentration labeled as Feature 23 from the Southeast corner of unit N244 E130 included two battered quartz pebbles, a core fragment, and three modified flake fragments. Figure 4–8 is a photograph of Feature 23, upon discovery, some of the feature continued into the adjoining unit and was subsequently excavated the following field season (see also Appendix 18, and Figures A18–2 and A18–3). These "pre Clovis" materials were recovered nearly one meter below the Clovis zone at the site. While no diagnostic artifacts associated with any known prehistoric culture from the region were identified within the reported pre Clovis deposits at Topper in 1998, the technological attributes present on many of the flakes (i.e., bulb of force, bulbar scar, platform remnant) suggested to the excavator that they were likely formed by cultural rather than natural processes (Goodyear 2000). However, skeptics of the proposition that these items are cultural in origin have argued that the proposed "pre Clovis" assemblage at Topper may result from natural processes such as thermal fracturing, or through "physical fracturing resulting from stream flow" (Waters et al. 2009:1309). Stratigraphically, the pre Clovis materials were recovered below a "moderately well-developed Bw paleosol horizon that formed in colluvial deposits" that lies beneath the Clovis cultural levels (Waters et al. 2009:1308). Optically Stimulated Luminescence (OSL) Dates obtained from the top of the proposed "pre Clovis" deposits returned dates of 15,200 year B.P. and 14,400 year B.P. respectively, suggesting a minimum age for the assemblage (Waters et al. 2009:1303–1308).

1999 Excavations

Excavations into the pre Clovis deposits on the terrace at Topper continued in 1999. Investigations were expanded to include the excavation of 60 square meters of Holocene and 32



Figure 4–8
Lithic Cluster from pre Clovis deposits at Topper (at top): N244 E140 South Wall 180cmbs (97.05–96.95m) 28 May,1998. (Image courtesy Albert C. Goodyear).

square meters of Pleistocene-age sediments from a large block excavation (Goodyear 1999). Units opened in 1999 included a 48 square meter block extending from N208 along the East 130 line to N214 E136; a 4m x 2m block extending from N242 E130 to E132; and two 2m x 2m units along the northern perimeter of the site: N268 E132, and N282 E132 (Figure A22–2). As with previous seasons of fieldwork at Topper, cultural materials spanning the Paleoindian through Mississippian periods were identified from the deposits. A Paleoindian horizon was identified from 90–110cmbs in the 48 square meter primary block excavation (Goodyear 1999:9). Excavations into the pre Clovis levels at Topper in 1999 were conducted with a goal to establish the absolute depth of the archaeological component at the site. As such, each unit from the 48 square meter primary block was taken down to the top of the alluvial terrace at a depth of 220cmbs. At 150cmbs, microlithic artifacts were encountered similar in form to the ones identified in 1998.

The 1999 excavation produced many fewer and much smaller lithic items in this area of the compared to what was recovered from the eight 2m x 2m units excavated the prior field season (Goodyear 1999:9). In 1999 many small lithic items and debitage of possible pre Clovis origin were recovered in the screen as opposed to being mapped *in situ*. Moreover, because of the small nature of the items recovered, investigators could not rule out the possibility that these items had been "fluvially transported from their location of origin" (Goodyear 1999:9).

Excavation into a gray silty-clay terrace below 250cmbs in depth in the 48 square meter block continued to produce artifacts described as small flakes and utilized tools. These artifacts differed in morphology from items recovered from units excavated to the north at the base of the hill slope the prior field season. According to Goodyear, the artifacts from the Terrace may have been reworked into the deeper deposits as a result of bioturbation (Goodyear 2000:9).

In 1999, a team of geoscientists visited the Topper Site to obtain sediment samples in an attempt to reliably date the possible pre Clovis component. The team collected sediment samples for radiocarbon dating of humic acids (n=4) and Optically Stimulated Luminescence dating (Goodyear 2000:10). Two of the radiocarbon samples were taken from fluvial layers above and below the pre Clovis zone and returned dates of 6,670 ± 70 ^{14}C yr B.P. and 8,270 ± 60 ^{14}C yr B.P. respectively (Goodyear 2000). However, the units from which the sediment samples were collected are in the "zone of high ground-water flow" and are thus "clearly contaminated by more recent humic acids" (Goodyear 1999:10). The remaining two samples were taken from "discrete alluvial layers" that lie immediately below the terrace and produced dates of 20,860± 90 ^{14}C yr B.P. and 19,280 ± 140 ^{14}C yr B.P. (Goodyear 1999:10).

In addition to the radiocarbon samples, four OSL samples were taken: three samples were obtained from the gray silty gray Pleistocene Terrace and a fourth was taken from the hilltop. Lab results provide three dates for the terrace unit and are 31,000 ± 4000 cal yr B.P., 35,000 ± 3,000 cal yr B.P. and 37,200 ± 3300 cal yr B.P. These dates are considered to reflect maximum ages for the deposits in this unit, and may be as much as 15,000 years too old (Goodyear 1999:11). According to the Geoscience team, the dates more likely reflect ages of 16,000, 20,000, and 22,000 cal yr B.P. respectively. The fourth OSL sample from eolian sands on the Topper Hillside returned a date of 40,000 cal yr B.P.

In addition to the 48 square meter block excavation, at least three additional subsurface investigations were carried out in 1999. One of these excavations was undertaken adjacent to where the initial pre Clovis discovery was made in 1998. A 4m x 2m block was excavated to a depth of 170cmbs in units N242 E130 and N242 E132. At least two distinct lithic working surfaces were identified and include an Archaic biface cache (labeled as F48) situated between

98.30–98.40m (Figure A23–1, A24–1) and a linear distribution of lithic artifacts and debris situated at the base of the Pleistocene Sands from elevation of 96.90–97.05m. In the Pleistocene Sands of unit N242 E132, a pre Clovis lithic cluster (labeled as F 49) was observed in close proximity to Feature 23, which had been identified the prior field season. A plan-view of this unit and associated Feature 49 is presented in Figure A23–2. In addition to the 4m x 2m block excavation, two additional 2m x 2m units were excavated at the northern end of the Topper Site in 1999. These units include N268E132 and N282 E132. An examination of the contents of these units revealed fewer artifacts than were recovered from other areas of the site in 1999.

2000 Excavations

In May 2000, two new excavation blocks were opened at Topper. A 4m x 8m block was opened extending from N242 to N244 along the E128 to E136 gridlines, and a 2m x 4m block excavation opened along the N244 grid line from E146 to E150 (Goodyear 2000). A map showing the extent of the 2000 field excavations at Topper is presented in Figure A22–3. Both of these block excavations were situated to the north of the 1999 48 square meter block excavation illustrated at the bottom of Figure A22–2. The 4m x 8m block was an expansion of the 4m x 2m block that was originally excavated in 1999. Each of these units was excavated to the base of the Pleistocene Sands, at the contact with the Pleistocene Terrace. In the 4x8 block, excavation proceeded in 2m x 2m units in 10cm arbitrary levels to 100cmbs. At this depth excavation continued in 1m x 1m quads with 5cm levels, the same procedure conducted for prior block excavations however only that the transition to quads commenced at 100cmbs rather than 70cmbs. Figures A23–3 and A23–4 present the vertical distribution of artifacts from the 4m x 8m block excavation. An OSL sample from the base of the Holocene colluvium at 100cmbs (97.55m) returned a date of 13,000 to 14,000 cal yr B.P. (Goodyear 2000). This block excavation

lacked evidence for diagnostic Clovis artifacts. However, a "transversely flaked and basally-thinned biface blank" was recovered and was classified as Clovis in origin based on the associated date (Goodyear 2000:18). Excavation produced little evidence that flooding had disturbed the archaeological deposits, indicating that the "Savannah River had already down cut to its present base level" at some point prior to the time these materials were deposited (Goodyear 2000:22). Continued excavation in this block excavation below 100 cmbs revealed an absence of river-stained chert, a form of chert that was commonly exploited by the Clovis inhabitants of the site, and that has been inferred to have a different history than the upland chert that outcrops along the hillside.

In the 2m x 4m block, excavation commenced in 10 cm levels from the ground surface to the base of the Pleistocene Sands, terminating at the contact with the terrace at 220 cmbs (Goodyear 2000). The top 140 cm of sediments of this block were preliminarily identified as slopewash sands, while fine-textured pedogenic layers and lamellae were prominent at the base of the Pleistocene Sands (Goodyear 2000:19). The vertical distribution of mapped artifacts from the 2000 2m x 4m block excavation is presented in Figure A23–5.Very few formal tools were recovered from the Holocene deposits. However, excavations in this area indicate a substantial quantity of lithic materials came from the Pleistocene Sands. Most lithic artifacts recovered from the pre Clovis deposits in this block were preliminarily identified as flakes, debitage, or chert pebbles/cobbles and are discussed in greater detail in chapter 6.

Distinct clusters of chert cobbles and chipped stone debris were identified in two separate levels within the Pleistocene Sands. From 180–190cmbs, a circular cluster of cobbles was found in association with a number of chert cores and hammerstone fragments in the Southwest corner of unit N245 E149. This cluster was labeled Feature 67. Near the base of the excavation, a

second circular cluster of rocks and tested chert cobles was also identified in the extreme northeast corner of unit N245 E147 at 200cmbs, and was designated Feature 68 (Figure A23–7). At the base of the unit, concentrations of weathered chert boulders were encountered, similar in form to the concentrations identified in the 4m x 8m block. Goodyear has proposed that these boulders could be the original source of the reported pre–Clovis cultural deposits at the site (Goodyear 2000). Due to time constraints at the end of the 2000 field season, lithic materials that were partially excavated had to be left *in situ* resting on the terrace surface. The unit was subsequently covered with plastic and backfilled.

2001 Excavations

In 2001 archaeological excavations at Topper were carried out in three separate areas, resulting in the addition of 86 square meters of excavation to the site's cumulative total (Figure A22–4). The excavation blocks opened in 2001 include:

1.A 5m x 10m block opened up adjacent to the 4m x 8m block that was completed in 2000. This block began at the N236 E127 gridlines and extended to the northeast corner of unit N242 E137 with a 1m baulk on the south, east and west margins of the excavation. The vertical distribution of artifacts from the 5m x 10m block is presented in Figure A23–8.

2. A 4x6m block placed along the E102–106 grid line from N230–N240.

3.Ten 1x2m units that formed a U and served as a baulk for the 5x10 block excavation. These units were placed on the southern, eastern and western margins of the 5x10m block (Figure A22–4).

The 5m x 10m block excavation extended the coverage of the pre Clovis units by 32 contiguous square meters to the south of the 2000 block, and resulted in the discovery of additional spatially clustered chert concentrations atop the alluvial terrace surface (Goodyear

2001). In this case, removal of the 5m x 10m block was conducted using an alternative excavation strategy that differed from prior block excavations. Rather than removing sediments in arbitrary 10cm levels from ground surface, the top 70cm was strategically removed in two separate levels. Level one was a road surface with varying elevations, and was excavated through the base of the plow zone. Materials were screened for diagnostic artifacts, which were picked out of the screen in the field and the remaining non-diagnostic material collected in screen bags. Level two of the 5m x 10m block was excavated from the base of the plow zone to a depth of 70cmbs, and was screened for diagnostic artifacts in a similar fashion as the upper level above. These two levels contained diagnostic artifacts associated with both Woodland and Late Archaic cultures of the region. Artifacts were only mapped when encountered *in situ*. Subsequent excavation below level two commenced at 70cmbs (98.00m), and continued in 10cm arbitrary levels to the top of the Pleistocene Terrace at 96.60m.

All sediments below 98.00m were dry screened through 1/8 inch screen mesh and the screened materials were collected for future analysis. Materials below 97.20cm were water screened. As a result of the larger level size for the upper meter of excavation of the 5m x 10m block, the potential was significantly greater that *in situ* artifacts would be missed in original contexts and subsequently recovered from the screen.

Artifacts classified as cultural materials were found throughout the 5m x 10m block excavation in 2001. A profile map showing the distribution of plotted artifacts and associated features is presented in Figure A23–9. A significant Middle to Late Archaic (MALA) presence was identified from the base of level two and extending into level three from approximately 60–80cmbs (98.10–97.90m). Below this a Taylor occupation was identified. Dating to about 11,500 cal yr B.P. (Anderson and Sassaman 2012), Taylor points are a variety of Early Archaic side-

notched points that are commonly recovered across the Atlantic Coastal Plain of the Southeast. At Topper, the occurrence of such points suggests an occupational surface toward the bottom of Holocene-age colluvial slopewash sands that conforms to the slope of the present day ground surface. Post-dating Clovis by some 1500 years, the Taylor occupation at Topper represents the first substantial occupation after Clovis, although the 1985 recovery of a Suwannee point suggests a discernable Late Paleoindian occupation as well. Figure 4–9 presents the vertical distribution of Taylor points recovered from the Terrace excavation at Topper. Based on the spatial patterning of these points on a common surface within the site grid, the assemblage likely reflects an old stable surface based on the co-coccurence of a Clovis point from the same approximate level. In addition to the Taylor assemblage, at least two distinct clusters of Paleoindian artifacts were identified and are presented on the plan-view map in Figure A23–9.

The results of the 2001 5m x 10m block pre Clovis excavation produced at least four lithic clusters (Figure A23–8). These clusters were subsequently given feature numbers and include Features 77, 80, 82, and 83. The pre Clovis features were well defined and typically consisted of numerous lithic items that, under preliminary observation, exhibit attributes consistent with chipped stone debris (Goodyear 2001). A description of the potential pre Clovis tool assemblage recovered from this block excavation is presented in Appendix 8.

Apart from the 5m x 10m block excavation, two additional block excavations were opened in 2001. Excavations were conducted along the southern, eastern, and western perimeter of the 5x10m block excavation and served as a baulk that would prevent collapse of the sandy

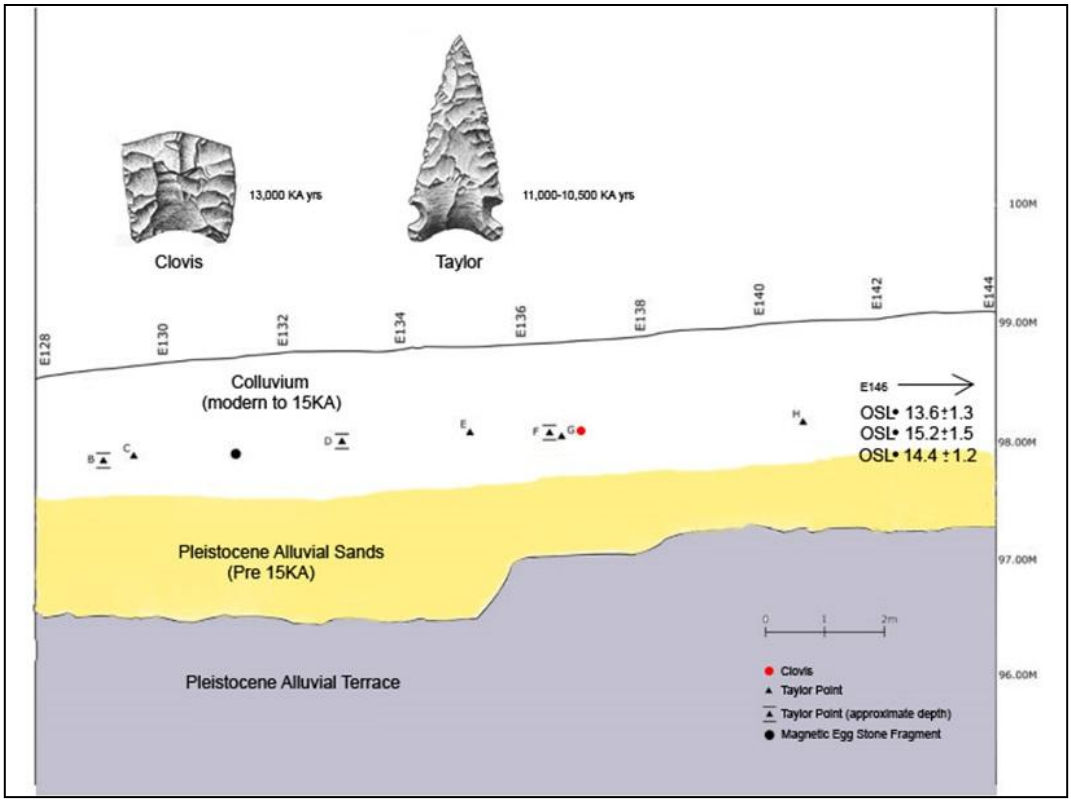


Figure 4–9
Spatial distribution of Clovis and Taylor points from the Holocene and Pleistocene Terrace at Topper. (Image courtesy Albert C. Goodyear).

profile wall as excavation progressed deeper. In total, ten 1m x 2m units were placed and were excavated to a depth of 97.80m (approximately 110cmbd) to the base of the Clovis deposits. To the west of the 1m x 2m units, a 4m x 6m block was excavated to 97.00m or 113cmbd, the base of the Clovis zone. Excavation below the Clovis zone was not undertaken in this block. The interpretation that this area served as a lithic workstation is based primarily on the diversity of tool forms and associated manufacture debris recovered in close proximity (Figure A23–10).

In addition to the block excavations, geoarchaeological research at Topper in 2001 was undertaken to date the pre Clovis deposits at the site with greater precision. One problematic issue compounding the dating of these deposits was the general lack of organic material suitable for radiocarbon dating from the pre Clovis zone (Goodyear 2001). In 2001 a sample of organic carbon was recovered from the base of the Pleistocene Terrace at 4.25 meters below surface from the base of BHT 14, which was excavated in Units N244 E130 and N244 E132. The organic material was submitted for analysis, and returned a calibrated date of 45,700 cal yr B.P. (CAMS–78602). Because this date falls at the extreme range of the ability of radiocarbon dating, the date is in all likelihood radiocarbon dead and thus provides a minimum date for the Pleistocene Terrace (Goodyear 2001:19). In addition to this date, BHT 14 also provided remarkably well preserved plant remains from a “black gumbo clay” encountered at 5m below ground surface (Goodyear 2001:20). Samples of this material were collected for examination. Materials observed from this clay by Dorothy Peteet were found to include hickory nuts, grasses, and pine needles, among other macrobotanicals (Peteet n.d.). Similar materials were recovered from the base of BHT 17 from a vibracore in 2012. Two samples of macrofossils collected from the

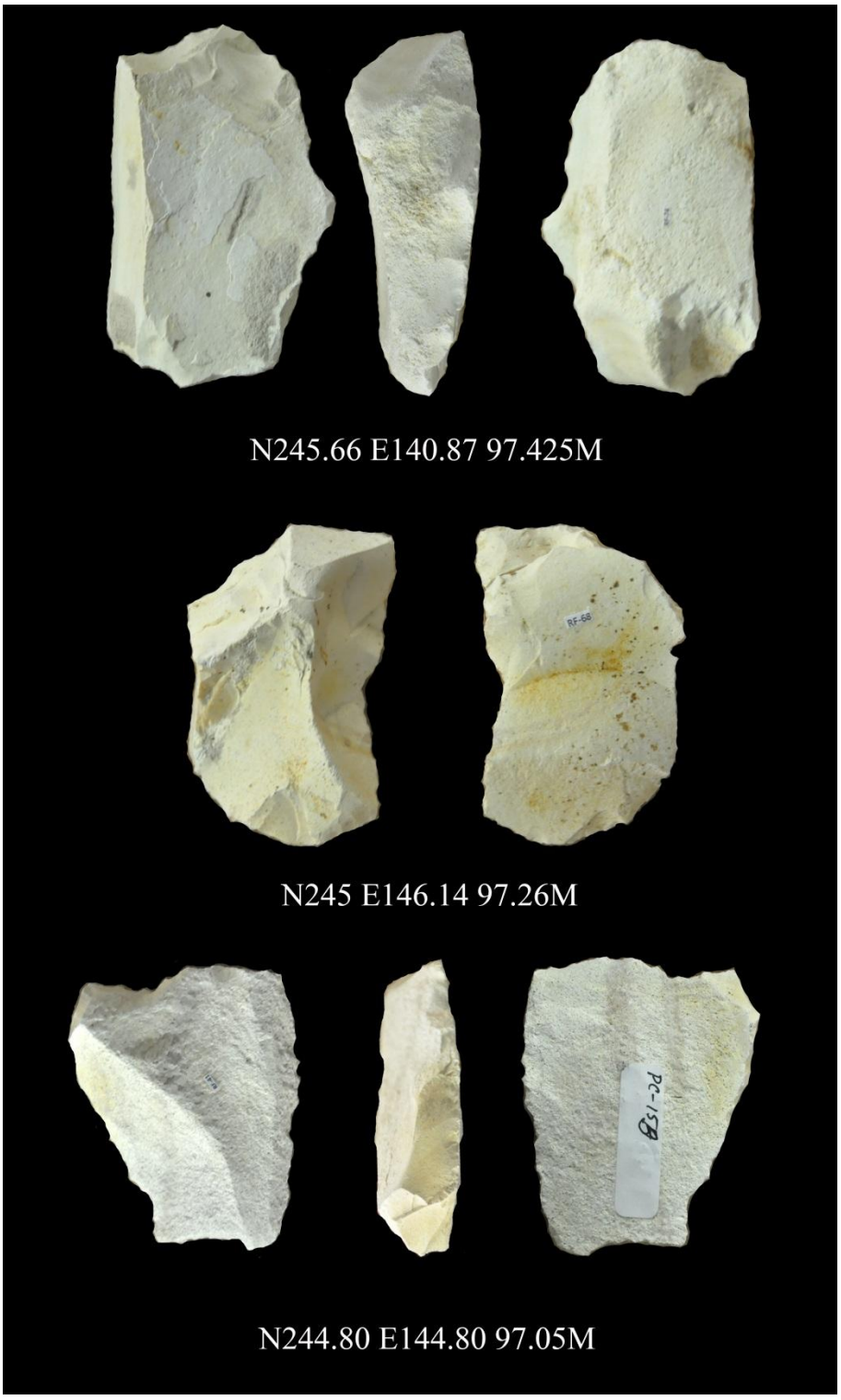


Figure 4–10
Possible pre Clovis flake tools from the 2002–2012 5m x 9m block excavation from the Topper Site (38AL23).

Pleistocene Terrace were dated by Tom Stafford and returned 14C dates of >54,000 and >55,000 yr B.P. indicating that they were C14 dead (Goodyear 2001:20).

2002 Excavations

The goal of the 2002 field season was to gather additional excavated materials from the pre Clovis zone near the 5m x 10m block, and to expand the search for evidence of Clovis materials along the northern perimeter of the site (Goodyear 2003). The location of the 2002 field excavations at Topper are presented in Figure A22–5. During the field season a new 5m x 9m block excavation was opened up immediately to the east of the 2000 4m x 8m block. This excavation was situated along the N242–N246 and E136–E144 gridlines, and was taken to the top of the Pleistocene terrace at 97.35m. The top 70cm of sediments were excavated in two levels. The first level included the plowzone (0–20cmbs) while level two extended from 20–70cmbs and included Mississippian, Woodland, and Middle to Late Archaic period cultural materials. While materials were screened in 1/4inch screen mesh, only a representative sample of the general screen materials was saved. These materials were excluded from the study sample.

The results of the 5m x 9m block investigation revealed a minor Woodland and Mississippian component, a substantial Middle to Late Archaic component from 35–50cmbs dominated by numerous hafted bifaces, a Paleoindian component approximately 1 meter below the ground surface consisting of numerous unifacial and non-diagnostic bifacial tools from Pleistocene-age sediments, and a possible pre Clovis assemblage stratigraphically separated from the Paleoindian deposits and consisting of spatially clustered concentrations of chert cobbles and pebbles and associated flake tools within 25cm of the top of the Pleistocene Terrace. Figure 4–10 presents a sample of the flake tools recovered from the 2002 5m x 9m block excavation. The vertical distribution of artifacts from the 2002 5m x 9m block excavation is

presented in Figure A23–11, and shows two distinct deposits (the Holocene and Clovis deposits, and an underlying pre Clovis assemblage) separated by archaeologically sterile sediments. The distribution of mapped artifacts from the 2002 5m x 9m block excavation is presented in Appendix 15.

The pre Clovis deposits from the 5m x 9m block excavation are characterized as spatially clustered associations of chert cobbles, cores, and microlithic tools including small blades, flake tools and bend breaks. A sample of the pre Clovis tools are presented in Figures A35–4 through12. The lack of bifaces distinguishes the pre Clovis zone from the overlying Clovis and Archaic materials. The pre Clovis lithic deposits in this area of the site range in depth from 97.75m to 97.10m, the contact with the Pleistocene Terrace. However, by the completion of the 2002 field season, excavation in the 5m x 9m block had only reached within 15cm of the top of the Pleistocene Terrace surface.

Apart from the 5m x 9m block excavation, a substantial Clovis lithic workstation was also encountered in two separate excavation blocks in 2002: one occurring in N267–271 and E134–138, and a second from N 284–N288 and E134–140 (Figure A22–5). The Clovis artifacts were identified based on the co-occurrence of outré passé flakes recovered in association with the base of a single fluted point. As such, the lithic deposits were interpreted as a Clovis workstation where biface and blades were produced and subsequently discarded after use.

In the N267–271 and E134–138 2002 block, excavation below the Clovis zone commenced as a 2m x 2m unit (N267 E135) to the top of the Pleistocene Terrace. The purpose of this excavation was to test the proposition that a pre Clovis occupation was present north of the primary 5m x 9m block excavation, and upstream from all other identified materials of such age (Goodyear 2003). Four square meters of sediments were excavated down to the Pleistocene

Terrace, with little evidence for artifact-bearing deposits below the Clovis levels, contrasting markedly with the high artifact densities encountered in the primary block excavation ca. 20 m to the south.

In 2002, the Topper Site was visited again by a team of geologists led by Mike Waters, John Foss and Tom Stafford. A backhoe trench was excavated to help "clarify" if a potential weathered "red" terrace remnant identified the previous field season at the northern end of the site was related to the Pleistocene Terrace (Goodyear 2003:25). This trench, labeled BHT 15, was placed along the N284 gridline and proceeded 50m up the hillslope to an elevation of 103m. The results of the geoarchaeological investigation for this season revealed that the weathered Terrace remnant (Figure 4–11) was a paleosol that "separated the Holocene colluvium" from the underlying Pleistocene alluvial sediments (Goodyear 2003:25). John Foss, soil morphologist, concluded that the weathered paleosol in this location had taken 2,000 to 4,000 years to form (Goodyear 2003:25). Toward the southern end of BHT15 the paleosol decreases in thickness, eventually terminating where the Holocene colluvial sediments rest atop Pleistocene white sands.

The excavation of BHT15 revealed a significant Clovis presence at the bottom of the Holocene colluvium. Artifacts identified from this trench include early stage prismatic blades, blade core preparation flakes, and outré passé flakes. The majority of the artifacts encountered from BHT 15 appear to reflect early stages of the lithic reduction continuum. Therefore this region of the site was interpreted as a chert processing center where lithic materials were roughed out from the adjacent chert quarry and initially reduced to manageable forms.



Figure 4–11
Results of BHT 15 2002 showing a Paleosol
above the White Pleistocene Sands that separates the Holocene colluvium from the underlying Pleistocene alluvial sediments. (Image courtesy Albert C. Goodyear).

2003 Excavations

Excavations at Topper in 2003 centered on three specific tasks: the completion of the 2002 5m x 9m block to the Terrace surface, the opening of a 6m x 6m block excavation, and a series of five 2m x 2m units along the northern perimeter of the site. The locations of these excavations are highlighted on the map in Figure A22–5. The provenience and artifact classification for all mapped and screen artifacts recovered during the 2003 field season are presented in Appendix 15 and in Tables A15–10 and A15–11.

In 2003, excavation continued in four of the 2m x 2m units from the 5m x 9m block excavation begun the prior year. These units were N242 E140, N242 E142, N244 E140, and N244 E142. In these units excavations centered on the removal of the remaining 20cm (in four 5cm levels) of Pleistocene Sands to the contact with the Terrace. Of note, six chert tools were recovered from these units, and at least two were found in close proximity to a large chert boulder resting at the contact of the Pleistocene Terrace. These items, according to Goodyear (2005), are irrefutable evidence of human agency. A single feature was identified in 2003, a lithic cluster designated Feature 90 and composed of chert cobbles, flakes, a utilized flake, cores, a single bend break, and a quartz hammerstone fragment. Feature 90 was encountered near the contact with the Pleistocene Terrace surface at elevation 97.30–97.25m. A profile and plan view map of the 2003 5m x 9m excavation shows the spatial distribution of mapped artifacts associated with Feature 90 (Figure A23–13). In addition to Feature 90, a second lithic cluster was encountered in unit N244 E142 between 97.30–97.25m that was not assigned a feature number. Two of the chert flakes associated with this lithic cluster were found to refit to scars on the surface of the adjacent boulder classified as an anvil (Figure 4–12).

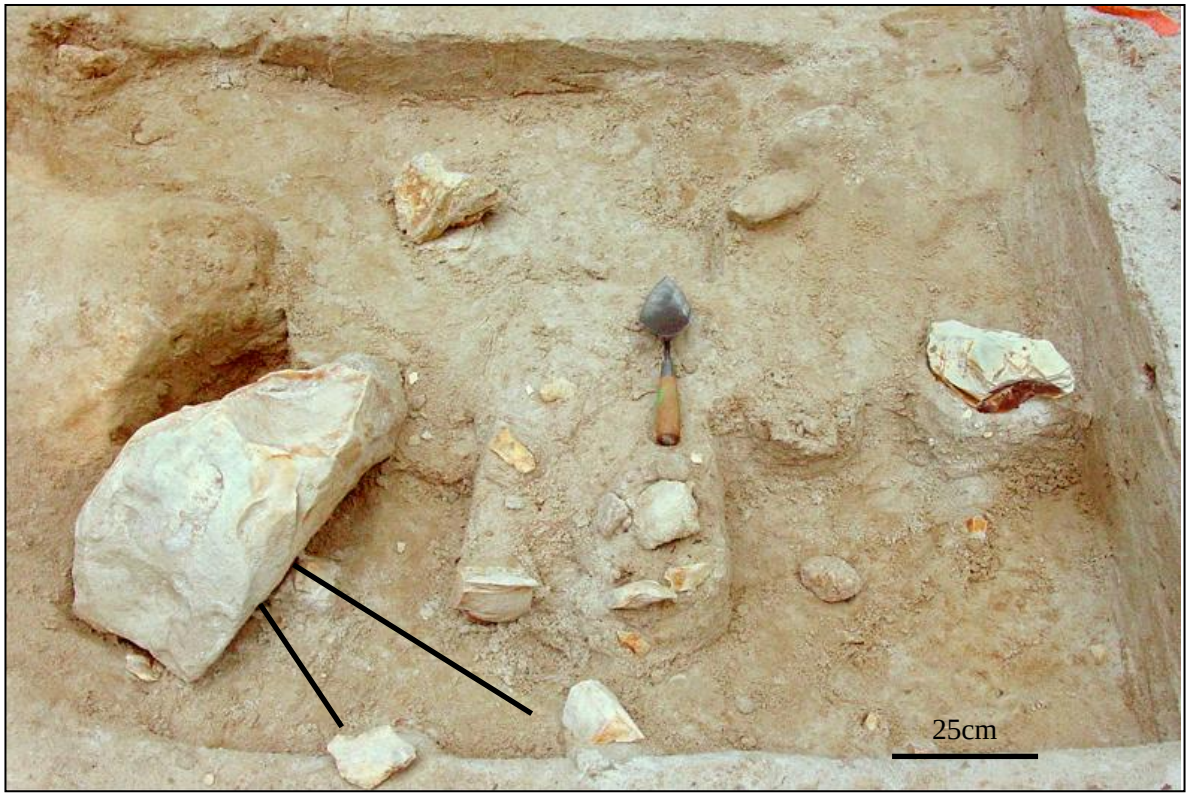


Figure 4–12
Chert cluster identified during 2003 5m x 9m block excavation at Topper. Cluster from unit N244 E142 level 19 (97.35–97.30m). Highlighted artifacts refit to chert boulder at left. Association not assigned a feature number. (Image courtesy Albert C. Goodyear).

At the conclusion of the 2003 5m x 9m block excavation, chert artifacts and lithic concentrations were observed embedded in the top of the unexcavated Pleistocene Terrace at approximately 97.05m (Goodyear 2005). Consequently, a backhoe trench (BHT 17) was excavated into this terrace at the base of the 5m x 9m block in July of 2003 (Appendix 14). Prior to the excavation of this trench, the terrace surface was prepared by removing the uppermost 50cm of sediment using conventional excavation methods. Units prepared for the backhoe trench excavation include N242/N245 to E140/E143 in 1m x 1m units. The fill recovered from this excavation were water screened using 1/8 inch mesh. BHT17 was subsequently excavated in two levels from ca. 97.00–96.60m, and from ca. 96.60–95.65m .The footprint for these excavations extended from N243 to N245 along the North gridline and from E140 to E143 along the East gridline. A profile map of BHT 17 is shown in Figure A14–5. As excavation proceeded, all sediments and their contents were collected and each level was screened separately. When lithic items were encountered they were mapped using a transit and stadia rod (Goodyear 2005:9). However, most items were recovered from the screen. The distribution of lithic items recovered from BHT 17 is presented in Appendix 15. The materials recovered from this excavation yielded additional chipped stone debris. Goodyear asserted that these materials exhibit lithic attributes consistent with human agency (Goodyear 2005).

In addition to the 5m x 9m block excavation, a new 6m x 6m block excavation was opened in 2003 and along the N270 E152 grid line to N276 E158. The goal of this excavation, along with another block 16m to the north, was to determine if there are similar patterns in the distribution of pre Clovis materials along the northern perimeter of the site. In the block, excavation began at ground surface (ca. 99.30m) and continued to the base of the Clovis deposits. Clovis artifacts encountered in this block are interpreted, based on observation, to

represent early stage lithic reduction and core preparation, as the majority of lithic cobbles were relatively large and still retain cortex (Goodyear 2003). The natural source of this chert was identified by Goodyear (2005) as occurring up the hillslope15 to 20 meters "where it had been exposed by erosion in previous millennia" (Goodyear 2005:6). In total, more than 700 individual lithic items were identified and recovered from the Paleoindian levels in this block, although the cortical pebbles and debris that was uncovered was simply collected and bagged by 1m squares rather than individually mapped. According to Goodyear, "due to the amount of time available and the dense nature of the deposit, this was the compromise solution for collecting all the material off the floor" (Goodyear 2005:4). As a result, a map of the artifacts recovered from this unit would be misleading given the quantity of piece plot data missing from Clovis deposits. An examination of the level records also failed to identify the precise number of artifacts recovered from the screen from this excavation. Figure 4–13 illustrates the dense occurrence of Clovis artifacts in the 2003 6m x 6m block excavation.

Immediately beneath the Clovis deposits, the excavation area was reduced to a 4m x 5m block (N272 E152 to N276 E157) and excavation continued through a "red" paleosol (Goodyear 2005:4). Other than quartz pebbles and "chemically weathered cortical material," the paleosol was sterile of archaeological materials within the 20 square meters, indicating an absence of human occupation between the Clovis and reported pre Clovis assemblage from the Pleistocene Sands (Goodyear 2005:5). Below the paleosol, excavation continued as a 2m x 4m unit (N274 E154) from 98.25m through white Pleistocene-age alluvial sands to the top of the Pleistocene Terrace at 97.00m. From the Pleistocene Sands, small flakes were recovered, some of which had bend break fractures consistent with those found in the primary 5m x 9m block (N242–N246 and E136–E144) excavated to the south in 2002–2003. At the conclusion of excavation, a backhoe



Figure 4–13
Distribution of Clovis artifacts from 2003 6m x 6m block excavation at the Topper Site. (Image courtesy Albert C. Goodyear).

trench (BHT16) was excavated along the southern terminus of the block so that the profile of the units could be drawn and examined in greater detail.

To the north of the 6m x 6m block excavation, a third excavation centered on expanding the 2002 N284– E134 block (Figure A23–7). Five 2m x 2m units were placed extending from N284 E132 to N288 E136. Excavation began at 98.50m and concluded at the base of the Holocene Colluvium at 97.30m. Excavation commenced in 10cm arbitrary levels to a depth of 97.90m and materials were screened using 1/4inch mesh. At 97.90m, excavation was conducted in 5cm. levels in quads, with all materials screened in 1/8 inch screen mesh. Cultural materials associated with Woodland and Archaic periods were recovered from the Holocene deposits. A possible Paleoindian assemblage was identified from the five 2m x 2m unit excavations. Although the base of a Clovis point was recovered from this area in 2002, no such items were recovered during the 2003 excavations.

2004 Excavations

In 2004 excavation on the Terrace at Topper was focused on three areas (Figure A22–8). These included: completing the 2002–2003 pre Clovis 5m x 9m block through the Pleistocene Sands to the top of the clay Pleistocene Terrace, and subsequent excavation of terrace sediments surrounding BHT 17; the excavation of a 4m x 8m block from N290 E132 to N292 E138; and the excavation of a series of eight-test units placed on the hillside slope where Clovis artifacts had been observed eroding from the base of a road bed. Because the results of the hillside excavations at Topper have been extensively documented and reported in a number of publications (Miller 2007; Smallwood 2010; 2012), the focus of this discussion will be on the excavation of the Pleistocene Sands and Terrace 5m x 9m block, where artifacts of potential pre Clovis origin had been documented in previous field seasons. However, a brief mention should

be made regarding the hillside and hilltop excavations as they are mapped on separate grid systems from the Terrace excavations. When excavations on the hillside were initiated in 2004, a new grid system was established. This was necessary, as at the time the hilltop portion of the site was still referred to in the site files as 38AL139. Over the course of the next three field seasons (2005–2007) at least three additional grid systems were established on the hillside. Each of these grid systems is highlighted on the map in Figure A22–9. The inclusion of multiple grid systems often led to complications in the recording, analysis, and comparison of spatial data regarding the site contents, since in some instances two or more units from different areas of the same site shared the same provenience grid number. With regard to the present study, when artifacts are presented in figures that derive from the hilltop or hillside, the provenience and grid system refer to that used when the artifacts were recovered.

The locations where excavations were carried out at Topper in 2004 are presented in Figures A22–8 and A22–9, and the distribution of the 2004 artifacts by tool type is presented in Appendix 15. Because of increased awareness in mapping protocol, fewer artifacts were recovered from the screen in 2004. This pattern continued through the 2012 field season, resulting in greater archaeological visibility for the site as a whole.

Initial excavations in 2004 centered on the excavation of partial and full 1m x 1m units surrounding the footprint of the exposed backhoe trench 17. During the first week of the field season a discrete lens of presumably charred material was observed within the exposed BHT and eroding from the margin near the base of excavation BHT17 (Figure 4–14). This lens was basin-shaped, was 50cm in width by 8cm in depth, and was located at 95.25m, 3 m below ground surface at grid coordinate N245.00 E141.00. This charred lens was designated Feature 91. Removal of a sediment sample from this lens resulted in the discovery of a single thermally

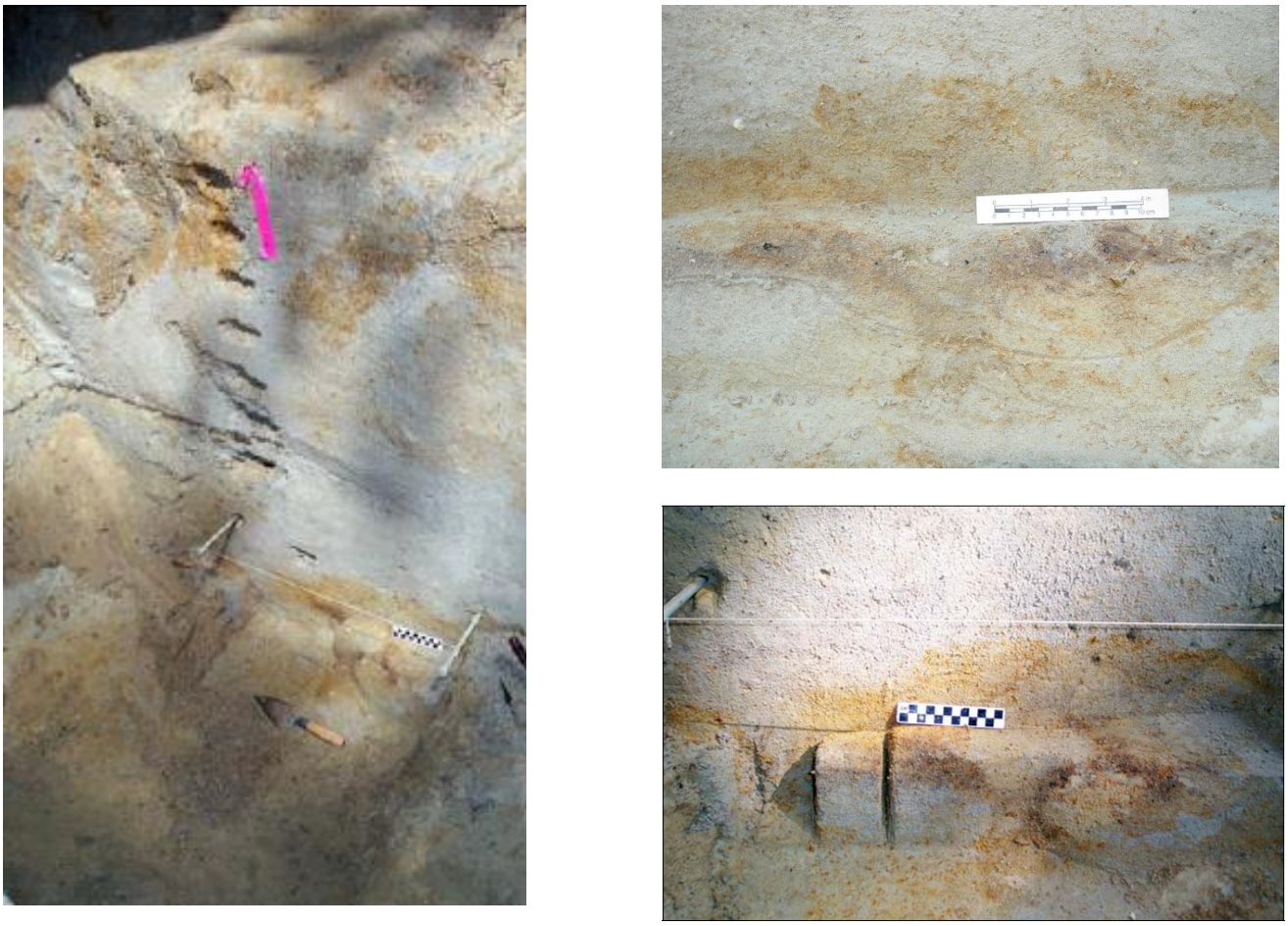


Figure 4–14
Feature 91 at the base of BHT 17. N245.00 E141. At left; Profile wall of BHT 17 above F91 where sediment samples were obtained. Top right: Presumed charred lens with associated chert flake *in situ* at 95.25m. Bottom right: Feature 91 bisected for analysis

altered chert flake fragment, recovered from within the charred sediment (Goodyear 2005) (Figure 4–15). A sample of the organic materials associated with Feature 91 was sent for radiocarbon dating and returned dates of 50,300 ^{14}C yr B.P. (UCIAMS 11682) and 51,700 ^{14}C yr B.P. (UCIAMS 11683) (Waters et al. 2009). Figure 4–16 illustrates a sediment sample from Feature 91 showing presumed charred materials in the sediment.

Sarah Sherwood, a geoarchaeologist from the University of Tennessee, was contacted to conduct a micromorphological analysis of samples from Feature 91. A goal of this study was to evaluate whether Feature 91 was a prehistoric hearth, or a natural deposit" (Sherwood and Goldberg 2006). If the feature was in fact a product of human agency then there should exist evidence for "charcoal or some other fuel that show evidence of burning, burned sediment, or micro-artifacts (Sherwood and Goldberg 2006:3). The analysis found that the reported lens was composed primarily of woody plant fragments that had undergone humification as opposed to burning (Sherwood and Goldberg 2006) (Figure 4–17). Furthermore, there was no evidence of micro-artifacts or indication that the sediment and surrounding matrix had been altered by heat. Therefore, apart from the isolated chert flake within the context of the humified lens, the results of this study offer no "evidence that the contents of Feature 91 were tied to human activity" or fire (Sherwood and Golderg 2006:19).

With the discovery of artifacts of potential human agency within the Pleistocene Terrace, a 2004 controlled excavation was undertaken of the terrace sediments surrounding BHT 17. This excavation began at the top of the terrace at 97.35m. Three full (N242 E140 SE, N242 E140 SW, N242 E142 SW) and one partial (N242 E140 NE) 1m x 1m meter units were placed around the margins of the trench and within the grid system. A plan-view map of the terrace excavations from 2004–2012 is illustrated in Figure A22–12. Excavations in this area were taken

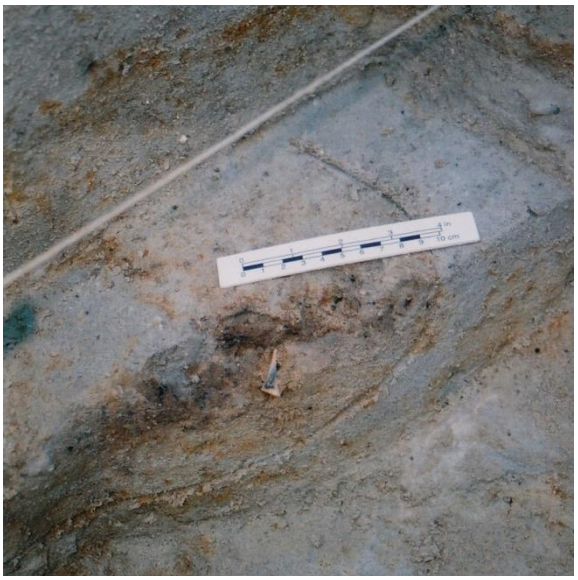




Figure 4–15
Presumed chert flake *in situ* associated with Feature 91. Flake recovered at elevation 95.25m at N245.00 E141.00. (Image courtesy Albert C. Goodyear).



Figure 4–16
Sample of the organic materials from Feature 91 (N245.00 E141.00 95.25m. (Image courtesy Albert C. Goodyear).

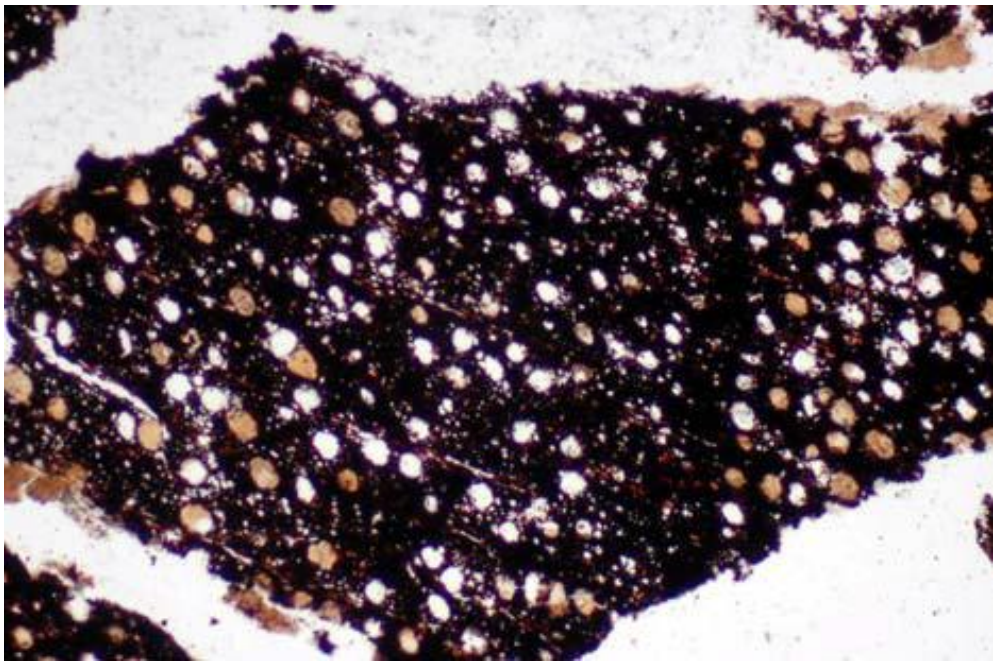


Figure 4–17
Photomicrograph showing unburned woody fragment from Feature 91 recovered from N245.00 E141.00 95,25m. Width of field in photomicrograph = 0.95 mm (Image courtesy Sarah Sherwood).

to 96.60m by the end of the 2004 field season. The mapped artifacts are presented in Table A15–13. Within these units, a cluster of lithic artifacts was mapped, the majority of items occurring between 96.90–96.80m (see Table A15–12 for an image of this cluster). These lithic items were pedestalled so as to gain a better perspective of the special integrity of the terrace deposits, but were not assigned a feature number. These artifacts were preliminarily identified as flakes, worked chert cobbles, bend break flakes, flake tools, cores, and weathered chert cobbles (Goodyear 2005:6).

In 2004 a 4m x 8m excavation block was opened at the northern perimeter of the site along the N290 and N292 gridlines and extended to the east along the E132 to E138 gridlines. This block served as an expansion to the north of the five 2m x 2m units that were opened during the 2002 and 2003 field season. Unit excavations began at 98.70m and were taken to a depth of 97.30m, at the base of the Pleistocene Sands. Very few Woodland and Archaic artifacts were recovered from this block as evidenced by the profile map in Figure A23–15. Similar to the discoveries in this area in 2002, a dense Clovis floor was uncovered that is approximately 20cm in thickness and "overlain by relatively sterile" Holocene deposits (Goodyear 2005:7). According to Goodyear (2005:7), the Clovis occupation in this area of the site represents "habitation life" as craft activities are often associated with a diverse range of tool forms including unifaces. Since 2002, a total of 70 square meters have been excavated at the northern perimeter of the site, and have produced "one complete Clovis point base and five Clovis preforms" as well as a diverse range of tool forms including unifaces, scrapers blades and utilized flakes (Goodyear 2005:8).

2005–2012 EXCAVATIONS AT TOPPER (38AL23)

In 2005 excavations at Topper expanded with the formation of the Southeastern Paleoamerican Survey (SEPAS), and the hosting of a conference directed to presenting and evaluating the fieldwork to date (Goodyear 2014). One of the first objectives of SEPAS was the development and organization of a major archaeological conference held in Columbia, South Carolina, referred to as the Clovis in the Southeast Conference (Goodyear 2014). In October of 2005 the Topper Site was visited by archaeologists and members of the public who attended the conference. All excavation units from the Pleistocene Terrace excavation were prepared and exposed for display, and provided an opportunity for professionals, avocationalists, and members of the public to ask questions and discuss issues relevant to the potential pre Clovis occupation at the site.

Since 2005, excavations into the Pleistocene-age sediments at Topper have continued in four specific locations. These areas include excavations at the southern end of the Terrace surrounding BHT 17 from 2005–2009; excavations of Holocene and Pleistocene-aged sediments to the north of BHT17 from 2009–2012; excavations of the Pleistocene Sands in three 1m x 1m quads along the eastern margin of BHT17 in 2005 and 2011; and the excavation of Holocene and Pleistocene sediments from a 4m x 4m block 20m north of the primary pre Clovis excavation from 2010–2012. This latter excavation served as a control sample to test for the presence of pre Clovis outside of the initial 5m x 9m discovery location. The first three of the excavations described are presented in Figure A22–12 and the location of the fourth (4m x 4m block) is illustrated in Figure A22–10. In the sections that follow, the types of material culture and culture sequence encountered in these areas are provided for each field season.

2005–2009 Southern Pleistocene Terrace Excavation

The Southern Pleistocene Terrace excavation includes investigations conducted immediately adjacent to BHT17, where six 1m x 1m units and four partial units were placed along perimeter of the trench from 2005–2009 (Figure A22–12 highlighted in red). This area is an expansion and continuation of the Terrace units that were opened during the 2004 field season. These units were subsequently excavated to a depth of 95.35m by 2009. Goodyear (personal communication 2009) produced a profile map showing the spatial distribution of mapped artifacts in the units along the N242 E140–144 gridline, which he argues depicts three common surfaces or lithic manufacture zones within the Pleistocene Terrace (Figure 4–18).

This map is based on the vertical and horizontal spatial array of artifacts that Goodyear preliminarily identified in the field and lab. The analysis and ultimate classification of these artifacts was based primarily upon the presence or absence of detachment faces found on the piece plotted lithic materials. The present study reexamined these items in greater detail, and over a much larger sample, with analysis geared toward the observation of additional attribute states. The results are presented in Chapter 7.

In 2005 excavation at Topper centered on the controlled removal of sediments from partial units that had been impacted by the excavation of BHT17. An image showing ongoing excavation in partial units N242 E140 NW, N244 E140 SW, and N244 E140 SE during the 2005 field season is presented in Figure A25–25 and A25–26. Because these units were partial rather than full 1m x 1m units, excavation proceeded in 10cm levels rather than in the usual 5cm levels. The removal of these partial units was necessary to place BHT17 onto the site grid, and to allow for the expansion of additional terrace units to the south and east.

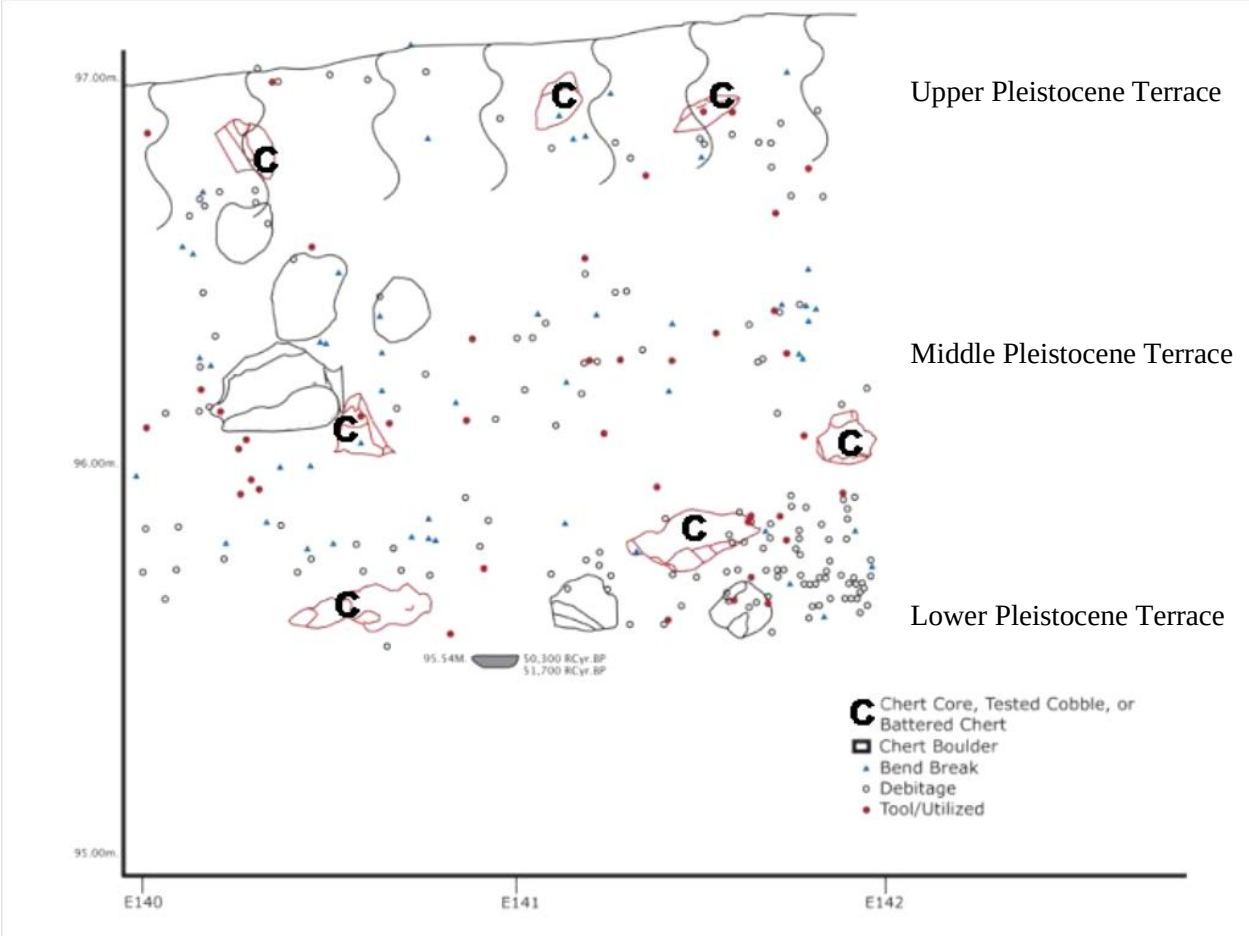


Figure 4–18
Profile map showing the spatial distribution of mapped artifacts from Pleistocene Terrace units N242E140SE, SW, and N22E142SW from 2004–2009. Profile viewing north (Image courtesy Albert C. Goodyear).

Near the base of the Pleistocene Terrace, the water table was encountered, requiring the continual removal of water from the excavation area with the aid of a pump. For excavation to proceed, it was necessary to pump water from the excavation area periodically and to trowel all contaminants from the excavation area before the resumption of field work. The fact that the deposits are frequently saturated implies that these postdepositional or taphonomic processes could have altered the stratagraphic integrity of the deposits. Numerous chert cobbles and boulders were encountered toward the base of the excavations, some of which appear to have flake removals from their surfaces. Most of the mapped items from these units consisted of cortical chert pebbles and debris (mapped items from these units are presented in Appendix 15). By the completion of the 2005 field season, all partial terrace units surrounding BHT17 had been excavated to 95.35m, arbitrarily classified as the base of the Pleistocene Terrace, as excavation into the deeper sediments was not possible owing to the encroachment of groundwater.

Excavation in three full 1m x 1m units, and one partial unit was carried out in the Pleistocene Terrace in 2006. These investigations include the continuation of excavation in the three full terrace 1m x 1m units started during the 2004 field season (N242E140 SE, N242E140 SW, N242E142 SW). Excavation in the E140 quads commenced at 96.80m and 96.60m respectively and were each taken down a total of 1m by the completion of the field season. Excavation in N242 E142 SW began at 96.80m and was taken down a total of 45cm by the season's end. Excavation of one new partial unit, N242E142NW, was carried out beginning at 97.20m and terminating at 96.85m. The upper portions of the Pleistocene Terrace in these units consist of strong brown sandy clay oxidation stains. By the completion of the field season, excavation in the three full Pleistocene Terrace units had passed through these oxidation features

and into grey clayey sand. The transition between the oxidation stains and grey clay is highlighted in Figure A25–27.

Two artifacts of note were recovered from the Pleistocene Terrace deposits in 2006. A bend break with a graver spur was recovered from the west profile wall of N242 E140 SW (N242.68 E139.93) at a depth of 96.82 m, and a chert core was recovered from the same unit at a depth of 96.05m. These artifacts are presented in Figure 4–19. Goodyear considers the core and bend break graver to be unequivocally the product of human agency. Moreover, the microscopic analysis of the bend break graver by Jim Wiederhold at Texas A&M found indications of use wear on this artifact. Although these artifacts occur within sediments that pre date Clovis, one goal of the present study was to determine if they have been redeposited into the older sediments from the overlying deposits.

In 2006 it became apparent that a structure or shelter was necessary to protect the site from the elements. At the close of each field season, the excavation block was partially covered with plastic until work continued the following year. During the offseason BHT 17 would often fill with rainwater as a result of long-term exposure to the elements. Such conditions led to considerable cleanup efforts, and risks of contamination prior to the resumption of excavation the following season. As a remedy for this situation, a permanent shelter was constructed over the Pleistocene excavation in the spring of 2006.

The goal of the 2007 field season was to complete unit N242 E140 to the base of the Pleistocene Terrace, and to continue excavation in the west half of N242 E142. One new quad, N244 E138 SE was opened in 2007 and taken to a depth of 96.55m by the completion of the field season. Towards the base of unit N242 E140 SE, a chert boulder with numerous detachment scars was uncovered (Figure A25–28). This boulder was exposed at the same general level where

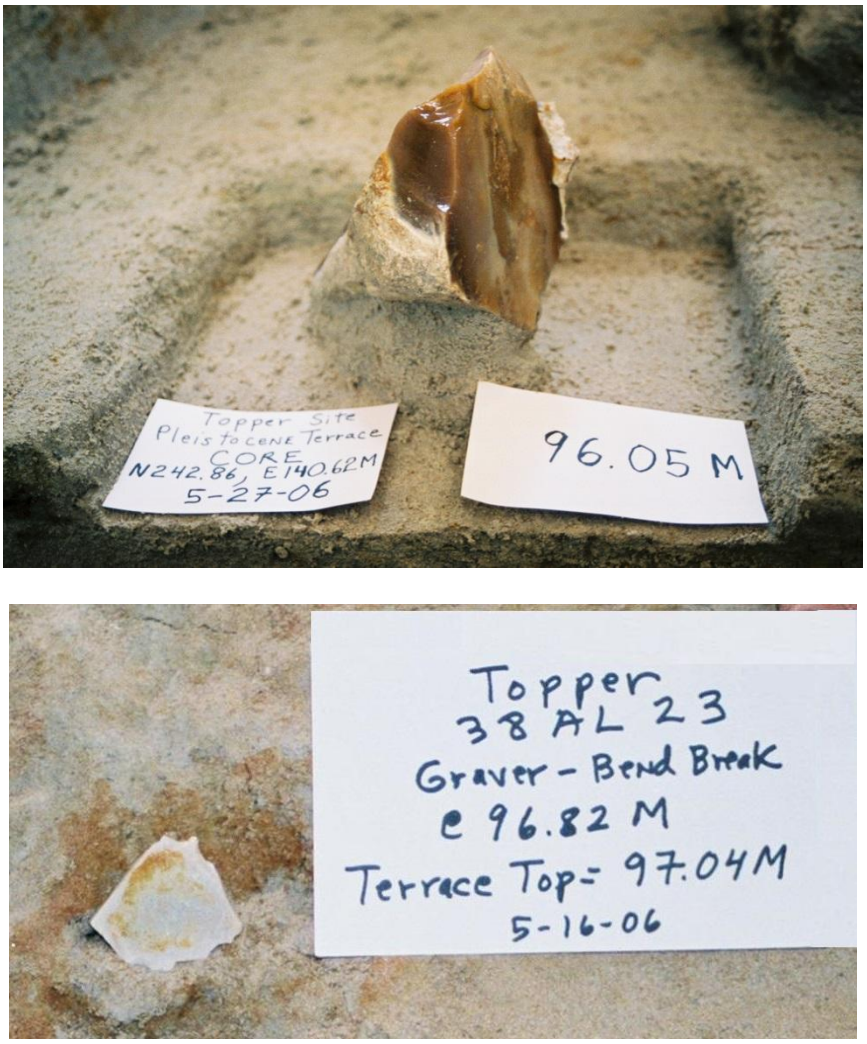


Figure 4–19
Lithic core (top) and a graver on a bend break (below) recovered from 2006 Pleistocene Terrace excavation at the Topper Site (38AL23), Allendale County, S.C. Bend break graver recovered at N242.68 E139.93 96.82m. Core recovered from N242.86 E140.62 at 96.05m. (Images courtesy Albert C. Goodyear).

numerous lithic cobbles had been identified in 2005 at the base of the Pleistocene Terrace. Interestingly, an abundance of lithic items were recovered in the level associated with the base of this boulder. This association appears to be the byproduct of testing chert cobbles or core/anvil reduction. However, these detachments may also form as the result of natural formation processes such as lithic collision in a fluvial environment, or natural weathering. To establish which of these processes is more plausible is one focus of this dissertation. By the conclusion of the field season excavation in N242 E140 had brought these units to the arbitrary base of the Pleistocene Terrace at 95.35m.

In the 2008 field season, excavation continued in the west half of unit N242 E142. The research goals for 2008 season were to complete the N242 E142 quads to the base of the Pleistocene Terrace. One new quad was opened from the Pleistocene Terrace this season (N244E138 NE). By the completion of the 2008 field season, these units had been excavated to a depth of 95.90–96.00m respectively. A cluster of broken chert cobbles and what appear to be flake detachments were uncovered in the northwest quad of N242 E142 at a depth of 96.00m. This cluster was not assigned a feature number. Two of the lithic detachments from this cluster were found to refit to the cobbles in association, implying that post depositional disturbances have not altered the original position of these materials. Moreover, the location of the flake, which is positioned near the base of the cobble it refits, implies that it was likely removed by some means of force rather than by natural weathering. However, no markings that are indicative of applied force on the flake exterior or interior surfaces were identified. The results of a refit analysis are presented in greater detail in Chapter 7 and in Appendix 26.

The goal of the 2009 Topper terrace excavation was to complete all the units in the Pleistocene Terrace that had been opened over the two prior field seasons. These units included

the west half of N242 E142, and the northeast quad of N242 E138. Most artifacts preliminarily identified from the Pleistocene Terrace deposits of these levels are bend breaks, broken chert cobbles, chert flakes, and flake fragments. Due to a rise in the water table this season, excavation in these units was terminated at a depth of 95.45m. After the completion of the 2009 field season, excavation ceased in the area immediately surrounding the footprint of BHT 17.

2005–2012 Northern Pleistocene Sands and Pleistocene Terrace Excavations

The second location where fieldwork has been carried out since 2005 lies immediately to the north of BHT17, and includes units extending from N246 E136–E142 and N248 E 136–142 (Figure A22–12 highlighted in blue). This area is referred to as the Northern Terrace block. During the 2005 field season, excavation of the Northern Terrace block consisted of the systematic removal of the Holocene Sands to the top of the Pleistocene Terrace at 97.15m. This 4m x 6m block excavation revealed evidence of intact stratified archaeological deposits encompassing the Woodland through pre Clovis culture chronology.

A sediment analysis conducted by Alan West provided evidence for magnetic microspherules in immediate post-Clovis sediments obtained from the west profile wall of N248 E140 (Figure 4–20). These results, along with similar findings at nearly 50 additional site locations throughout the continental U.S., have been used as evidence for an impact event that may have led to the onset of the Younger Dryas ca. 12,900 cal yr B.P. (Bunch et al. 2012; Firestone et al. 2007; Israde-Alcantara et al. 2012; Kennett et al. 2009; Kenzie et al. 2014). However, this hypothesis has been met with criticism and debate continues as to whether or not such an event actually occurred (Gill et al. 2012; Holliday and Meltzer 2010; Meltzer et al. 2014; Pinter and Ishman 2008a, 2008b; Pinter et al. 2011a, 2011b; Surovell 2009).

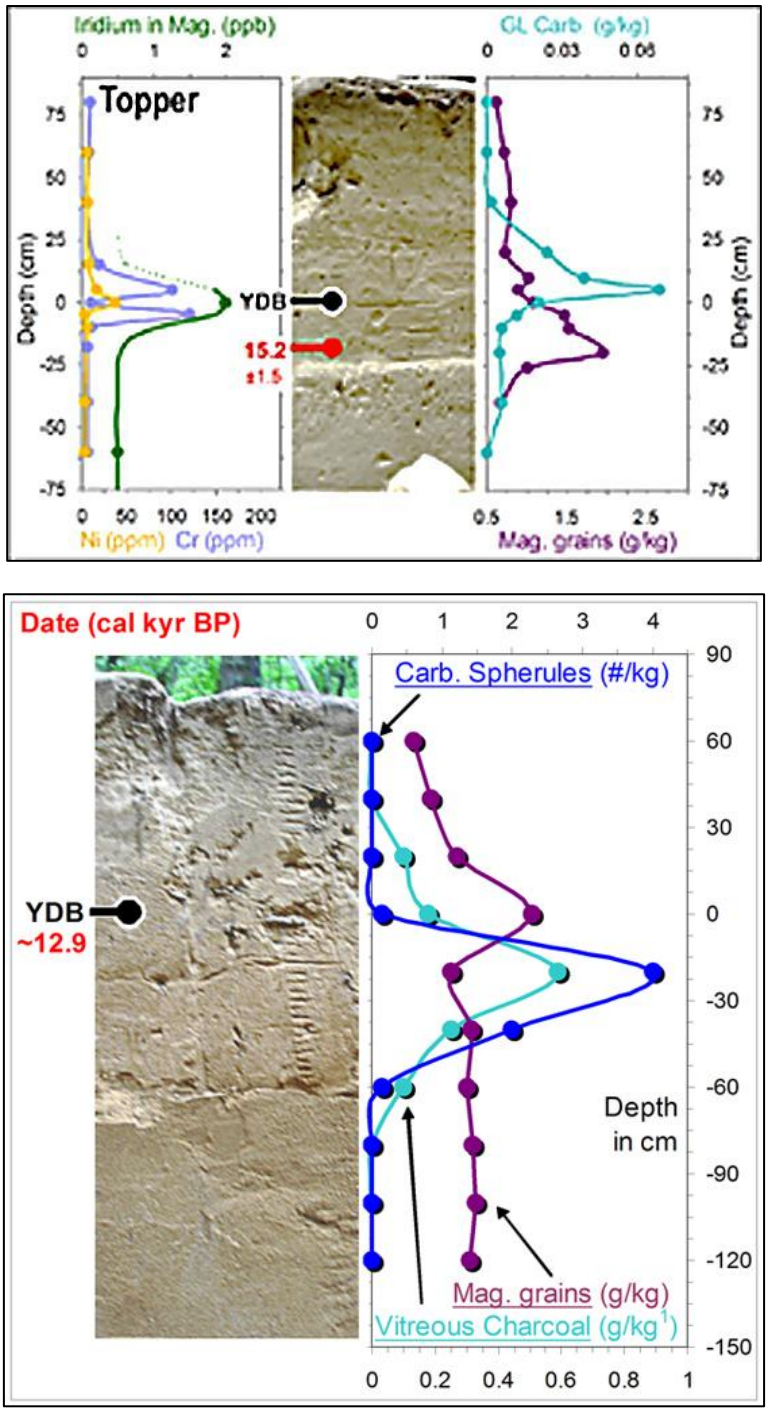


Figure 4–20
The results of a sediment analysis to test for evidence of microspherules at the top of the Clovis levels in the west profile wall of N246 E140. There is a spike in iridium, nickel, manganese, and microspherules/magnetic particles at the Younger Dryas boundary (Image courtesy Firestone et al. 2007; West, n.d.).

A number of interesting discoveries were made at Topper during the 2005 field season in the Northern Terrace block excavation. In N248E142 at a depth of 97.40m, a pedogenic feature was identified below the Clovis horizon and was left *in situ* for further examination (Figure 4–21). This feature was described by Waters et al. (2009) as brown, silty sand that exhibits evidence of soil development. Lamellae (accumulations of oriented silicate clay on or bridging sand and silt grains) were visible throughout this feature, possibly indicating periods of enduring landform stability resulting in pedogenisis. This section soil formation is more compact than the overlying sand but is not as dense as the underlying clay Pleistocene Terrace, although clay particles are present within its structure. Because soils form during periods of long-term landform stability, it was thought that this feature could have developed at some point in time prior to the Clovis occupation at the site. Subsequent excavation in N246 E138 and N246 E140 revealed additional evidence of this soil formation. When encountered, the feature and associated sediment structure was pedestalled and left in place for further evaluation. In some instances, lithic materials including potential flakes and tools were observed embedded in the profile wall of the feature formation.

In 2007 David Leigh of the University of Georgia visited the site to examine the material structure of the pedogenic feature in an effort to better establish its age and origins. The original hypothesis was that this formation reflects pedogenesis, or a period of long-term landform stability and soil formation between the period of time that the river deposited alluvium at the site, and the period of initial Holocene colluvial deposition. If such processes were in fact occurring, then the feature likely formed during a period or periods of long-term landform stability and that as a consequence, the feature acts to extend or bolster the difference in age between the Clovis and proposed pre Clovis assemblages at the site. However, according to



Figure 4–21
Pedogenic feature in Unit N246 E142, as initially exposed in 2005 top of feature at 97.97.75m, base of feature at 97.20m.

Leigh (personal communication 2008), other processes could also be responsible for the occurrence of the pedogenic feature. The feature could reflect the translocation of illuvial clay particles out of the overlying Holocene colluvium and into the deposits below, forming an illuvial deposit. For example Mostafa (2011) found that the depth of clay deposition is thought to be controlled primarily by pore size. When pores become so small they can constrict water flow, as the pore is partially plugged by illuviated clays from prior episodes of translocation. In such case, it would be a stretch to use the pedogenic feature as an actual temporal marker for defining the extent of time elapsed between the termination of alluvial deposition onsite and the subsequent beginning of colluvial deposition. This is because the feature would not have formed between these two events, but primarily alongside the subsequent period of colluvial deposition.

Another possible explanation for the formation of the pedogenic feature is based largely on its proximity and relationship with the underlying clay terrace. Clay particles may not only have been redeposited by leaching from the Holocene deposits but may also have been translocated upward from the terrace itself. Although movement of clay particles through soil and sediments have typically been accepted as being predominantly a downward phenomenon, Mostafa and Burras (2011:34) suggest that the movement of clay in such matrix can be multidirectional. In such a scenario, the formation of the pedogenic feature would have been aided by the upward translocation of clay particles from the Terrace. A third possible explanation follows that the Pleistocene Terrace surface acts as an aquatard, prohibiting the downward movement of leached clay particles past the Pleistocene Sands/Pleistocene Terrace boundary. Upon reaching this point, clay particles build up over time resulting in a feature that resembles a buried soil. Remnants of this pedogenic feature have also been uncovered in units to the west in quads N246 E139 SE and SW. Locations where this soil formation is lacking may reflect areas

that have been scoured by the Savannah River during flood stages when the river flowed as a braided system. In March of 2012, John Foss took additional sediment samples from the pedogenic feature in an effort to conduct a geo-and micromorphological analysis. The results of this study are still pending.

In 2009 excavation into the Pleistocene Terrace resumed in the Northern Terrace block with the placement of nine 1m x 1m units immediately beneath the 2005 Holocene/Pleistocene Sands excavation (Figure A22–12 highlighted in blue). The goal of this excavation was to expand the areal extent of the existing 2005 block, and to determine if similar patterns exist in the distribution of artifacts preliminarily identified as bend fracture flakes from the Pleistocene Terrace. For excavation to proceed and for safety, it was necessary to construct a foot bridge above the existing BHT17. It was also necessary to expand the excavation block further to the north by the removal of a 2m baulk along the N248 and N250 gridlines. Thus additional Holocene sediments were excavated and contents collected as a result of this project.

In 2009 Megan King examined a suite of lithics and lithic debris recovered from six of the 1m x 1m meter terrace units from the Northern Terrace block as part of her MA thesis (King 2012). A map of these units is presented in Figure 6–1. King found evidence for conchoidal flakes from the contexts that underlie Clovis in this area of the site. The results of this study are examined in greater detail in chapter 5. Through the 2012 field season these six units, plus an additional three1m x 1m units, have been taken to a depth of 96.50m, revealing additional lithic items of potential human agency. An image showing the extent of excavation in these nine 1m x 1m units through 2012 is presented in Figure A25–35. An examination of the number of mapped artifacts by type for the Northern Terrace excavation (Table A15–19) shows a similar incidence of bend break and flake tools from pre Clovis deposits.

2005 and 2011 Eastern Terrace Excavation

Beginning in 2005 excavation resumed in two 1m x 1m quads (N244 E144 SW, N242 E144NW) that had previously been excavated in 2002 and that originally served as the Eastern baulk for the primary 5m x 9m block excavation (Figure A22–12 highlighted in green). In 2002 the western half of these quads had been excavated to the base of the Holocene colluvium, forming a 1m x 2m block excavation. The goal of the 2005 field season was to carefully remove the Pleistocene sediments from these quads, extending to the contact with the clay Pleistocene Terrace. This entailed the removal of 13 5cm levels of sediments from a depth of 95.95m to 95.35m. Over the course of excavation, a total of 147 lithic items were mapped from these proveniences. The majority of items were classified as chert pebbles or chert flakes, although 10 artifacts were identified as chert tools from the pre Clovis Pleistocene Sands.

In 2011, excavation began on the eastern half of the 2005 1m x 2m block, starting at the ground surface and terminating at the top of the clay Pleistocene Terrace. The goal of this excavation was to expand the footprint of the exposed terrace surface to the east of BHT17. In total, 1302 items were three-dimensionally mapped revealing a dense lithic deposit in the locale. Most of these items were identified in the field as flakes, flake fragments, and chert pebbles. However, 161 items were classified as tools, the majority of which derive from the Clovis levels and from the base of the Pleistocene Sands. Artifacts recovered from Clovis contexts include utilized flakes, scrapers, and hammerstones. Items recovered from the Pleistocene Sands include bend breaks, utilized flakes, broken quartz pebbles and small blades. A single biface fragment was recovered but was not diagnostic. A single anvil stone was identified, resting at the contact with the Pleistocene Terrace, and was recovered in association with items classified as broken quartz pebbles and bend break flakes. No feature number was assigned to this lithic cluster.

2010–2012 4 x4m Block Excavation

In March 2010, a 4m x 4m block excavation was placed 12m to the north of BHT 17 along the N262 grid line, and represents the third area where fieldwork on the Holocene and Pleistocene Terrace at Topper has been carried out since 2005. Figure A22–10 shows the location of the 2010 4m x 4m excavation. The goal of this excavation was to test whether artifacts of potential pre Clovis origin occur to the north, and further upstream from the primary 5m x 9m block excavation where such artifacts have been identified. An absence of pre Clovis artifacts from this 4m x 4m block would indicate that (a) the Savannah River had limited influence on the deposition of the Topper pre Clovis assemblage across the site, and (b) that the chert outcrop situated above the floodplain also had limited influence on the deposition and formation of the hypothesized pre Clovis assemblage through natural weathering, breakage and subsequent transport of materials down–slope.

The results of the 2010 4m x 4m block excavation yielded an extensive and dense Early Archaic and Paleoindian lithic floor near the base of the Holocene colluvium. The distributions of the artifacts recovered from this floor are given in Appendix 15. These items were composed largely of primary reduction debris. Of note was the recovery of a Taylor point, Taylor perform, and hafted end scraper (Figure 4–22). Possible Clovis artifacts consisted of weathered blades and unifaces, although no tools diagnostic to the Clovis period were recovered from this unit. An initial examination of the lithic items from these deposits indicates that they are probably related to early stage biface and core reduction (D. T. Anderson 2011).



Figure 4–22
Taylor preform (left) and Taylor point (right) recovered from 4m x 4m block excavation in 2010 (N262 E144). (Image courtesy of Derek Anderson).

To examine the integrity of deposits in the unit, a spatial analysis of the lithic assemblage was undertaken (D. T. Anderson 2011). For this analysis, all lithic items were classified into three categories based on cortex. Categories of cortex included upland cortex, river stained cortex , and river–stained chert. This analysis operated under the assumption that individual occupation areas can be identified based on the clustering of different cortex types. The results of this analysis showed that river–stained and river stained cortex flakes tend to cluster to the eastern half of the block whereas upland cortex flakes were clustered in the western half of the block (D. T. Anderson 2011). Moreover, the "correlation" of large flakes and cores typical of Clovis with items that have upland cortex suggest a possible Clovis occupation in the "lower half of the deposit" (D. T. Anderson 2011:18). The results of the spatial analysis revealed little evidence for disturbed areas within the profile (D. T. Anderson 2011). A subsequent refit analysis produced over 256 individual refits, comprising roughly 21.7% of the entire assemblage from the Paleoindian levels (D. T. Anderson 2010) (Figure A23–17).

Below the Paleoindian deposits, excavation proceeded as a 2m x 2m unit through the Pleistocene Sands to the top of the Pleistocene Terrace. These 70cm of sediments produced a total of 11 mapped items, and provided little evidence for clustered chert cobbles characteristic of the reported pre Clovis assemblage in the large excavation block to the south. A total of eight bend breaks and three flakes were recovered from this pre Clovis excavation. To provide additional insight on the age of the cultural sequence from the 2010 4m x 4m block excavation, 10 sediment samples were taken from the east profile wall of the unit and subsequently submitted for OSL dating. This analysis resulted in a chronology ranging from 17,500–19,400 cal yr B.P. for the Upper Pleistocene Sands (Units 2b, 2c). These subunits represent direct contributions of slope wash at the base of the hill after the Savannah River could no longer flood

at this elevation. Below this stratum, a date of 29,800 cal yr B.P. was obtained for the Lower Pleistocene Sands (Unit 2a) of the 4m x 4m block and may date a period when alluvium was being deposited at the site.

To date, a number of locations upstream and north from the primary block excavation have been excavated down to the Pleistocene Terrace. These excavations, illustrated in Figure A22–11, have revealed little evidence for nodules or clusters of chert and it is evident that such clusters only exist in the original 5m x 9m block excavation, which is also below the natural chert outcrop upslope. If the Topper pre Clovis assemblage was formed as the result of natural weathering and transport of lithic materials down-slope, then it follows that such materials should also be expected along the entirety of the base of the outcrop, and not in only one isolated locale such as where they have been recovered from the primary block excavation. The prospect that the pre Clovis assemblage is restricted to a single locale implies that neither the river, nor the weathering of the exposed chert outcrop were likely responsible for the formation of the entire hypothesized pre Clovis assemblage. Appendix 15 provides a list of all units (and mapped items) that have been excavated below Clovis that fall outside of the primary block excavation.

Summary

The excavations undertaken at the Topper Site and associated chert quarries since 1985 allow for the reconstruction of the culture history of the immediate vicinity. The Holocene cultural sequence at Topper is confined within what Waters et al. (2009:1303–1308) define as sub unit 3b and can be reconstructed based on the preceding geostratigraphic and archaeological research. The upper 30cm of sediment contains a "minor" Mississippian occupation (1100–1400 AD) and a considerable Middle and Late Woodland component (2500 B.P. to 1000 AD) consisting of pottery and triangular Yadkin lithic projectile points. From 40–50 cm is a Late

Archaic (4500 to 4000 cal yr B.P.) occupation consisting of stemmed projectile points and steatite fragments (Goodyear 2014). Just below the Late Archaic sediments at Topper, and ranging from 60–70cmbs is an extraordinarily dense Allendale (MALA) component that is predominantly composed of heat–treated bifaces and point fragments (Figure A24–2). However, the earlier part of the Middle Archaic period at Topper is minor in scope and is characterized primarily by the occurrence of a small number of Morrow Mountain points (Figure A24–3). Apparently from about 7,500 to 6,000 cal yr B.P., there was an "abandonment of Topper as a quarry or habitation site" based on the general lack of artifacts recovered from sediments dated to this time period (Goodyear 2014). Immediately below the Morrow Mountain zone begins an extensive Early Archaic side-notched (10,000–9500 B.P.) occupation consisting of Taylor points and represents the first discernible occupation after Clovis (Figure A24–4 and 4–22). The Late Paleoindian period is poorly represented at Topper with only a single Redstone, Suwannee and Dalton point recovered from 854 square meters of excavated sediments. With the exception of the Suwannee point, these points were recovered from the Topper Hillside excavations.

To date, 174 formal diagnostic bifaces and biface fragments have been recovered from the Clovis contexts at Topper (Smallwood 2011). Of these, 20 have been recovered from the Terrace while 154 derive from the Hillside. A total of four finished Clovis projectile points have been found at the Topper Site, two of which have been recovered from colluvial deposits on the Pleistocene Terrace and were produced from Allendale Coastal Plain chert (Smallwood 2011). A sample of the Clovis bifaces recovered from Topper is presented in Figure A24–5 (Figure 4–23).

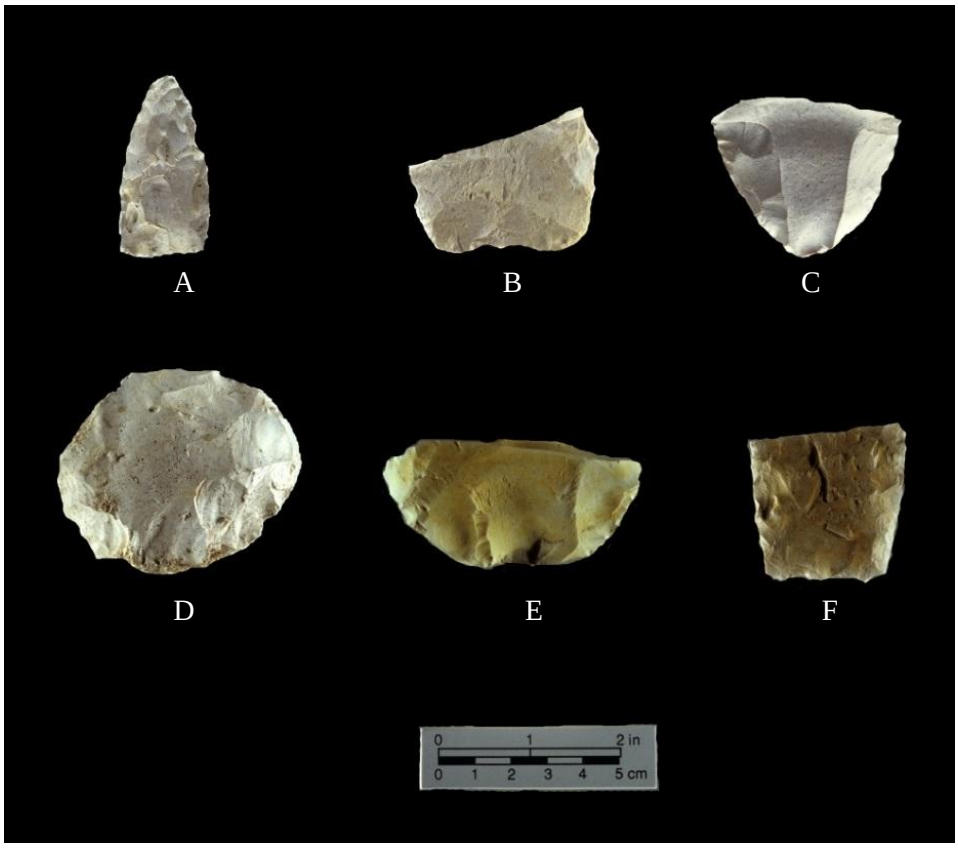


Figure 4–23
Clovis preforms and bifaces from the Topper Site. A; complete, B; biface base, C; biface base, D; complete, E; biface base, F; biface base.

Compared with the Woodland and Archaic cultures at Topper, the Clovis component is substantial in areas of the Pleistocene Terrace to the north of the primary 5m x 9m excavation block. The Clovis deposits at Topper represent one of the largest quarry-related sites in the southeastern U.S. Moreover, the Holocene and Late Pleistocene deposits appear to be stratigraphically intact with little evidence of artifact mixing. A spatial analysis of the distribution of diagnostic projectile point types from the Holocene Clovis deposits further confirm this proposition (Figure A23–17). Apart from the Clovis points, additional artifacts recovered from the Clovis – age deposits include unifaces, denticulates, blades, cores and utilized flakes. Figures A24–7 through A24–10 present a sample of blades and blade cores that have been recovered from Topper (Sain 2012).

Goodyear (2007) and King (2012) noted the presence of flakes and possible artifacts from stratigraphic units below the Clovis deposits at Topper. This assemblage occurs within and at the base of unit 2a and 2b, and extends into the Pleistocene terrace below. To date, evidence of pre Clovis at Topper has been restricted to the Alluvial terrace. Although a substantial amount of fieldwork has been undertaken on the hilltop portion of the site, there has been no evidence of chipped stone tools or other artifacts below the Clovis horizon other than a few small biface flakes attributed to downward drift or bioturbation. The absence of artifacts of potential pre Clovis age from this area of the site is intriguing given the abundance of such items on the alluvial terrace at the base of the hillside slope. A number of possible scenarios could explain this pattern. These results could imply that existing pre Clovis occupants were not intensively occupying the hilltop area of the site, or what has been interpreted as a pre Clovis occupation on the Terrace is in fact the byproduct of naturally chipped chert items that have accumulated at the base of the hillside slope. Likewise, evidence of pre Clovis could exist on the hilltop but has yet

to be identified. This study is designed to examine the Topper assemblage from the Terrace floodplain in greater detail, and provides a comprehensive lithic analysis of the materials below the Clovis deposits at the site. The following chapter provides a discussion on lithic analysis with special emphasis on the various approaches to chipped stone tool analysis and how to differentiate artifacts produced by humans from items that can form by way of natural processes.

CHAPTER V

IDENTIFYING ARTIFACTS FROM GEOFACTS: APPROACHES TO CHIPPED STONE TOOL ANALYSIS

Introduction

One of the most important objectives of archaeological investigation is the verification and reconstruction of past life-ways from an assemblage of material culture. Stone tools and chipped stone debris (the byproducts of their manufacture) are the most abundant material recovered from prehistoric archaeological sites. Given the abundant and diverse strategies implicit in stone tool production it is important for the archaeologist to have a comprehensive knowledge of lithic fracture mechanics, and the attributes consistently found to occur as the result of different strategies of manufacture. By studying these processes, archaeologists may form an understanding of past human behavior with regard to the manufacture of stone tools. Lithic items produced by natural processes can resemble chipped stone tools, and it is essential that the lithic analyst is able to distinguish stone tools deposited as part of the behavioral system from those that are produced in nature. This is critical at a site like Topper, where the pre Clovis assemblage has received widespread public attention yet only partial technical analysis, and indeed, is viewed with skepticism by many Paleoindian researchers (Wheat 2012). An understanding of context and how chipped stone artifacts interact with the natural environment is critical in this regard to infer past human activity. In this chapter a literature review focusing on lithic research and lithic attribute analysis is provided. Specific emphasis is given to flake formation, debitage analysis, approaches to stone tool analysis, and lithic taphonomy. The lithic analyses discussed herein are employed in the following chapters to evaluate whether natural or human agents were responsible for the patterns observed in the archaeological record and also to determine the processes leading to their deposition.

I conclude this chapter with a discussion on the role of site formation processes in the distribution of lithic material culture.

Lithics, Terminology and Basics of Stone Tool Production

Stone is one form of raw material that has been used by practically all human cultures, and the manufacture and usage of chipped stone tools covers 99% of all of human prehistory. Chipped stone materials represent the most plentiful artifact form found on prehistoric sites (Andrefsky 2005). Unlike material remains produced from organic materials, stone has the added advantage to withstand various environmental, geological, and human induced site formation processes such as erosion, deterioration, and decay (Andrefsky 2005:1). As such, in some contexts, chipped stone tools and debitage produced as waste from tool manufacture may be the only record of human behavior that archaeologists have at their disposal for reconstructing the past.

The examination of chipped stone tools and chipped stone debris is known as lithic analysis. The term lithic derives from the Greek work for stone, and is used in this study to refer to all culturally modified stone materials found on prehistoric sites (Andrefsky 2005:11). Chipped stone artifacts fall into two categories: objective pieces or detached pieces (Andrefsky 2005:12). According to Andrefsky, "objective pieces are stone items that have been hit, cracked, flaked, or modified in some way", and are therefore distinguished from detached pieces, or those "removed from objective pieces during the modification process" (Andrefsky 2005:12).

Lithic analysts are interested in examining stone artifacts to obtain some information about prehistoric life-ways and behavior. One way this is accomplished is through analyzing the byproducts (detached pieces) of stone tool manufacture. Unlike other production technologies such as ceramic manufacture, stone tool production is a reductive process, the byproducts of

which can be examined to reconstruct particular behaviors inherent in the manufacture process. These byproducts are referred to as debitage, and fall under the detachment category of chipped stone materials. While there are multiple categories of debitage, Fish (1981:374) has defined debitage as all stone artifacts of cultural origin that are not cores or tools, a major subset of which are flakes. Flakes are important to archaeologists and lithic researchers alike as the attributes characteristic of a given flake detachment may provide valuable information regarding the strategy of reduction, the technique(s) used in manufacture, or for what purpose the piece was used. Figure 5–1 illustrates a typical flake showing common elements and terminology.

Throughout the history of lithic research, there have been many definitions for a flake (Cotterell and Kamminga 1987). Andrefsky (2005) defines a flake as any "portion of a rock removed from an objective piece by percussion or pressure", the objective piece being the rock reduced by the removal of flakes (Andrefsky 2005:255). According to Cotterell and Kamminga, a flake is "any fragment detached from a nucleus, and not limited to the conchoidal variety" (Cotterell and Kamminga 1987:676). Shott defines a flake as any object detached from a larger stone mass; this treatment, however, includes natural as well as human-induced fracture (Shott 1994:70).

One reason for the seeming abundance of definitions for a flake stems from the notion that flakes can vary significantly in morphology and condition based on the technique(s) used to detach them. Flakes removed in a controlled manner typically exhibit technological and morphological characteristics that provide clues to the manner by which they were detached (Andrefsky 2005). Technique refers to the design implement or implements chosen for lithic reduction. Examples of lithic techniques include hard hammer percussion, soft hammer percussion, or pressure flaking. Known as the Application load typology, Cotterell and

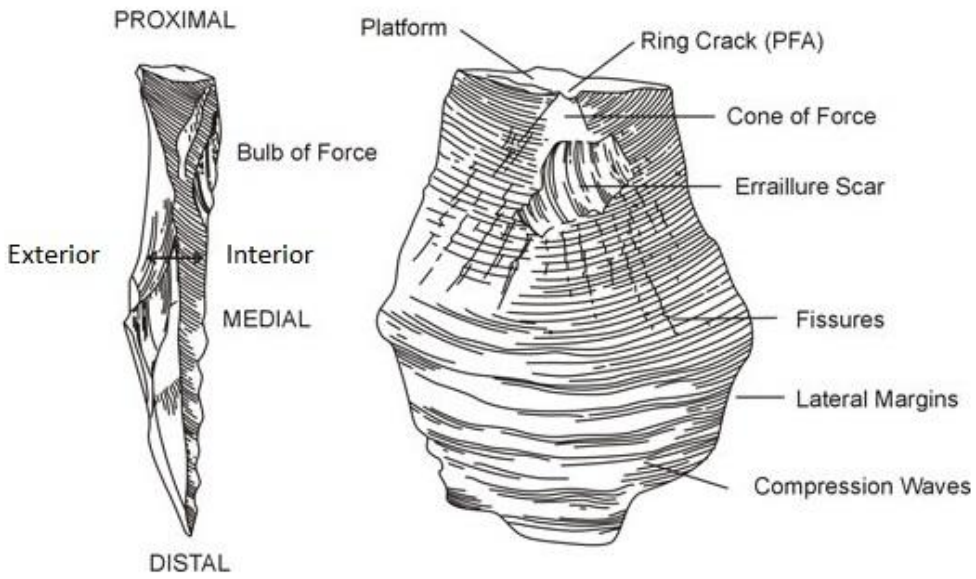


Figure 5–1.
Example of a typical hertzian, conchoidal flake showing common elements and terminology (Image modified after Andrefsky 2005:19).

Kamminga (1987) have identified a number of ways that flakes may form, and they suggest that different techniques employed in flake detachment may result in a wide variety of technological and morphological attributes that the detached pieces may exhibit. Table 5–1 presents different lithic reductive techniques and the attributes commonly found on the detachments produced from each. Hard hammer percussion such as with a quartzite hammerstone is often considered the technique of choice for early stages of manufacture and produces detachments that are thick and have prominent points of applied force. A soft hammer such as a billet made of wood, bone or antler typically produces detachments that are flat and thin and have small diffuse points of applied force. Soft hammer methods are thought to occur during secondary stages of lithic manufacture such as thinning a biface.

A third reductive technique, pressure flaking, uses direct force by pressing as opposed to striking the objective piece, and results in flake detachments that are typically smaller, thinner, and lighter than percussion flakes. However, Andrefsky cautions that small, thin and light flakes may occur as the result of any reductive technique and therefore it is difficult to distinguish reductive technique based solely on the attribute of size (Andrefsky 2005). Hard hammer percussion, soft hammer percussion and pressure flaking techniques have in common the characteristic that they all employ a specific fracture condition known as hertzian, conchoidal fracture as means to detach a flake. Alternative reductive techniques such as bipolar reduction may be different and can result in fracture patterns that are unique. Therefore a discussion of fracture mechanics is essential and necessary to any discussion of flake formation.

In the section that follows, the mechanics of flake formation and the individual attributes of a flake are discussed in greater detail and provide a description of the common elements and terminology used to depict them. Because there are many definitions for a flake, and a seemingly

Table 5–1
Load Application Designation for Different Lithic Reduction Techniques (Andrefsky 2005; Collins 1999).

Reductive Technique	**Load Application**	**Flake Morphology**	**Striking Platform**	**Reduction Sequence**
Hard Hammer	High	Large	Large, Salient	Early/Primary
Soft Hammer	Medium	Flat and thin	Small, Diffuse	Middle/Secondary
Pressure Flaking	Low	Small, light	Smallest	Late/Tertiary

endless array of methods for examining them, problems can sometimes arise when lithic analysts attempt comparisons of debitage assemblages that have been defined based on differing recording criteria. Therefore it is important to use a standardized set of methods and terminology to recognize and record attributes on flake debitage if we are to gain some insight into the ways in which people made and used stone tools in the past (Andrefsky 2005). It is of significant importance to establish definitions for the attributes of flakes and chipped stone artifacts to ensure replicability for future research endeavors. Appendix 45 gives a glossary of terms discussed in the text with regard to lithic analysis. a discussion on debitage analysis concludes this section.

Flake Formation and Fracture Mechanics

As defined above, a flake is any lithic material detached from a given mass of stone. Flake formation is dependent on the theory of hertzian fracture. The name derives from Heinrich Hertz, a German physicist who was the first to conduct scientific experiments on the principle of the cone fracture. Hertz observed that when a solid, firm, and rounded precursor strikes "perpendicularly" into the surface of an "isotropic brittle solid", a hertzian cone fracture is produced (Cotterell and Kamminga 1987:685; Hertz 1896; Lawn and Marshall 1979). The concept has been likened to the shatter pattern produced when a bb pellet strikes a pane of glass. The same concept applies to the fracture of any brittle solid, including stone. When sufficient force is applied to the surface of stone, the resulting energy travels through the material and produces what is known as the hertzian cone. The hertzian cone subsequently expands downward into the nucleus at an angle relevant to the angle of applied force. Once a hertzian cone is formed, fracture will continue through the nucleus only if the force of the blow was "sufficient to accelerate and overcome the inertia of the material that is to be removed" (Cotterell and

Kamminga 1987:685). The result of applied force exits the nucleus, and depending on the angle, affects the condition of the flake termination. If the nucleus was struck close to the margin, then only a partial hertzian cone will be visible on the resulting interior surface of the flake.

Cotterell and Kamminga (1979, 1986, 1987) provided the foundation of our current understanding of fracture mechanics as it pertains to the process of flake formation. They have found that the formation of flakes occurs in three distinct phases. These phases include initiation (hertzian, bending, wedging), propagation (stiffness controlled, compression controlled, and termination (Cotterell and Kamminga 1987). Initiation refers to the means of initial contact between a precursor or striking implement and the objective nucleus from which a flake is to be detached.

Hertzian initiations form when increased loads between the indentor and brittle solid ultimately lead to the formation of cracks in the surface of the solid (Figure 5–2 and 5–3). According to Cottterell and Kamminga, the "cracks grow downward as load application is increased" until reaching a threshold of "three times the contact area radius", at which point additional growth falls under the influence of alternative mechansims (Cotterell and Kamminga 1986:685). Wedging initiation occurs when an indentor strikes the objective piece "well away" from its margin, or if the edge angle is greater than 90 degrees (Cotterell and Kamminga 1987:688). According to Cotterell and Kamminga, such initiations are more common when the nucleus being struck is flawed (Cotterell and Kamminga 1987). Wedging initiation often results in the formation of multiple cracks and fractures from the area "surrounding the primary crack" and can also occur from the bottom of the objective piece (Cotterell and Kamminga 1987:689).

In bending initiation, fracture occurs when applied pressure of the indentor produces a crack near, but not at the initiation face and develops downward at a 90 degree angle. A bend

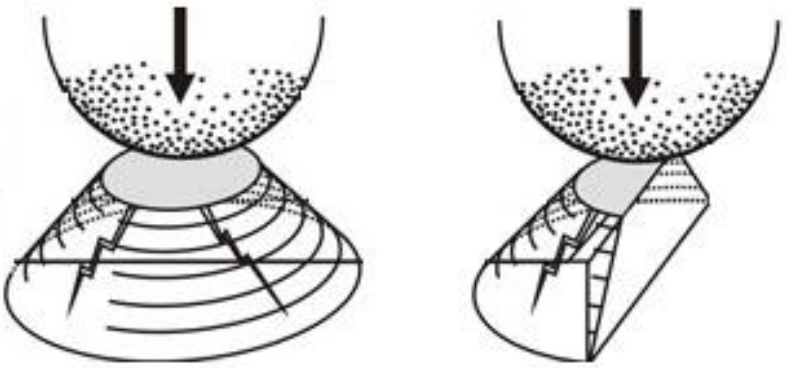


Figure 5–2.
Illustration of a complete hertzian cone formed by an indenter at left and partial cone produced when struck near the margin of a plane (Image adapted from Andrefsky 2005:26).

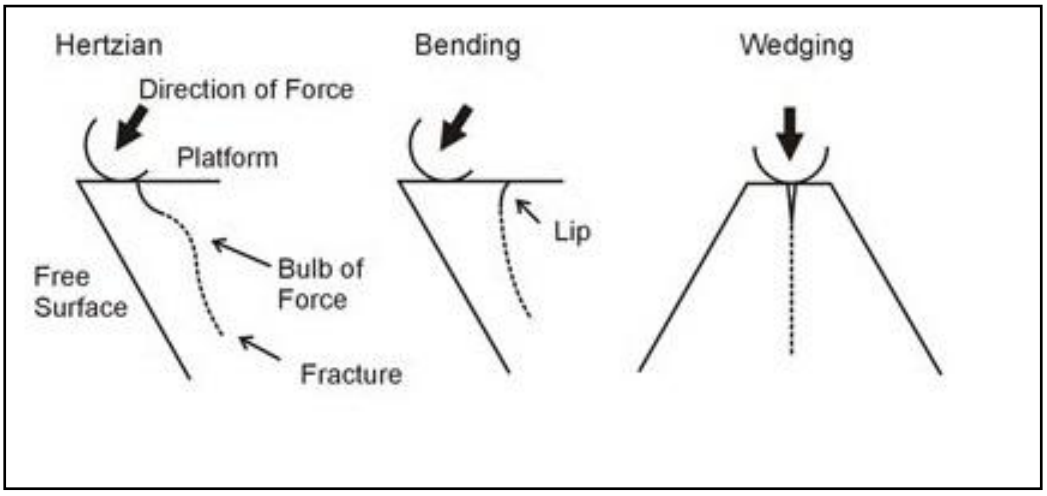


Figure 5–3.
Types of Fracture initiation in the formation of a flakes described by Cotterell and Kamminga 1987 (Image adapted from Cotterell and Kamminga 1987:684).

break occurs when the flake is struck at the midpoint without being supported on each end. In addition to intentional lithic manufacture, this form of fracture can occur if natural pressures such as sediment load exert force on a given lithic body that is not supported on each end, and that is in a matrix with many numerous and larger lithic bodies. Bending initiations can also form as the result of trampling, either from humans or animals.

The Propagation phase refers to the means by which cracks appear in a solid form and grow under different types of stresses (Figure 5–4). Propagation is influenced by different offsetting stresses (tensile, bending and compressive) resulting from the degree and direction of applied force, and can affect the path a crack takes through the core (Cotterell and Kamminga 1987). Termination refers to the "mechanics involved in the final detachment of a flake from a nucleus", and are the result of changes in the angle and amount of applied force, as well as the morphology of the nucleus (Cotterell and Kamminga 1987:698) (Figure 5–5). Using the above criteria, Cotterell and Kamminga recognized three distinct flake types based on fracture mechanics. These flake types include the conchoidal flake, the bending flake, and the compression flake.

Individual Flake Attribute Analysis: Flake Types

Conchoidal Flakes

Conchoidal flakes are formed through hertzian initiation, and result in "stiffness-controlled propagations" (Jennings 2011:1). Such flakes may terminate as feather, hinge, or step terminations. They are characterized as having a bulb of force, and are often produced with the aid of a hard hammer percussor such as a hammerstone (Andrefsky 2005; Cotterell and Kamminga 1987). Conchoidal flakes are most commonly a byproduct of biface manufacture.

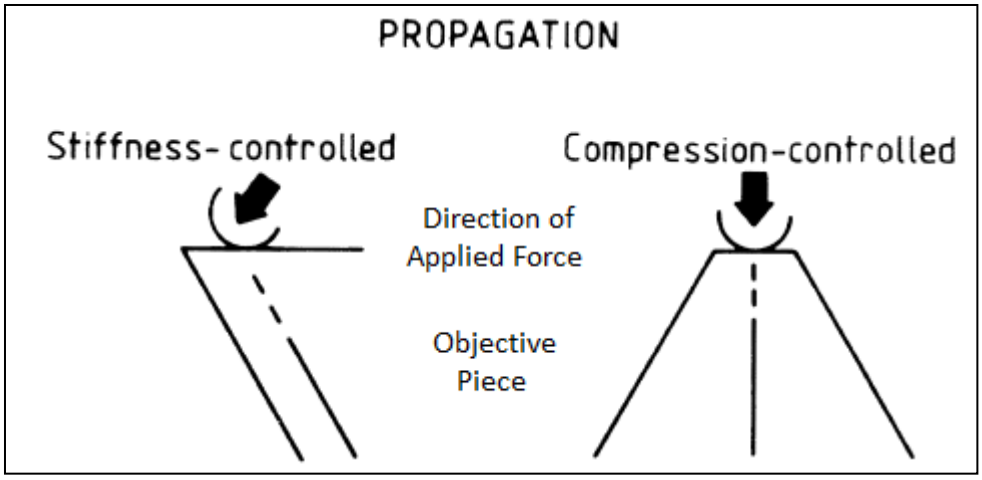


Figure 5–4
Illustration showing the types of propagation in the mechanics of flake fracture as described by Cotterell and Kamminga 1987 (Image adapted from Cotterell and Kamminga 1987:684).

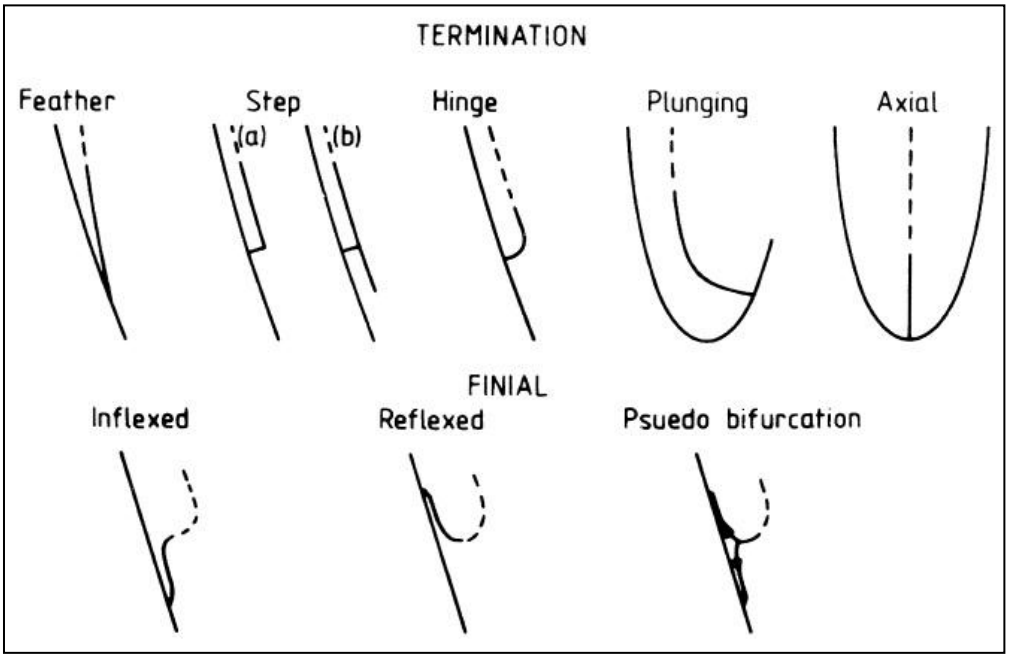


Figure 5–5
Flake termination types as defined by Cotterell and Kamminga 1987 (Image adapted from Cotterell and Kamminga 1987:684).

Compression Flakes

Unlike conchoidal flakes, compression flakes are a product of wedge initiation, whereby the application of force is focused away from the margin of the objective piece, and upon what is considered the center of the hertzian cone (Andrefsky 2005). Compression flakes typically result in axial termination (Odell 2003). Figure 5–6 illustrates attributes of a compression flake. Compression flakes are often formed through a technique known as bipolar reduction, whereby the flake is detached by placing the objective piece between an anvil and the point at which the percussor initiates contact. Useable flakes are considered to be the primary goal of bipolar lithic production (Diez-Martín et al. 2010). Because compression flakes are struck with support from below (anvil stone providing opposing force opposite the point of impact), they will occasionally exhibit two impact marks: one resulting from the applied force from above, and the second resulting from compressive stresses acting between the objective piece and anvil.

Diez-Martín et al. (2011) identified three methods of bipolar reduction: vertical axial, horizontal axial, and non–axial or oblique (Figure 5–7). Each method results from the way applied force strikes the objective piece. In vertical flaking, the objective piece is struck with applied force emanating downward from above and "perpendicular to the core and anvil" (Diez-Martín et al. 2011:692). In horizontal flaking, the objective piece is struck from above; however, the "axial length and the striking plane do not coincide" (Diez-Martín et al. 2011:692). In non-axial flaking, the objective piece is struck in such a way that applied force is directed away from the point of contact with the anvil (Callahan 1987:13). According to Diez-Martin et al. (2011:692), "Without a distal contact point, flakes obtained by means of an oblique method do not differ substantially" from conchoidal flakes. However, because horizontal and vertical flaking techniques produce detachments from different regions from a given objective piece than

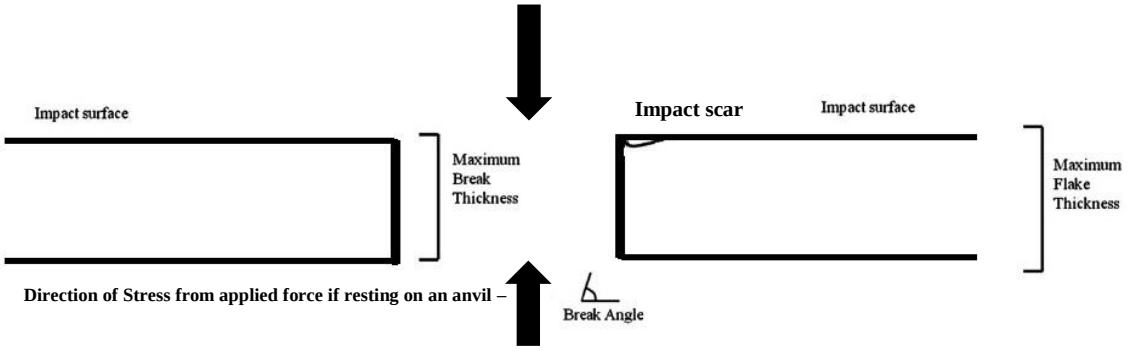


Figure 5–6
Example of a compression flake with associated attributes. Compression flakes often result in axial termination (Image adapted from Jennings 2011:3).

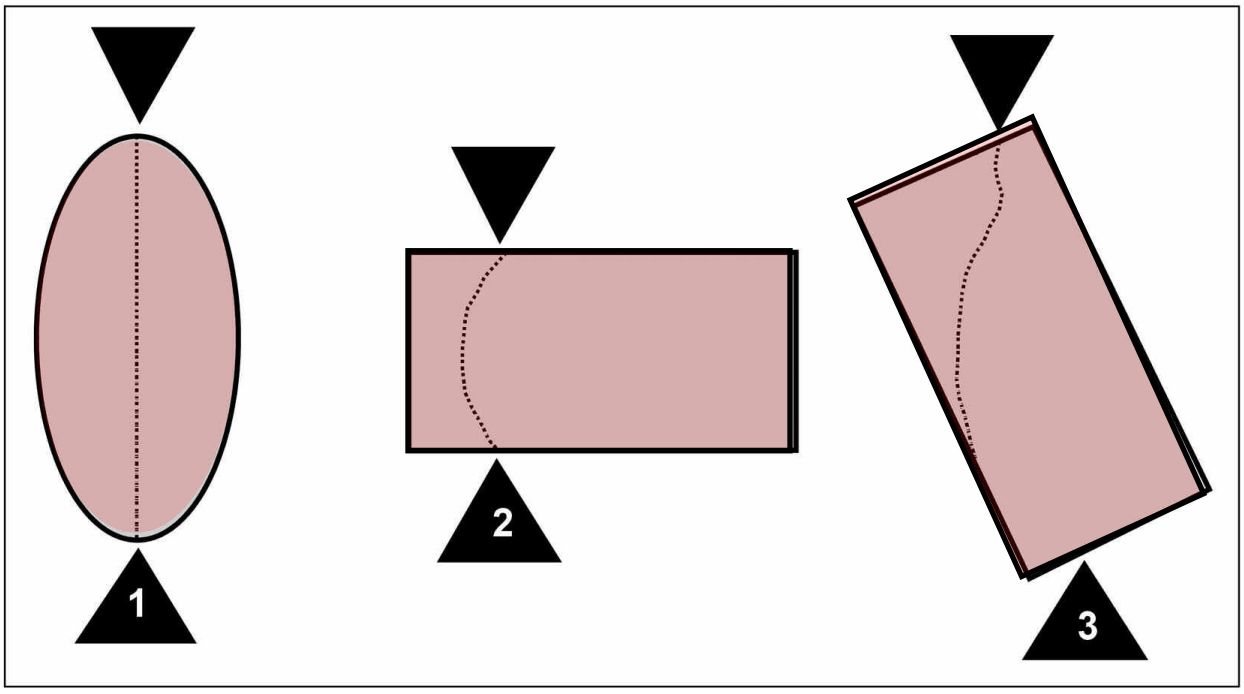


Figure 5–7
Three distinct types of compression or bipolar flaking techniques: 1; Vertical, 2; Horizontal, and 3; Non-axial (Image adapted from Diez-Martin 2011:692).

non-axial flaking, compression flakes produced by such methods typically have attributes that are technologically distinct from conchoidal flakes.

Bending Flakes

A final type of flake is the bending flake (Figure 5–8). Bending flakes are initiated when raw material cleaves at a point away from the load application of force (Andrefsky 2005). Like conchoidal flakes, bending flakes also form through stiffness-controlled propagation, and may also terminate as feather, hinge or step terminations. A special form of bending flake is the bend fracture flake, noted for their step terminations (Jennings 2011). In lithic production, bend fracture flakes are produced when the point of impact is concentrated at the mid-point of an existing biface or flake (Cotterell and Kamminga 1987; Jennings 2011), and have been identified from a number of Paleoindian assemblages (Bergman et al. 1987; Ferring; 2001; Frison and Bradley 1980; Waters et al. 2011). If there is no force directly opposite the point of impact, then bending fracture will lead to the flake snapping transversely. By contrast, if an opposing force is placed directly beneath the point of impact, "compression fracture will propagate from the striking surface and result in a radial break", whereby the flake snaps into three or more pieces (Cotterell and Kamminga, 1987, Jennings 2011). In some cases, such breaks can create fracture angles close to but not quite ninety degrees.

An experimental study by Bergman (1987) found a number of diagnostic attributes that are consistently identifiable with bend fracture flakes. These include: points and cones of percussion, incipient cones, dorsal crushing at the point of impact, wedge shaped fracture lines, and lips or protrusions along the terminal end of a break face on a bend break resulting from bending initiation. The occurrence of lips along the break margin of a bend break flake forms as a byproduct of applied bending force to the object, and therefore does not likely occur as

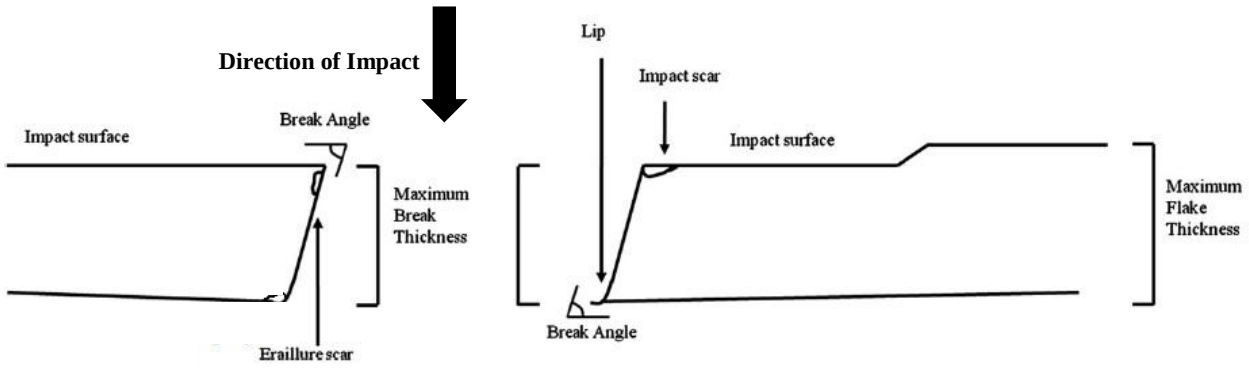


Figure 5–8

Example of a bending flake with associated attributes. Note the different break angle and only a single direction of impact stress compared with the compression flake (Image adapted from Jennings 2011:3).

resulting from natural weathering processes. Other attributes characteristic of bend fracture flakes include an interior surface, compression lines, lips along the break margin, and no bulb of force.

In a more recent study, Jennings (2011) examined the attributes of flakes experimentally produced by bend fracture initiation, and those incidentally produced in biface reduction. Accordingly, bend fracture flakes were found to be significantly thicker, and exhibit a higher occurrence of lips than hertzian flakes. Hertzian breaks were found to have more acute break angles than bend fracture flakes. Jennings (2011:3) experiments also demonstrate that lips occur significantly more frequently on bending fractures that have been intentionally struck than on hertzian, radial or unintentional fractures. Finally, significantly more flakes produced by bend fracture techniques have impact fractures than flakes fractured during biface reduction (Jennings 2011). Jennings concludes that intentional flake fracture "typically leaves evidence of the point of impact on fractured fragments" (Jennings 2011:7).

Individual Flake Attribute Analysis: Flake Attributes

Lithic analysis can be used as a tool to distinguish and categorize flakes through individual attribute analysis. Attributes are individual features of artifacts that can be observed or measured, and are used to distinguish one artifact from another. Attributes are important for identifying variability among lithic assemblages. According to Andrefsky (2005), many debitage studies emphasize why particular flake attributes are important for understanding certain aspects of technological behavior but "never show how to record such attributes in a consistent and reliable manner" or provide the reasoning behind the selection of some attributes over others (Flenniken 1978; Magne 1985).

The first aspect of any technological analysis of chipped stone materials is for the analyst to determine what he or she wants to learn from the data that have been acquired. The flake attributes selected for analysis should be chosen based on a set of criteria that can reliably inform about a research question. Certain flake attributes have been shown to be more informative about some aspects of stone tool manufacture than others. Therefore it is important to select for analysis those combinations of attributes that best reveal aspects of the lithic technology that are in question.

All attributes of lithic flakes and chipped stone debris are classified as either morphological or technological attributes. Morphological attributes provide information on the characteristics of artifact shape (length width, thickness) and weight. Morphological attributes can be recorded on complete or broken flakes, as well as on individual characteristics of a flake (Figure 5–9). Technological attributes inform about particulars of the manufacture process and include attributes of the exterior and interior surfaces, flake condition and flake class (Figures 5–1, 5–10 to 5–14). Condition refers to completeness (whole, proximal, distal), and presence or absence of post-detachment modification. Class refers to position in the reduction sequence to which a particular specimen belongs, and is identified through examining the presence and absence of cortex on the exterior surface. Below I discuss technological attributes commonly recorded on flakes. These attributes include characteristics of the exterior and interior surfaces, flake condition and flake class. These attributes can inform a great deal about raw material condition, how a given flake was removed from a nucleus, and technological decisions made during the manufacture trajectory.

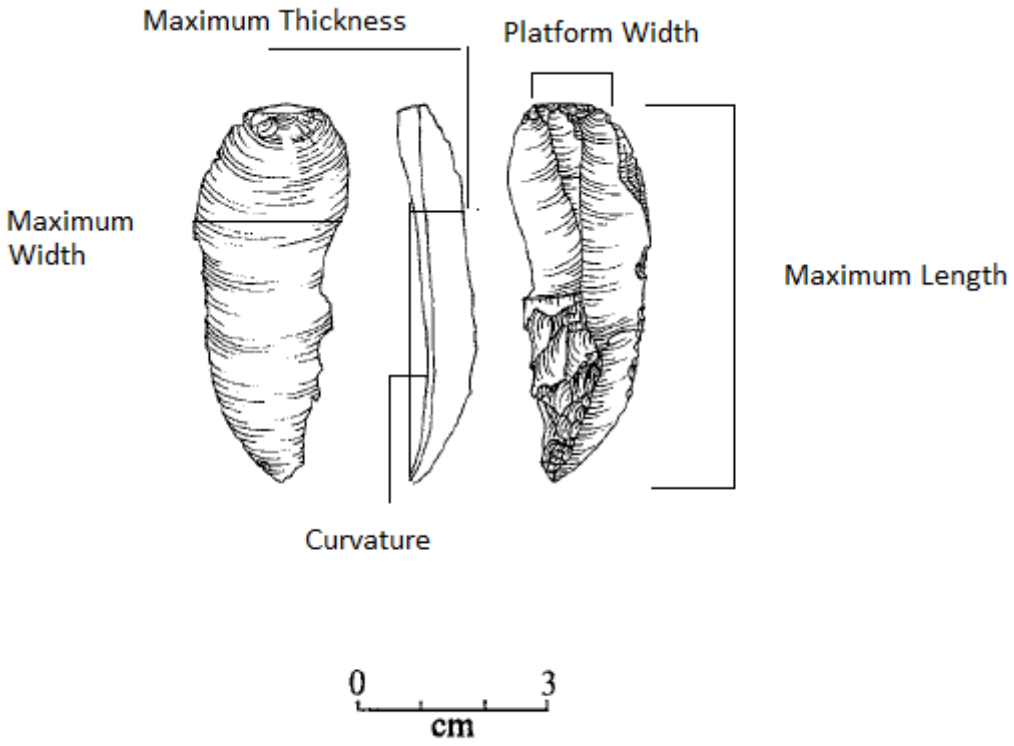


Figure 5–9
Morphological attributes of flakes (Image modified after Andrefsky 2005:95, 100–101).

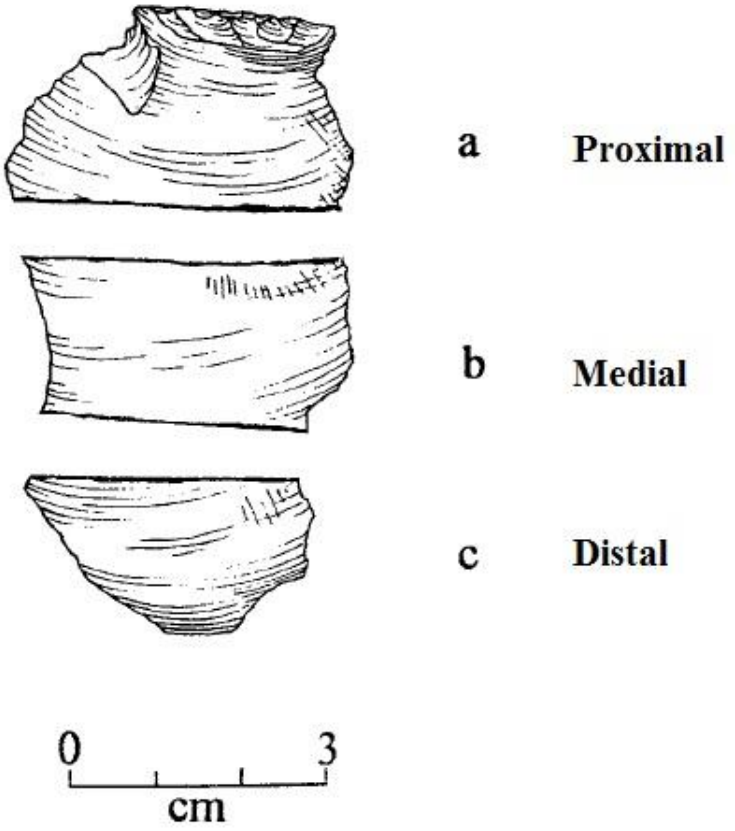


Figure 5–10
Attributes of flake condition. A: proximal, B: medial, and C: distal (Image adapted from Andrefsky 2005:88).

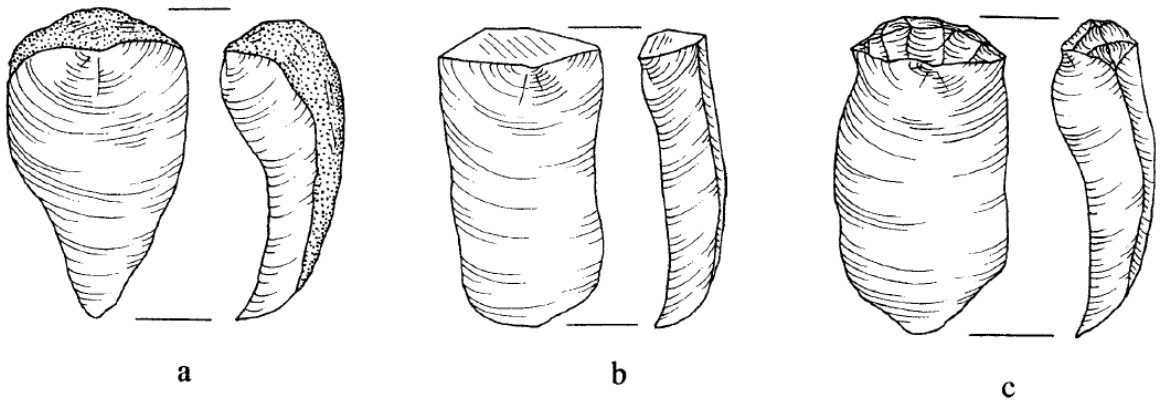


Figure 5–12
Striking platform types. A: cortical, B: plain, C: Faceted (Image adapted from Andrefsky 2005:96).

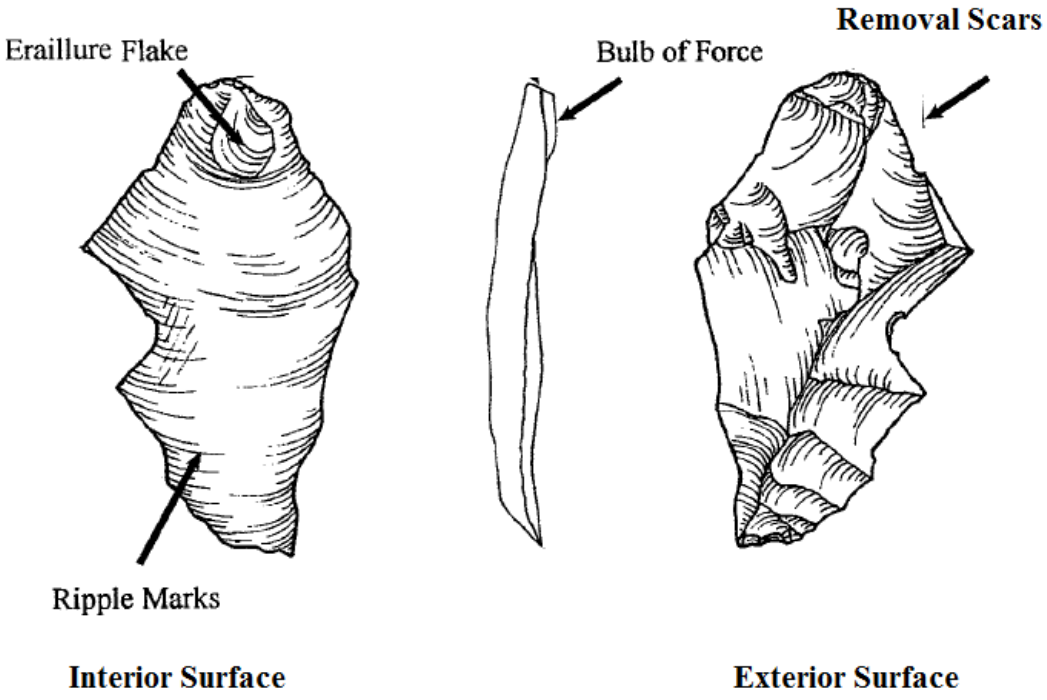


Figure 5–13.
Exterior and interior surface of a flake showing attributes of each (Image adapted from Andrefsky 2005:19).

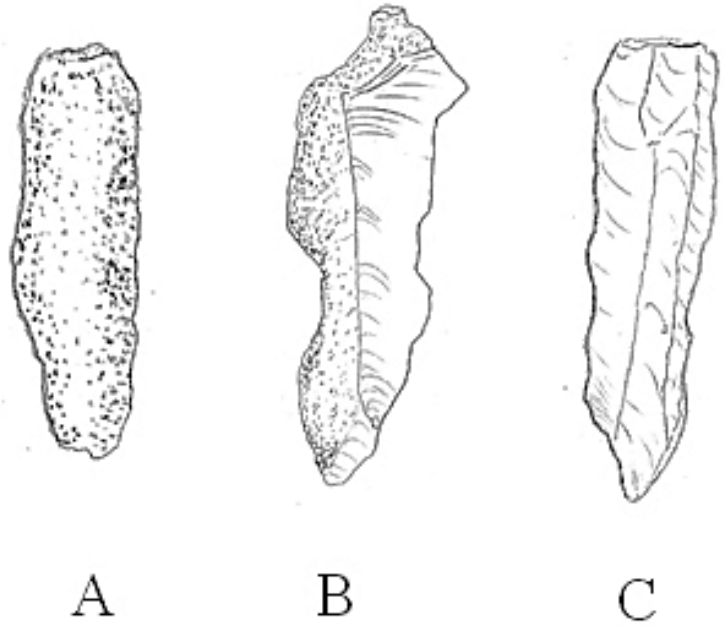


Figure 5–14.
Attributes of flake class. A: Primary flake, B: secondary flake, C: tertiary flake (Image Courtesy Sain 2011).

Flake Attributes of the Interior surface

Striking Platform

The striking platform or point of applied force is the point on a core or objective piece at which a "single flat surface" is struck or hit to remove a detachment. The point on a detached flake that contains the remnant of the objective platform surface is known as the platform remnant, and is referred to as the proximal end of the flake (Andrefsky 2005). The striking platform is an important lithic attribute since specific characteristics of the platform surface such as size shape and condition can convey information about the original objective piece, manufacture technique, and reduction trajectory. Striking platforms can have flat or plain surfaces, they can exhibit faceting (single or multiple), or they can display evidence of grinding (Figure 5–12). Striking platforms that are shattered often reflect hard hammer percussion whereas wide, flat points of applied force are often the result of soft hammer percussion. Modified striking platforms are those that are faceted or that exhibit grinding. Faceting and grinding are the result of actions taken to ensure added control of the direction and detachment of a flake as it is removed from a core. Plain striking platforms lack evidence of modification and are typically featureless. Such platforms can occur as a result of natural collisions of lithic material or by human agency.

Bulb of Force

Immediately below the striking platform on the proximal, interior surface of a conchoidal flake is the bulb of force (Figure 5–1, 5–13). The bulb of force results from the influence of compressive forces as the hertzian cone "turns toward the outside of the objective piece" (Andrefsky 2005:253). This feature may be identified as a raised hump on the interior surface of the flake. The bulb of force may be prominent (salient) or flat (diffuse) and may indicate the type

of percussor used in flake production or the angle of applied force (Andrefsky 2005:20). While a bulb of force is typically found on most flake types (discussed below), some flake types such as bending flakes lack a bulb of force as the initiation occurs away from the point of applied force.

Eraillure Scar

An eraillure scar is the negative of a removal flake that separates from the mid-point of the bulb of force as a flake is detached from a nucleus (Figure 5–1, 5–13). An eraillure flake is a product of differential force waves that travel through the objective piece once applied force is initiated. According to Andrefsky, an eraillure flake is formed when "an inferior wave contacts a dominant wave as the bulb of force is being created" (Andrefsky 2005:22).

Compression Rings/Ripple Marks

Compression rings are undulations on the interior surface of a flake and radiate in the direction away from the bulb and point of applied force. When a striking platform is missing, compression rings are attributes that are helpful in determining the direction the flake was struck.

Flake Attributes of the Exterior Surface

Removal scars

Removal scars are the negatives of prior flake detachments that occur on the exterior surface of a flake (Figure 5–13). Lithic analysts have used the number and pattern of removal scars on the exterior surface of a flake to determine the point in the reduction trajectory that the flake was detached. Later stages of reduction are thought to have higher numbers of removal scars than flakes detached during early stages of reduction. Moreover, the directionality of removal scars is thought to inform about reduction strategy (blade versus biface manufacture).

Arrises

Arrises are ridges on the exterior surface of a flake that result from the intersection of two or more flake removals. Also referred to as the dorsal ridge, the arris is used to delineate the margins between flake removal scars on the exterior surface of the flake.

Flake Condition

The term flake condition refers to a measure of completeness (whole, proximal, medial distal), and is used to differentiate complete flakes from those that are broken or are flake fragments. Condition can also refer to the presence or absence of post-detachment modification on a flake surface, thermal alteration, or patination/staining.

For analytic purposes, a flake can be divided into four potential sections. These include complete flakes, proximal flakes, medial flake segments, and distal flake terminations. Three of these categories are presented in Figure 5–10. The proximal end of a flake is that end that received applied force and contains evidence of a striking platform or bulb of force. The flake distal segment is the terminus of a flake. A flake medial segment refers to the mid-point of the flake. The terms proximal, distal and medial are typically used to identify and describe broken flakes and flake fragments and are important attributes in assessing debitage categories.

In addition to measures of completeness, the presence or absence of post detachment modification is often used in flake attribute analysis. Modification includes utilization or retouch, and applies to any type of trimming (unifacial or bifacial), at any angle, that is restricted to any margin or edge of an artifact or flake (White et al. 1963). This may be accomplished through either production, use, or rejuvenation of a tool during its life span.

In addition to post-detachment modification, flakes are subject to natural processes that can affect the appearance of the exterior surface of the flake. One such process is referred to as

patination. Patina refers to an accretional process whereby mineral deposits on an artifact or flake surface gradually increases by steady addition over time. One form of patina is river staining, and is a darkening of the flake surface because of being submerged or worn by fluvial processes for an extended period. River patination is an important attribute as it can inform about the geological processes affecting an artifact over time. Moreover comparisons of the presence or absence of river patina on flakes on an archaeological assemblage can also be used to assess issues relevant to raw material procurement.

The distal end of a flake is often characterized by its termination type, which represents the manner in which the distal end of a flake detached from a nucleus. Termination types include feather, hinge, step, or plunging (overshot or *outrepassé)* and are illustrated in Figure 5–5. Hinge, step, and plunging terminations are often considered to be errors, whereas feather terminations are the natural progression of a flake detachment as it propagates away from the nucleus. Feather terminations form as the flake gradually decreases in thickness as it is detaching from the core, and are considered a continuation of propagation (Cotterell and Kamminga 1987). Hinge terminations are terminations at the distal end of a flake that are rounded or blunt (Andrefsky 2005). Such terminations form when the applied force, during propagation, rolls away from the parent body (nucleus). Step terminations occur when there is an "abrupt change in the direction of a crack" during flake detachment (Cotterell and Kamminga 1987:700). Such terminations are thought to be the result of "insufficient energy available to complete a fracture or because the crack intersects a significant flaw "in the objective piece (Cottrell and Kamminga 1987:700). When such a flake breaks prematurely during detachment, it may leave a distal terminus that forms a 90 degree angle relative to the point of applied force. Plunging flakes are the opposite of hinged flakes and are the result of applied force rolling back towards the nucleus.

Flake Class

Class refers to a position in the reduction sequence to which a particular flake belongs, and is identified through examining the presence, amount and absence of cortex on the flake exterior. Flake classes include cortical, secondary, and interior (Figure 5–14). Cortical flakes lack evidence of removal scars on the exterior of surface of the flake. Secondary flakes have removal scars, yet still exhibit some cortex. Interior flakes do not exhibit any evidence of cortex on the flake exterior and are considered to represent later stages of the reduction continuum. Studies that document the presence and quantity of cortex on the exterior surfaces of artifacts are geared toward identifying patterns in the reduction stage or sequence.

Debitage Analysis

While individual artifact attribute analysis can be an integral approach to understanding human lithic reduction behavior, it may not always be possible to examine the attributes of all flakes from an assemblage. Moreover, some researchers have suggested that an analysis focused solely on attribute definitions is too subjective (Sullivan and Rozen 1985). Therefore, it may be useful to combine individual artifact attribute analysis with approaches that examine the assemblage as a whole (debitage analysis), to make more informed interpretations of chipped stone assemblages.

Debitage analysis is the examination of an entire assemblage of flaked stone debris in an effort to understand the relationships between debitage attributes and stone tool manufacture behavior (Andrefsky 2005). A primary goal of debitage analysis is to provide the analyst or researcher the ability to make accurate assumptions about the purpose of lithic manufacture. According to Andrefsky, while there is a wide range of approaches for analyzing debitage, debitage analysis may be conducted from the "perspective of an individual artifact", or from the perspective of a population of artifacts (Andrefsky 2005:113). However, because individual

attribute analysis can be a "time consuming" process, one method to overcome this problem is to group different categories of debitage into types based on one or more shared characteristics (Andrefsky 2005). Such "types" are considered to contain important information regarding human behavior. Andrefsky refers to this approach as a typological approach to debitage analysis. One popular typological approach to debitage analysis is the Free Standing Typology. Free Standing Typologies typically focus on a set of criteria that is replicable, yet do not make use of any information regarding the "final interpretation of the debitage" in question (Andrefsky 2005:127). One example of the Free Standing Typology is the Interpretation Free Model (IFM) developed by Sullivan and Rozen (1985) (Figure 5–15).

Interpretation Free Model

In a seminal study on flake analysis, Sullivan and Rozen developed an "Interpretation Free Model" (IFM) for flake analysis (Sullivan and Rozen 1985). Their method incorporates three dimensions of flake variability, each with two possible outcomes (Sullivan and Rozen 1985). The flake variables include a single interior surface, a point of applied force, and intact margins. The outcomes for each variable are given as "presence" or "absence". The dimensions of variability were selected, because they do not contain inherent categories that may be tied to specific interpretations. Rather, such variables are objective, and thus may "enhance replicability" (Sullivan and Rozen 1985:758). Sullivan and Rozen define complete flakes as those artifacts having a single interior surface, a complete or partial striking platform, and intact margins with a clear point of termination (King 2012:73; Sullivan and Rozen 1985). As a focus solely on complete flakes may partially overlook some of the variability inherent within a given

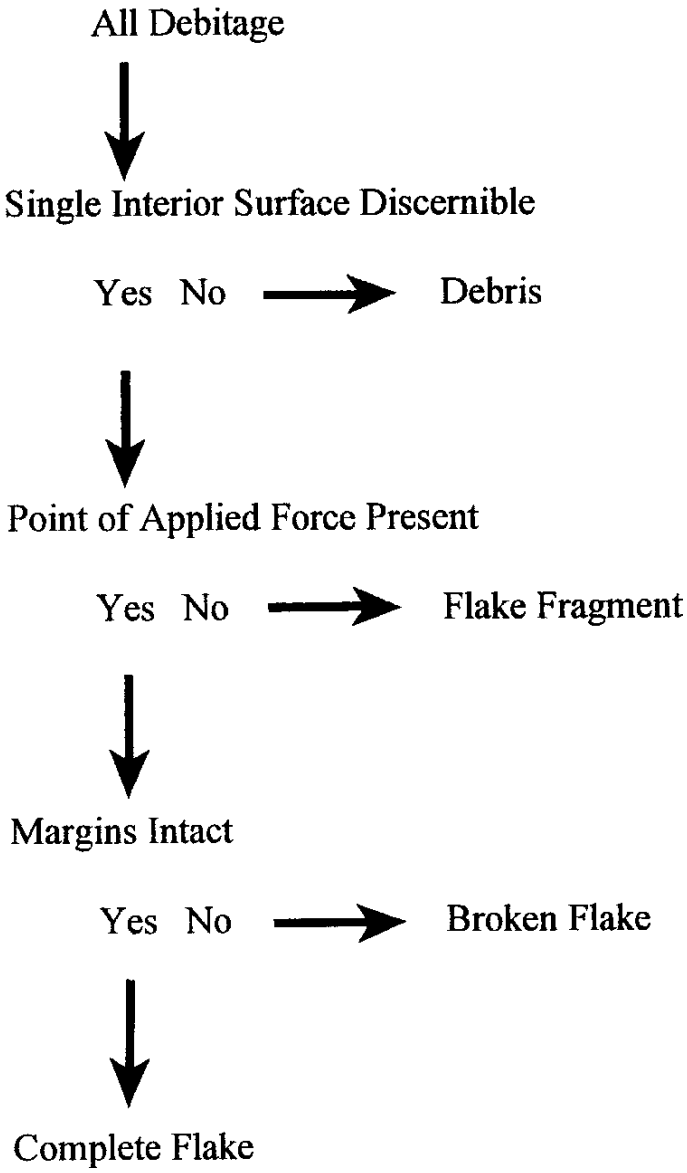


Figure 5–15
Debitage analysis diagram showing four distinct flake types (adapted from Andrefsky 2005:128: and Sullivan and Rozen 1985:759).

assemblage, the IFM allows for the classification of broken flakes and debitage (Carr and Bradbury 2001). Accordingly, flake fragments and broken flakes are those pieces that have a discernible interior surface, yet lack a point of applied force or intact margins respectively. Sullivan and Rozen's IFM is an important contribution to debitage analysis as it stresses the significance of interpretation free categories in flake identification, and may be used to differentiate complete flakes from debris. The IFM is critical to this study because lithic debris can form because of cultural or non-cultural (natural) processes. Natural processes such as weathering and erosion can create or modify a lithic assemblage and therefore it is essential to discuss how "differential fragmentation, attrition, and the alteration of lithic materials might affect archaeological patterning" (Rasic 2004:114). In the section that follows, I consider the role of lithic technology in the formation and distribution of lithic materials.

Lithic Technology and Chipped Stone Tool Typology

Lithic technology may be defined as the extensive array of methods employed to manufacture usable tools from a variety of lithic raw material types. Andrefsky (2005) has presented a morphological typology for the classification of all chipped stone artifacts (Figure 5–16). At the highest level, chipped stone artifacts are categorized as either tools or non-tools (debitage). Non-tools include such items as flakes and non-flake angular shatter (Andrefsky 2005). Tools may further be subdivided into biface tools and non-biface tools. According to Andrefsky, the non-biface tool category includes two distinct tool types: core tools and flake tools. Flake tools consist of all modified lithic implements that have been produced on flakes, and include such artifacts as unifaces, scrapers, blades and utilized flakes. All tools that are not flake tools or bifaces are classified as core tools. These exhibit flake removals on the exterior surfaces and "must contain some form of retouch or modification" (Andrefsky 2005:81).

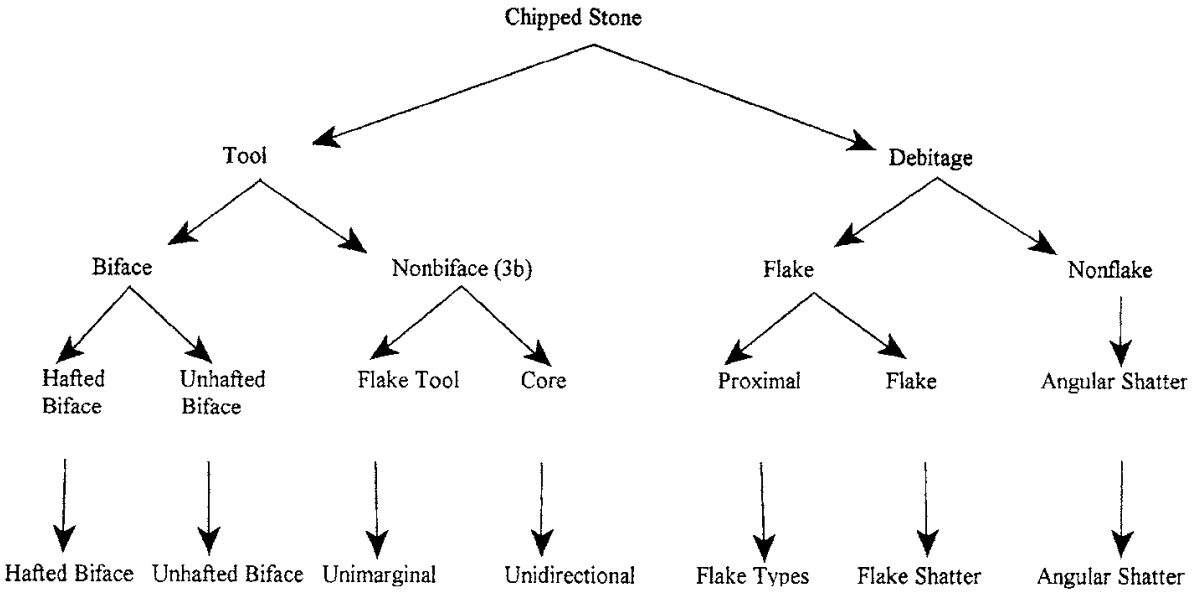


Figure 5–16
Morphological typology for the classification of all chipped stone artifacts as defined by Andrefsky (2005:76).

The morphological typology for chipped stone tools allow for the analysis of lithic assemblages. Many lithic analysts classify chipped stone assemblages based on specific production technologies. These are often defined based on desired end product. Four lithic production technologies are considered here and include biface tool production, core tool production, flake tool production and bipolar reduction. The first three are components of Andrefsky's morphological typology and are based primarily on flake removal strategies that utilize hertzian initiation. The fourth production mode, bipolar reduction, employs compressive or wedge initiations to aid lithic detachment. Compression flakes produced by bipolar reduction are commonly flat as opposed to curved.

Bifaces are objective pieces that have two sides that converge to create a single margin that "circumscribes the entire artifact" (Andrefsky 2005:178). Biface production involves the removal of flakes from each of two sides of the objective piece. Bifaces can serve as raw material sources to be further reduced into stone tools, as projectile point performs, as chopping or slicing tools, or hafted to be used as projectile points. Extensive research has been undertaken to understand the strategies employed in biface production by prehistoric peoples. These studies typically involve analyses geared toward understanding reduction stages or sequences. (Callahan 1979; Frison and Bradley 1980), trajectories, or tool function (Frison 1968).

Core tool production involves the removal of flakes from an objective piece in either a unidirectional or multidirectional form (Andrefsky 2005). The flake removals detached from a core may be used as tools, the core itself may be modified and fashioned into a tool, or the core may serve as a source of raw material for additional flake removals (Figure 5–17). Flake tools are artifacts that have been detached from a core and subsequently undergone some form of modification. Flake tool production involves the detachment of flakes from an objective piece

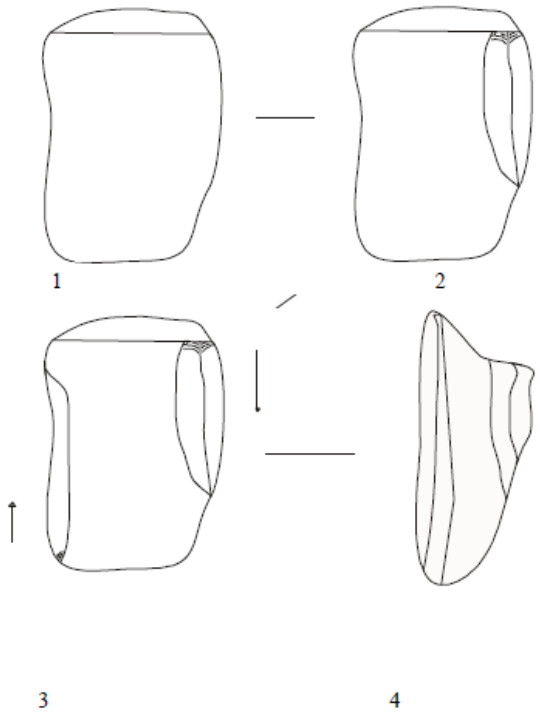


Figure 5–17.
Lithic manufacture trajectory employed in flake core manufacture, (Sain 2011).

followed by intentionally retouching the flake margins for use or using them unaltered, thus providing some evidence of use-wear along the edge. A number of artifact types are made on flakes. Flakes produced from unidirectional cores typically take the form of blades (Ackerman 1992; Andrefsky1987; Hiscock 2002) and are detached using hertzian initiation. Other common forms of flake tools include end and side scrapers, unifaces, denticulates and utilized flakes.

A fourth lithic reduction technology, bipolar reduction, refers to a form of core technology that employs the use of compressive forces to detach a flake from a core. Bipolar technology involves placing an objective piece on an anvil and "striking it with a hammer to split or remove a flake detachment" (Andrefsky 2005:253). This action results in a series of characteristic attributes that may be observed on either the core, the detached flakes, or both. As discussed above, the flakes detached in bipolar reduction often exhibit evidence of impact on both the proximal and distal end of the flake and have compression rings that "move in two directions toward one another: (Andrefsky 2005:253). Bipolar reduction results in compression flakes produced by wedging initiation, or bend fracture flakes if there exists no opposing force opposite the point of impact. However, bipolar production also produces debitage residue that often takes the form of blocky shatter, and is therefore difficult to distinguish cultural debris from the material byproducts of natural fracturing events.

Goodyear (1993) suggested that bipolar production by anvil reduction was one way to extend the use-life of stone tools. In areas of raw material uncertainty, bipolar reduction could be used as a method to obtain a sharp flake from a core. By contrast, Shott (1997) found that bipolar reduction was an expedient method to obtain flakes when raw material was readily available and not in short supply. Accordingly, more artifacts reflecting bipolar anvil reduction were found at

sites where raw materials were locally abundant. Because of the abundance of materials, flakes could be quickly and easily detached from bipolar cores without concern for error.

Lithic Taphonomy

There are a variety of natural processes that can alter or disturb an assemblage of culturally chipped stone artifacts. Mechanical weathering, hydric forcing, sediment consolidation, cryoturbation, thermal stress, trampling, colluvial action, and fluvial action are all processes that can alter an existing archaeological assemblage subsequent to its deposition. However, it is also possible for these natural processes to generate a suite of stone debris from non-cultural or unmodified cobbles. For example, geological processes can affect stone cobbles in such a way that can lead to the formation of lithic products that mimic the attributes of culturally chipped stone artifacts. Therefore, it is now generally accepted that the ways by which natural processes can affect lithic materials should be understood prior to making any "behavioral interpretations from a lithic assemblage" (Eren et al. 2011:202).

The effect that natural processes have on stone materials has been referred to as lithic taphonomy (Eren et al. 2011). The concept of taphonomy was initially defined as "the study of geological processes of the transition of animal remains from the biosphere into the lithosphere" (Efremov 1940:88). In archaeology, taphonomic studies are typically employed to investigate faunal remains and to account for the processes that affect an animal's death, burial and subsequent recovery. However, Eren (2011) suggested that chipped stone artifacts can also interact with the natural environment and that such interrelationships can play a significant role in altering that artifact's final cultural context and even appearance. Importantly, these changes can affect lithic attributes that are frequently measured in debitage analysis. Therefore, it is important not only to identify the various taphonomic processes that might be active on an

archaeological site, but to also determine what debitage attributes are characteristic byproducts of each process. Most essential is to distinguish taphonomic process from the lithic byproducts of cultural process, and specifically to assess whether a given chipped stone taphonomic process has modified stone tools in such manner that they could be misinterpreted as cultural (Eren et al. 2011). Below I briefly summarize some of the most important taphonomic processes that have the potential to alter or disturb lithic materials, and their consequences with regard to context and the archaeological record.

Mechanical Weathering

Principles from mechanical weathering can be used to help identify the causal mechanisms responsible for producing artifact patterning in archaeological deposits. The processes by which rocks weather can greatly affect the mechanical stability and internal structure of lithic materials over time. Mechanical weathering is defined as the "erosion or breakdown of rock into smaller fragments by natural and physical agents" but without significant change in chemical or mineralogical makeup (Boggs 1987:4). Mechanical weathering encompasses all external processes that transform solid rock into sediment without changing the rock's mineral composition. According to Robinson and Williams (1994), three primary factors control rock weathering. These factors include the mineralogical make-up of the rock itself, climate conditions, and the length of time in which weathering processes have operated.

The mineralogical make up of a lithic body influences the degree to which it weathers. Lithic bodies that have mineral constituents consisting of small particle sizes tend to weather quickly that those with larger particle sizes. It follows then that artifacts produced from lithic raw materials consisting of small particle sizes may exhibit greater degrees of weathering than those

that have large particle sizes. Because differential weathering is dependent on raw material type, such processes can greatly affect the visibility of the archaeological record.

Climatic factors are crucial to the rate of rock weathering. In sedimentological contexts, the most common climate conditions that influence natural unmodified lithic weathering include episodes of heating and cooling (temperature), and immersion of the lithic body in groundwater and subsequent drying (hydric forces). For example, as a stone is heated it slowly expands. This process leads to specific tensile, compressive, and sheer stresses along granular boundaries within the lithic substrate (Weiss and Marsan 2004). Subsequent cooling results in lithic contraction, and the "progressive loss of cohesion along grain boundaries" (Weiss et al. 2004:402). Over time, lithic items that are subjected to prolonged cycles of heating and cooling may eventually fracture.

Frost Wedging

One of the most common temperature-dependent types of mechanical weathering is known as frost action or frost shattering, frost wedging or cryofracturing. Frost action refers to the mechanical weathering of stone induced by stresses created by the freezing of water into ice. When water freezes within the pores, cracks and joints of rock, it expands, leading to the formation of stresses within the rock, eventually causing it to split, break up, or disintegrate. Frost weathering is primarily determined by the frequency and intensity of freeze thaw cycles and the material constituents of the rocks subjected to weathering. Therefore, it is traditionally considered a process that affects lithic materials in northern or Arctic latitudes but can occur in any region where freeze thaw cycles occur with frequency. These cold climate processes can all

produce natural features on the stone surfaces that lithic analysts should not confuse with cultural features.

Cryoturbation

Research has shown that repeated cycles of freezing and thawing not only affect the mechanical stability of lithic bodies themselves but can also disturb the soils in which such bodies are situated (Bockheim et al. 1998). Cryoturbation or frost churning refers to the mixing of sediments from multiple soil horizons as a result of freezing and thawing and should not be confused with frost wedging which affects the mechanical stability of the rock itself. Cryoturbation can redeposit archaeological materials into older or younger sediments thus obscuring the archaeological record. Excavation and intensive analysis are often required to determine whether archaeological deposits are in primary or secondary context. Evidence for cryoturbation is often seen in soils that have "irregular or broken, materials that have been incorporated from other horizons and show evidence of vertical and horizontal sorting" (Bockheim et al. 1998).

Cryoturbation and frost wedging are important mechanical weathering processes that can significantly alter or redeposit archaeological materials. As such, these processes have received considerable attention in the archaeological literature. Hilton (2003) provides a series of questions that archaeologists should address when conducting analysis of the spatial patterns of archaeological deposits. What duration have artifacts been exposed on the ground surface subsequent to leaving the "systemic context"? Have such materials been subjected to cyclical processes of burial and subsequent exposure? Under what circumstances are freeze-thaw (Figure 5–18) cycles capable of postdepositional transformation of the archaeological record, and can postdepositional processes disperse artifact assortments thus "masking: areas of potential

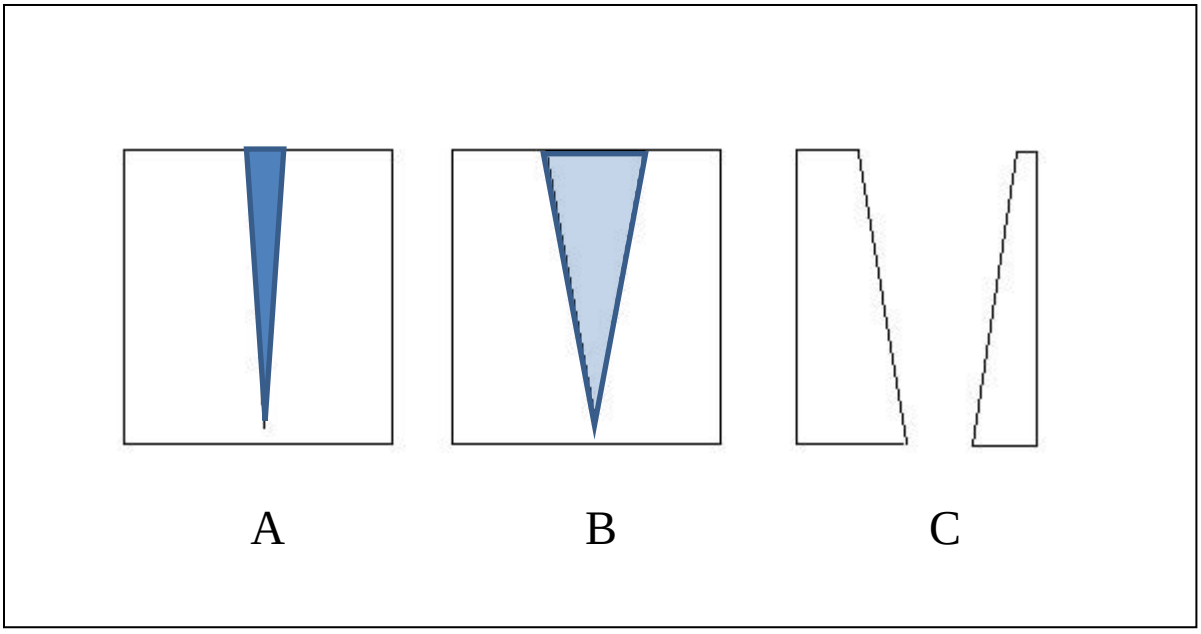


Figure 5–18.
The effect of freeze-thaw processes on stone. A: water seeps into the cracks in rock. B: when water freezes it expands and forces materials within the lithic body to expand, ultimately resulting in C: the fragmentation of a portion of the original lithic body into two or more pieces.

anthropogenic activity? Freeze-thaw and cryoturbation processes can be evaluated through experimental programs designed to quantify the degree that these processes can rework materials or affect lithic bodies under controlled conditions. Hilton found that the nearer to the ground surface an artifact is situated, the more quickly it will travel upwards as a product of the freezing process (Hilton 2003). Moreover, rapid rates of burial provide fewer opportunities for cryogenic cycles to displace cultural materials (Hilton 203:196). Therefore, it is important to consider deposition rates when gauging the effects of cryoturbation on archaeological deposits.

In a similar study, Rasic examined the effects of freeze-thaw processes on lithic materials through experimental procedures (Rasic 2004). Rasic found that the breakage and degradation of lithic artifacts attributed to freeze-thaw processes typically only occur on items that have previously undergone episodes of thermal stress. The cracks and cleaves along bedding planes formed by thermal fatigue ultimately leave rocks more susceptible to the effects of freeze-thaw cycles whereby water can penetrate, freeze, and further fragment a lithic sample (Rasic 2004:122). Thus, the influence of freeze-thaw processes would appear to be secondary to thermal stress.

Hydric Forces

Hydric forces influence the structural integrity of stone through the addition or reduction of moisture. Rocks that heat rapidly due to peak insolation and subsequently lose their moisture content are subject to greater mechanical stresses than those that remain cooler and wetter for longer periods when exposed to air (Coombes and Naylor 2012). These hydric parameters are affected by the grain size, weight, porosity, as well as the micro-structure of a given lithic body. The introduction of moisture into the pores of a given lithic body followed by periods of dehumidification lead to episodes of hydric shrinking and swelling, and ultimately “moisture

induced degradation" (Weiss et al. 2004:403). Drying of lithic materials is thought to lead to "negative pore pressures and consequent tensile stresses that pull the rock apart (Boggs 1987). In contrast, the absorption of water by lithic materials during phases of greater moisture creates swelling pressures that tend to push rocks apart" (Boggs 1987). Elliott (2008) has found that lower levels of moisture intake are more effective in producing weight loss among specific rock types. One may expect that rocks exposed to dry, arid conditions, should exhibit greater weight loss than those in moist environments. Rocks subjected to cyclic periods of wetting and drying will exhibit greater evidence of weathering and deterioration than those exposed to more temperate conditions.

Over time, hydric and temperature-induced "degradation" forces may lead to the formation of fissures, cracks, and cleavage planes within a given lithic body. Ultimately, fracture may ensue, and individual pieces may detach from the parent material. In such cases, the potential exists that the detached pieces may exhibit attributes common to some flaked stone technologies. As such, by examining how different temperature and moisture regimes affect the stability of rocks, it is possible to form a much broader understanding of the relationships between mechanical weathering processes and flaked stone taphonomy.

A byproduct of alternating wetting and drying cycles occurs as sediments in clays shrink and swell and cause a form of mixing referred to as argilliturbation. During dry periods, clay-rich sediments will shrink and crack. If occurring on archaeological sites, artifacts resting on the surfaces of these sediment formations may fall into the cracks, thus obscuring the visibility of the archaeological record. Through this process, argilliturbation can cause downward movement of archaeological constituents through soil cracks and subsequent upward movement of lithic materials during swelling episodes.

Sediment Consolidation

Lithic materials in buried contexts are subject to rearrangement or alteration as the result of changes in the volume of sediment load. Sediment consolidation or compaction is defined as the process(es) by which sediment volume is reduced in response to increased sediment density with "natural overburden loading" (Andrews 2006:460). Sediment consolidation typically occurs when the amount of void space in the sediment matrix diminishes as overburden increases (Figure 5–19). This action results in a more compact association of solid particles within the sediment (Andrews 2006). If exposed to such conditions for prolonged periods, solid particles within consolidated sediments can undergo significant rearrangement or even fracture. Because sediment consolidation can affect the spatial distribution, vertical displacement, orientation, or inclination of chipped stone artifacts, it is important to determine the means and degree to which sediment consolidation has affected an archaeological assemblage" (Andrews 2006).

A number of studies have simulated sediment consolidation on lithic materials in an effort to document and quantify the effect of this process on buried archaeological deposits (Andrews 2006; Eren et al. 2011). Most research identifies at least two ways by which sediment consolidation can disturb lithic assemblages following deposition. These include artifact displacement and artifact fracture. Artifact displacement refers to the displacement and movement of flakes within an archaeological assemblage. For example, artifacts can move through a sediment profile as sediment consolidation has significant influence on artifact inclination. Artifacts with horizontal or little inclination are typically assumed by archaeologists to reflect undisturbed contexts on an archaeological site. However, Andrews suggests that consolidation can transform assemblages with seemingly "random inclinations" into those with

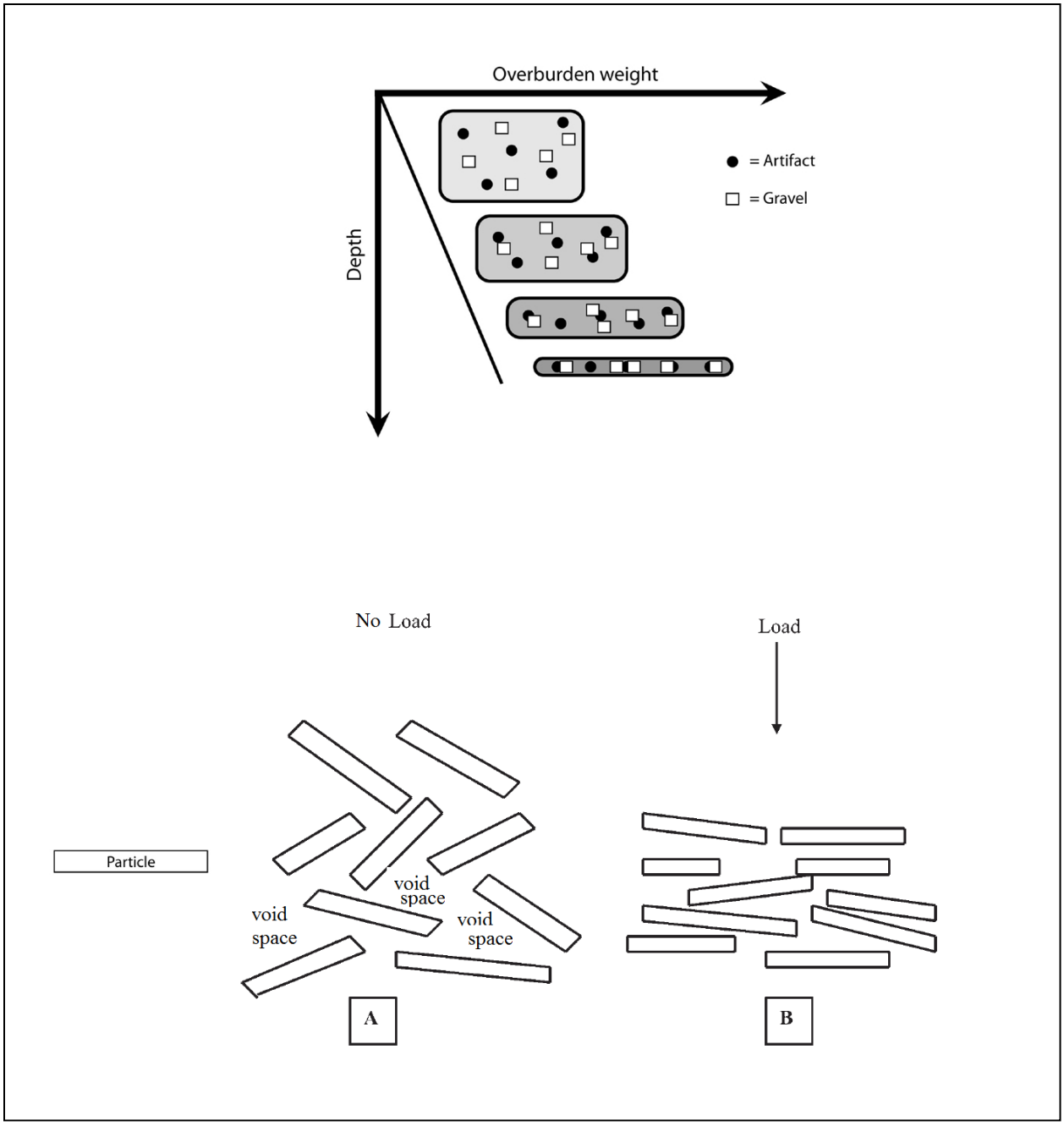


Figure 5–19
Model of sediment consolidation. As the weight of sediment overburden increases, there is a corresponding reduction in void space resulting in a more compact association of solid particles within a sediment (adapted from Andrews 2006:463 and Eren et al. 2011:204).

apparently more deliberate patterning leading to the potential for misinterpreting the "depositional history" of a site (Andrews 2006:464).

Andrews finds the following regarding sediment consolidation: results of controlled simulations indicate that artifacts initially deposited with elevated inclination angles will experience greater reduction in inclination than artifacts originally deposited "at lower inclination" (Andrews 2006:468). Moreover as compressive forces increase on a body of sediment, so too does the extent to which artifacts will flatten within the sediment matrix. As consolidation increases, so too does the amount of downward movement of artifacts through a sediment profile. Finally, soil moisture content may also influence sediment consolidation. Variation(s) in the moisture content within sediment typically result in consolidation when "water is removed or swelling when water is added" (Andrews 2006:473; see also Lambe and Whitman 1969 and Moeyersons 1978). Andrews cautions that researchers should not view sediments as static, but rather that they operate as "fluid bodies" through which archaeological materials may "float, sink, or glide" (Andrews 2006:473).

In addition to issues relating to artifact displacement, sediment consolidation can also influence artifact condition, composition, and alteration. Lithic artifacts subjected to compressive forces are susceptible to fracture or breakage in sediments and variables such as gravel size within the sediment load may influence the regularity of breakage events (Eren et al.2011). Therefore as sediment consolidation increases, one may also presume an increased potential for gravels within the sediment matrix to modify lithic edges in such a way that they "might be interpreted by lithic analysts as cultural retouch" (Eren et al. 2011:203). However, Eren (et al. 2011) has examined the effects of sediment consolidation on artifact morphology, and has found that sediment consolidation does not lead to the formation of retouched assemblages. In the

experimental simulation, pressure was applied to sediments containing three distinct gravel sizes in which replicated stone flakes were “suspended”. While the incidence of retouch on flakes was minimal, the creation of bend fracture flakes “did occur with some regularity” in medium to large gravel sizes (Eren et al. 2011:2112).

Eren (2011) acknowledges the occurrence of bend break flakes from proposed pre Clovis lithic assemblages, and suggests that the deposits from which these assemblages occur (e.g. alluvial sand, or colluvial clay with little to no gravel) exhibit far less compressive stresses than were examined experimentally. Based on the results of this study, therefore, bend break flakes are not likely to have been formed as a result of sediment consolidation (Eren et al.2011:212). However, it is of interest that the alluvial clay terrace at Topper represents a fining up sequence whereby larger particle sizes are present within the deeper deposits at the site. Therefore, it is reasonable to hypothesize that bend fracture flakes might occur in greater numbers from the deeper deposits that contain larger gravel sizes than the higher strata that contain lesser amounts and smaller gravel sizes.

Thermal Stress

Lithic materials are susceptible to a number of alterations that form as a byproduct of thermal stress. Thermal stress refers to the strain in a body or structure due to inequalities of temperature. Fracture or breakage of lithic items subjected to heat is typically the result of thermal stress, and occurs when a portion of the material becomes differentially warmer or cooler than another resulting in an unequal rate of expansion or contraction (Luedke 1992).

In lithic materials, raw material homogeneity, stone morphology (size and shape), and thermal conductivity are the attributes most vulnerable to alteration by thermal stress (Rasic 2004:118) Raw materials that have high coefficients of thermal expansion will exhibit greater

frequency fracture due to thermal stress. Quartz is one raw material that has a high coefficient of thermal expansion, and because chert is composed primarily of microcrystalline quartz, it is considered to be highly susceptible to thermal stress (Luedke 1992). Thermal stress also acts to reduce the tensile strength of stone, making it a greater risk to postdepositional breakage.

The size of lithic materials also influences factors of thermal stress. Lithic items that are large exhibit greater risk of thermal stress because portions of the lithic body may heat or cool more (Rasic 2004). As such, one may hypothesize that smaller lithic items such as flakes may exhibit less susceptibility to thermal fracture than larger blocky fragments as the heating and cooling is more homogenous throughout the specimen. Moreover, the amount of heat energy absorbed by a lithic item is influenced by its thermal conductivity. Lithic materials with a greater ability to conduct heat are less likely to be subject to thermal stress fracture than those that have lower conductivity thresholds.

Thermal stress induced fracturing in lithics can take a number of forms including large blocky/angular fragments, potlid fracturing, or surface crazing. Blocky or angular fragmentation of lithic materials typically occurs when stone is heated so rapidly that it explodes into multiple fragments (Purdy 1974). There is a correlation between the release of pressure in heated lithics and the presence of water within the internal structure of the materials. If water is present within a lithic body, the water may be converted to steam as it reaches a critical threshold. The subsequent continual buildup of steam within the lithic body is capable of generating internal expansion thus shattering of the material. Rasic (2004) suggests that in cases where thermal stress results in the detachment of angular debris, subsequent detachments typically lack points of applied force or compression rings.

Another attribute produced by thermal stress is potlidding. A pot lid is a plano-convex flake removed from a larger lithic body as the result of differential expansion and contraction when the lithic is exposed to heat (Ahler 1983). Pot lids exhibit a circular concave scar or pit on the surface specimen with no compression rings or points of applied force. Thermal fracturing of lithic materials can also produce very fine non-linear cracks on the surface of lithic items. These cracks are referred to as crazing (Ahler 1983). Like potlidding, crazing is also another byproduct of differential heating and pressure release. Experimental studies have found evidence of crazing among other forms of thermal fracturing during post fire field observations (Benson 2002; Lentz 1996).

Rasic identifies three mechanisms that can cause thermal stress in archaeological settings (Rasic 2004). These mechanisms include insolation, natural wildfire, and human-controlled fire features. Insolation is the heat created from solar radiation and is conditioned by a variety of microclimatic variables. Insolation affects lithic materials by the rate at which changes in temperature cause fracture in rock masses. Insolation includes the processes relating to the heating and cooling of lithic surfaces. Expansion and subsequent contraction of lithic surfaces heated by the sun can act to destabilize the bonds along the granular boundaries of lithic materials. Over time, this process can lead to the flaking of lithic surfaces and rock fragments. Since many of the processes relating to insolation were covered above (e.g. freeze thaw), I focus the remainder of this section on mechanisms relating to wildfire and human-controlled fire features.

Wildfires are an unintentional form of lithic alteration that can affect lithic assemblages on nearly all landforms (Johnson 2003). Fire-induced change in lithic materials is a complex process and depends on a combination of variables including raw material type, morphology,

orientation, surface position, fire intensity, fire duration, and post-fire cooling rate (Johnson 2003). The effects on lithic materials from wildfire include breakage, spalling, crenulating, potlidding, microfracturing, pitting, bubbling, bloating, discoloration, adhesions, altered hydration, and weight and density loss. It is important to note that some of these attributes such as discoloration may not be visible, as they may have undergone weathering and subsequent patination in the soil following thermal alteration. However, significant thermal alteration of lithic materials that have been subjected to the effects of wildfire are typically limited to within the top 10cm of the "burn level", and surface artifacts tend to exhibit greater degrees of alteration than those buried in significant subsurface contexts. Thermal alteration that occurs on lithic materials as a result of wildfires typically is not uniform, with the potential for temperatures to rise and fall sharply depending on fire behavior and fuel type/loading (Buenger 2003). Most researchers agree that the higher the fire temperature, the greater the severity of alteration.

The majority of archaeological literature concerning the thermal alteration of lithic materials involves the intentional heat treatment of stone during prehistory, and research has been conducted to assess a number of issues related to thermal alteration including intentional versus unintentional alteration (Anderson 1979), flaking quality (Crabtree and Butler 1964) and temperature thresholds required for specific changes in the raw material properties. Humans can intentionally alter (heat treat) lithic materials to aid control over flake detachment during the lithic manufacture process, or lithic materials can undergo unintentional thermal alteration if raw materials are discarded near a fire pit or hearth (Pevny 2012). In an experimental simulation study to replicate the production of prehistoric stone tools, Crabtree and Butler (1964) found that heat-treating lithic materials prior to the manufacture process resulted in enhanced flaking qualities. Purdy (1974) conducted a comprehensive study on the effects of thermal alteration on

lithic materials that demonstrated that there are specific temperature thresholds at which various changes will occur in the fracture properties of specific cherts. When chert is heated to temperatures ranging from 100–150°C, free water will evaporate from the pores and cracks within the lithic body (Purdy 1974). If heated slowly and maintained between temperatures of 350–400°C, desirable changes will occur in the fracture properties of chert. Such changes many include color change, increased luster and reduced tensile strength (Purdy 1974). Research suggested that if lithic materials are heated too rapidly, or above a critical temperature threshold, fracture (thermal shock) will occur, resulting in debris attribute patterns consistent with those that occur as a byproduct of natural wildfires.

Purdy observed that the color change that occurs as a result of thermal alteration is due to the "presence of minute amounts of iron" held within the lithic material at the time it is heated, and that such change typically occurs at lower temperatures than required to increase chipping ease (Purdy and Brooks 1971:323). Tests undertaken to examine the effect of thermal alteration on lithic tensile strength found a reduction of 45% in the tensile strength of heated samples compared with unheated lithics (Purdy and Brooks 1971). The reduction in tensile strength of thermally altered lithics is often attributed to heat treatment allowing a fracture to propagate across rather than around the microcrystalline quartz grains within the lithic material (Purdy 1974).

Stress Release Weathering

Another form of stress related weathering is stress-release weathering. Although not often considered in archaeological studies, stress-related weathering involves the release of compressional stresses that are active on a body of lithic material at depth when the weight of overlying sediment is removed by erosion. The release of pressure on lithics at depth can result

in fracture and breakage patterns on detached pieces that could resemble the attributes of some lithic reductive technologies

Trampling

Trampling refers to treading, walking, or stepping upon lithic materials by prehistoric peoples or animals. Archaeologists and lithic analysts are most interested in how trampling affects the modification, damage, or vertical displacement of lithic artifacts (McBrearty et al. 1998). Trampling is often considered as a causal mechanism for the unintentional production of flake edge modification in prehistoric lithic assemblages (Gifford-Gonzalez et al. 1985). Most studies of human trampling involve the comparison of experimentally replicated assemblages to the archaeological assemblages that are thought to have undergone prehistoric trampling. The variables that are most likely to influence artifact breakage during trampling include substrate, raw material type, and artifact morphology. Artifacts that undergo trampling over coarse-grained substrates are thought to exhibit a greater degree of edge damage than those that undergo treadage on fine-grained substrate (Flenniken and Haggerty 1979). However, McBrearty et al. (1998) found that edge modification on lithic artifacts that have undergone trampling on fine-grained sediments can also be severe (McBrearty et al.1998). Moreover, some lithic raw materials are harder than others and therefore will respond differentially when pressure is exerted by trampling. Artifacts that are thin and that are oriented horizontally are more susceptible to breakage than artifacts that are bulkier and inclined. One may also expect flakes that are curved as opposed to flat to exhibit higher occurrences of breakage. When breakage does occur on trampled lithic assemblages, McBrearty et al. (1998) find most damage to consist of "irregular, abrupt or alternate edge modification, the blows often directed at nearly right angles to the edge, rather than delivered oblique to the edge as in normal retouch" (McBrearty et al.1998:109).

The recent discovery of bend and radial break flakes at a number of proposed pre Clovis assemblages has generated interest in the prospect of trampling as a causal mechanism for the production of such assemblages. Jennings (2011) conducted an experimental study to compare replicated bend break flakes to breaks produced incidentally during bifacial core reduction and those produced by trampling. Flakes were trampled on a "hardened silty-clay soil surface" and "all breaks larger than 1 cm in length were subsequently analyzed" (Jennings 2011:3). The results of this study found significant differences in the break types produced when the trampling assemblage was compared with the flakes that were intentionally fractured (Jennings 2011:5). Trampling appears to produce a "near absence" of radial break flakes, and individual flakes trampled directly on the ground surface broke only by bending fracture with "no evidence of impact"(Jennings 2011:7). Jennings concludes that high occurrences of radial break flakes can be used to differentiate "intentional breakage from trampling damage". He suggested that, "to distinguish intentionally fractured flakes from trampling damage, the ratio of radial to bend fractures should exceed 3to20" (Jennings 2011:7).

Apart from breakage and edge damage, experimental studies have shown that trampling can lead to vertical displacement of lithic artifacts from their original context. For example, artifacts that have undergone trampling in sandy sediments are more prone to exhibit vertical displacement that those tread on in more compact or clayey sediments (Gifford Gonzalez et al.1985). These findings imply that objects tend to penetrate deeper in loose sediments as a result of trampling. However, artifact morphology such as size and weight also influences an artifact's susceptibility to vertical displacement. Studies have shown a positive correlation between artifact weight and downward migration of artifact's (Moeyersons 1978). In contrast, Gifford-Gonzales (et al. 1985) found that weight-dependent sorting as a byproduct of trampling typically only

occurs within the top 30cm of the soil profile, and more research is needed to fully understand the dynamics between trampling, artifact size, and vertical displacement (Gifford-Gonzalez et al.1985). Other studies cite sediment moisture content as a potential variable that influences vertical displacement during trampling (Eren et al. 2010). Because saturated sediments are "weaker" and more vulnerable to "deformation or applied stress," it is expected that lithic artifacts in saturated environments will exhibit greater vertical displacement than those exposed to drier ones (Eren et al. 2010).

Fluvial processes

Fluvial processes refer to the movement of material agents generated by the activities of rivers, streams and associated flow. Fluvial processes play an important role in archaeological site formation, preservation, and disturbance episodes. Research by Waters (1988:479–491), has shown that archaeological materials may be preserved through rapid burial due to fluvial action, redeposited in secondary context, or destroyed as a result of erosion. Therefore, it follows that lithic materials in fluvial settings may undergo a variety of postpositional disturbances because of fluvial action.

Petraglia and Potts (1994) recognized a number of ways by which archaeologists have attempted to evaluate the effects of water flow on archaeological assemblages. Water flow can modify, or affect artifact orientation, cause rounding, and result in size sorting, and even the spatial distribution of lithic assemblages (Petraglia and Potts 1994). The primary spatial association and "composition" of lithic assemblages are more prone to modification in high-energy environments. Such modifications may occur as lithic materials collide under high-energy conditions. Lithic assemblages that exhibit high degrees of similarity in long axis orientation such as "parallel or criss-cross patterns" are also considered to form because of "flowing water"

and are an indicator of the direction and intensity of flow (Petraglia and Potts 1994:230; but see also Issac1967). Likewise, variation in artifact inclination can depend on fluvial processes. In most cases, lithic specimens that are inclined at steeper angles reflect greater flow velocity (Petraglia and Potts 1994).

The amount of time between artifact discard and subsequent burial can influence the degree of artifact movement. Petraglia and Potts (1994) found a direct correlation in the degree of artifact movement and the amount of time the artifact has been exposed on the ground surface. Assemblages exposed on surfaces for longer periods prior to burial are more likely to undergo movement and disturbance than those that are buried rapidly. Sediment grain size can also inform about the energy contexts under which a lithic assemblage may have been modified. Coarse-grain sediments that contain medium to large-size cobbles and pebbles were likely deposited under high-energy environments, whereas silt and clay deposits typically signal deposition by low-energy. Moreover, research suggests that there is a correlation between water flow velocity and the morphology of transported materials (Petraglia and Potts 1994). Accordingly, slow to moderate flow rates have a greater impact on the movement of smaller specimens from an assemblage whereas larger items are typically transported only under the highest energy conditions.

Taking these conditions into account, Petraglia and Potts offer the following as attributes consistent with a lithic assemblage that has undergone little to no modification by water flow: "Burial in clay or some other fine-grain sediments, no evidence of preferred orientation of long axis specimens, no evidence for differential size clustering of lithic items by size or direction, and no evidence for surface or edge rounding" (Petraglia and Potts 1994:236). By contrast, an assemblage modified by water flow should exhibit all or some of the following: "deposition in

sandy sediments in a high energy setting", artifacts that exhibit reorientation of the long axis and that are size sorted such that large items are closer, and small items are further from the place of origin, evidence for edge rounding and non-cultural retouch modification along artifact margins (Petraglia and Potts 1994:236).

Avenues of Research to Evaluate Lithic Taphonomy

Modification and lithic micro wear research

Artifact context is important when conducting lithic micro wear research. An understanding of taphonomic processes that affect and alter lithic materials once they enter the archaeological record is important, as sometimes damage resulting from post depositional processes can mimic patterns of cultural use. Interpretations of stone tool use are typically determined based on trace microwear analyses of existing archaeological assemblages as well as from tool assemblages that have been experimentally produced. According to Pevny (2012), to make such interpretations it is necessary to have an understanding of how stone fractures, how stone interacts with bodies in motion (tribology), how stone is affected by post depositional processes (e.g. trampling, thermal alteration.), and how it is affected by intentional human use. Each of these processes can be interpreted through microscopic analysis, specifically through high (100–500x) and low magnification. Low magnification (10–70x) is typically employed to examine the shape and size of prior modification detachment scars whereas high magnification is employed to examine evidence of micro-fracture, polish, and striations.

Post depositional processes can obscure evidence of cultural modification by "altering artifact surfaces, introducing damage that resembles human-induced tool use-wear, or by destroying evidence of use-wear" by abrasion or weathering (Wiederhold and Pevny 2014:9). According to Pevny (2012), attributes produced as a result of postdepositional trampling include

bending fractures and L and V shaped fractures. Moreover mechanical damage on flake edges exhibit crushing or abrasion, bright spots, and multidirectional striations. These flake removals are also typically less than 2m from the flake margin, and are randomly oriented (Wiederhold and Pevny 2014).

Artifact Refit Research

Lithic refit analysis can be used to assess site integrity, specifically as it relates to the potential for post depositional vertical and horizontal displacement of artifacts across the site. Refit analyses of archaeological assemblages are beneficial as they deal with the relationship between the spatial configuration and physical properties of lithic artifacts. A recent study by Miller (2010) found eleven refits among a sample of 16,000 lithic artifacts from the hillside portion at Topper. Miller found a maximum horizontal distance of 8 cm between refitted artifacts from Clovis contexts in this area, and used his findings to support the notion that little post-depositional activity has altered the integrity of the Clovis deposits in some locations of the hillside. In another study, D. T. Anderson (2010) conducted a refit analysis of lithic materials recovered from a four by four m block excavation to the north of the lower terrace excavation at the base of the hillside slope. The results of this analysis identified more than 300 individual lithic artifacts that refit. Moreover, few refits were found to cross-cut stratigraphic levels, with most occurring on a common surface. For the present study, refits that are identified will be documented and further examined with regard to their spatial association with other artifacts within the site grid.

River–stained Cortex Research

Lithic material(s), when submerged in or subjected to fluvial activity for an extended period, may become stained. The cortex on unmodified Coastal Plain chert cobbles is typically

chalky white/grey a result of terrestrial patination. By contrast, chert items from underwater contexts become stained brown over time. Therefore, in the Savannah River Valley, chert items recovered from underwater and terrestrial environments have been affected differently and their visual appearance can be used to interpret the environmental conditions it has been exposed to. The degree of river staining is dependent upon the length of time of submergence, as well as the chemical properties of the water and raw material. As such, the presence of river–stained cortex on lithic artifacts is an indication that the piece in question, prior to detachment, was at some point submerged, and possibly "quarried" from the river. Although no experimental studies have been conducted to assess the amount of time required for river staining to form on Allendale Coastal Plain chert from Topper, the potential exists that such formations could take some time to develop. Future studies are needed to evaluate this process in greater detail.

Recent studies by Miller (2010) and D. T. Anderson (2010) have identified the presence of river staining on at least some artifacts recovered from Clovis and Holocene contexts at Topper. The occurrence of such items from these deposits implies that the chert was quarried from the river prior to being reduced onsite during lithic manufacture episodes. The presence of river–stained cortical debitage from known archaeological deposits, combined with the absence of such materials from deeper strata, could be one indication of site integrity. At some point prior to the Clovis occupation at Topper, the Savannah river down-cut its channel, exposing chert to the abrasive nature of the river. Because this chert had yet to be exposed or stained by the river, it was not accessible to any potential pre Clovis peoples that might have been occupying the site at this time. Whereas Holocene and Late Pleistocene Clovis peoples had at least two sources (terrestrial and river) of chert at their disposal for tool production, earlier occupations were

restricted to the terrestrial outcrop. Therefore, the absence of river–stained cortex on artifacts, below Clovis contexts, could be indicative of differentiation in quarry behavior through time.

Prior Lithic Analysis of the Topper Assemblage: King (2012) Analysis

From 2009–2011 King examined a suite of lithics and lithic debris recovered from six 1m x 1m columns as part of an MA thesis (Figure 5–20). Her study represented the first systematic examination of the reported pre Clovis assemblage at the site. King selected three of the six units because they had been excavated from the ground surface to the top of the clay Pleistocene Terrace, and reflected a "complete stratigraphic profile" (King 2012:65). This protocol was important for presenting the vertical distribution of debitage from the deposits, which were examined to evaluate "the stratigraphic integrity of the site" (King 2012:43). The units King selected for analysis include the NE and NW quads of unit N246E138 and the NE quad of N246E136. Three additional 1m x 1m units were also selected, and included materials excavated from the top of the Pleistocene Terrace and continued into this older material.

The goal of King's research was to determine whether the Clovis and potential pre Clovis assemblages at Topper exhibited similar distributions of debitage attributes, and therefore reflect the use of similar technological strategies in the manufacture of stone tools. According to King (2012), the study was guided by the assumption that if the debitage patterns among the Holocene, Clovis, and potential pre Clovis assemblages are similar, then "the probability is very low that the pre Clovis assemblage has been subjected to displacement" (King 2012:42). By contrast "if the patterning of debitage is dissimilar then there is a greater probability that the pre Clovis assemblage was either displaced or created using alternative reduction technologies" (King 2012:42).

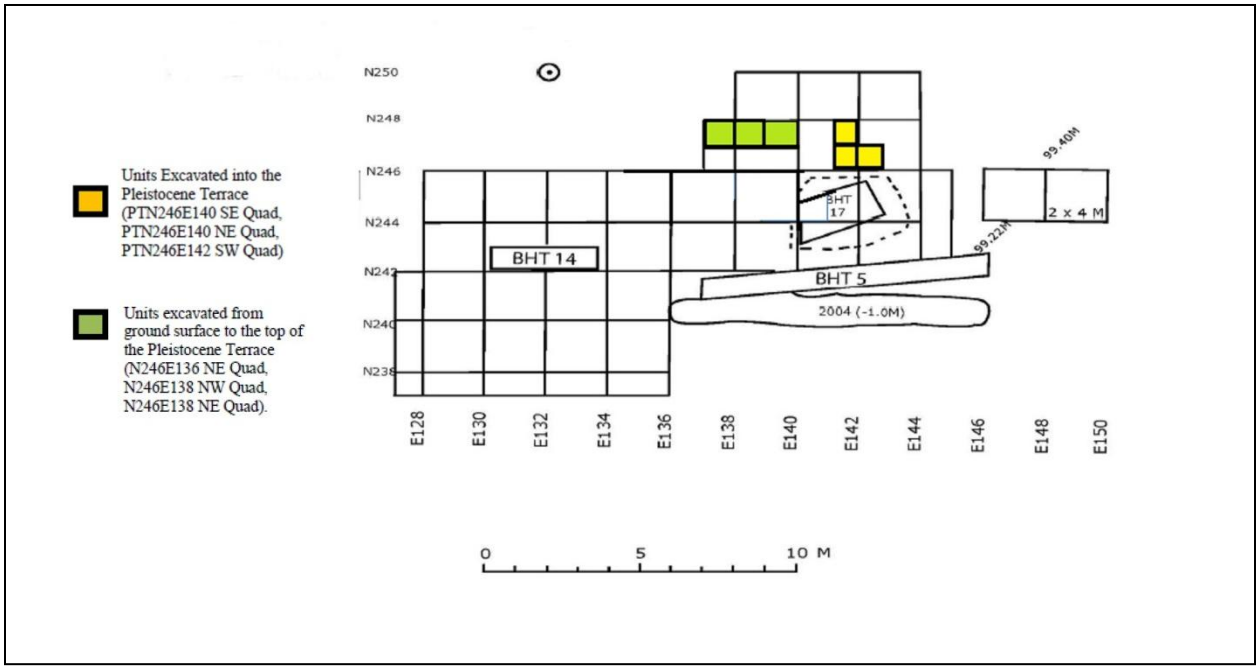


Figure 5–20

Planview map of Terrace excavations showing units selected by King for her 2012 MA thesis.

To evaluate the similarity between the Topper Clovis and pre Clovis assemblage at Topper, King employed mass analysis, Sullivan and Rozen's interpretation-free analysis (IFM), and artifact attribute frequency analysis. Mass analysis, a form of aggregate analysis that examines the size distribution of the debitage sample, was used to analyze the assemblage using non-technological criteria, and to subdivide the assemblage prior to making interpretations regarding the technology used to create it (Shott 1994). Individual artifact attribute analysis was employed to examine questions regarding reduction stage and manufacturing techniques.

The results of King's study demonstrated that small incomplete flakes and small debitage consistent with bifacial manufacture strategies were present in Pleistocene – age deposits at Topper (King 2012). However, these artifacts were found in deposits identified by Waters (et al. 2009) as unit 2b, and consist of gravel filled chute channels thought to have been deposited when the Savannah River flowed as a braided stream system. (King 2012:130). As such, these findings may indicate the presence of "considerable disturbance in the Pleistocene archaeological record at Topper" (King 2012:131). The occurrence of flakes in the older deposits could reflect evidence of the bioturbation and displacement of smaller flakes from the overlying cultural deposits, or their presence could reflect the formation or introduction of flakes as the result of fluvial processes. King (2012:131–134] subsequently developed two contrasting hypotheses to account for the occurrence of archaeological materials in the Pleistocene deposits at the site. These are presented below.

1.) "There was no occupation at the Topper Site prior to the arrival of the Clovis populations. If this hypothesis is correct, it would mean that the materials recovered from within the older Pleistocene Sands and Pleistocene Terrace sediments at Topper are likely the result of

natural processes such as bioturbation, freeze thaw action, erosion and deposition from stream flow".

2.) There was a pre Clovis occupation at the Topper Site. Moreover, the patterns of debitage distribution are different for the Pleistocene Sands levels because the pre Clovis occupants were using a different manufacturing technique, thus leaving behind a different assortment of debitage.

The results of King's study demonstrate the presence of cultural flakes beneath Clovis bearing deposits at the site. These flakes were found to possess the same or similar attributes as the debitage recovered from the Holocene Terrace. Barring any post depositional disturbances, these findings would tend to support the proposition that these flakes were also produced using stone tool production episodes rather than by natural processes. One important contribution of the study was the identification of stone tools from pre Clovis contexts at the site.

It is important to note that the analytic protocol employed in King's study called for the use of lithic attributes most common with conchoidal fracture as a means to identify cultural flakes. These attributes include at minimum a striking platform, and interior surface with features consisting of compression rings and a bulb of force. Goals of the project did not determine as to whether the attributes observed on flakes could have been produced as a result of bending or compressive forces. Therefore, it seems essential that any study geared toward distinguishing whether Clovis and potential pre Clovis occupations at Topper utilized different manufacture techniques must consider the technological byproducts that can form as a result of *all* lithic manufacture strategies. The current study will evaluate the Topper Pleistocene assemblage in detail, and will serve as a test to evaluate which of King's two hypotheses is more plausible.

Each of the taphonomic processes discussed in this chapter have the potential to alter or modify existing archaeological assemblages or create lithic materials that could be misinterpreted as the byproducts of human lithic manufacture. In the following chapter a research design is proposed to account for the taphonomic processes that might be active at the Topper Site. The goal of this study is to determine whether or not the lithic items from the proposed pre Clovis assemblage resulted from natural taphonomic processes, or alternatively represent human agency.

CHAPTER VI

RESEARCH DESIGN

This chapter presents the research design used to examine the lithic assemblage at the Topper Site. I begin by summarizing the goals of this analysis, followed by a brief review of the methods and results of prior lithic analyses of the pre Clovis assemblage. This discussion is followed by an outline documenting how the research sample was selected, and what criteria were employed in choosing the attributes for analysis.

Research Goals

Excavations undertaken at the Topper Site have revealed evidence of chipped stone tools that span the entire known culture chronology for the southeastern U.S extending back ca.13,500 years. Each of these cultural components ranging from Mississippian through Clovis made use of the local Allendale chert outcrop, implementing similar bifacial reduction technologies in the manufacture of chipped stone tools. The presence of cultural materials beneath the Clovis deposits consisting of conchoidal flakes (King 2012) and bend breaks typically considered to be byproducts of bipolar reduction suggests an older occupation at Topper. This assemblage is referred to as the Topper pre Clovis assemblage.

The stated goals of this study are to 1) determine the origin of the lithic materials identified as conchoidal flakes from the Topper pre Clovis assemblage; 2) test the role of human agency in the manufacture of the materials preliminarily identified as bend break flakes and 3) provide a comprehensive description of the lithic assemblage that will enable a better understanding of the technological strategies of tool production at the site.

Most issues with claims for pre Clovis assemblages have involved problems with one of three classes of data: dating, context, and artifact status. Extensive studies at Topper have been

undertaken to establish the geochronology, resulting in a well defined geological context for the assemblages, and a somewhat less secure chronological framework (Waters et al. 2009). This dissertation addresses the material remains found in the deposits, and focuses on problems of context and artifact status.

Contextual problems deal with goal 1, determining the origin of flakes from the Topper assemblage. Natural processes such as bioturbation, colluvial redeposition, and fluvial activity can redeposit existing archaeological assemblages, and it is necessary to distinguish whether such processes occurred onsite in the past, and the degree to which they may have affected the spatial integrity of the Topper assemblage. The second goal of this study deals with problems of artifact status, and specifically whether bend break flakes from the Topper assemblage are byproducts of human agency or are the direct result of natural weathering processes such as freeze/thaw, hydric forcing, or sediment consolidation. These natural processes can create lithic items that may exhibit attributes that mimic those evident on cultural artifacts. Therefore it is essential to establish and isolate the attributes consistent with lithic manufacture from those that form by natural processes. The third goal of this study entails artifact attribute analysis. If any spatio–temporal differences in the composition of artifacts exist at Topper, the attribute analysis can be used to identify such differences and make interpretations about the technological strategies employed in their production.

Methodological Framework

The methodological framework developed for this dissertation incorporates multiple objective analyses. These analyses include 1); individual lithic artifact attribute analysis of the Clovis and pre Clovis assemblages recovered from the site's three stratigraphic units (Holocene/Late Pleistocene Colluvial Sands, Pleistocene Alluvial Sands, Pleistocene Alluvial

Terrace); 2), trace micro wear analysis of a sample of artifacts recovered from the Clovis and Topper pre Clovis assemblages; 3), experimental archaeology consisting of natural mechanical weathering experiments of Allendale chert and subsequent comparison of the lithic byproducts to those items recovered from the deposits at Topper; and 4), spatial analysis, size grade analysis and cortical analysis conducted to interpret site formation processes and site integrity.

Research Sample

This study examines lithic materials recovered from 16 2m x 2m units of Holocene and Pleistocene Sands, and 14 1m x 1m units from the clay Pleistocene Terrace that underlie the Pleistocene Sands at Topper (Figures 6–1 and 6–2). The 16 2m x 2m units include materials that derive from Early Archaic deposits to the top of the alluvial clay Terrace. The upper sediments of these units were excavated in 10cm arbitrary levels. Once Clovis deposits were encountered, or at 65cmbs, excavation commenced in 1m x 1m quads and in 5cm arbitrary levels. The 16 2m x 2m units derive from four separate but ultimately contiguous excavation areas of the site. These include units from the 2002–2003 5m x 9m block excavation, the 2009–2012 excavation north of BHT17 (Northern Terrace excavation), the 1998–2000 4m x 8m block excavation, and the 2010 4m x 4m block excavation (Figure 6–2).

One important component of this analysis was to select units that represent complete stratigraphic profiles from Early Archaic deposits to the base of the Pleistocene Terrace. Therefore, the 14 1m x 1m Pleistocene Terrace units selected for analysis all derive from contexts that lie immediately beneath the corresponding units from the 2m x 2m sample. This allows for the examination of the vertical and horizontal distribution of lithic materials from discrete units in the block, and is important for evaluating potential disturbance between or within individual occupational episodes. Of note, three of the 1m x 1m Pleistocene Terrace units

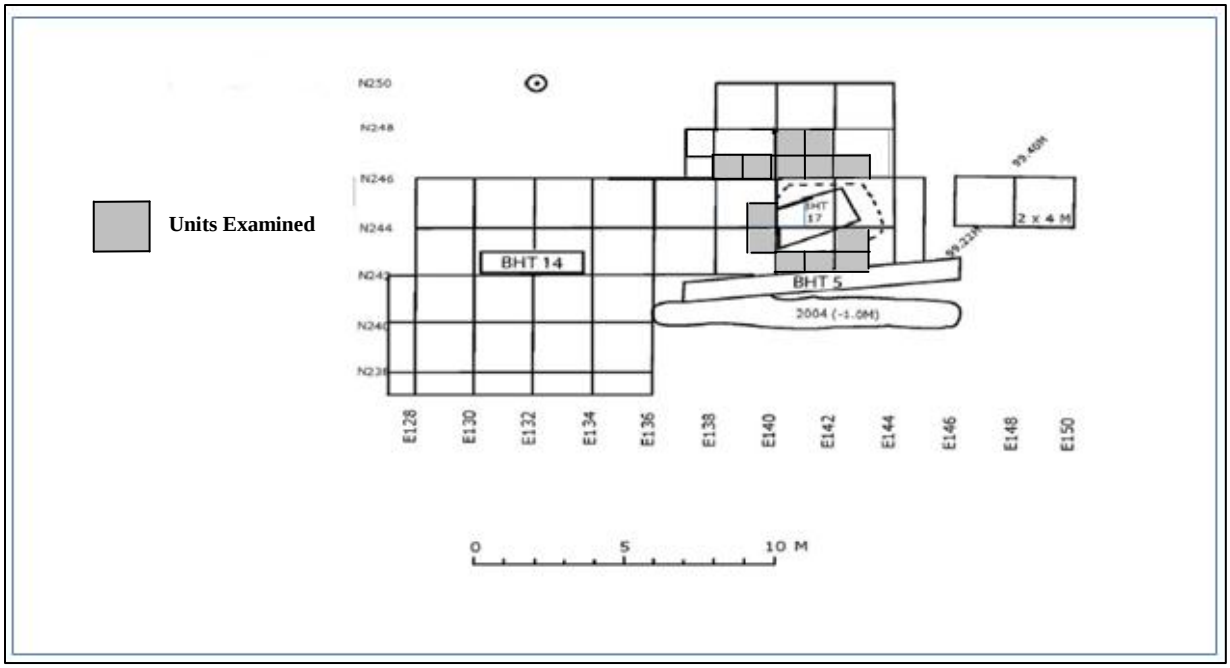


Figure 6–1
Planview map of Terrace excavations showing 1m x 1m Pleistocene Terrace units selected for analysis in for this study.

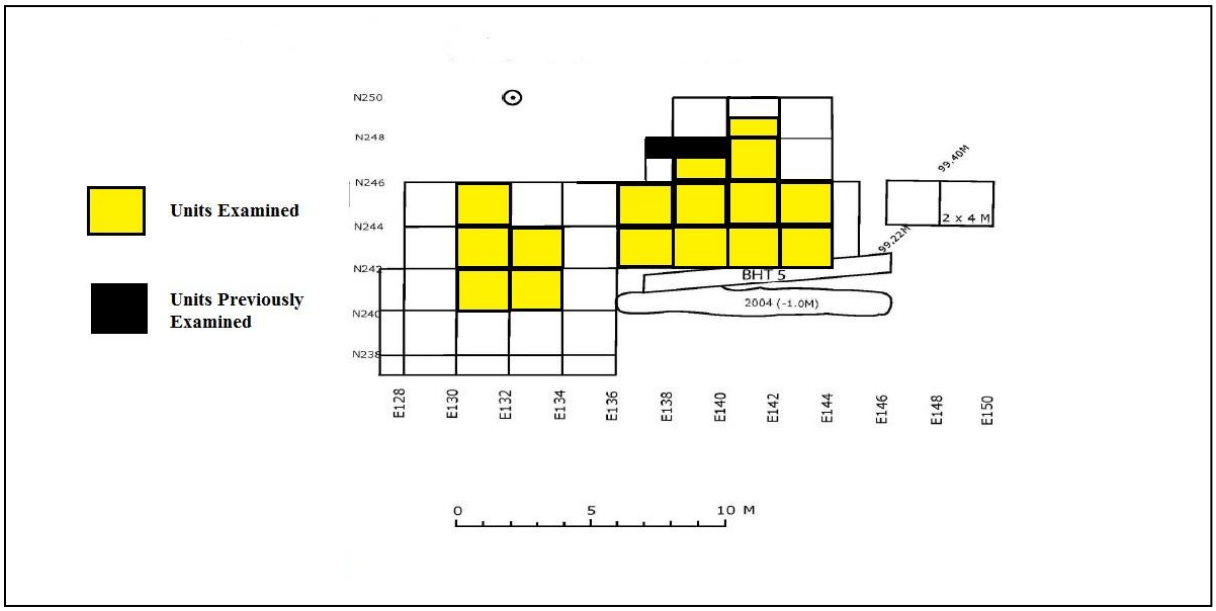


Figure 6–2
Planview map of Terrace excavations showing 2m x 2m units selected for analysis in for this study. The area highlighted in black was previously examined and reported by King (2012). Three Pleistocene Terrace units examined by King were also examined for the present study. These include units N246 E140 NE and SE and N246 E142 SW.

selected for analysis overlap with units analyzed by King. These include units N246 E140 NE, SE, and N246 E142 SW quad and are depicted in Figure 6–1.

All Pleistocene Terrace units selected for analysis were excavated in 5cm arbitrary levels. The sample selected from the Pleistocene Terrace represents all of the 1m x 1m units excavated to date. Four partial Pleistocene Terrace units have also been excavated, surrounding BHT 17. However, these partial units were excavated in 10cm levels rather than conventional 5cm levels. The considerable differences in size among these units makes problematic any comparison with the full 1m x 1m units. Therefore, no partial unit was examined in this study.

The lithic materials selected for analysis in this study include: 1) three dimensionally piece plotted items from each level within the site grid, and 2) all lithic materials recovered from the 1/8 inch screen mesh. Accordingly, all lithic items 2.5cm in diameter or greater were mapped when possible. To date this consists of nearly 10,000 items from the alluvial floodplain portion of the site. This protocol was conducted regardless of whether visible evidence for cultural flaking was identified on the specimen in question, and therefore does not make predetermined infield assumptions regarding the role of human agency in the production of each piece plot. Furthermore, the procedure allows for the spatial arrangement of all materials above the stated size grade within the assemblage to be assessed. Attribute analysis in the lab enables the development of interpretation free artifact categories from which the spatial arrangement of each category may then inform about assemblage composition through time.

Lithic Analysis

Debitage Attribute Analysis

Debitage attribute analysis is designed to identify attributes that distinguish culturally produced flakes from those specimens that may form as a result of natural or taphonomic

processes and also to establish if any variation exists in lithic technology through the vertical profile at the site. Technological attributes considered for this analysis include the presence or absence of striking platform, bulb of force, compression rings, ripple marks, number and direction of removal scars, flake condition (complete, proximal, medial, distal), presence or absence of modification, thermal alteration and river staining. The incidence of cortex on lithic specimens was recorded to document the nature and extent of reduction. In addition to these technological attributes, morphological attributes were also recorded and included measures of flake length, width, thickness, and weight.

Sullivan and Rozen's interpretation free model was employed to characterize the nature of the lithic assemblage. Their method incorporates three dimensions of variability, each with two outcomes (Sullivan and Rozen 1985). These variables include a single interior surface, a point of applied force, and intact margins. For the present study, two additional attributes of variability, bulb of force and compression rings are added to distinguish between specimens that have interior surfaces resulting from mechanical weathering, and those produced through force initiation. This model results in six debitage classes. Figure 6–3 presents a flow chart showing how each debitage category was determined, a modification from the flow chart presented in Figure 5–15 to accommodate the Topper materials. The analytic framework was used to document assemblage variability between the Clovis and pre Clovis assemblage deposits, and to determine the role of human agency. The six debitage classes are presented in Figure 6–3 and are defined as follows:

Pebble/Cobble– Lithic specimens that lack a discernible interior surface, compression rings, bulb of force, point of applied force and intact margins. For the purpose of this study pebbles and cobbles can be any round, subrounded, or subangular lithic item that does not

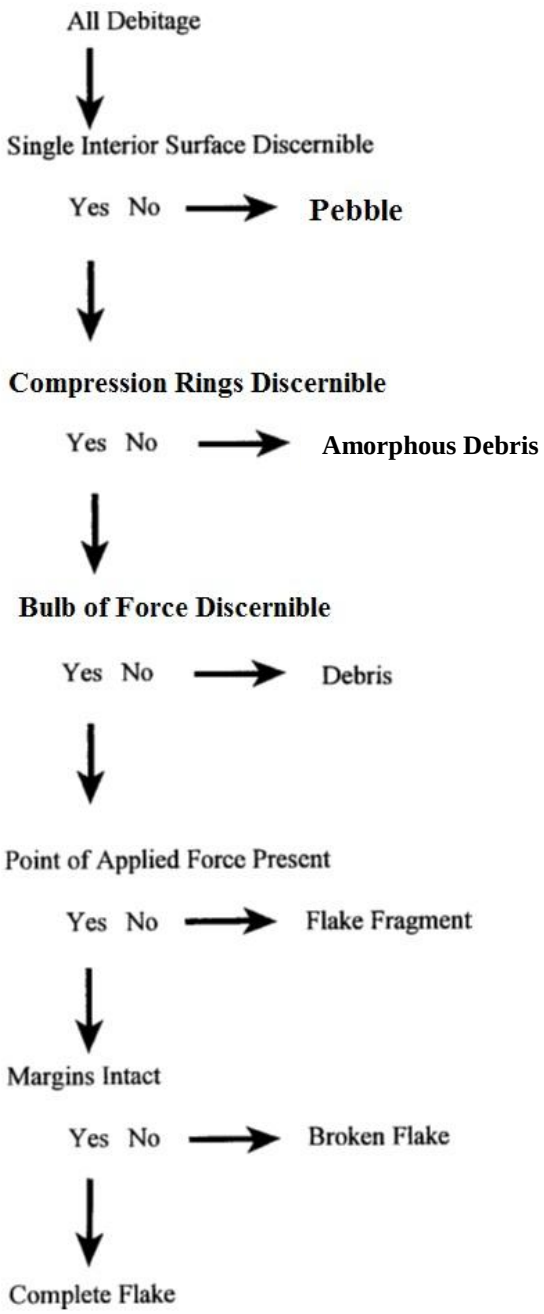


Figure 6–3
Flow chart showing debitage categories used in Interpretation Free Analysis. Modified from Sullivan and Rozen (1985:759).

exhibit an attribute consistent with a detachment struck from a core. The Wentworth scale provides a good means by which to classify lithic objects by size. By definition, pebbles range in size from 4-64 mm, whereas cobbles range in size from 64-256 mm. Two sub-categories of pebbles/cobbles are defined based on material, and include cortical and quartz.

Amorphous debris– Lithic specimens that have a discernible interior surface, yet lack compression rings, bulb of force, point of applied force and intact margins.

Debris– Lithic specimens that have a discernible interior surface and compression rings, but lack a bulb of force, point of applied force and intact margins.

Flake fragment– Lithic specimens that have a discernible interior surface, compression rings, and bulb of force, yet lack a point of applied force and intact margins.

Broken Flake–Lithic specimens that have a discernible interior surface, compression rings, bulb of force, and a point of applied force, yet lack intact margins.

Complete Flake– Artifacts that have a single interior surface, compression rings, bulb of force, a complete or partial striking platform, and intact margins with a clear point of termination.

For the purpose of this study, artifacts of potential human agency must have at least one interior detachment face that has been released from an objective piece, and must exhibit force lines (compression rings) that emanate from the direction of a point of applied force. These lines, or compression rings, are evidence of applied force resulting from flake initiation, propagation and detachment, and may be used to distinguish lithic pieces that have been detached by weathering and/or taphonomic fracture agents, from those that are a product of force. Lithic materials that exhibit only a detachment face, and that do not have evidence of lines of force are classified as naturally formed debris (amorphous debris). A complete flake has a point of applied

force and intact margins, whereas flake fragments, broken flakes, and other debitage lack such attributes (Andrefsky 2005:18). Barring relocation or downward movement of humanly created materials, if people were exploiting the locally available chert quarry at Topper prior to Clovis, then I expect similarity in assemblage composition and frequency of debitage categories for the Clovis and pre Clovis deposits. By contrast, if peoples were not present at Topper prior to the Clovis occupation, then barring any downward movement or displacement of humanly produced artifacts from elsewhere, and holding reductive technology constant, I expect no similarity in assemblage composition and frequency of debitage categories for Clovis and pre Clovis deposits. Furthermore, the attributes found on materials from these lower deposits should consist primarily of amorphous debris that could result from natural weathering.

Lithic Analysis: Flake Formation

In an initial analysis of the pre Clovis deposits at Topper, King (2012) examined attributes of flake types known to occur as a byproduct of biface manufacture, and the research design for her study assumed that "each of the populations occupying the Topper Site utilized the same technology" (King 2012:42). However, other lithic tool production technologies may produce artifacts that have attributes that are unlike those produced as a result of biface manufacture. Goodyear (2005) contends that the Topper assemblage was produced using a bipolar technology, whereby wedging and bending initiation were employed to produce compression and bend fracture flakes. Goodyear further asserts that debitage from such manufacture may produce attributes that are unique and inconsistent with traditional biface reduction trajectories. In contrast, Waters (et al. 2009) assert that the pieces" that comprise the Topper assemblage could have also been produced by natural processes such as thermal fracturing or physical fracturing during stream transport.

It is essential in this study to determine the technology or technologies employed in the production of stone tools at Topper, as well as the specific techniques applied in manufacture. In stone tool production, technology refers to the sum total of manufacturing knowledge necessary to produce a given tool. This includes the transmission of information gained with regard to artifact form and style, and turning them into lithic implements of use. Technology is thus the formal design strategies applied in carrying out a specific manufacture trajectory. Associated with technology is technique. Technique is the application of a given technology, and refers to the mechanism(s) by which applied force, initiation, propagation and termination are carried out, as well as the implements used for lithic detachment. As such, technology may be said to be of the mind, whereas technique is in the hand.

For this study, Cotterell and Kamminga's (1987) model of flake formation is used to assess lithic technology, and to determine the techniques applied in stone tool production at Topper. Technological strategies of lithic tool production considered for this analysis include: biface and core flake manufacture by conchoidal hertzian flaking; bipolar core reduction by compression flaking; and bend fracture flaking by either bending or compression forces. Because bend fracture technologies result in flakes whose lateral margins may not be intact, it is necessary to distinguish between intentionally produced bend fracture flakes from those flakes that are incidentally broken during biface manufacture. For this analysis, each flake is examined for the presence or absence of breaks, as well as the morphological characteristics of such breaks. Breaks were classified as either bend or hertzian based upon the mechanics of fracture as described by Cotterell and Kamminga (1987). Morphological attributes recorded for breaks include maximum flake thickness, and number of broken margins. Attributes that are consistently identifiable with bend breaks include: points and cones of percussion, incipient

cones, dorsal crushing at the point of impact, wedge shaped fracture lines, and lips or protrusions along the terminal end of a break face on a bend break resulting from bending initiation. If Clovis and pre Clovis peoples were present at Topper, and if they shared the same lithic manufacture strategies, then the expectation is that the same flake types and lithic technologies should occur in both Clovis and pre Clovis deposits. Alternatively, If Clovis and pre Clovis were present at Topper and did they not share the same lithic manufacture strategies, then the composition of flake types in each assemblage should be distinct.

Lithic Analysis: Stone Tool Analysis

The lithic assemblage at the Topper Site was classified by tool type. Andrefsky (2005) presented a morphological typology for the classification of all chipped stone artifacts, and the current study incorporated this typology to categorize all stone tools that were mapped from the sample of units selected. The sample was initially divided into two categories, tools and non-tools. Non-tools include unmodified flakes and angular shatter. Categories of tools used for this analysis include biface tools, core tools, and flake tools. The flake tool class was further subdivided into blade tools/ uniface tools and bend break tools. All flake tools must exhibit evidence of modification to be distinguished from unmodified (non-tool) flakes. The morphological typology of stone tools was employed to identify the types of tools that were manufactured or used in specific locations onsite. The methodology is also used to distinguish whether or not there are any differences in technological strategies of tool production through time. If peoples were exploiting the locally available chert quarry at Topper for the production of chipped stone tools prior to Clovis, then there should be evidence for at least one of three types of tools (biface tools, core tools, and flake tools) from the deposits, barring movement or relocation of these items from elsewhere. By contrast, if there is no pre Clovis occupation at

Topper, then it follows that stone tools should not be present in the Pleistocene Sands and Terrace, barring movement or relocation of these items from elsewhere.

If there is evidence for pre Clovis tool production at Topper and if such production is technologically dissimilar to Clovis or later lithic technologies then I also expect dissimilarity in the frequency and types of debitage recovered from these deposits. Similarity in toolkit composition would indicate that 1) either two groups of peoples, separated in time, were using the same technological strategies of tool production and use, or 2) the tools observed were being redeposited from Clovis contexts into deeper strata at the site.

Lithic Analysis: Trace Microwear and Edge Modification Analysis

Trace Microwear Analysis

Microscopic analyses were conducted to determine whether lithic items recovered from the Pleistocene alluvial sands and Pleistocene Terrace at Topper were a byproduct of human versus nonhuman agency. Trace microwear analysis was employed to examine the Clovis and potential pre Clovis assemblages at Topper, and is used to distinguish between patterns of use and natural taphonomic processes. For this analysis, the location and relationship of flaking and microwear indicators is significant (Wiederhold and Pevny 2014). Experimental studies have shown that different types of tool use can result in different flaking patterns on tool margins, and can be used to identify the "actions that produced the flaking (Odell 1981a, 1981b, 2003; Tringham et al.1974; Vereecken 1980; Shea 1987; Wiederhold and Pevny 2014).

Attributes that are consistent with use include uniform polish and striations identified on the exterior and interior of flake surfaces, and that is restricted to edges and oriented parallel to the lateral margins. Chips and removal scars produced by cultural agents should be patterned, consisting of two or more consecutive removals that are uniform and that occur on the lateral

margin of the flake. Evidence of use on bend fracture flakes should consist of transverse or parallel polish and striations on the flat surfaces of these flakes and have a high degree of polish on the projections at the intersection of the snapped edges. For the purpose of this study, microwear resulting from intentional human use should exhibit a definite pattern of three or more consecutive fractures along a potentially used edge, together with corroborative evidence in the form of polish, striations, or linear features consistent with interaction between bodies in motion.

By contrast, attributes that might indicate postpositional disturbance or trampling include crushing or abrasion of the flake margin, random or un-patterned bright spots, and striations that are multidirectional. Micro-flake removals produced by natural processes should be less than 2m from the flake margin, should be randomly oriented with respect to the flake edge, and should not occur as more than two consecutive parallel removals. Although both natural as well as modern human-induced processes such as bag-wear can result in the occurrence of apparent microwear on lithic items, the present study operates under the assumption that uniformity in patterning of micro-chipping combined with striations serves as the best evidence for microwear resulting from cultural processes.

Modification

All artifacts from the Topper assemblage were examined for the presence of macroscopic modification. Modification refers to the alteration of a tool or artifact in such a way as to rejuvenate, enhance, or extend its use-life, or to change it into another tool form. Evidence of modification typically takes the form of flakes or chips from one or more lateral margins of the tool. Andrefsky (2009: 69, see also Andrefsky 2012) has developed an index of modification to distinguish edge modification on tools resulting from human use versus those occurring as a byproduct of natural processes. This method measures the number of segments of an artifact that

have undergone modification. An artifact is placed under a grid with eight sections. The number of segments that show evidence of modification is calculated. Andrefsky has found that edge modification attributed to human use typically occurs within a range of 2–5 segments of the artifact. Artifacts with two or fewer segments or greater than 5 segments of with modification are attributed to natural or post depositional processes. If Modification resulted from intentional human use, such modification should exhibit a definite pattern of three or more consecutive fractures along a potentially used edge and no more than 5 of 8 segments of the tool or flake having retouched or used edges. Corroborative evidence must also be present in the form of polish, striations or linear features consistent with interaction between bodies in motion. If modification resulted from natural processes, such modification should consist of two or fewer or greater than 5 segments of the artifact's surface having been modified.

The methodological framework offered above allows for the construction of testable hypotheses with regard to the cultural and potential chipped stone assemblages at Topper. Hypotheses pertinent to lithic technology at Topper are presented in Table 6–1 and in Figures 6–4 through 6–6 as flow charts, and are applied to evaluate the role of human agency in the production of lithic materials from pre Clovis contexts at Topper.

Hypothesis:

If there was a pre Clovis occupation at Topper, then evidence of this occupation should be indicated by 1) similarity in the composition of debitage attributes for the Clovis and pre Clovis

Table 6–1
Flow Chart Showing Potential Outcomes of Testable Hypotheses

Lithic Technological Analyses		
Analysis	Supporting Evidence for Intact pre Clovis deposits	No Supporting Evidence for pre Clovis deposits
Interpretation Free (IFM)	* Debris, Flake Fragment, Broken Flake, Flake	Pebble, Amorphous debris
Flake Formation	*If share same lithic Tech. with Clovis = Expect Similar Flake Types in both strata	Absence of Flake Types
Flake Formation	*If do not have same lithic Tech. as Clovis = Expect Dissimilar Flake Types in both strata	Absence of Flake Types
Chipped stone tools	*Presence of one of Core, Flake, or Biface Tools	Absence of Tools
Site Formation Analyses		
Spatial	Non–random Distribution with No Fluvial Displacement Non–random Distribution with No *in situ* Weathering	Random Distribution Non-Random Distribution with Clustering only in Cracks Non-Random Distribution with Fluvial Displacement
Refit	Two or more Detachments of Debris, Flake Fragment, Broken Flake, or Flakes on Common Surface and in Non–Random Association	Two or more Detachments of Pebbles or Amorphous debris Either on Common Surface or Randomly Distributed
Cortical	Cortex in Non–Random Distribution and in Association with Debris, Flake Fragment, Broken Flake, Flake	Cortex in Random Distribution. No Association with Debris, Flake Fragment, Broken Flake, Flake
Mass and Size Grade	More wt. in Debitage Associated with Tools	Horizontal or Vertical Sorting of Artifacts

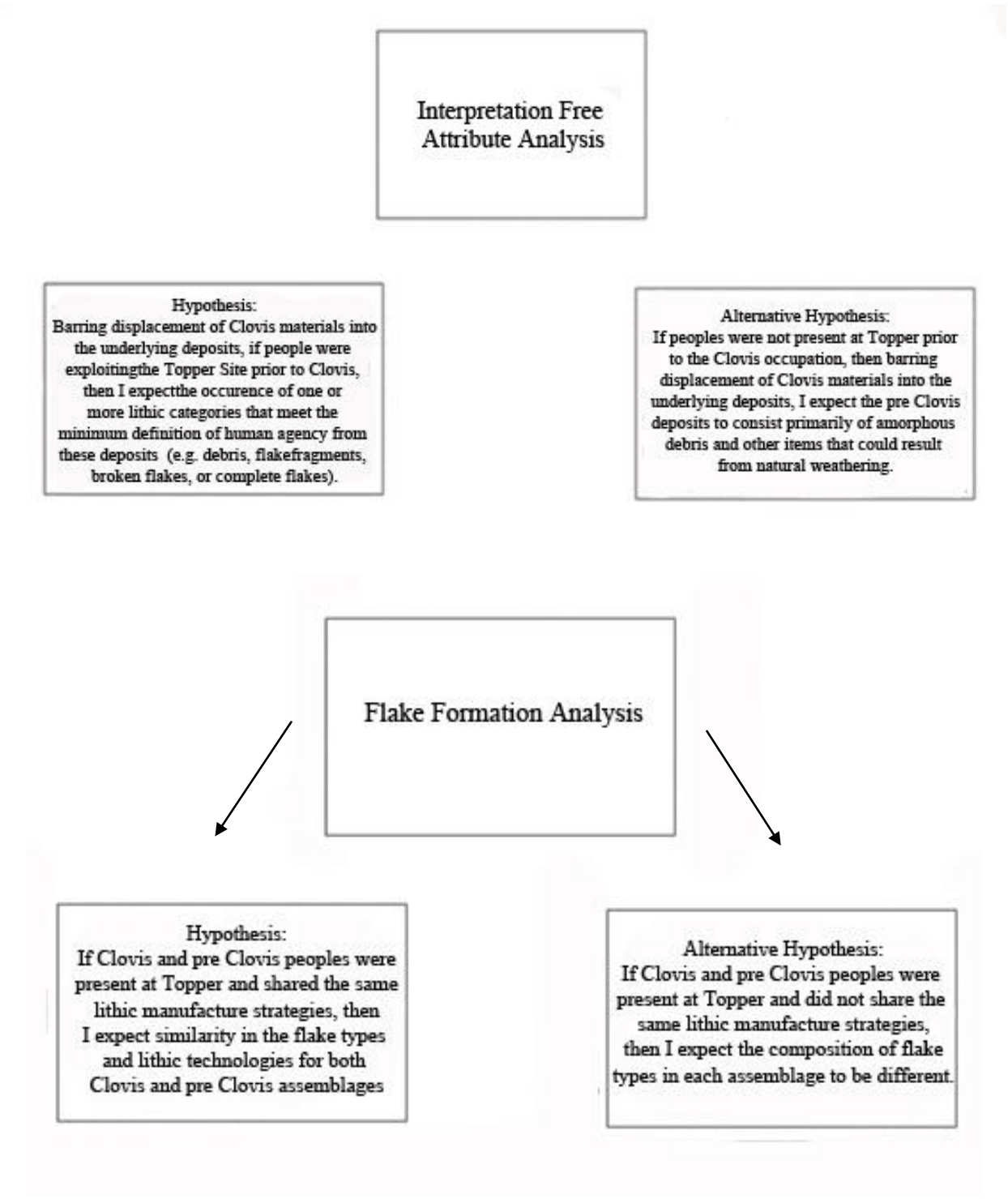


Figure 6–4
Chart showing Hypotheses and Alternative Hypotheses for Interpretation Free Attribute (above) and Flake Formation Analyses (below).

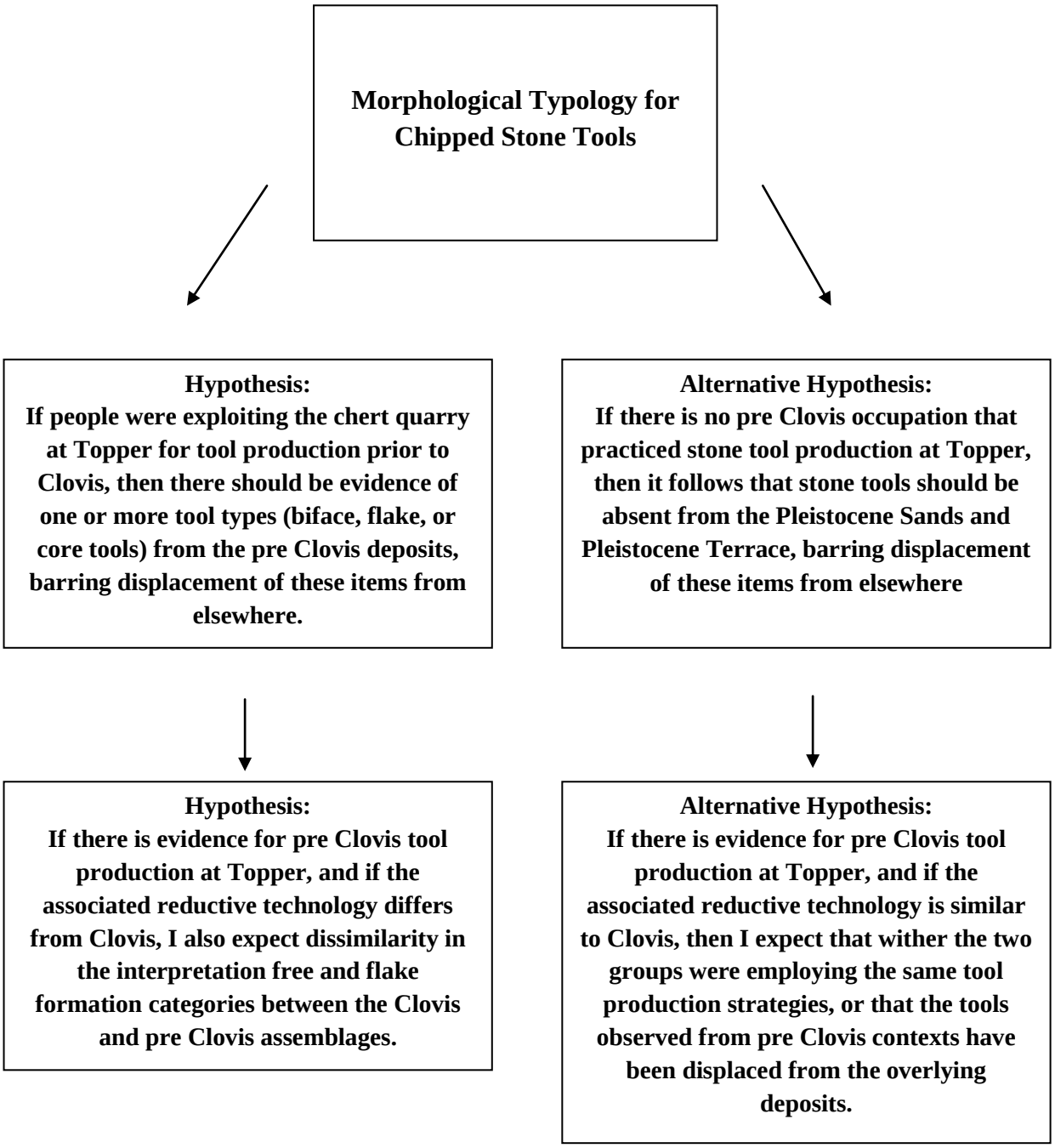


Figure 6–5
Chart showing Hypotheses and Alternative Hypotheses for Morphological Typology for Chipped Stone Tools.

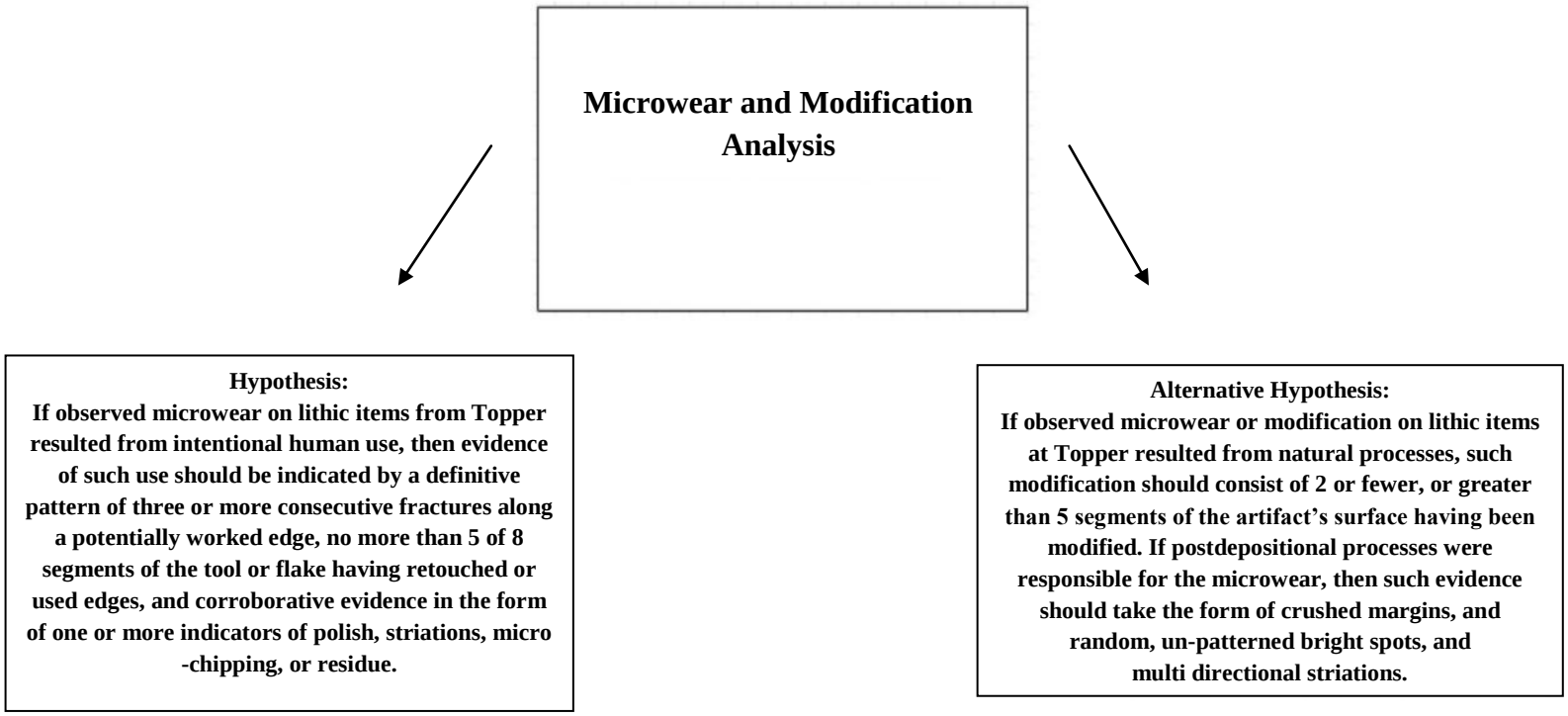


Figure 6–6
Chart showing Hypotheses and Alternative Hypotheses for Micro – wear and Modification Analyses.

assemblages, 2) similarity in flake types and lithic technologies between each assemblage if peoples utilized the same reductive technologies 3) evidence of one or more chipped stone tool types (bifaces, flake, core) from pre Clovis deposits, 4) microwear patterns that consist of three or more consecutive, uniform detachments along a potentially used margin that also exhibit one or more attributes of polish, striations, or linear features, and that more than two, but no greater than five of 8 segments of a tool or flake having retouched or used margins.

Alternative Hypothesis:

If there was no pre Clovis occupation at Topper, then there should be 1) no similarity in the composition of debitage attributes for the Clovis and pre Clovis assemblages, 2) no similarity in flake types and lithic technologies between each assemblage 3) no chipped stone tool types (bifaces, flake, core) from pre Clovis deposits, and 4) a lack of microwear patterns on lithic items recovered from the pre Clovis deposits.

Experimental Archaeology

As part of this dissertation, I implemented experimental archaeology to test the effects of mechanical weathering on chert cobbles. This study was developed to assess whether mechanical weathering agents, acting on a given mass of stone, may affect its internal properties in such a manner as to produce natural detachments that might be mistaken for artifacts of cultural origin. The results of laboratory simulations on various mechanical weathering influences were compared to the attributes of (1) the potential pre Clovis bend break assemblage recovered from the Pleistocene alluvial sands and Pleistocene Terrace at Topper, and (2) a controlled assemblage of bend breaks recovered from stratigraphically intact deposits from off–site contexts. This off–site control assemblage consists of Fort Payne chert and was recovered from alluvial and colluvial deposits from Williamson County, Tennessee at approximate latitude N 35.8650,

longitude W -86.7071. Artifact attribute analysis employed in conjunction with experimental replication studies may help answer questions related to flaked stone taphonomy.

To test the effects of mechanical weathering on chert cobbles from Allendale County, South Carolina, the effects of three variables were examined: air temperature, moisture level and water temperature. The goal was to determine what variables had the greatest effect on the material integrity of lithic bodies. A total of four weathering simulations were undertaken:

1. Freeze/Thaw

In the first procedure, a cobble was frozen for 12 hours at 25 degrees F, and subsequently left to thaw at 65 degrees F for an equal duration. The cobble was then inspected for the presence of structural fatigue and or micro fractures produced as a result of cryogenic or thermal induced processes. Briefly, if fracture was found to occur, the specimen was collected and examined for the presence or absence of specific identifiable attributes. This procedure was conducted to assess the effect of temperature on a given chert cobble, and the conditions necessary to produce lithic detachments from the parent material. A total of 25 cycles were run for this experiment on an unaltered chert cobble selected at random from the Topper Site. Photographs were taken prior to and subsequent to each freezing and thawing cycle for comparative purposes.

2. Freeze/Thaw/Wet

In the second procedure, a cobble was frozen for 12 hours, allowed to thaw, and was subsequently immersed in a body of water held at room temperature (65 degrees F) for a period of 12 hours. This process was repeated, and was conducted to assess the effect of moisture content and temperature on a given chert cobble. A total of 25 cycles were conducted for this experiment. The analysis was conducted using an unaltered chert cobble selected at random from

the Topper Site. Photographs were taken prior to and subsequent to each freezing and thawing cycle for comparative purposes.

3. Freeze/Thaw/Wet/Heat

The third procedure was the same as procedure 2, with the exception of the added variable of increased water temperature. Accordingly, a chert cobble was immersed in hot water (120 degrees F.) for a duration of 12 hours, as opposed to that at room temperature prior to having undergone the freeze thaw process. This procedure is conducted to determine if water temperature has any influence on the mechanical degradation of a chert cobble. A total of 25 cycles were run for this experiment. The analysis was conducted using an unaltered chert cobble selected at random from the Topper Site. Photographs were taken prior to and subsequent to each freezing, wetting, heating, and thawing cycle for comparative purposes.

4. Wet/Dry

The fourth procedure is employed to assess the influence of moisture on physical rock weathering. For this test, a fourth cobble was immersed and then dried for a period of 12 hours each, observing the presence or absence of structural fatigue for each hydric cycle. In addition, each chert cobble was weighed prior to and subsequent to each weathering cycle (weighed when wet and when dry), as weight may inform on the occurrence and amount of evaporated water loss. A total of 25 cycles were conducted for this experiment. The analysis was conducted using an unaltered chert cobble selected at random from the Topper Site. Photographs were taken prior to and subsequent to each wetting and drying cycle for comparative purposes. Each of the four procedures was conducted on a single specimen so as to differentiate the process(es) responsible for the greatest extent of observable weathering.

All lithic cobbles were weighed and photographed prior to and after each weathering cycle. Furthermore, if lithic detachments resulted, each specimen was measured, weighed and examined for debitage attribute properties. These items were compared to the attributes of lithic artifacts recovered from the archaeological assemblages at Topper, and to the attributes of bend fracture flakes recovered from the off-site control assemblage. The goal of the mechanical weathering experiment was to assess if specific agents of weathering (temperature and moisture) on chert cobbles can result in the formation of lithic detachments. If so, are there any attributes present that share similar characteristics to and that may be mistaken as cultural artifacts? Technological attributes examined for detached spalls included the presence or absence of cortex, an interior detachment face, parallel or irregular lateral margins, and presence and number of right angle break faces. Morphological attributes recorded included maximum detachment thickness, and maximum break angle thickness.

If the Topper pre Clovis lithic assemblage is a byproduct of human agency, then I expect that the attributes observed on the experimental weathering detachments to be distinct from, and can be differentiated from, the attributes found on inferred humanly-created artifacts recovered from the Topper assemblage. Such findings would imply a cultural origin for the lithic assemblages at the site.

If the Topper assemblage is a byproduct of natural weathering processes, then I expect the attributes found on the lithic specimens from this assemblage to be indistinguishable from those observed on the detachments produced from the natural weathering experiment. Artifacts of human agency must exhibit at the least a detachment face and lines of force on that face that emanate from a point of applied force. If the Topper pre Clovis assemblage was a product of bend break manufacture, then I expect the attributes of this assemblage to be statistically distinct

compared to the attributes consistently identified on items examined from the off-site control sample of lithic items that resemble bend break flakes. This control assemblage was recovered from alluvial and colluvial deposits in stratigraphically intact deposits where there is no other indication of cultural activity. If on the other hand mechanical weathering processes were responsible for producing the Topper pre Clovis lithic assemblage, then I would expect the attributes most commonly found on the artifacts recovered from this assemblage to be similar to those observed on lithic detachments formed by the simulated weathering experiments. Artifacts consistent with weathering processes should lack force lines on the interior surface of lithic specimens.

Site Formation Processes

Although King (2012) has noted the presence of flakes from strata underlying the Clovis deposits at Topper, the potential exists that these materials were redeposited or reworked from their original position of discard. To determine whether post depositional processes have altered and or redeposited the lithic flakes and tools from the Topper Site, I conducted a series of spatial, refit, cortical, and mass analyses. Hypotheses for these analyses are provided in Figures 6–7 through 6–10.

Spatial Analysis

All lithic materials from the Topper pre Clovis and Clovis assemblage were examined to assess their location in relation to one another within the spatial grid at the site. Spatial analyses were conducted to assess if non-random horizontal or vertical patterns exist within the Topper Clovis and pre Clovis assemblages, and to aid in establishing the processes responsible for their location of deposition. For these analyses, I recorded the northing (X), easting (Y), and depth (Z) for each piece of lithic material recovered. I subsequently use Arcscene, a function within

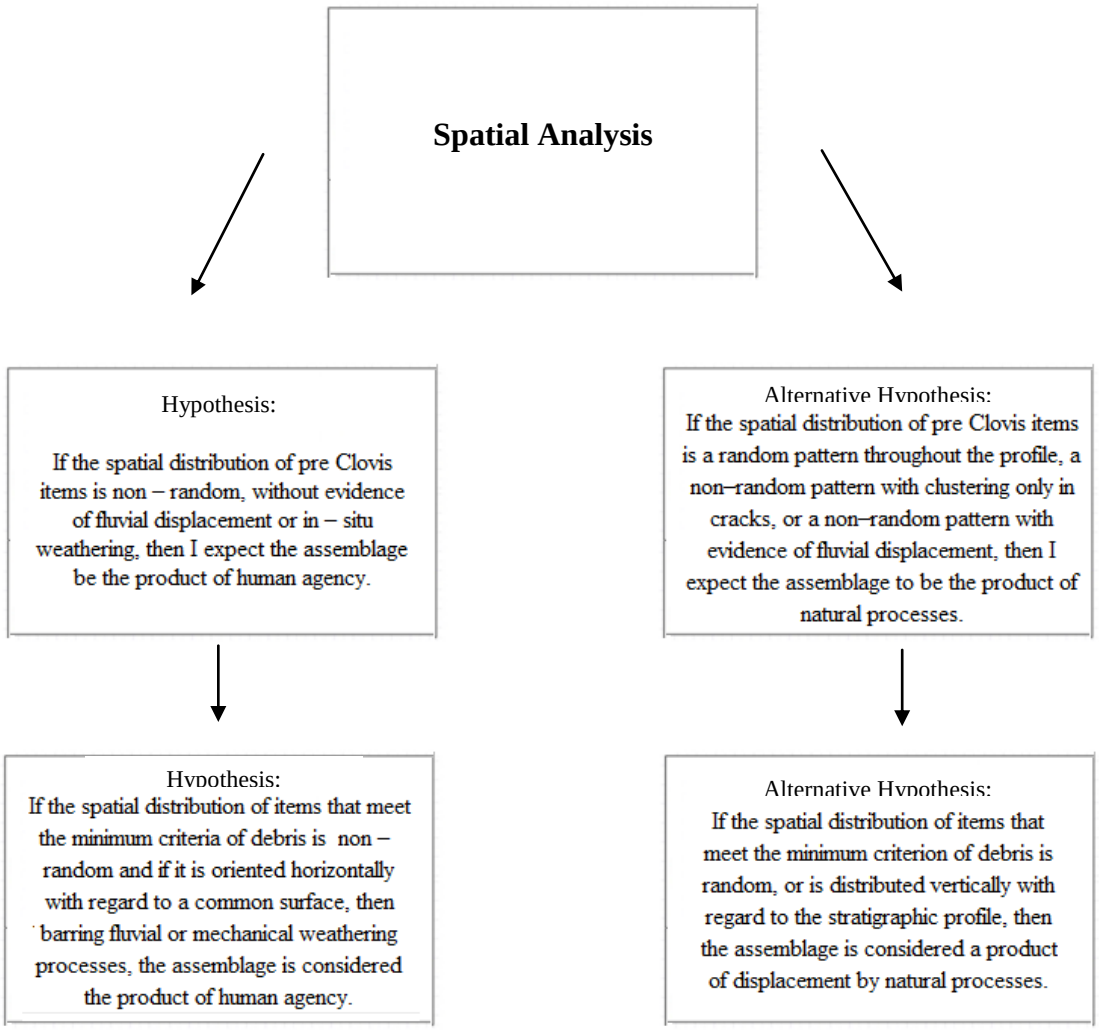


Figure 6–7
Chart showing Hypotheses and Alternative Hypotheses for Spatial Analyses.

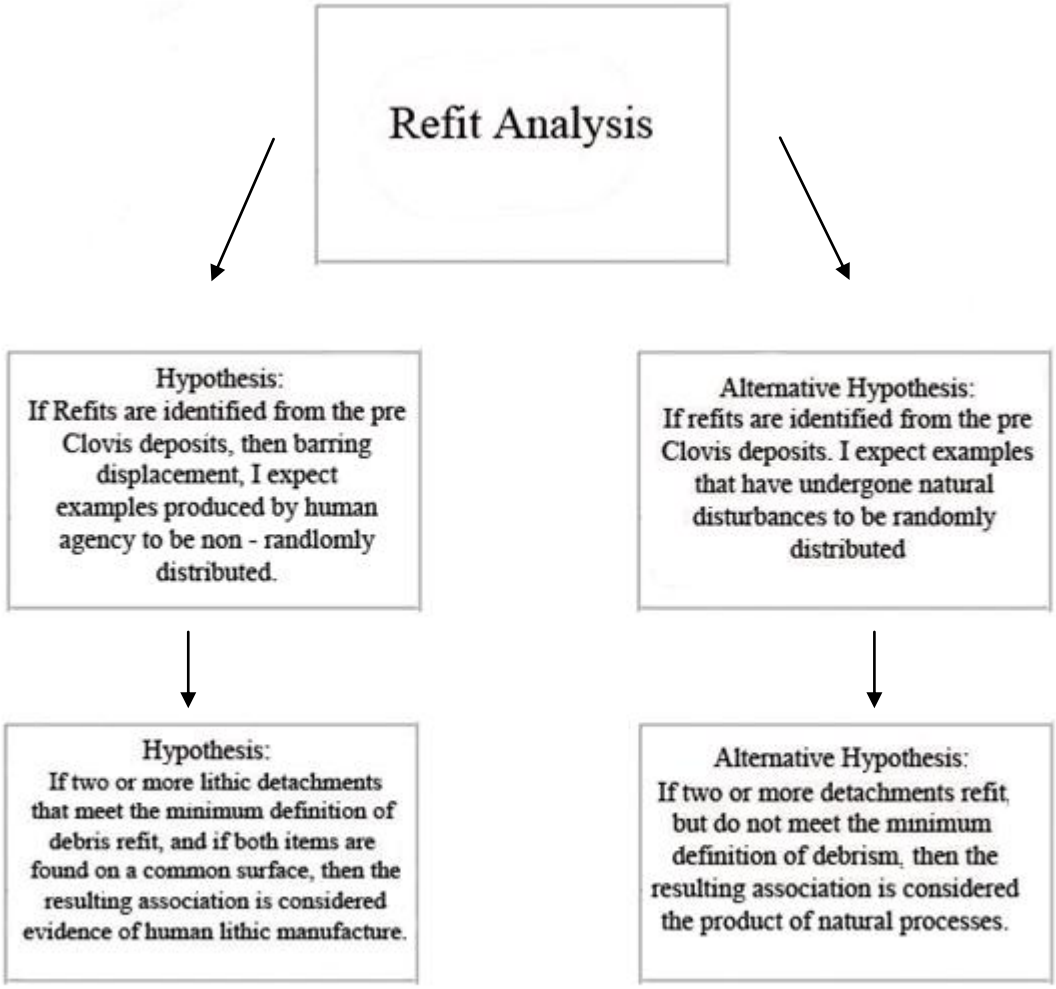


Figure 6–8
Chart showing Hypotheses and Alternative Hypotheses for Refit Analyses.

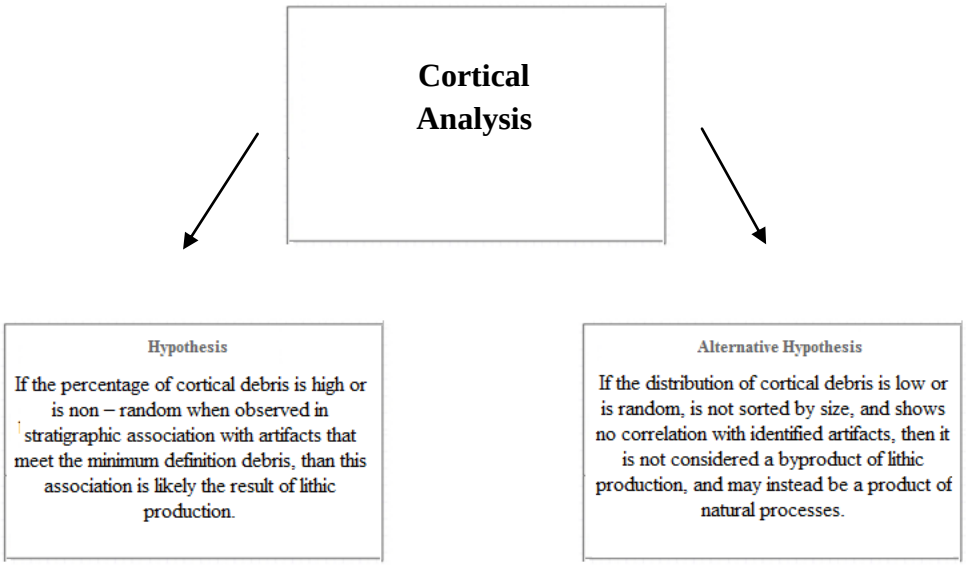


Figure 6–9
Chart showing Hypotheses and Alternative Hypotheses for Cortical Analyses.

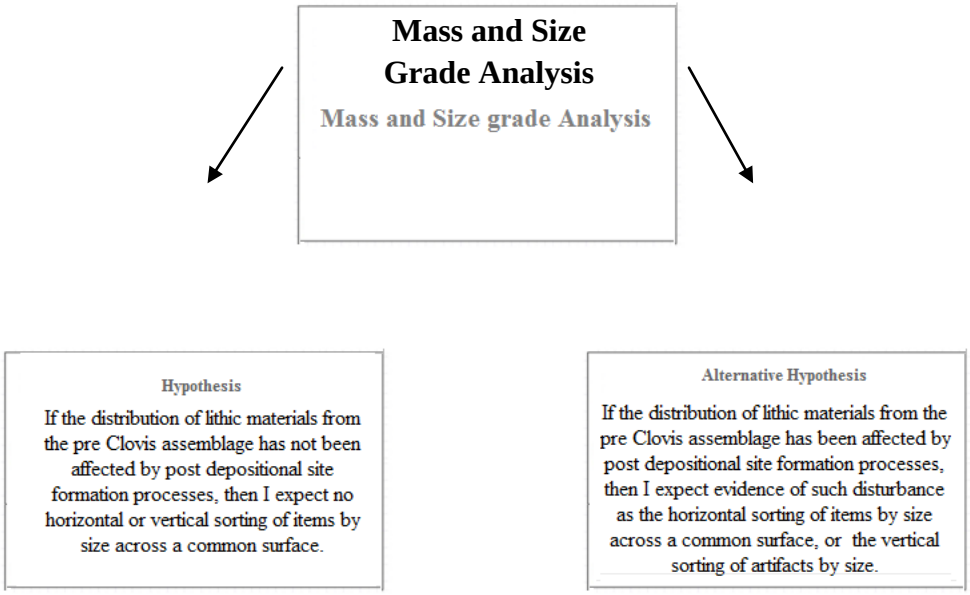


Figure 6–10
Chart showing Hypotheses and Alternative Hypotheses for Mass and Size-grade analysis.

ArcGIS 10.0, to create three dimensional visualizations of the imported data. A nearest neighbor analysis was used to evaluate the spatial patterns of the lithic deposits at the site. The analysis is conducted for lithic materials observed within the Topper Clovis, Pleistocene Sands, and Pleistocene Terrace assemblages. This analysis operates under the assumption that non-random patterns within the assemblage should exist if: 1) the distribution of lithic artifacts is a byproduct of human manufacture, and 2) site integrity has been preserved. Although clustered or uniform distributions can occur resulting from *in situ* weathering or as a consequence of displacement, additional analyses including artifact size grade, inclination, and cluster shape morphology are employed to distinguish these processes from the byproducts of human manufacture.

If the Topper assemblage was a byproduct of taphonomic disturbance or represents the displacement of flakes from the Clovis contexts above, then I expect the spatial distribution of the assemblage to consist of 1) a random pattern throughout the horizontal and vertical profile, 2) a non-random pattern whereby artifacts are vertically clustered with regard to possible cracks in the sediment, or 3) a non-random pattern whereby fluvial processes have removed or redistributed a portion of the extant assemblage. By contrast, a non-random (clustered) pattern for the Topper assemblage that 1) exhibits no evidence of fluvial displacement or 2) evidence of in situ weathering is considered representative of human agency.

Although lithic clustering is often associated with human agency, post-depositional processes can create distributions that appear cultural in origin. Natural disturbances such as tree throws can affect the integrity of archaeological deposits, often displacing materials with respect to the vertical profile of the deposit. Moreover, untested cobbles may be fractured through mechanical weathering and may cause items to migrate up or down the vertical profile.

If the pre Clovis deposits at Topper have undergone little disturbance, then the spatial distribution of the assemblage should be distributed horizontally as opposed to vertically with regard to a common working surface, and should exhibit a non-random (clustered) pattern. A non-random distribution, whose lithic contents cross cut multiple stratigraphic horizons, is evidence of disturbance regardless of the technological nature of the lithic assemblage and implies upward or downward movement.

Sullivan and Rozen's Interpretation free categories may also be employed to evaluate site integrity. If there is a nonrandom (clustered) pattern to the spatial distribution of artifacts that meet the minimum criterion of debris, and that such a pattern is oriented horizontally with regard to a common surface, then barring evidence of fluvial or mechanical weathering processes, the assemblage is considered the byproduct of human agency. By contrast, if the spatial distribution of artifacts that meet the minimum criterion of debris is random, or is distributed vertically with regard to the stratigraphic profile, then the assemblage is considered a product of bioturbation or downward drift of flakes from above.

An inter assemblage spatial analysis was conducted for the Clovis, pre Clovis Pleistocene Sand, and pre Clovis Pleistocene Terrace assemblages. If the Topper pre Clovis assemblage is a byproduct of taphonomic disturbance or represents the displacement of flakes from the Clovis contexts above, then the technological tool and debitage composition for each assemblage should either 1) be randomly distributed throughout the vertical profile, or 2) display evidence for a decrease in size with depth. If this is the case, then tool types consistent with Clovis lithic technologies should occur in deposits associated with the Topper pre Clovis assemblage and should exhibit little stratigraphic integrity. However, if the Topper pre Clovis assemblage is a byproduct of human agency, and has been unaltered by post depositional processes, then the

technological tool and debitage composition for each assemblage should be non-randomly distributed throughout the vertical profile at the site, assuming each assemblage is in stratigraphically discrete deposits. Artifact categories selected for this analysis include bifaces, core tools, flake tools, and bend breaks.

In addition to the nearest neighbor analysis, a K-means cluster analysis was used to identify spatial patterning among the assemblage and within individual tool classes from the assemblage. K–means is a non-hierarchical clustering program that searches for clusters on input data that reduce the squared distance between a cluster's centroid and points in the cluster (SSE) (Kintigh and Ammerman 1982). The optimal cluster number is subsequently determined based on the plot of Within Sum of Squares (SSE) by the number of clusters. The program assumes that the variance of the horizontal distribution of each attribute is roughly spherical, and that each cluster has approximately the same number of observations. The presence of clustering by artifact type could indicate the presence and location of individual activity areas at Topper.

Refit Analysis

For this study, all three-dimensionally mapped items were evaluated for their potential to refit. Where two or more lithic items are found to refit, their orientation (strike and dip) and spatial location in relation to the site grid were noted, and used to inform about site integrity. Artifacts were examined to assess refit potentiality as encountered during the attribute analysis. Possible detachment scars on lithic items were examined, typically from one to three minutes per specimen. Items that exhibit scar patterns that could refit were subsequently compared.

If refits were found among the assemblage, then I assume that their orientation and stratigraphic position within the vertical profile is either the result of human agency, or is the byproduct of natural processes. Bioturbation processes may act to displace artifacts along the vertical profile

of an archaeological deposit, whereas water, erosion, and colluvial processes may also act to redistribute deposits horizontally. Refits that have undergone little or no natural disturbances should cluster. As such, the distribution of refits, if produced by humans, and barring displacement, should be non-randomly distributed.

While the above methods deal with the presence and spatial array of refits within the Topper assemblage, additional analyses are needed to assess the agent of fracture that produced each refit. Since natural processes not only can redistribute artifacts of cultural origin, but can also create fracture patterns that appear to have been produced by humans, there is a need to distinguish refits as a product of natural versus cultural origin. Therefore, if two or more lithic detachments that meet the minimum definition of human agency refit, and both items are found on a common surface, and in relative proximity, then the resulting association is considered evidence of chipped stone tool production. By contrast, if two or more detachments refit, but do not meet the minimum definition of human agency, then the resulting association is considered the product of natural processes. Furthermore, if there is no relationship between the spatial array of refits, then the items have likely been displaced by posdepositional processes. The refit study is designed to serve as a proxy for understanding and distinguishing between site formation processes and those that could result from lithic production. Because the refit study is not comprehensive, the results should not be used to interpret the intensity of on-site lithic production.

Cortical Analysis

The presence of cortex and cortical pebbles at a site is an indication of either human lithic reduction episodes, or geological processes that have acted to degrade lithic materials over time.

Cortical analysis is employed as a means to identify the presence and intensity of lithic reduction episodes at Topper, and to determine the extent of post depositional weathering of chert cobbles. In chipped stone tool production, if reduction begins with the removal of flakes from a natural unmodified cobble, it should produce debitage that takes the form of cortical flakes, cortical debris, or cortical pebbles. Cortical debitage detached by human lithic manufacture typically exhibits evidence of lines of applied force (compression rings) on the interior face of the flake. However, cortex can also become detached from a lithic cobble through bipolar production or through the natural weathering of the exterior surface of the specimen. The percentage of these weathering detachments can then be compared to the percentage of flakes within a level to determine if the assemblage was more likely formed by cultural or natural processes. The on-site presence of cortex and or cortical debris is an indication of either 1) human lithic reduction episodes, or 2) natural geological and physical processes that have acted to weather or degrade lithic materials over time.

For this analysis, I compare each 5cm level of excavated material with regard to the size, amount, and weight of cortical debris and cortical pebbles from each unit. Areas at Topper where there are high concentrations of cortical debris or pebbles in association with chipped stone tools and flakes that meet the minimum definition of human agency are considered evidence of culturally produced deposits. The weight of cortical debris, cortical pebbles, quartz pebbles, and lithic flakes obtained from the sediment matrix in each unit was examined for each 5cm level from the top of the Clovis deposits to the base of the Pleistocene Terrace. The data allow for both horizontal and vertical comparison of the assemblage over the sample of units examined for the study. If the percentage of cortical pebbles is high when observed in stratigraphic association with artifacts that meet the minimum definition debris, than this association is likely the result of

lithic production. However, the presence of such items in a random distribution and that is not sorted by size, and which shows no correlation with identified artifacts, is not considered a byproduct of lithic production, and may instead be a product of natural processes. It is important note that that any distribution of cortical pebbles also be considered relative to the distribution of items that meet the minimum definition of human agency (debris) when making interpretations regarding the source of origin of the cortical assemblage.

Like cortex, quartz pebbles can also be deposited on a site as a result of postdepositional processes. At Topper, quartz pebbles are an indication of input by fluvial processes such as the Savannah River or Little Sweetwater Creek. The percentage and spatial distribution of quartz pebbles in a level can be compared with the percentage of flakes and cortex to determine the agencies most responsible for deposition at the site. High densities of flakes found in association with rounded quartz pebbles presents a greater likelihood that the existing flakes were transported to the location of discovery by fluvial activity, or that the flakes were created as a result of bombardment during fluvial processes.

River Stained Cortex Analysis

The presence of river staining on the exterior cortex of each mapped piece, as well as the weight of river stained cortex from the screen bags was examined. An examination of the distribution of river–stained cortex across the site may inform on patterns of lithic quarry behavior through time. If there is no change in the distribution of river–stained cortex throughout the vertical depth of the excavation profile, then I assume that there was little change in quarrying behavior at Topper through time. However, if there is evidence for river staining on Clovis artifacts, then the absence of river–stained artifacts that meet the minimum definition of human agency from the underlying deposits is 1) evidence for a pre Clovis occupation at the site

or 2) simply indication of extensive weathering, due to the prolonged time the materials have been in the ground. In the latter scenario, it also follows that all materials within the weathered pre Clovis deposit, barring displacement from above should also be extensively weathered.

It should be of note that Allendale chert is susceptible to patination over time. Therefore, it is plausible that such patination has obscured evidence of river stained cortex. It is also possible that river–stained chert flakes from the Clovis deposits are simply migrating through the stratigraphic profile by displacement and are subsequently weathering in the older coarser Pleistocene Sands. To evaluate this possibility I compared the vertical distribution of river–stained chert from the Holocene, Clovis, Pleistocene Sands and Terrace deposits with the distribution of other conditional categories of chert. To account for the possibility that river stained cortex is simply being displaced from above I examined the quantity by weight of river stained cortical flakes per level. A gradual decrease in flakes through the profile is an indication that some flakes are being redeposited into the underlying strata. The possibility also exists that processes related to weathering have removed some or all evidence of river stained cortex on chert items. If weathering processes have altered the assemblage, then it follows that these same processes have also removed evidence for other conditional attributes on chert items from the deposit as well. One such attribute is thermal alteration. Therefore evidence of the extent of displacement and weathering should be indicated by the point in the stratigraphic profile where river–stained and thermally altered flakes are no longer visible. If both conditional attributes are absent from a given deposit, the likelihood is greater that such an absence resulted from weathering. By contrast, the occurrence of one attribute and absence of another from the profile suggests that the difference is less likely to have been the product of weathering, and more likely the result of cultural processes.

Mass and Size Grade Analysis

All lithic materials recovered from each provenience at Topper were examined by size. For this analysis, materials were passed through a series of nested screens to determine size grades: 1–inch, 1/2 inch, 1/4 inch, and 1/8 inch. Materials from each size grade were subsequently counted and weighed. Size grade analysis is employed to assess site integrity, specifically the horizontal and vertical displacement of artifacts by size. Research has shown that horizontal size sorting of artifacts is one potential indicator of post depositional processes such as fluvial or aeolian transport that could affect site integrity (Gunn and Foss 1997:53). Vertical size sorting of artifacts is a potential indicator of postdepositional processes such as bioturbation. Krotovina are natural agents that may displace smaller artifacts into deeper strata from stratigraphically higher intact deposits. To test whether post depositional agents have sorted artifacts by size across the site, all mapped and screened materials were examined by size:

If the distribution of lithic materials from the assemblage has been affected by post depositional site formation processes, then evidence of such disturbance would be: 1) the horizontal sorting of artifacts by size across a common surface, or 2) the vertical sorting of artifacts by size. In addition to measuring lithic materials by size, artifact density was examined by level. The total counts and weights of identified artifacts were recorded for each excavation level, divided by the volume of the bulk provenience. Compared against the vertical profile, greater quantities of artifacts in the form of debitage should exist in areas where lithic reduction and stone tool manufacture were the greatest.

Chapter Summary

Topper is one of the largest Clovis lithic workshop sites identified in the southeastern United States. If people were occupying Topper and exploiting this abundant lithic resource prior

to Clovis, then evidence for such exploitation should be present in the form of recognizable stone tools, or debitage resulting from the manufacture of these tools in deposits that pre date Clovis and show no evidence for disturbance. Chapters 7–11 offer the results of analysis. Chapter 7 presents the results of the lithic analysis with emphasis on the debitage and stone tool analyses. Chapter 8 offers the results of the experimental analysis while chapters 9–11 present the results of the distributional analyses.

CHAPTER VII

RESULTS OF LITHIC ANALYSIS

Interpretation Free Analysis

This study examined the lithic materials recovered from 16 2m x 2m units of Holocene and Pleistocene Sand sediments, and 12 1m x 1m units from the clay Pleistocene Terrace that underlie the Pleistocene Sands at the Topper Site (38AL23). An interpretation free analysis adapted from Sullivan and Rozen (1985) was conducted for the piece plotted items recovered from the study sample. The frequency of piece plotted and screen artifacts for each interpretation free category are presented in Table 7–1. Percentages of items per unit are presented in parentheses. A total of 4,286 lithic items were systematically examined for the interpretation free analysis. Of the lithic items examined, 195 were from the Clovis deposits, 786 from the Pleistocene Sands and 3,305 from the Pleistocene Terrace. Although there is a significant difference in the quantity of items examined from each stratigraphic deposit, I use proportions as well as raw counts when describing the characteristics of each assemblage. According to the Interpretation Free Analysis of all piece plotted lithic items from the sample units, the Topper assemblage consists of 193 complete flakes, 116 broken flakes, 344 flake fragments, 729 pieces of debris, 1,597 pieces of amorphous debris, and 1307 pebbles (Table 7–1). Appendix 29 gives the results of the Interpretation Free Analysis and illustrations of artifacts, while Appendices 30–33 present the metric, technological and conditional attributes for all mapped items from the study sample.

In addition to the mapped items, this study resulted in the identification of 70,074 pieces of lithic debitage (complete flakes, broken flakes, flake fragments, debris and amorphous debris) from the screen bags from these units. It should be noted that the screen materials were

Table 7–1
Results of Interpretation Free Analysis for frequency of mapped debitage types by stratigraphic unit. Number of items by type for each strata followed by percentage of items the category represents in parentheses.

Piece Plotted Items				
	Clovis	**Pleistocene Sands**	**Pleistocene Terrace**	**Total**
Complete Flakes	27(13.8)	44 (5.59)	122 (3.69)	193
Broken Flakes	21 (10.7)	28 (3.56)	67 (2.02)	116
Flake Fragments	77 (39.48)	103 (13.10)	164 (4.96)	344
Debris	17 (8.71)	166 (21.11)	546 (16.52)	729
Amorphous debris	30 (15.38)	221 (28.11)	1346 (40.72)	1597
Pebbles	23 (11.79)	224 (28.49)	1060 (32.07)	1307
Total	**195**	**786**	**3305**	**4286**
Piece plotted items per 5cm level (meter²)				
Complete Flakes	1.86	0.564	1.432	3.856
Broken Flakes	1.448	0.36	0.788	2.596
Flake Fragments	5.28	1.324	1.928	8.532
Debris	1.17	2.132	6.4	9.702
Amorphous debris	2.06	2.84	15.8	20.7
Pebbles	1.58	2.88	12.44	16.9
Total Debitage	**9.758**	**4.38**	**10.548**	**24.686**
Total	**13.398**	**10.1**	**38.78**	**62.278**
Materials recovered from screen				
Complete Flakes	4538 (38.99)	5248 (12.35)	1047 (6.56)	10833
Broken Flakes	1842(15.82)	4954 (11.66)	647(4.05)	7443
Flake Fragments	2143(18.41)	12278 (28.90)	3254(20.39)	17675
Debris	2305(19.80)	11261(26.50)	4862(30.47)	18428
Amorphous debris	810(6.95)	8743(20.57)	6142(38.50)	15695
Total	**11638**	**42484**	**15952**	**70074**
Screen debitage per 5cm level (meter²)				
Complete Flakes	78.24	16.87	3.07	**98.18**
Broken Flakes	31.75	15.92	1.90	**49.57**
Flake Fragments	36.94	39.47	9.57	**85.98**
Debris	39.74	36.20	14.3	**90.24**
Amorphous debris	0.695	28.1	18.06	**46.85**
Total	**187.36**	**136.56**	**46.9**	**370.82**

categorized by debitage class and were further analyzed by condition, but did not undergo the full attribute analysis that was conducted for the artifacts piece plotted. As a consequence, the screen materials are not included here as part of the interpretation free analysis but are discussed in greater detail in chapters 8 and 9. In the following section I discuss the results of the interpretation free analysis for the Clovis, Pleistocene Sands, and Pleistocene Terrace deposits.

Complete Flakes

Complete Flakes, Clovis

A total of 27 complete flakes containing a distal terminus were identified from the piece plotted Clovis deposits from the study sample. Figures A29–1 and A29 – 2 present a sample of complete flakes identified from these levels. These flakes represent approximately 15% of all non–tool Clovis items that were mapped from the selected 16 2m x 2m units. Table 7–1 shows the distribution of debitage categories by stratigraphic unit. What is immediately obvious from this table is the higher quantity of plotted items from the Pleistocene Sands and Pleistocene Terrace. These totals could lead one to presume that higher rates of lithic reduction were carried out in these lower levels than in the overlying Clovis and Holocene deposits. However, it is important to note that these findings result from 1) a much greater volume of sediment that was excavated from the lower deposits at the site and 2) increased precision in the mapping protocol after 2005. For example, artifacts from only 58 5cm levels were examined from the Clovis deposits whereas 311 levels and 340 levels were examined from the Pleistocene Sands and Pleistocene Terrace deposits, respectively. Because of the extensive differences in the sample sizes from each stratigraphic unit, I provide the artifact percentage data in addition to frequency data for each assemblage.

When the overall percentage of artifacts is considered, Table 7–1 shows a decrease in the percentage of complete flakes in the Pleistocene Sands (5.59) and Pleistocene Terrace (3.69%) compared to the Clovis deposits (13.8%). Table 7–1 also shows the mean number of piece plotted items per 5cm level (in meter^2). On average, more complete flakes from the Clovis deposits were mapped per level than from the underlying strata.

Based on the proportion of complete flakes from the sample, it is evident that there are differences between the debitage categories for each stratigraphic unit. A Pearson's Chi–Square test was conducted comparing the frequency of flake types (complete flakes, broken flakes, flake fragments) by strata. Table 7–2 presents the results of this test which demonstrate a significant difference between the populations (χ 2 statistic; 4.6998, p = 0.030166). A subsequent Chi–Square test examined the frequency of flake categories for each assemblage and also resulted in a significant difference between the Clovis and underlying assemblages (Table 7–3). Although there are more complete flakes from the Pleistocene Sands and Terrace, the Clovis deposits have the highest percentage of complete flakes and a lower percentage of broken flakes and flake fragments. This finding demonstrates a higher proportion of flake breakage with depth through the stratigraphic profile at the site.

Table A33–1 presents the metric attributes of complete flakes for each stratum. A unique characteristic of the Topper Clovis flake assemblage is the significant variation observed in flake dimension indicating that there was no standard detachment size. Ratios of Length to width demonstrate this variability, although an examination shows a positive correlation in the ratio of complete flake length to width and also in flake width to thickness (Appendix 29, Figure A29–12– and A29–13). Table 7–4 presents the minimum, maximum, and mean attributes for complete

Table 7–2A

Results of a Chi-Square test comparing complete and broken/flake fragments for the Clovis, Pleistocene Sands, and Pleistocene Terrace Assemblages. Expected cell totals in parenthases; Chi–Square statistic in brackets.

	Complete Flakes	**Broken Flakes and Flake Fragments**	**Marginal Row Totals**
Clovis	27 (36.94) [2.68]	98 (88.06) [1.12]	125
Pleistocene Sands and Terrace	166 (156.06) [0.63]	362 (371.94) [0.27]	528
Marginal Column Totals	193	460	653

Chi–Square statistic =4.6998. p value = 0.030166. This result is significant at $p < 0.05$.

Table 7–2B

Results of a Chi–Square test comparing Flake morphology for Topper Clovis and Pleistocene Sands assemblages. There is a significant difference between the two assemblages. Expected cell totals in parenthases; Chi–Square statistic in brackets.

	Clovis	**Pleistocene Sands**	**Row Totals**
Length	46 (33.03) [5.10]	55 (66.97) [2.48]	101
Width	26 (21.58) [0.90]	40 (44.42) [0.44]	66
Thickness	11 (10.14) [0.07]	20 (20.86) [0.04]	31
Weight	20 (38.26) [8.17]	97 (78.74) [4.23]	117
Column Totals	103	212	315 (Grand Total)

Chi–Square statistic= 21.9734. p value = .00006. The result is significant at $p < 0.05$.

Table 7–3
Results of Chi–Square test comparing Interpretation Free debitage categories for each stratigraphic assemblage. Numbers in each cell reflect number of artifacts, and expected cell totals respectively. No more than 20% of the expected counts may be less than 5 and all individual expected counts are greater than 1 (Yates, et al. 1999).

Type	**Clovis**	**Pleistocene Sands**	**Pleistocene Terrace**	
	Observed *(Expected)*	Observed *(Expected)*	Observed *(Expected)*	
Flakes	27 (*8.8)*	44 *(35.6)*	123 *(149.6)*	194
Broken Flakes	21 (*5.3)*	28 *(21.3)*	67 *(89.5)*	116
Flake Fragments	77 *(15.6)*	103 *(63.1)*	164 *(562.2)*	344
Debris	17 (*33.2)*	166 *(133.7)*	546 *(15.33)*	729
Amorphous debris	30 *(72.6)*	221 *(292.8)*	1346 *(1231.6)*	1597
Pebbles	23 *(59.5)*	224 *(239.6)*	1060 *(1007.9)*	1307
	195	786	3306	4287
$X^2 = 498.80001$	df = 10	P = <0.00001		

Table 7–4
Morphological Attributes of complete flakes from the Topper Clovis, Pleistocene Sands and Pleistocene Terrace assemblages. Values depict minimum, maximum, and average length of complete flakes from each assemblage

	Min. (mm)	**Max. (mm)**	**Av. (mm)**	**Sample Size**
Clovis				**n = 27**
Length	8.3	79.66	46.17	
Width	3.9	61.5	26.44	
Weight	0.1	63.3	21.02	
Pleistocene Sands				**n = 44**
Length	11.59	178.3	56.7	
Width	5.1	117.4	41.67	
Weight	0.1	841.2	53.21	
Pleistocene Terrace				**n =122**
Length	21.5	76.4	25.95	
Width	6.3	55.5	17.35	
Weight	0.1	53.8	4.85	

Min= minimum; Max=maximum; Av.=Average

flakes for each stratum. Although Clovis flakes are smaller than flakes from the Pleistocene Sands, they are considerably larger than flakes from the Pleistocene Terrace (Table 7–4).

The complete Clovis flake assemblage was subsequently examined by condition and attributes of the exterior and interior surfaces (Appendix 33, Tables A33–2 and A33–3). Clovis flakes typically have feather terminations, lack evidence of thermal alteration, and are a product of upland as opposed to river stained chert. An examination of flake exteriors show that most Clovis flakes are secondary or interior as opposed to cortical (Table A33–3). Given the complete cortical and secondary flake sizes, the largest flakes were detached from Clovis cores that were at least 70mm in length. A Pearson Chi– Square test comparing flake class by stratigraphic unit demonstrates a statistically significant difference between each assemblage (Table 7–5). The Clovis deposits have a higher percentage of tertiary flakes compared with flakes from the Pleistocene Sands or the Pleistocene Terrace. Clovis flakes are further characterized by either having unidirectional or multidirectional removal scars. Flakes that have unidirectional scars frequently exhibit attributes characteristic of blades, whereas flakes with multidirectional scars share attributes consistent with biface thinning flakes. An examination of the lateral margins shows that a higher percentage of Clovis flakes exhibit modification compared with the complete flakes from deeper deposits (Table 7–6). The range of retouch scars on Clovis flakes is lower than was found to occur on flakes from the Pleistocene Sands (Table 7–7, 7–11). In terms of size, modified flakes from the Clovis deposits tend to be longer than unmodified examples, implying a preference given for the selection of longer flakes for use (Table 7–7).

Complete Flakes, Pleistocene Sands

The interpretation free analysis resulted in the identification of 44 complete flakes from the Pleistocene Sands. Examples of the flakes from these deposits are illustrated in Figure A29–

Table 7–5

Results of Chi–Square test comparing complete flake class by assemblage. There is a statistical difference in flake class by assemblage. Expected cell totals in parenthases; Chi–square statistic in brackets. No more than 20% of the expected counts may be less than 5 and all individual expected cunts are greater than 1.

Results				
	Decortication	**Secondary**	**Tertiary**	**Row Totals**
Clovis	2 (3.06) [0.37]	11 (10.53) [0.02]	14 (13.40) [0.03]	27
Pleistocene Sands	0 (4.99) [4.99]	29 (17.16) [8.16]	15 (21.84) [2.14]	44
Pleistocene Terrace	14 (7.94) [4.62]	15 (27.30) [5.55]	41 (34.75) [1.12]	70
Column Totals	16	55	70	141

Chi–Square statistic = 27.0043. p value =.00002. The result is significant at $p < 0.05$.

Table 7–6

Modified artifacts by Interpretation Free category. The number and percentage of modified artifacts for each interpretation free artifact category for each strata at the Topper Site (38AL23).

	Clovis	**Pleistocene Sands**	**Pleistocene Terrace**
Modified Flakes	7 (14%)	15 (7.85%)	16 (4.9%)
Modified Broken Flakes	2 (4%)	14 (7.32%)	14 (4.30%)
Modified Flake Fragments	28 (56%)	60 (31.41%)	39 (12%)
Modified Debris	12 (24%)	73 (38.21%)	173 (17.84%)
Modified Amorphous debris	1 (2%)	18 (9.42%)	121 (37.23%)
Modified Pebbles	0	11 (5.75%)	77 (23.69%)
Total	50	191	440

Table 7–7
Mean length of unmodified and modified complete flakes by stratum.

	Unmodified Flake Length (mm)	Modified Flake length (mm)	Av. retouch Scar count	Min. retouch scar count	Max. retouch scar count	Sample Size
Clovis	43.21	54.19	5	2	10	7
PS		83.2	8.9	2	27	15
PT		31.37	2.4	1	5	16

Table 7–8
Comparison of the proportion of modified piece plotted flakes for the Clovis and Pleistocene Sands assemblages. Percentage data left; Expected cell totals in parenthases; Chi–square statistic in brackets.

	Clovis	Pleistocene Sands	Row Totals
Complete Flakes	14 (11) [.82]	8 (11) [.82]	22
Broken Flakes	4 (6) [.62]	8 (6) [.67]	12
Flake Fragments	56 (44.5) [2.97]	33 (44.5) [2.97]	89
Debris	24 (32.5) [2.22]	41 (32.5 [2.22]	65
Amorphous debris	2 (6) [2.67]	10 (6) [2.67]	12
Column Totals	100	100	200 (Grand Total)

Table 7–9
Chi–Square Analysis comparing broken flake class by assemblage. Expected cell totals in parenthases; Chi–Square statistic in brackets. Note: More than 20% of expected counts are less than five. Sample may be too small to meet assumptions of test.

Results				
	Decortication	**Secondary**	**Tertiary**	**Row Totals**
Clovis	0 (1) [0.95]	5 (9.46) [2.10]	16 (10.59) [2.76]	21
Pleistocene Sands	1 (1.26) [0.05]	13 (12.61) [0.01]	14 (14.13) [0.00]	28
Pleistocene Terrace	4 (2.79) [0.52]	32 (27.93) [0.59]	26 (31.28) [0.89]	62
Column Totals	5	50	56	111

Chi–Square statistic = 7.8799. p value = 0.09608. The result is *not* significant at $p < 0.05$.

Table 7–10

Chi–Square Analysis comparing flake fragment class by assemblage. Expected cell totals in parenthases; Chi–square statistic in brackets. No more than 20% of the expected counts may be less than 5 and all individual expected cunts are greater than 1.

Results				
	Clovis	**Pleistocene Sands**	**Pleistocene Terrace**	**Row Totals**
Decortication	1 (4.87) [3.08]	2 [6.78) [3.37]	16 (9.35) [8.01]	21
Secondary	41 (43.84) [0.18]	65 [61.03) [0.26]	14 (84.13) [0.02]	189
Tertiary	32 (25.29) [1.78]	36 [35.19) [0.02]	26 (48.52) [1.17]	109
Column Totals	74	103	142	319

The Chi–Square statistic =17.8809. P value = 0.001302. The result is significant at $p < 0.05$

Table 7–11
Attributes of modified artifacts for each interpretation free category.

			Sample	Number	Percentage	Retouch Scars		
	Unmod. (L)	**Mod (L)**	**Size**	**Modified**	**Modified**	**Min.**	**Max.**	**Avg. Number**
Clovis								
Flake	43.21	54.19	27	7	25.9	2	10	5
Broken Flake			21	2	9.5	15	20	18
Flake Fragment			77	28	36.4	1	12	5.7
Debris			17	12	70.5	1	18	5.8
Amorphous debris			30	1	3.3	2	2	2
Pebble			23	0	0	–	–	–
					25.64			
P. Sands								
Flake		83.2	44	15	34.09	1	25	8.9
Broken Flake			28	14	50	3	16	5.5
Flake Fragment	46.43	57.4	103	60	58.25	2	24	7.08
Debris			166	73	43.9	2	19	6.4
Amorphous debris			221	18	8.14	2	7	3.8
Pebble			224	11	4.91	2	2	2
					24.30			
P.Terrace								
Flake		31.37	122	16	13.11	1	5	2.4
Broken Flake			67	14	20.89	2	7	3.5
Flake Fragment			164	39	23.78	1	16	5.1
Debris			546	173	31.68	1	10	3.22
Amorphous debris			1,346	121	8.98	–	–	1.68
Pebble			1,060	77	7.26	–	–	–
					13.31			
Total			**4,286**	**681**	**15.88**			

4. There is a lower percentage of complete flakes from the Pleistocene Sands than from the overlying Clovis deposits (Table 7–1). These patterns could reflect a temporal change in reductive technology, or the displacement of artifacts into deeper strata as the result of bioturbation. When examined by size, flakes from the Pleistocene Sands tend to be longer, wider, and heavier than flakes recovered from Clovis contexts (Table A33–1), and also have a greater range in length (Table 7–4, Figure A29–29). These patterns are intriguing given the prospect for bioturbation or artifact displacement within the Pleistocene Sands. If artifact displacement by postdepositional or taphonomic processes were responsible for the distribution of artifacts through the vertical profile at the site, the expectation is that flakes should decrease in size with depth. However, based on the results, this is not the case. Whereas Clovis flakes are proportionately long compared to their width, complete flakes from the Pleistocene Sands tend to be proportionately thicker. Such morphological changes in flake form through the profile are more likely to reflect variation in raw material selectivity and reduction technique than they are the result of artifact displacement by disturbance.

Apart from morphology, a number of technological and condition attributes characterize the flake assemblage from the Pleistocene Sands (Tables A33–2 and A33–3). Thermal alteration was absent on mapped flakes from the stratum and the occurrence of river–stained cortex was rare. An examination of the complete flakes recovered from the Pleistocene Sands screen further supports these results with only 46 of 42,484 flakes identified that exhibit river stained cortex compared with 1,054 of 11,638 flakes identified from the Clovis screen bags (See chapter 9 Table 9–3).

Exterior surface attributes include removal scar patterns that are predominantly multidirectional with a mean scar frequency comparable to flakes from the Clovis deposits

(Table A33–2). A unique aspect of this flake category is the absence of primary decortication flakes. An examination of the presence or absence of cortex on the exterior surfaces found that 65.9% (29 of 44) of flakes are secondary while the remaining examples are tertiary. Compared to the distribution of complete flakes from the Clovis deposits, a higher percentage of examples from the Pleistocene Sands were classified as secondary flakes, whereas a lower percentage of items were identified as tertiary (Table A33–3).Combined with the larger flake sizes, the apparent decrease in the proportion of tertiary flakes with depth could also imply lithic items from the Pleistocene Sands were not being reduced to final stages of the reductive trajectory or that final end products did not require the removal of all cortical material.

A lower percentage of modified flakes were recovered from the Pleistocene Sands compared to the Clovis deposits (Table 7–6). In all but a single example, lateral edge modification occurred on the exterior face of the flakes. These modified flakes are longer than unmodified examples and are also longer than modified flakes from the Clovis deposits (Table 7–7). These patterns may imply that lithic manufacture, if occurring prior to Clovis, was geared more toward the production of tools that could be used for cutting, slicing, and chopping, with less emphasis on biface and projectile point manufacture. A comparison of the proportion of modification on piece plotted items from the Clovis deposits to modified items from the Pleistocene sands shows that a higher proportion modified flakes and flake fragments occur from the Clovis deposits (Table 7–8). By contrast, the Pleistocene Sands have a higher proportion of modified debris and amorphous debris.

Complete Flakes Pleistocene Terrace

The interpretation Free Analysis resulted in the identification of 122 flakes from the mapped Pleistocene Terrace assemblage (Table 7–1). A much lower percentage of items were

identified as flakes from this deposit than from the overlying strata. Examples of complete flakes are illustrated in Figure A29–7. Flakes from the Pleistocene Terrace are on average the smallest and lightest flake category compared with similar artifacts from the overlying deposits (Table A33–1).The smaller artifact sizes for flakes and debitage from the Pleistocene Terrace could potentially reflect evidence of bioturbation, with the smaller items filtering through cracks in the sediment over time. If flakes had filtered through cracks in the sediment over time, the resulting spatial distribution and artifact dip and strike presented in chapter 11 should reveal evidence of such movement. It is also possible that the small sizes of flakes from the Pleistocene Terrace could reflect morphological variability in debitage patterns resulting from different load application techniques employed in the lithic reductive technologies of two different populations at the site.

Technological attributes that characterize the Pleistocene Terrace flake assemblage include exterior surfaces that are frequently cortical, scar patterns that are often unidirectional with higher percentages of cortex than flakes from other strata, and modification scars that when present, frequently occur on both interior and exterior surfaces of the flake (Table A33–2–A33and A33–3). A comparison of the cortical attributes of the complete flakes shows that examples from the Pleistocene Terrace have a higher percentage of cortex than Clovis or Pleistocene Sands flakes, although secondary flakes are most common (Table A33–3). These secondary flakes typically exhibit fewer removal scars on the exterior surfaces (2.2%) than similar flakes recovered from the Pleistocene Sands (8.6%). Tertiary flakes represent the lowest proportion of flake types based on flake class. An examination of flake condition found an increase in the percentage of thermal alteration and an absence of river staining on flakes from the Pleistocene Terrace (Table A33–2). The absence of river staining implies that such cobbles

would not have been exposed and readily available for exploitation if peoples were present at the time these materials were deposited.

Post detachment modification was identified on 16 complete flakes from the Pleistocene Terrace (Table 7–5), reflecting a lower proportion of the flake assemblage compared with similar items from the overlying strata (Table 7–6). Moreover, retouch scars on these flakes are comparatively infrequent (Table 7–7).Retouch scars on flakes from the Pleistocene Terrace, when present, tend to be intermittent, irregular, and randomly distributed along the flake margin; attributes that are more likely to have been the result of natural processes. Morphologically, modified flakes are short, compared with flakes from the Pleistocene Sands (Table 7–7) and are considerably lighter and thinner (Table A33–1).

Broken Flakes

Broken Flakes, Clovis

A total of twenty one broken flakes were identified from the piece-plotted Clovis deposits at Topper (Table 7–1). By definition, broken flakes exhibit a striking platform but do not have intact margins. Broken flakes identified are proximal fragments as opposed to medial or distal sections. Examples of Clovis broken flakes are presented in Figure A29–3. Technological attributes that characterize these flakes include terminations that end in hinges or steps, and exterior surfaces that lack cortex and that have multidirectional removal scars (Table A33-4 and A33–6). When broken flakes were compared by cortical class, the results of a Chi–Square test found no statistical difference in the distribution of broken flakes by assemblage at the .05 level (Table 7–9). At Topper, a number of bifacially worked broken items (n=9) were assigned to the Clovis broken flake category, and consist of portions that were broken and discarded during middle to late stages of the manufacture process. When examined by condition few broken flakes

were found to be thermally altered (5 of 21) (Table 7–1, Table A33–4). River staining was present, but was only identified on three broken Clovis flakes (Table A33–4). When all broken Clovis flakes were examined for the presence of modification, two examples were identified. These flakes each had more than 15 unidirectional removal scars from both margins of the flake.

In addition to the piece plotted broken flakes, a total of 1,842 broken flakes were identified from the Clovis screen bags (Table 7–1). This number reflects 15.82% of all debitage recovered from the screen bags from this stratigraphic unit. Apart from the amorphous debris category, fewer broken flakes were identified from the Clovis screen bags than from any other debitage category.

Broken Flakes, Pleistocene Sands

Twenty eight (28) broken flakes were identified from the piece plotted Pleistocene Sands assemblage (Table 7.1). Examples of these flakes are presented in Figure A29–5. As shown in Table 7–1 the proportion of broken flakes decreases through the stratigraphic profile at Topper. Attributes that characterize broken flakes from the Pleistocene Sands include termination types that end in steps fractures, exterior surfaces that exhibit prior detachment scars, and scar patterns that are multidirectional, indicating that such flakes were detached from multiple locations of the objective piece (Tables A33–4 to A33–6).The occurrence of cortex is rare on broken flakes from the Pleistocene Sands assemblage at Topper. Only a single cortical example was identified based on the attribute analysis. A higher proportion of broken flakes from the Pleistocene Sands are secondary compared with similar items from the Clovis deposits (Table A33–6). Removal scars on broken flakes range from 0 to 26 with a mean of seven scars per item. When examined by condition, all broken flakes lack river–stained cortex, and the occurrence of thermal damage is infrequent (Table A33–4). Broken flakes from the Pleistocene Sands displayed a comparatively

high incidence of modification. Compared with the Clovis samples (Table 7–5), retouch was observed on 14 (7.32%) of the broken flakes. Unlike Clovis broken flakes, examples from the Pleistocene Sands nearly always have retouch scars that occur on the exterior face of the specimen. Retouch scars on broken flakes from the Pleistocene Sands are comparatively fewer in number compared to similar artifacts from the Clovis deposits (Table 7–11).

Broken Flakes, Pleistocene Terrace

The Pleistocene Terrace broken flake assemblage consists of 67 piece-plotted proximal fragments and 647 broken flakes from the screen bags (Table 7–1). The piece plotted assemblage represents 2.02% of all mapped lithic categories recovered from the Pleistocene Terrace contexts. Examples of broken flakes are presented in Figure A29–9. By definition these flakes exhibit compression rings and a bulb of force on the interior surface of the flake. Most broken flakes are small, thick relative to their length, and end in step terminations. However, approximately 30% of the broken flakes end in feathered or hinged terminations.

The Pleistocene Terrace broken flake assemblage differs with respect to a number of technological attributes compared to broken flakes from the overlying deposits. A comparison of removal scar directionality shows that Terrace broken flakes are predominantly unidirectional, although multidirectional forms also occur with less frequency. By contrast, similar items from the Clovis and Pleistocene Sands have multidirectional scars (Table A33–4). When the number of exterior surface removal scars was tabulated, exterior scar counts were found to be much lower on broken flakes from the Pleistocene Terrace than on broken flakes identified from Clovis or Pleistocene Sands contexts (Table A33–4). The low frequency of removal scars on these broken specimens implies that they fractured as a result of natural processes rather than human agency. The exterior surfaces of broken flakes were examined by cortex. Unlike broken flakes

from the Clovis and Pleistocene Sands, most examples from the Pleistocene Terrace are secondary, with decortication flakes occurring infrequently (Table A33–6). Although cortical flakes are infrequent, the percentage of such flakes was found to increase in the Pleistocene Terrace compared with the distribution of broken flakes from the Clovis and Pleistocene Sands (Table A33–6).

River staining was not observed on any broken flakes from the Pleistocene Terrace. However, there was an increase in the percentage of thermally altered or thermally damaged broken flakes was compared to broken flakes identified from the overlying assemblages (Table A33–4). Table 7–6 presents the distribution of modified broken flakes. Although a higher frequency of modified examples were identified from the Pleistocene Terrace, a greater proportion of broken flakes were recovered from the Clovis deposits. Modification consists of 2–7 retouch scars removed from the exterior surface of the flake margin with a mean of 3.5 retouch scars per broken flake. Accordingly, modified broken flakes from the Pleistocene Terrace have fewer retouch scars per item than broken flakes from the Clovis or Pleistocene Sands. Given the incidence of modification combined with scar directionality observed on items from the broken flake assemblage, examples from the Pleistocene Terrace share more characteristics with breakage resulting from natural processes as opposed to lithic reduction.

Flake Fragments

Flake Fragments, Clovis

A total of 77 flake fragments were identified from the Clovis deposits (Table 7–1). Flake fragments have compression rings or a bulb, yet lack an observable point of applied force and intact margins. A number of attributes characterize the Clovis flake fragment assemblage. Clovis flake fragments are rarely cortical with most items consisting of secondary or tertiary removals

(Table A33–8). A Chi–Square test indicates a significant difference between the cortical, secondary, and tertiary flake fragments for each of the three assemblages (Table 7–10). Based on this table, more than the expected quantity of tertiary flake fragments were identified from Clovis deposits whereas less than the expected sum were found to be cortical or secondary. Scar patterns on Clovis flake fragments are more often multidirectional with a higher scar frequency than found on either the Pleistocene Sands or Pleistocene Terrace assemblage (Table A33–7). Thermal alteration and river staining were observed on Clovis flake fragments (Table A33–7). The thermal damage is more ubiquitous on Clovis flake fragments than on either the complete or broken flake artifact classes (Tables A32–2, A32–4, A32–7). While thermal crazing was not observed on complete or broken flakes from the Clovis deposits, such conditions were identified on flake fragments (Tables A32–2, A32–4, A32–7).

All flake fragments were examined for modification. Modification was identified on a higher proportion of Clovis items than similar artifacts from the underlying deposits (Table 7–6). Moreover, flake fragments also makeup the highest proportion of modified artifacts from any interpretation free category from the Clovis deposits (Table 7–6). Modified fragments typically have retouch flakes removed from the exterior face of the flake margin as opposed to the interior surface. Although retouch scars on modified flake fragments range in number from one to 12, such items have a lower mean retouch scar count compared to flake fragments from the Pleistocene Sands (Table 7–11). Most modified flake fragments were identified as shattered utilized flakes.

Flake Fragments, Pleistocene Sands

A total of 103 flake fragments were identified as piece plots from the Pleistocene Sands at Topper. Examples of these artifacts are illustrated in Figure A29–6. These flake fragments are

predominantly short, wide, and light. Technologically, examples from the Topper Pleistocene Sands are rarely cortical, and predominantly have prior detachment scar patterns that are multidirectional, with scar frequencies that often exceed 8 (Table A33–7). Most fragments are broken secondary detachments. The relative high proportion of secondary flakes from the deposit implies a general low emphasis placed on reducing objective pieces to stages of complete decortication. Compared with flake fragments from the Clovis deposits, examples from the Pleistocene Sands exhibit significantly fewer removal scars on the fragment exterior surface (Table A33–7). Distal terminations, when present (n=99 of 103) most often have feather terminations, with step and hinge terminations occurring with less frequency (Table A33–7). The relative scarcity of hinge terminations on fragments compared with the abundance of step terminations may be a product of flaws or vugs encountered in the raw material during the reduction process. All flake fragments from the Pleistocene Sands were examined by type. An examination of Appendix 32 shows that most flake fragments from the Pleistocene Sands are either indeterminate (46.6%) in form, or are medial (30%) sections. Only 25.24% of the broken flakes were identified as distal fragments and much fewer (1.94%) were classified as proximal. The high proportion of indeterminate sections relative to flake proximals implies high rates of shatter or breakage incurred during lithic reduction as well as little evidence for platform preparation and biface production.

When examined by condition, a low percentage of plotted flake fragments from the Pleistocene Sands were found to display evidence of thermal alteration. A total of 6 fragments (5.8%) exhibit thermal alteration, fewer than were recovered from either the Clovis (n=12, 15.6%) or Pleistocene Terrace (n=15, 9.14%) deposits. River staining is also rare, present on only one fragment (Table A33–7). When examined in greater detail, four of the thermally altered

flake fragments also exhibit modification along the lateral flake margins, and the lone river–stained fragment is bifacially modified.

Tables 7–6 and 7–11 present the distribution of modified artifacts. There is an overall decrease in the proportion of modified flake fragments from the Pleistocene Sands as compared to similar items observed from the Clovis deposits. However, modified fragments from the Pleistocene Sands have higher mean scar counts than modified fragments from the Clovis or Pleistocene Terrace (Table 7–11).These modified flake fragments are longer than unmodified examples and also exhibit higher numbers of prior detachment scars (9.7 to 6.3).

Flake Fragments, Pleistocene Terrace

A total of 143 piece-plotted flake fragments and 3,254 flake fragments from the screen bags were identified from the Pleistocene Terrace assemblage (Table 7–1). A sample of these items is illustrated in Figure A29–9. The flake fragments from the Pleistocene Terrace include 18 proximal sections, 6 distal sections, and 30 medial segments. A total of 45 fragments could not be reliably identified with regard to condition. Attributes that characterize flake fragments from the Pleistocene Terrace include exterior surfaces that are cortical, secondary or interior, with scar patterns that are multidirectional with comparatively few (e.g. <4) removal scars, and distal terminations that are feathered or end in steps (Table A33–7). Compared with flake fragments from the Clovis and Pleistocene Sands, a slightly higher proportion of fragments from the Terrace are cortical (Table A33–8). Secondary detachments make up the largest proportion of flake fragments from the stratum. An evaluation of exterior surface scars shows that flake fragments from the Pleistocene Terrace have lower mean scar counts compared with items from the overlying deposits. Additional attributes characteristic of flake fragments from the Pleistocene Terrace include an absence of river staining on flake surfaces yet a higher

percentage of thermally altered/damaged flakes compared with fragments from the overlying deposits.

A total of 39 flake fragments from the Pleistocene Terrace assemblage were found to have modification. The Pleistocene Terrace has the lowest proportion of retouched flake fragments (Table 7–11). Retouch includes uni-and bilateral retouch along one or both margins. Most flake fragments from the assemblage (70%) have modification on the exterior lateral margin of the flake while the remaining 30% are modified on both exterior and interior margins. Compared with the mean retouched scar counts on flake fragments from the Clovis and Pleistocene Sands assemblages, retouch scars on flake fragments from the Pleistocene Terrace are often fewer in number.

Debris

Debris, Clovis

Debris refers to all lithic items that have a discernible interior surface and compression rings, but lack a bulb of force, point of applied force and intact margins. Because debris lack many of the attributes consistent with conchoidal flaking, it is not always easy to distinguish the lithic technologies associated with flaking debris or if such materials are a byproduct of naturally fractured lithic items. A total of 17 debris fragments were identified from the Topper Clovis deposits. Clovis debris occur with less frequency than from deeper deposits (Table 7–1). All debris were examined and classified by metric and technological attributes. Morphological attributes for debris are presented in Table 7–12. A comparison of Clovis debris morphology shows that these items are frequently larger than complete Clovis flakes. Clovis debris are longer, thinner, and lighter than debris from the Pleistocene Sands. A correlation analysis found a strong positive relationship when Clovis debris length was regressed against measures of width

Table 7–12
Morphological Attributes of piece plotted debris size by stratum at the Topper Site (38AL23).

	Length (min. mm.)	**Length (max. mm.)**	**Mean Length (mm.)**	**Sample Size**
Clovis	25	141.41	52.42	17
Pleistocene Sands	4.9	226	63.72	
Pleistocene Terrace	0.3	227.5	36.16	
	Width (min. mm.)	**Width (max. mm.)**	**Mean Width (mm)**	
Clovis	10.3	119.44	39.48	166
Pleistocene Sands	0.3	195.66	74.83	
Pleistocene Terrace	10.2	180	27.11	
	Weight (min. g.)	**Weight (max. g.)**	**Mean Weight (g.)**	
Clovis	0.8	618.5	82.82	546
Pleistocene Sands	0.2	9,100	366	
Pleistocene Terrace	0.2	17,900	72.35	

(.8621) (Figure A29–14). A positive relationship was also found when debris width was compared to measures of thickness (r^2=.567). If Clovis debris are the result of lithic manufacture, there is uniformity in flaking based on the correlation observed in the dimensions of these artifacts.

A number of technological attributes distinguish the Clovis debris category. Clovis debris are most often secondary or tertiary fragments that lack completely cortical exterior surfaces (Table A33–10). The near absence of cortical lithics from the Clovis contexts in this area of the site implies that cobbles were initially reduced to manageable forms elsewhere and then brought here for continued reduction and shaping. Technologically, flake debris exhibit removal scar patterns that are predominantly (86.96%) multidirectional as opposed to unidirectional (8.6%) or bidirectional (4.34%) (Table A33–9). Removal scars range from two to 27 in number, and have a higher mean scar count compared with debris from the deeper deposits at the site (Table A33–9). The high number of exterior surface removal scars found on these items indicates that Clovis debris were probably associated with the trimming and shaping of bifaces rather than the systematic detachment of blades from unidirectional cores at this location. However, the relatively high occurrence of step and hinge (56.51%) terminations on flaking debris are also evidence of high rates of errors incurred during the reduction process (Table A33–9). The lack of striking platforms and bulbs of force on these items are an indication that flake detachments shattered when force was applied to the objective piece. Modification was identified on 12 pieces of Clovis lithic debris, occurring with a higher percentage than observed on debris from the Pleistocene Sands or from the Pleistocene Terrace (Table 7–11). However, when scar counts were examined, debris from the Clovis deposits were found to have fewer retouch scars than

similar artifacts from the Pleistocene Sands. When examined by condition river staining and thermal alteration are rare on Clovis debris (Table A33–9).

In addition to the piece plotted debris, a total of 2,305 pieces of lithic debris were identified from the Clovis screen bags accounting for approximately 20% of all debitage recovered from the stratigraphic unit (Table 7–1). Given this distribution, the Clovis deposits have a lower proportion of small debris compared with the deeper assemblages. These findings could indicate that Clovis tool manufacture was more formalized; that debris from the Pleistocene Sands and Terrace reflect informal tool production or byproducts of natural processes; or that a higher percentage of debris originally discarded in the Clovis deposits has filtered into the underlying strata.

Debris Pleistocene Sands

A total of 166 items were classified as debris from the Pleistocene Sands. Examples of these debris are presented in Figure A29–7. Most lithic debris items from Pleistocene contexts vary considerably in morphology, yet are typically large compared with Clovis lithics of the same category (Table 7–12). Whereas Clovis debris may be described as relatively small, yet elongated in morphology, debris from the Pleistocene Sands tends to be blocky and irregular (Table 7–12). A total of 31 items categorized as lithic debris from the Pleistocene Sands (reflecting 18.67% of mapped items from the deposit) are heavier than 500g compared with only 1 (5.8%) item from the Clovis deposits.

A correlation analysis of debris morphology shows a positive association in the length to width ratios for Clovis and Pleistocene Sands debris ($R^2 = 0.8621$ and $R^2 = 0.8448$ respectively). When the debitage length to weight ratios were compared, debris from Clovis contexts are strongly correlated ($R^2 = 0.763$) while items from the Pleistocene Sands show no association (R^2

= 0.0002) (Appendix 29). The variation evident in debris size between these two stratigraphic units could reflect differences in technological strategies of lithic manufacture. For example, the large, blocky nature of the Pleistocene Sands debris assemblage could be linked to bipolar load application in the production of compression flakes. By contrast, debris from the Clovis assemblage is relatively uniform in morphology, and shares more attributes consistent with biface manufacture. It is also possible that the irregular nature of the Pleistocene Sands assemblage could reflect natural processes.

Debris from the Pleistocene Sands may be characterized as secondary or tertiary detachments, with exterior surfaces having multidirectional as opposed to unidirectional removal scars, and scar counts similar in frequency to Clovis debris (Table A33–9). An examination of the debris category by portion confirmed that in most cases (133 or 80%) the lithic items could not be assigned to a specific class and were subsequently labeled indeterminate. Of the debris that could be accurately identified, most items were classified as proximal sections, as opposed to medial or distal segments. An analysis of the termination types observed on Pleistocene Sands debris resulted in similar findings compared with items from the overlying Clovis deposits; most debris are either indeterminate or terminate in step fractures (Table A33–9).

A total of 73 pieces of mapped debris from the Pleistocene Sands exhibit modification. Although more of these artifacts exhibit modification compared to the frequency of Clovis debris, a comparison of the proportion of modified artifacts shows that a much larger percentage of the Clovis assemblage were modified (Table 7–11). Most modified debris from the Pleistocene Sands consist of the broken margins of retouched flake fragments. In the majority of cases, modification occurs on the exterior surface of the flake margin. Modification of both interior and exterior margins occurs with less frequency. Retouch scars on these items are similar

in average frequency with modified Clovis debris (Table 7–11). When examined by condition, debris from the Pleistocene Sands exhibit a greater range of thermal alteration than items from the Clovis deposits (Table A33–9.) Four of the thermally altered debris weigh in excess of 500g. These items could have fractured as a result of natural wildfires or possibly lightning strikes. However, Goodyear has proposed that fire was used by prehistoric peoples to break apart exceptionally large nodules that cannot otherwise be broken for subsequent lithic reduction (Goodyear personal communication). Of the thermally altered debris items identified from the depositional unit, all but three items display evidence of cultural modification.

In addition to the piece plotted debris, a total of 11,261 items were classified as debris from the Pleistocene Sands screen bags. A comparison with the Clovis assemblage shows that a higher percentage of artifacts from the Pleistocene Sands were classified as debris (Table 7–1).The differential frequency of debris between the two stratigraphic units could result from the use of alternative lithic reductive technologies between the two assemblages at the site, or the occurrence of naturally occurring chert in the deposits, given the possibility that some may have rolled down the hill. The flake formation, stone tool, and spatial analyses will examine these propositions in greater detail.

Debris, Pleistocene Terrace

There are 543 plotted items classified as debris from the Pleistocene Terrace. These include 21 proximal fragments, 25 medial segments, 61 distal fragments, and 435 items that were too fragmented to identify. A sample of debris items recovered from the Pleistocene Terrace is illustrated in Figure A29–10. Piece plotted debris make up a lower percentage of the sum of all lithic materials identified from the Pleistocene Terrace compared with the Pleistocene

Sands (Table 7–1). This implies that items with definitive compression rings are less common from the Pleistocene terrace than from the overlying deposits.

Figures A29–22, A29–23 and Table 7–12 show the distribution of debris by morphology for all piece plotted items from the Pleistocene Terrace. Similar to items from the Pleistocene Sands, debris from the Terrace vary considerably in morphology. In general, such debris items are smaller than similar items from the Pleistocene Sands. For example, much fewer debris items from the Pleistocene Terrace weigh greater than 500g (n =9) compared with the distribution of items from the Pleistocene Sands assemblage (n =31).

Debris from the Pleistocene Terrace most commonly consist of secondary detachments with multidirectional removal scars and with scar counts occurring in considerably lower numbers than found on debris from the Clovis or Pleistocene Sands (Table A33–9 and A33–10). Distal termination types are predominantly stepped (32.05%) or feathered (29.67%), with hinge terminations infrequent (0.2%). A total of 38.09% of all debris fragments were too fragmented to make a conclusive identification with regard to termination type.

A comparison of debris attributes from the Terrace with similar items from other strata result in a number of intriguing findings. Although secondary detachments occur with the greatest regularity, debris items from the Pleistocene Terrace have a higher percentage of cortical fragments than the overlying deposits (Table A33–10). Likewise, whereas multidirectional scar patterns occur most frequently from the stratum, a much greater proportion of debris from the Clovis and Pleistocene Sands have multidirectional scars. These patterns show that attributes consistent with reduction intensity decrease with depth across the site and imply that reduction was occurring with greater intensity in the Clovis and Pleistocene Sands. When examined by condition pre Clovis debris exhibit proportionately higher incidence of thermal alteration and

crazing than found on lithic debris recovered from more recent sediments. In total, 9% of all debris display evidence of thermal damage or thermal alteration. River staining was not observed on lithic debris from the Pleistocene Terrace.

Modification was identified on 173 piece plotted lithic debris from the Pleistocene Terrace (Table 7–11). Most modification includes chipping or retouch removed from the exterior lateral margin of the piece. Only on 4% of lithic debris was modification present on the interior lateral margin of the lithic item. A comparison of retouch scars on modified debris found that items from the Terrace have significantly fewer scars than modified items from the Clovis or Pleistocene Sands (Table 7–11). In most cases, debris exhibit one to two scars that are irregularly distributed along the margin of the lithic item as opposed to removal scars that are uniform in nature. Moreover, retouch on most debris was found on fewer than three segments of the debris margin, with a mean value of 2.55 segments of retouch per debris item. Compared with modified debris from the Pleistocene Sands, the Terrace examples are smaller in size, exhibit a lower average number of retouch scars, and have a lower percentage of retouched items in general (Table 7–11). If these modified items reflect chipped stone tools that have been broken or snapped resulting from use, then given their comparatively small size and distinct technological attributes, they were likely part of a separate reductive technology than items identified from the Clovis deposits.

Amorphous Debris

Amorphous debris, Clovis

Amorphous debris are lithic specimens that have a discernible interior surface, yet lack compression rings, a bulb of force, point of applied force and intact margins. A total of 30 piece-plotted items exhibit attributes characteristic of amorphous debris from the Clovis sample at Topper (Table 7–1). In addition to the mapped items, a total of 810 pieces of amorphous debris

were also identified from the screen bags. The frequency of amorphous debris is comparatively low for the Clovis deposits when considered relative to the frequency of amorphous debris from the deeper deposits at the site.

Like other flake categories from the Clovis deposits, most piece-plotted amorphous debris exhibit prior removal scars that are multidirectional in orientation (Table A33–11). However, amorphous debris were found to exhibit a greater percentage of detachments that have cortex or that are partially corticated compared with the other flake categories from the Clovis strata (Table A33–12). These findings suggest that amorphous debris were typically detached during earlier stages of the reduction continuum than flakes, broken flakes, and flake fragments. It is also possible that amorphous debris reflect errors incurred in the reduction process as flaws that were encountered in chert nodules. For example, all amorphous debris have pronounced stepping or crushing at the distal terminations of snapped specimens, an attribute that typically occurs when the energy from applied force does not travel evenly through the objective piece when struck. Such fractures occur when the objective piece is not struck properly, resulting in a failed or crushed detachment.

When examined by condition, thermal damage was an infrequent occurrence of Clovis amorphous debris, as well as on piece plotted amorphous debris from all strata examined. Only 6.6% (2 of 30) of all amorphous debris from the deposit exhibit thermal alteration (Table A33–11). Similarly, there is little evidence for river staining (2.77%) on amorphous debris from the Clovis deposits. Moreover, modification was infrequent with only a single example identified. The infrequent and irregular nature of possible removal scars from the lateral margin of this piece implies that such “modification” is not likely attributable to human agency.

Amorphous debris, Pleistocene Sands

There are 221 piece plotted items identified as amorphous debris from the Pleistocene Sands. These materials make up approximately 28% of all mapped items from the stratigraphic unit, and reflect an increase in the percentage of this artifact category compared with similar items identified from the Clovis deposits (15.3%) (Table 7–1). In addition to the piece plotted items, a total of 8,743 additional amorphous debris items were identified from the screen bags; significantly more than were recovered from the Clovis deposits. The morphological attributes of amorphous debris are presented in Table 7–13. Amorphous debris from the Pleistocene Sands are longer, wider and heavier than amorphous debris from the other deposits examined. Technologically, amorphous debris may be characterized as secondary fragments that retain partial cortex and are rarely completely cortical. Amorphous debris have multidirectional removal scars and have step-fracture terminations (Table A33–11). On average there are fewer removal scars on the exterior surface of amorphous debris from the Pleistocene Sands than there are on items from the Clovis deposits (Table A33–11).

Unlike other debitage types from the Pleistocene Sands, the percentage of modification on amorphous debris is infrequent, and is only present on 18 piece plotted items. However, a higher percentage of these artifacts were modified compared with the Clovis amorphous debris sample (Table 7–11). Most modified items consist of utilized chert cobbles and retouched quartz fragments. Retouch scars on modified specimens range from 2 to 7 in number with an average of 3.8 scars per item. When examined by condition, the presence of river staining was found to be absent on amorphous debris items from the Pleistocene Sands. Thermal alteration is rare, only occurring on four items (Table A33–11).

Table 7–13
Morphological Attributes of piece plotted Amorphous debris size by stratum at the Topper Site (38AL23).

	Length min. (mm.)	**Length max. (mm.)**	**Mean Length (mm.)**	**Sample Size**
Clovis	14.9	183.3	50.9	30
Pleistocene Sands	9.89	300.3	58.05	221
Pleistocene Terrace	5.4	445.1	31.56	1346
	Width (min. mm.)	**Width (max. mm.)**	**Mean Width (mm)**	
Clovis	14.9	183.3	38.03	30
Pleistocene Sands	6.05	209	41.2	221
Pleistocene Terrace	2.7	1,858	22.72	1346
	Weight (min. g.)	**Weight (max. g.)**	**Mean Weight (g.)**	
Clovis	0.4	141	30.17	30
Pleistocene Sands	0.2	4,900	150.8	221
Pleistocene Terrace	.05	7,000	22.02	1346

Amorphous debris, Pleistocene Terrace

There are 1,346 piece plotted lithic items identified as amorphous debris from the Pleistocene Terrace in addition to 6,142 examples recovered from the screen bags (Table 7–1). The piece plotted amorphous debris category makes up 40.72% of all lithic materials mapped from the Pleistocene Terrace; and represents the greatest frequency of any other lithic category from the deposits. Based on Table 7–1, amorphous debris items generally increase in number with depth at Topper. For example, compared with the overlying deposits, there is a greater percentage of amorphous debris from the Pleistocene Terrace than from the Clovis or Pleistocene Sands (Table 7–1). Morphologically, Pleistocene Terrace amorphous debris are smaller, thinner, and lighter than amorphous debris from other strata.

All Pleistocene Terrace amorphous debris items were examined for technological attributes of the exterior and interior surfaces. Most items are secondary detachments although primary (cortical) and tertiary detachments also occur (Table A33–12). There is an increase in the percentage of cortical amorphous debris compared with the frequency of items identified from the Clovis and Pleistocene Sands. Technologically, most amorphous debris consist of lithic items that exhibit prior removal scars that are multidirectional in orientation, terminate in step fractures, and lack evidence of river staining on the exterior surface. Removal scars on amorphous debris range from one to 11 in number, and occur in lower numbers than found on amorphous debris from the overlying deposits (Table A33–11).

Figure A29–11 illustrates a sample of the amorphous debris items that have been identified from the Pleistocene Terrace. Since amorphous debris lack a striking platform or bulb of force, the occurrence of these items from the Pleistocene Terrace could be the result of the natural breakage from weathering over time. The three lower items of Figure A29–11 lack a

striking platform and combined with the absence of compression rings or lines of force, imply that they are not likely to have been the result of lithic manufacture.

A total of 121 amorphous debris items from the Pleistocene Terrace are modified (Table 7–11). This frequency represents a higher percentage of modified artifacts compared with the distribution of modified amorphous debris from the Clovis or Pleistocene Sands levels. This finding is interesting given that the percentage of modification on other lithic categories decreases through the stratigraphic profile at Topper. However, most modified amorphous debris items from the Pleistocene Terrace have slightly fewer retouch scars per item (Table 7–11). Patterned retouch is infrequent on these items and typically consists of two or fewer segments of the flake margin showing evidence of modification. By contrast, retouch on amorphous debris from the Pleistocene Sands is more uniform in nature and frequently consists of three or more parallel scars per working margin. When retouch location was considered, most modified amorphous debris (98.35%) exhibit chipping or retouch on the exterior margin of the lithic item whereas less than two percent of the examples have such chipping on the interior margin. The lack of consistently uniform retouch scars found on modified amorphous debris from the Pleistocene Terrace assemblage imply that these items were produced by natural as opposed to cultural formation processes.

Pebbles

Pebbles, Clovis

All lithic items that lack an interior or a discernible interior surface are classified as pebbles. As discussed in chapter 6, pebbles are defined as ranging in size from 4-64 mm, whereas cobbles range in size from 64-256 mm. However, for the purpose of this study, both morphological categories are subsumed under the label pebble as a simple method to distinguish their technological characteristics from other interpretation free categories.

Pebbles are typically byproducts of natural processes such as weathering and the deterioration of cherts over time. However, they can also occur as quartz pebbles that are suitable for use as hammer stones. The distribution of pebbles is presented in Table 7–1 and 7–11). Of the pebbles identified from the Clovis deposits, five items were made of quartz and two of these were subsequently identified as hammer stones. The remaining items are classified as natural cortical chert pebbles/cobbles.

The conditional and cortical attributes for the Clovis pebble interpretation free category are illustrated in Tables A33–13 and A33–14. Clovis pebbles lack many of the technological attributes consistently identified on other flake categories. For example, only a single item was found with identifiable removal scars on the exterior surface. Moreover, termination types were frequently indeterminate on pebbles, and those items that could be identified had step terminations. All Clovis chert pebbles were a product of upland chert and no examples were found to exhibit evidence of thermal damage. Likewise, modification was not observed on any item classified as a chert pebble from the Clovis deposits at Topper. Therefore it is assumed that these items are byproducts of natural formation processes and were not incorporated into the Topper toolkit.

One interesting aspect of the Clovis pebble category is the considerable variation in size of these materials. Although the largest pebbles were identified from the Pleistocene Sands and Terrace, Clovis pebbles are longer, and lighter than pebbles from other strata and are comparable in width with items identified from the Pleistocene Sands (Table 7–14). A positive correlation was found for the ratios of Clovis pebble length to width (Figure A29–24). The quartz pebbles and hammer stones were found to have a strong positive correlation in artifact weight to length

Table 7–14
Morphological Attributes of piece plotted pebbles size by stratum at the Topper Site (38AL23).

	Length min. (mm.)	**Length max. (mm.)**	**Mean Length (mm.)**
Clovis	43.7	153.9	71.21
Pleistocene Sands	7.5	221.93	70
Pleistocene Terrace	8.9	220	35.42
	Width (min. mm.)	**Width (max. mm.)**	**Mean Width (mm)**
Clovis	23.8	125.8	50.61
Pleistocene Sands	3.9	146	52.64
Pleistocene Terrace	5	163	26.99
	Weight (min. g.)	**Weight (max. g.)**	**Mean Weight (g.)**
Clovis	18	879.2	124.79
Pleistocene Sands	0.2	3,200	184
Pleistocene Terrace	0.1	4,100	31.28

and in the ratio of length to width. These findings suggest that people may have selected pebbles and cobbles for use as hammerstones based on morphological specifications.

Pebbles, Pleistocene Sands

A total of 224 piece plotted items were classified as pebbles from the Pleistocene Sands. Whereas pebbles comprise the smallest percentage of lithic debitage from the Clovis contexts (11.79%) they make up the largest proportion (28.4%) of lithic materials from the Pleistocene Sands. On average, pebbles from the Pleistocene Sands are comparable in morphology to the pebbles identified from the Clovis deposits although weights are frequently greater than Clovis counterparts. Pebbles from the Pleistocene Sands may be characterized as cortical (95.5%) and lacking in many of the identifiable attributes of lithic manufacture technologies (Table A33–13). For example, prior detachment scars on pebbles were only visible on 6 items or 2.6% of the population. Distal termination types were not identifiable on any specimen (Table A33–13). Additional attribute conditions that were not visible on Pleistocene pebbles include thermal alteration, river staining and intact margins.

Pebbles from the Pleistocene Sands display a low incidence of modification compared with other contemporaneous debitage categories (Table 7–11). Although eleven modified items were identified, this frequency reflects an increase in the proportion of pebble modification compared with the Clovis assemblage. Retouch scars on modified pebbles were variable, isolated, and not uniform indicating that they could have formed as a byproduct of natural formation processes rather than lithic reduction. Moreover, in all but three examples modification represented the only flake removals detached from a given pebble exterior surface. In summary, the modification attributes identified on pebbles from the Pleistocene Sands may be more indicative of postdepositional processes, than to byproducts of lithic reduction episodes.

Pebbles, Pleistocene Terrace

A total of 1,060 piece plotted lithic items were classified as pebbles from the Pleistocene Terrace. Apart from amorphous debris, the frequency of pebbles from the Pleistocene Terrace makes up the largest percentage of lithic items from any stratigraphic deposit at Topper. On average, Pleistocene Terrace pebbles are small in comparison to pebbles identified from the overlying deposits. There is an apparent decrease in the size of the piece plotted lithic pebbles through the stratigraphic profile at Topper (Table 7–14) When the Pleistocene Terrace pebble assemblage was examined by cortex, most (88.39%) items were found to be entirely cortical. A total of 106 (10%) pebbles were secondary or had a single detachment scar, while only six were classified as interior. Distal terminations, thermal alteration, and river staining were not identifiable on pebbles.

A total of 77 pebbles from Pleistocene Terrace contexts exhibit some form of modification. This number represents 23% of all modified items from the Pleistocene Terrace deposits. Pebbles display a lower incidence of modification compared with other contemporaneous debitage categories. Retouch scars on the modified Pleistocene Terrace assemblage were similar in form to items identified from the Pleistocene Sands; That is, they were isolated, irregular and non-uniform indicating that they could have formed as a byproduct of natural formation processes. Only eight pebbles were found to exhibit evidence of patterned retouch in the form of two or more consecutive removal scars along a single margin of the lithic item. In summary, modification attributes on pebbles from the Pleistocene Terrace are more indicative of lithic items that have been subjected to postdepositional processes than lithic reduction.

Table 7–15

Chi–Square test comparing the frequency of debitage types from the screen per 5cm level by each stratigraphic assemblage. The results demonstrate a statistically significant difference at the .05 level. Expected cell totals in parenthases; Chi–Square statistic in brackets.

	Clovis	**Pleistocene Sands**	**Pleistocene Terrace**	**Row Totals**
Complete Flakes	78 (49.66) [16.17)	17 (35.92) [9.97]	3 (12.42) [7.14]	98
Broken Flakes	32 (25.34) [1.75]	16 (18.33) [0.30]	2 (6.33) [2.97]	50
Flake Fragments	37 (43.58) [0.99]	39 (31.53) [1.77]	10(10.89) [0.07]	86
Debris	40 (45.61) [0.69]	36 (32.99) [0.27]	14 (11.40) [0.59]	90
Amorphous Debris	1 (23.82) [21.86]	28 (17.23) [6.73]	18 (5.95) [24.37]	47
Column Totals	188	136	47	371 Total

Chi–Square statistic = 95.6521. p value = < 0.00001. The result is significant at $p < 0.05$.

Interpretation Free Analysis Summary and Conclusions

The goals of the interpretation free analysis were to 1) determine if there are attributes containing criteria of human agency on lithic materials recovered from the Topper pre Clovis assemblage and 2) to determine if there is similarity in the assemblage composition and frequency of debitage categories for both Clovis and pre Clovis deposits. If peoples were exploiting the locally available chert quarry at Topper prior to Clovis, then I expect either similarity in assemblage composition and frequency of debitage categories for both Clovis and pre Clovis deposits, or the presence of debitage attributes containing indisputable criteria of human agency from the pre Clovis deposits. By contrast, if peoples were not present at Topper prior to the Clovis occupation at the site, then I expect a difference in assemblage composition and frequency of debitage categories for both Clovis and pre Clovis deposits *and* that the debitage attributes found on materials from pre Clovis deposits consist exclusively of amorphous debris or pebbles that could result from natural weathering processes.

The results of the interpretation free analysis demonstrate an unambiguous difference in the distribution of debitage categories when the Clovis and pre Clovis units are compared. The Chi-Square tests (Tables 7–3 and 7–15) validate this finding. The Clovis assemblage predominantly consists of complete flakes, broken flakes, and flake fragments and a higher proportion of these artifacts were assigned to the flake categories compared with lithic items from the Pleistocene Sands and Pleistocene Terrace deposits. Most complete Clovis flakes are the byproduct of biface manufacture given that the majority are biface thinning flakes. In contrast, the pre Clovis assemblages primarily consist of items classified as debris, amorphous debris, and pebbles. Therefore there *is* a difference in assemblage composition and frequency of

debitage categories when the Clovis and pre Clovis deposits at Topper are compared. The assemblages are not the same.

Flake Formation Analysis

Cotterell and Kamminga's (1987) model of flake formation was employed to determine the lithic reduction technologies selected for the manufacture of chipped stone tools at Topper. Technological strategies of lithic tool production considered for this analysis include: biface manufacture by conchoidal hertzian flaking; bipolar core reduction by compression flaking; and bend fracture flaking by either bending or compression forces. Flake types considered for this analysis included conchoidal flakes and bend break (fracture) flakes. Production materials include quartz hammerstones, quartz pebbles and anvil stones. In the section below, I provide a description and present the distribution of flake types identified for each stratigraphic profile at Topper. The analysis allows for a cross assemblage comparison of the distribution of each artifact form. While bend break flakes are discussed in detail in the section that follows, a thorough synopsis of bend break tools is reserved for the section on stone tool analysis.

The Topper piece-plotted assemblage examined consists of 568 conchoidal flakes and flake fragments, and 287 bend break flakes (Table 7–16). The frequency distribution of each flake type by stratum is presented in Appendix 34 and images of items from each flake class are presented in Figures A34–1 to A34–6. Both flakes and bend breaks increase in frequency with a corresponding increase in depth throughout the stratigraphic profile at Topper (Table 7–16). However, when only the percentage of these artifacts per stratum is considered, the percentage of conchoidal flakes decreases whereas an increase is evident for bend breaks. Neither flake class ever makes up more than 30% of the total lithic assemblage for each stratigraphic deposit. A Chi-Square test comparing the frequency of conchoidal and bend break flakes by stratigraphic

Table 7–16

Results of flake formation analysis. Distribution of Mapped Bend breaks and Conchoidal Flakes for each strata. Percentage data provided in parentheses.

	Clovis	**Pleistocene Sands**	**Pleistocene Terrace**	**Sample Size**
Total Items Mapped	**195**	**786**	**3305**	**4,286**
Conchoidal Flakes	109 (19.19)	155 (27.28%)	304 (53.52%)	568
Bend Break Flakes	8 (2.78%)	45 (15.67%)	234 (81.53%)	287
Number of Piece plotted items by Type per 5cm level (meter^2)				
Total Items Mapped	**6.74**	**2.96**	**9.98**	
Conchoidal Flakes	1.87	0.498	0.88	
Bend Fracture Flakes	0.13	0.144	0.680	

Table 7–17

Results of a Chi–Square test comparing frequency of conchoidal flakes and bend break flakes by stratigraphic unit. The difference between the three assemblages is significantly different at the .05 level. Expected cell totals in parenthases; Chi–Square statistic in brackets. All expected counts should be 10 or greater.

	Conchoidal Flakes	Bend Break Flakes	Row Totals
Clovis	109 (77.73) [12.58)	8 9 (39.27) [24.90]	117
Pleistocene Sands	155 (132.87) [3.69]	45(67.13) [7.30]	200
Pleistocene Terrace	304 (357.41) [7.98]	234 (180.59) [15.79]	538
Column Totals	568	287	855 Total

Chi–Square statistic =72.2475. p value is < 0.00001. The result is significant at $p < 0.05$.

deposit confirms that there is a significant difference between the two assemblages in terms of flake formation type (Chi–Square statistic =72.2475. P < 0.00001) (Table 7–17). Moreover, when the frequency of artifacts per 5cm level (1m x 1m) for each category was compared, the results still show a difference; bend breaks increase in abundance with depth relative to conchoidal flakes. In the sections below, conchoidal flakes and bend breaks from the Topper deposits are compared to determine if there is any difference in these artifact forms between each strata. Deposits included in this analysis are the Clovis, Pleistocene Sands and Pleistocene Terrace. Due to the extensive depth to which the Pleistocene Terrace was excavated, and because it represents two distinct subunits, the formation was subdivided into two subunits referred to here as the Upper and Lower Pleistocene Terrace.

Conchoidal Flakes

A total of 109 piece-plotted Clovis conchoidal flakes were identified from the study sample (Table 7–16). Although fewer conchoidal flakes were mapped from the Clovis deposits relative to deeper strata at the site, an examination of Table 7–16 shows that the number of mapped conchoidal flakes per level actually decreases with depth across the site. This pattern was not the same when the distribution of bend breaks was examined. The morphological attributes for the Clovis conchoidal flake category are presented in Table A34–2. A comparison of the attributes shows that Clovis flakes are shorter, thinner, and lighter than similar flakes from the Pleistocene Sands but are much larger than conchoidal flakes from the Pleistocene Terrace. Technological attributes of conchoidal flakes are presented in Table 7–18. Most Clovis conchoidal flakes are secondary or tertiary detachments have 10 or more removal scars that are predominantly multidirectional, with feathered distal terminations (Table 7–18).

Table 7–18
Conditional and technological attributes of conchoidal flakes and bend breaks from the study sample at the Topper Site (38AL23).

	Bend Breaks			**Conchoidal Flakes**		
	Clovis	PS	PT	Clovis	PS	PT
Cortex						
Primary	1 (12.5)	5 (11.1)	34 (14.52)	3 (2.75)	3 (1.92)	37 (12.17)
Secondary	4 (50)	23 (51.11)	137 (58.54)	51 (46.78)	94 (60.25)	166 (54.6)
Tertiary	3 (37.5)	17 (37.7)	62(26.49)	55 (50.45)	59 (38.46)	101
Total	**8**	**45**	**233**	**109**	**156**	**304**
µ Removal Scars	2. 57	4.26	2.82	14.67	8.61	3.16
µ Total Detachment Scars	4	5.97	3.98	17.15	9.89	4.31
Range Detachment scars				8.3–76.79	2–47	
Multi directional scars	6 (75)	34 (75.55)	178 (76.06)	85(77.98)	113 (72.43)	147 (48.35)
Bi–directional scars	1 (12.5)	0	9 (3.84)	2 (1.8)	5 (3.20)	22(7.23)
Uni–directional scars	1 (12.5)	11 (24.44)	47 (20.08)	22 (20.18)	38 (24.35)	135 (44.40)
Thermal Alteration	0	0	2 (.854)	18 (16.50)	7 (4.48)	13 (4.27)
Crazing	0	0	2 (.854)	0	1 (0.64)	9 (2.96)
Pot–lidding	0	0	0	2 (1.8)	1 (0.64)	6
Termination						
Step	8	44 (97.77)	219 (93.58)	45 (41.28)	80 (51.61)	126 (41.47)
Hinge	0	0	1 (.427)	3 (2.75)	3 (1.93)	15 (4.93)
Feather	0	1 (2.22)	14 (5.98)	61 (55.96)	72 (46.4)	163 (53.61)
Modification	2 (25)	17 (37.7)	52 (22.31)	22 (20.18)	79 (50.96)	49 (16.11)

When Clovis conchoidal flakes were examined by condition, most show no evidence of thermal alteration, although a comparison with the deeper deposits shows that a higher proportion of the Clovis assemblage is thermally altered (Table 7–18). River staining was also rare on Clovis conchoidal flakes. Further examination revealed a total of 22 modified conchoidal flakes from the Clovis assemblage. Given the relatively high number of scars on these flakes, it is likely that these flakes are the discard or waste products of onsite biface production although the occurrence of modification on some examples implies that flake tool production was also common.

Of the piece-plotted assemblage, a total of 155 conchoidal flakes were identified from the Pleistocene Sands (Table 7–16). On average, there are less than half as many conchoidal flakes from the Pleistocene Sands compared from the Clovis deposits. The morphological and technological attributes of all piece plotted conchoidal flakes from the Pleistocene Sands were compared to the attributes identified on conchoidal flakes from the Clovis deposits (Table A34–2, 7–18). Flakes from the Pleistocene Sands are on average longer, wider, thicker, and heavier than conchoidal flakes identified from the Clovis and Pleistocene Terrace deposits. The results of a Chi–Square test confirm that conchoidal flake morphology is statistically different between the Clovis and Pleistocene Sands (Chi–Square statistic= 21.9734. p value = .00006. (Table 7–2b).The difference in size between the two assemblages could be attributed to variation in manufacture technique, or to processes related to mechanical weathering.

Appendix 31, 32, and Table 7–18 present the conditional and technological attributes of piece plotted conchoidal flakes and bend breaks from the Pleistocene Sands at Topper. These flakes are characterized as secondary or interior detachments. The low percentage of cortical flakes from these deposits is intriguing. If natural processes were responsible for the production

of flakes, the expectation favors a high percentage of cortical flakes relative to interior or tertiary flakes. It is unlikely that natural processes will result in the removal of multiple flakes across the same location of an objective piece resulting in secondary or interior flakes. As such, the occurrence of high percentages of secondary and interior flakes from the Pleistocene Sands is more likely the result of either undisturbed human lithic manufacture episodes, or biotubated flakes. The results also show a higher percentage of multidirectional removal scars on conchoidal flakes from the Pleistocene Sands. However, scar counts on flakes from the Pleistocene Sands are lower in frequency than on Clovis examples (Table7–18).The significantly higher scar count on Clovis flakes relative to items from the Pleistocene Sands might reflect the occurrence of intensive biface manufacture.

When examined by condition, most conchoidal flakes from the Pleistocene Sands were found to be complete, with broken and indeterminate flakes occurring with less frequency. Complete flakes end in feather terminations whereas broken fragments typically end in step fractures. Hinge terminations are infrequent. An interassemblage comparison shows a higher proportion of step fractures on flakes from the Pleistocene Sands than flakes from the Holocene and Clovis deposits. River staining is also absent on conchoidal flakes from the Pleistocene Sands. The lack of river staining on these flakes is interesting. Unless weathering has removed evidence of all river staining on these items, it is unlikely that their presence is the direct result of bioturbation. Unlike flakes from the Clovis deposits, a high proportion of conchoidal flakes from the Pleistocene Sands are modified. The high frequency of modified flakes combined with the rarity of bifaces from the Pleistocene Sands distinguishes the pre Clovis from Clovis deposits.

There are 304 conchoidal flakes from the Pleistocene Terrace. Table 7–16 gives the frequency of piece plotted conchoidal flakes from the Pleistocene Terrace as a proportion

relative to each 5cm level. Given the results, there is a decrease in the frequency of mapped conchoidal flakes per level through the Pleistocene Sands, with a subsequent increase observed for the Pleistocene Terrace. Because bioturbation and artifact displacement can lead to the accumulation of an abundance of small artifacts resting on a common surface, it was necessary to consider the morphological attributes of the conchoidal flake assemblage from the terrace. This was done to evaluate whether the observed increase in conchoidal flakes at the Pleistocene Sands/Terrace transition is a byproduct of natural processes. In essence, is the high proportion of observed flakes from the Pleistocene Terrace simply the result of the mass accumulation of numerous small flakes that have worked their way down through loose sandy deposits and into the top of the more resistant silty Pleistocene Terrace deposits, resulting in their resting on a common surface? To evaluate this proposition, I examined the morphological attributes of all piece plotted terrace flakes. Table A34–2 shows the results of the morphological analysis of conchoidal flakes from the Pleistocene Terrace. Flakes from the Terrace are smaller and lighter than examples from younger deposits in every morphological category. A One Way Analysis of Variance (ANOVA) test (Table A34–2) was conducted to determine if it is likely or not that the differences observed are due to random sampling. The results demonstrate a statistical difference for each assemblage by morphological measurements of length, width, thickness, and weight. Pleistocene Terrace conchoidal flakes are statistically smaller than flakes from the overlying assemblage.

Based on morphology, the possibility exists that conchoidal flakes from the Pleistocene Terrace could be the result of artifact displacement or bioturbation. However, it is also possible that these deposits reflect a stratigraphically intact assemblage of flakes and that the morphological differences evident in flake size could also be the byproduct of variations in the

reductive technologies of two separate assemblages. Therefore, it was necessary to consider the technological attributes of the Pleistocene Terrace conchoidal flake assemblage and to compare them to the flake assemblages from the Holocene and Pleistocene Sands.

Table 7–18 presents the technological and conditional attributes of conchoidal flakes from the Pleistocene Terrace. These flakes may be characterized as relatively small secondary detachments with three or fewer scars on the exterior surfaces that are typically unidirectional in form and have feather terminations. Although most examples are secondary, a higher proportion of conchoidal flakes from the Pleistocene terrace are cortical compared to the proportion of flakes from the Clovis or Pleistocene Sands. The higher percentage of cortical flakes and infrequent occurrence of multidirectional removal scars on flakes from the Pleistocene Terrace is interesting and could represent detachments by natural processes. Although most flakes from the Pleistocene Terrace have feather terminations, step fractures are also common. A Chi-Square test was conducted to determine whether there is a statistical difference in the frequency of flake termination types by stratigraphic unit. The results of this analysis (Table 7–19) show no significant difference in the frequency of termination types by assemblage for piece plotted conchoidal flakes at Topper (Chi–Square Statistic = 6.8766. p value = 0.142558.)

When examined by condition, the occurrence of thermal alteration is infrequent on flakes from the Pleistocene Terrace, occurring with slightly greater frequency than on flakes from the Pleistocene Sands. Modification was also found in a much lower percentage of flakes from the Pleistocene Terrace (Table 7–18). The results of a t-test comparing the number of retouch scars on flakes from the Pleistocene Sands and Pleistocene Terrace assemblage support the finding that there is a significant difference in the number of retouch scars on flakes from each assemblage ($p<0.0001$) (Table 7–20).

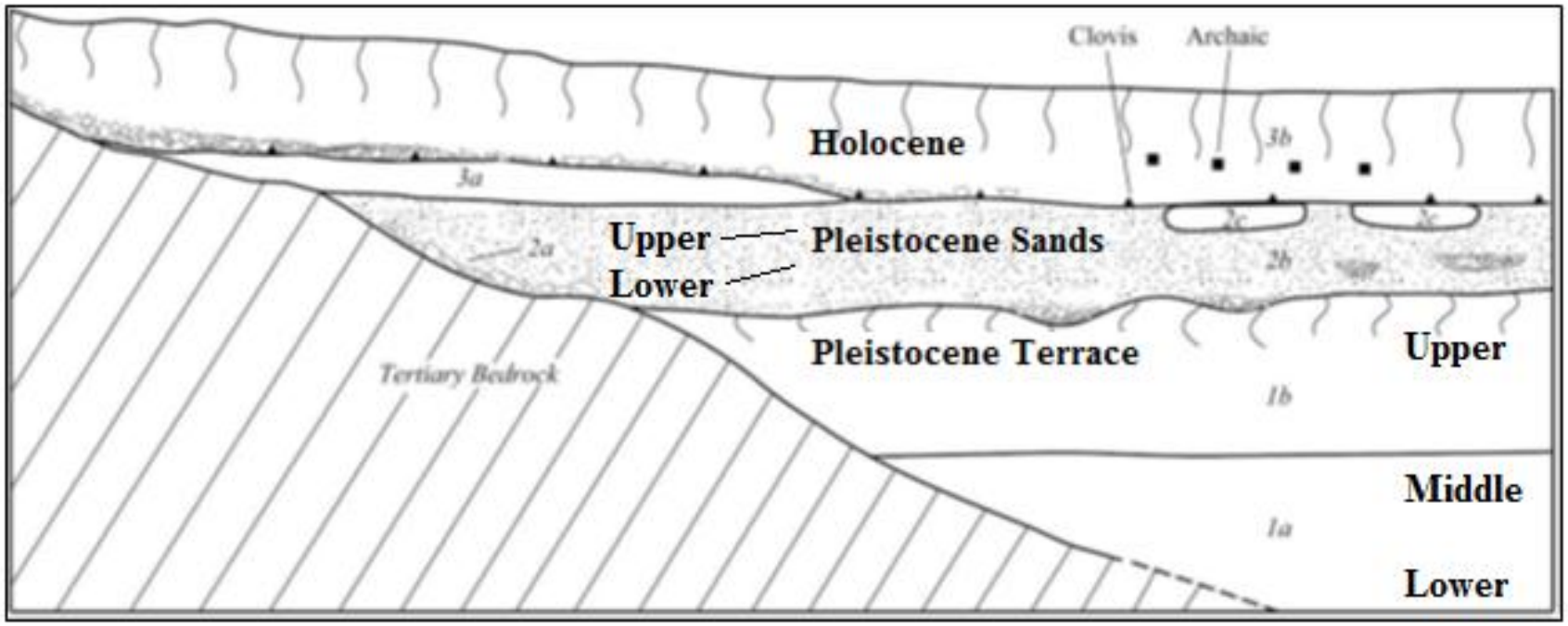


Figure 7–1
Profile map showing the location of stratigraphic units discussed in text. (Figure adapted from Waters et al. 2009).

Table 7–19
Results of a Chi–Square test comparing the frequency of Flake termination types for the Topper Clovis Pleistocene Sands and Pleistocene Terrance assemblages.

	Clovis	**Pleistocene Sands**	**Pleistocene Terrace**	**Row Totals**
Step	45 (48.17) [0.21]	80 (68.49) [1.93]	126 (134.34) [0.52]	251
Hinge	3 (4.03) [0.26]	3 (5.73) [1.30]	15 (11.24) [1.26]	21
Feather	61 (56.80) [0.31]	72 (80.77) [0.95]	163 (158.42) [0.13]	296
Column Totals	109	155	304	568 Total

The Chi–Square statistic = 6.8766. p value = 0.142558. The result is *not* significant at $p < 0.05$.

Table 7–20
Results of a t-test comparing the number of retouch scars on conchoidal flakes from the each assemblage

Stratum	**Sample Size**	**Range**	**Mean Retouch Scars**	**Standard Deviation**
Pleistocene Terrace	49	1–16	4.43	1.63
Pleistocene Sands	79	2–33	7.43	6.49
Clovis	22	1–31	7.22	12
t– test for Pleistocene Sands and Terrace = t-value =–11.98, df=7.7, p <0.0001.				

Table 7–21
Morphological attributes of conchoidal flakes and modified conchoidal flakes from the Pleistocene Terrace.

Unmodified Conchoidal Flakes n = 418					
	U. Terrace	L.Terrace	t-value	p value	Significance
Length (mm)	26.05	26.67	0.00999	0.992034	*not* significant at $p < 0.05$
Width (mm)	18.11	17.7	0.44736	0.655005	*not* significant at $p < 0.05$
Thickness (mm)	7.63	7.99	0.65136	0.515424	*not* significant at $p < 0.05$
Weight (g)	6.08	5.09	0.73900	0.460656	*not* significant at $p < 0.05$
Exterior Scars	3.38	2.15	3.90088	0.000123	significant at $p < 0.05$.
Percent cortical	7.6%	18.18%			
Sample Size	172	132			
Modified Conchoidal Flakes n = 150					
	Upper Terrace	Lower Terrace	t-value	p value	Significance
Length (mm)	46.68	34.85	2.23744	0.030754	significant at $p < 0.05$
Width (mm)	33.66	25.19	1.55941	0.126585	*not* significant at $p < 0.05$.
Thickness (mm)	22.64	11.35	3.12311	0.003278	significant at $p < 0.05$
Weight (g)	35.34	12.14	2.11187	0.040991	significant at $p < 0.05$
Exterior Scars	6.53	3.57	3.36288	0.000781	significant at $p < 0.05$.
Retouch Scars	6	3.34			
Percent cortical	0%	10%			

Because the Pleistocene Terrace excavation represents nearly two meters of lithic deposits, it was deemed appropriate to investigate the contents of this formation as two subunits: an upper Pleistocene Terrace that extends from 97.25–96.50m, and a lower Pleistocene Terrace that ranges from 96.50–95.25m (Figure 7–1). These two subunits correspond with unit designations 1b and 1a as defined by Waters (et al. 2009). Table 7– 21 presents the distribution of mapped items from each Pleistocene Terrace subunit. Conchoidal flake morphology was compared for the upper (97.25–96.50m) and lower (96.50–95.25m) Terrace. Of the 304 conchoidal flakes identified, most were recovered from the upper Pleistocene Terrace. Table 7–21 also presents the mean size and removal scar attributes for modified and unmodified conchoidal flakes from each stratum.

A number of interesting patterns emerge from this analysis. First, there is no significant difference in flake size when unmodified flakes from the upper Pleistocene Terrace are compared with unmodified flakes from the lower Terrace. When the amount and distribution of exterior surface removal scars was compared it was found that flakes from the upper Pleistocene Terrace have a higher frequency of removal scars than flakes from the lower Pleistocene Terrace and the results of a t-test show that this difference is significant at the .05 level. Patterns were also evident in the morphology of the modified flakes identified from the Pleistocene Terrace. When conchoidal flakes were examined by modification, the modified flakes are significantly longer, wider, thicker and heavier than unmodified examples. Moreover, the modified flakes from the upper Pleistocene Terrace were, on average larger than modified flakes from the lower Pleistocene Terrace in every morphological category. Only when the attribute of flake width is considered is the difference between the two categories not statistically significant. Finally, an examination of retouch patterns on modified flakes from each stratum demonstrates that flakes

from the upper Pleistocene Terrace have twice as many retouch scars per working margin than flakes identified from the lower terrace. To summarize, conchoidal flakes from the upper Pleistocene Terrace exhibit attributes that are more consistent with cultural lithic manufacture (i.e., human agency) than flakes identified from the Lower Terrace.

Bend Break Flakes

Based on the results of the flake formation analysis, eight bend breaks were identified from the Clovis deposits. An example of a Clovis bend break is presented in Figure A34–4. Compared with the distribution of bend breaks from the Pleistocene Sands and Terrace, the occurrence of bend breaks is rare from the Clovis deposits at Topper (Table 7–17). Morphological attributes of Clovis bend breaks are presented in Table A34–3. Clovis bend breaks have two or more 90 degree break angles and are relatively short, thin and light. Clovis examples are shorter thinner and lighter than bend breaks from the underlying deposits. However, the results of a t-test comparing the mean difference in length between bend breaks from the Clovis and Pleistocene shows that the results are not significant at the $p < 0.05$ level. (t-value = 0.658507; p = 0.513359) (TableA34–3).

Table 7–18 presents the technological attributes of Clovis Bend Breaks. Technological attributes consistently observed on Clovis bend breaks include exterior surfaces that have secondary detachments or that are tertiary, have multidirectional removal scars, and terminations that end in step fractures. When examined by cortex, most bend breaks from the Clovis levels are secondary or interior, with few cortical specimens identified.

By definition, bend breaks exhibit snapped terminations and broken lateral margins. Two of the Clovis bend breaks were modified, one of which exhibits modification on three distinct areas of the break margin. However, a detailed examination of the location of modification on

Clovis bend breaks found that retouch was always restricted to the artifact exterior surface as opposed to the interior surface. All bend breaks from the Clovis deposits were recovered near the base of the cultural horizon, and at the transition with the Pleistocene Sands deposits. Moreover, all but a single bend break from the Clovis deposits were recovered from the same 2m x 2m unit and within two contiguous 5cm levels. If bend breaks are the product of human agency these findings could imply that Clovis developed from the peoples who made the bend breaks Based on the location of these artifacts from the base of the Clovis deposits, it is also plausible that these items were formed by trampling.

Bend breaks are commonly produced as a result of applying force on the acute edge of an objective piece. In Clovis assemblages, the sharp edge of a biface may snap or chip off and result in the formation of a bending flake when force is applied near the acute bifacial edge. The resulting bending flake will have a striking platform that is composed of a part of the original bifacial edge. Due to the thin nature of bend breaks from the Clovis sample, it is plausible that these artifacts represent snapped flakes that were broken unintentionally at some point subsequent to manufacture.

Artifacts typically associated with bipolar, bend fracture and compression flake technologies such as anvil stones, broken quartz pebbles, and chert pebbles are rare if not absent from the Clovis deposits at Topper (Appendix 34). Only ten broken quartz pebbles were identified from the Clovis sample and anvils were absent. Quartz pebbles may have been used as support platforms on which flakes may have been placed and intentionally snapped. The flake is placed across two pebbles and is subsequently struck at the midpoint of the flake. Such strategies result in bending fractures as opposed to compression fractures on the break margins of detached flakes. Attributes one might expect from this process include impact marks on the surfaces of

quartz pebbles. Alternatively, the flake may be placed atop a single quartz pebble and struck at its mid-point (compression flaking), thus using the pebble as an anvil. This process may result in the pebble splitting into two or more pieces. If so, fracture surfaces on broken pebbles should be flat and uniform as opposed to irregular in form. An examination of the broken quartz pebbles from the Clovis deposits at Topper found that most fractured surfaces are uneven as opposed to flat and are not consistent with having been used in the production of bend or compression fracture flakes.

The process of bend break or bipolar production has been found to often result in the detachment of numerous lithic byproducts. Chert pebbles are one hypothesized byproduct of bipolar production, though such items may also form as the result of natural weathering of lithic materials over time. Therefore, an analysis was conducted to compare the occurrence of bend breaks and chert pebbles from the Clovis deposits to determine if there is a correlation in the distribution of these artifacts across the stratigraphic unit. Very few chert pebbles occur in the Clovis deposits at Topper (n=23), and therefore, they were not likely byproducts of bend break manufacture in this cultural horizon. By contrast, a much greater percentage of pebbles, bend breaks, and potential bend break production items were recovered from the Pleistocene Sands. The results of a Chi–Square test comparing the proportion of artifacts associated with bend break manufacture per 5cm level by stratigraphic assemblage at Topper Site shows that the three assemblages are statistically different at the .05 level (Chi–Square statistic = 83.3309. p value = < 0.00001) (Table 7–22).

There are 45 piece plotted bend breaks from the Pleistocene Sands (Table 7–17). A sample of these bend breaks are illustrated in Figure A34–5. Four of the artifacts in this image exhibit uniform modification along their lateral, exterior margins suggesting that they are a

Table 7–22

Results of a Chi–Square test comparing proportion of piece plotted artifacts associated with bend break manufacture per 5cm level by stratigraphic assemblage at the Topper Site (38AL23). Expected cell totals in parenthases; Chi–Square statistic in brackets.

	Clovis	**Pleistocene Sands**	**Pleistocene Terrace**	**Row Totals**
Bend Breaks	14 (11.75) [0.43]	14 (15.61) [0.17]	69 (69.64) [0.01]	97
Anvil	0 (0.48) [0.48]	3 (0.64) [8.62]	1 (2.87) [1.22]	4
Quartz	17 (19.25) [0.26]	17 (25.59) [2.89]	125 (114.15) [1.03]	159
Pebbles	40 (50.85) [2.32]	72 9(67.61) [0.29]	308 (301.54) [0.14]	420
HS	14 (2.66) [48.24]	7 (3.54) [3.38]	1 (15.79) [13.86]	22
Totals	85	113	504	702 Total

Chi–Square statistic = 83.3309. p value = < 0.00001. The result is significant at $p < 0.05$.

* Note frequency values per 5cm level were multiplied by 100 to ensure all categorical values.

HS = Hammerstones

product of human agency. When the distribution of bend breaks at the site is considered, the percentage of bend breaks was found to increase with depth through the stratigraphic profile (Table 7–16). A higher percentage of bend breaks occur within the Pleistocene Sands than the Clovis deposits. However, the percentage of bend breaks from the Pleistocene Sands is relatively small (5.72%) compared to the cumulative total of mapped items from this stratigraphic unit (n=786). Based on the results of the morphological analysis, bend breaks from the Pleistocene Sands are longer, thicker, and heavier than examples identified from the Clovis levels (Table A34–3). On average, bend breaks from the Pleistocene sample were 26.3mm in length compared to 23.1 mm for items recovered from the Clovis deposits. However, the results of a t-test comparing the difference in means shows that the results are not significant at the $p < 0.05$ level. (t-value = .658507; P = .513359) (Table A34–3b).

Technological and conditional attributes for bend breaks from the Pleistocene Sands are presented in Table 7–18. Bend breaks from the Pleistocene Sands are predominantly made on secondary detachments, although interior specimens are also common, have four or more removal scars, two to three 90 degree break angles, and multidirectional removal scars on the exterior surfaces. The relatively high proportion of interior as opposed to cortical bend breaks is intriguing given that extended weathering processes would be required to completely decorticate these items. Bend breaks identified from the Pleistocene deposits were found to exhibit higher scar counts than similar artifacts identified from the Clovis deposits. Conversely, the results of a t-test comparing the number of bend break removal scars by assemblage found no statistical difference between the two assemblages (t–value = 1.038201; p value = 0.304074) (Table A34–3b).When all bend breaks were further examined by the cumulative number of detachment scars, examples from the Pleistocene Sands also have higher scar counts compared with Clovis

specimens (Table 7–18). On average, two to three of the detachment scars consist of 90 degree break angles, and are used to distinguish bend breaks from conchoidal flakes. Likewise, because bend breaks by definition exhibit snap fractures, they tend to nearly always terminate in step terminations. The results presented in Table 7–18 confirm this assertion and show that all but a single bend break from the deposits terminates in a step fracture. Removal scar directionality was examined to account for potential variability in reductive technology or to determine if natural processes were responsible for the production of bend break flakes. (I.e. a single unidirectional removal scar could result from natural processes). The results illustrated in Table 7–18 show that most bend breaks from the Pleistocene Sands exhibit multidirectional removal scars. Compared with the directionality patterns found on the distribution of artifacts from the Clovis deposits, the results are nearly identical for both assemblages, with 75% of the artifacts having scar patterns that are multidirectional.

When artifact condition was considered, thermal alteration was absent on bend breaks from the Pleistocene Sands. This same pattern was observed for the Clovis bend break assemblage. The higher percentage of thermal alteration on Clovis conchoidal flakes could indicate the potential that bioturbation has reworked a portion of the overlying assemblage into deeper deposits.

Table A34–11 shows the percentage of modified bend breaks identified for each stratigraphic deposit. Based on this table it is evident that a greater percentage of items from the Pleistocene Sands are modified compared with the frequency of modification found on bend breaks from the Clovis deposits. However, when the distribution is considered relative to the quantity of modified bend breaks per 5cm level, the variance between the Clovis and Pleistocene Sands assemblages is much less (Table A34–11). On bend breaks, modification typically consists

of two to four unidirectional uniform retouch scars taken from the exterior margin of the break surface. Retouch scars on these items range from 2 to 10 in number with a mean of 3.5 uniform scars per item. Only on one example is modification present on the interior surface of the artifact.

The morphological and technological attributes of modified and unmodified bend breaks from the Clovis, Pleistocene Sands and Pleistocene Terrace deposits are compared and the results presented in Table A34–12–14. Modified items from the Pleistocene Sands are frequently larger than those that are unmodified. Moreover, such bend breaks tend to have greater amounts of patterned exterior surface removal scars, a higher percentage of multidirectional removal scars, and a lower percentage of items classified as amorphous debris than bend breaks that lack modification. The results of multiple t–tests comparing the morphological and technological attributes of modified and unmodified bend breaks show that in most cases there is a significant difference in the two artifact populations for the Pleistocene Sands (Table A34–13). Consequently, evidence supports the premise that the modified bend breaks from the Pleistocene Sands are not the product of chance collisions with other lithic materials. Modified bend breaks from the Pleistocene Sands have higher number of break angles on average, although these differences are not statistically significant (Table A34–13). Such angles are thought to be well suited for cutting, slicing, or grooving purposes. When bend break modification was further examined by the location of potential retouch, it was found that systematic retouch occurred on anywhere from one to six segments of a given piece from the population. On average however, 3.2 segments of bend breaks from the Pleistocene Sands were found to exhibit some form of modification.

To help determine whether bend breaks were a product of natural versus human agency at Topper, the Pleistocene Sands assemblage was further examined by the frequency of other

artifact forms that might be associated with the production of bend breaks from the assemblage. The results were then compared with the contents of the Clovis assemblage as a test for similarity in assemblage composition. The number of broken quartz pebbles, anvil stones, and chert pebbles identified from the Pleistocene Sands is presented in Table A34–5–8. Based on these tables, there is a slight increase in the number and percentage of bend breaks, anvil stones, chert pebbles, and broken quartz pebbles with depth when the contents of the Clovis deposits are compared to the Pleistocene Sands. However, these differences are less substantial when the frequency of bend breaks is considered as a proportion of artifacts per 5 cm level. The most obvious difference between Holocene and Pleistocene Sands assemblages is the increase found in the distribution of chert pebbles. Chert pebbles comprise 24.26% of the Pleistocene lithic deposits, an increase of 18.38% compared with items recovered from the Clovis assemblage. The increase in the number of bend breaks in conjunction with a corollary increase in chert pebble debris might imply that these two categories are culturally related. However, an in depth examination of potential weathering processes is required to substantiate this claim, and will be discussed in the following chapters.

The morphological attributes of anvil stones and broken quartz pebbles are illustrated in A34–6 and A34–7. Anvil stones at Topper have scars on the upper surface of the boulder that result from hypothesized compression flaking. A total of nine artifacts that fit the description of anvil stones were identified from the Pleistocene deposits at Topper. Morphologically, these artifacts are large and range in size from 10g to 979.8g (Table A34–6). Exterior surfaces on anvil stones are either cortical or secondary. No anvil stones were found to be completely decorticated or tertiary. Anvil stones typically have multiple removal scars on the exterior surfaces, a possible result of compression flaking. Removal scars on the surfaces of anvils are frequently on the top

or bottom of the artifact and lack evidence of scars removed from the exterior margin. Such scars are attributed to bipolar reduction. Anvils lack any evidence of river staining or thermal alteration.

The distribution of broken quartz pebbles from the Pleistocene Sands deposits at Topper are presented in Table A34–7. These broken quartz pebbles are slightly heavier and larger than quartz pebbles identified from the Holocene contexts. An examination of the removal patterns on these pebbles also shows that they exhibit higher percentages of removal scars per item than quartz pebbles from the Clovis deposits (Table A34–7). The majority of fracture surfaces on quartz pebbles are flat and uniform as opposed to irregular in form, and are consistent with attributes associated with compression flaking. In addition to broken quartz pebbles, 22 quartz hammerstones were identified from the Pleistocene Sands. When examined by size, these hammerstones were on average larger than broken quartz pebbles from the same contexts. However, hammerstones recovered from the Pleistocene Sands tend to be smaller and exhibit fewer removal scars than hammerstones identified from the overlying Clovis deposits.

A total of 233 bend breaks were identified from the Pleistocene Terrace. This number represents 7.04% of all piece plotted items recovered from the stratum (Table 7–1, 7–18). The morphological and technological attributes of these items were compared to bend breaks recovered from the overlying deposits. Table 7–23 and Table A34–3 present the morphological attributes of bend breaks from the Pleistocene Terrace at Topper. Bend breaks from the Pleistocene Terrace are on average smaller and lighter than those identified from the Pleistocene Sands with lengths range from 6mm to 56mm (Table A34–3). However, the results of a One Way Analysis of Variance demonstrate that the observed differences are not statistically different at the 0.05 level (Table A34–3).

Table 7–23
Attributes for Pleistocene Terrace bend breaks by subunit

	U. PT 97.25–96.50m n=100		**L. PT 96.50–95.25m n = 133**	
	Modified	**Unmodified**	**Modified**	**Unmodified**
Weight (g)	4.81	3.25	8.72	5.29
Length (mm)	24.57	22.65	29.51	23.47
Width (mm)	19.22	17.00	22.04	18.32
Thickness (mm)	8.45	7.26	10.98	8.45
Break Angles (n)	3.22	3.09	3	3
Removal Scars (n)	2.78	2.25	3.14	3.14
% multi-dir. Scars (n)	62.5	57.74	66.12	75.36
%Cortical Bend Breaks (n)	12.50	11.2	19.35	14.49
%Interior Bend Breaks (n)	28.12	22.53	24.19	31.28
Modified BB	32	*	62	*
%Modified	31.68	*	47.69	*
Segments of modification (n)	2.25	*	2.5	*
Retouch scars (n)	2.33	*	2.5	*
%Bi marginal retouch	0	*	4.58	*
% Amorphous debris	40.62	69.01%	40.32	71.01

The technological and conditional attributes of bend breaks from the Pleistocene Terrace are presented in Table 7–18. These bend breaks may be characterized as produced on secondary detachments with three or fewer removal scars with removal scar patterns that are multidirectional. Compared with bend breaks from the overlying deposits, a higher proportion of those from the Pleistocene Terrace are entirely cortical. Likewise, when the proportion of tertiary bend breaks was examined by strata, a greater percentage of artifacts from the Pleistocene Sands were found to be tertiary compared with the Pleistocene Terrace assemblage (Table 7–18). These findings imply that bend breaks retain greater percentages of cortex as depth increases across the site. Bend breaks from the Pleistocene Sands also average nearly twice as many exterior removal scars than artifacts recovered from the Pleistocene Terrace, and have fewer examples with scar patterns that are multidirectional and non-uniform. The combination of non-patterned features, fewer removal scars, and greater percentage of cortex are attributes consistent with natural as opposed to cultural formation processes.

All Pleistocene Terrace bend breaks were examined by condition and for the presence or absence of post detachment modification (Table 7–18). Very few bend breaks were found to exhibit thermal alteration. River staining was also absent from all Pleistocene Terrace bend breaks. Of the bend breaks identified from the research sample, a higher proportion of examples from the Pleistocene Terrace were found to exhibit some form of modification (Table A34–11). Modification typically takes the form of 2 to 2.5 retouch scars removed from the lateral edge of the bend break margin. Interestingly, the percentage of modification on Pleistocene Terrace examples is slightly greater than the number of modified bend breaks identified from the Pleistocene Sands. However, a comparison of the morphological and technological attributes shows that there are a number of significant differences between these two samples (Tables

A34–3, A34–13, A34–14). First, modified Pleistocene Terrace bend breaks are smaller and lighter than those recovered from the overlying sands. Next, modified Pleistocene Terrace bend breaks average fewer 90 degree break angles than those identified from the overlying deposits. Such angles are considered useful margins for gouging and grooving organic media such as wood and bone, and artifacts with more 90 degree break angles would have served greater utility. When the scar patterns on bend breaks were examined, the modified Pleistocene Terrace bend breaks exhibit fewer retouch and exterior surface scars than similar artifacts classified as bend breaks from the Pleistocene Sands. Moreover, the retouch scars on Pleistocene Terrace items tend to be irregular in form compared with bend breaks recovered from the Pleistocene Sands. Retouch scars on bend breaks from the Pleistocene Sands are more uniform. Finally, a greater proportion of modified bend breaks from the Pleistocene Terrace were classified as amorphous debris, lacking compression rings or impact markers whereas modified items from the Pleistocene Sands were more frequently classified as debris. If bend breaks were produced by humans at Topper, then the morpho-technological attributes consistently found on examples from the Pleistocene Sands appear to have been better suited for use as tools compared with items recovered from the Pleistocene Terrace contexts.

There are also potential differences in the morphological and technological attributes of bend breaks from the Pleistocene Terrace when the sample was analyzed by the occurrence and extent of modification. To evaluate this possibility, an intra-assemblage analysis was undertaken to compare the attributes of modified and unmodified bend breaks from the Terrace (Table A34–14).The results of this analysis show that unmodified bend breaks tend to be smaller, have fewer break angles, and consist of a greater percentage of amorphous debris than modified bend breaks from the same contexts. Consequently, if bend breaks do in fact represent a culturally modified

assemblage at Topper then attributes such as material size and condition may have influenced which items were selected for use over others.

To better understand bend break technology at Topper, the lithic deposits from the Pleistocene Terrace were further examined as two separate subunits (Table 7–23). As for the conchoidal flake assemblage, the number and condition of terrace bend breaks was recorded for items recovered from two zones; 97.25–96.50m and 96.50–95.25m. At first glance, a number of intriguing patterns are evident. Foremost, a slight majority of bend breaks were recovered from the deeper subunit. In terms of morphology, items recovered from the deeper deposits of the Pleistocene Terrace also tend to be larger and heavier than bend breaks recovered from the overlying deposits. There appears to be a positive trend in lithic abundance and size with depth through the Pleistocene Terrace. This pattern is opposite the pattern one would expect if items are filtering through the stratigraphic profile through time. In addition to these attributes, more bend breaks from the deeper subunit are tertiary, have greater numbers of removal scars, and have a higher incidence of multidirectional removal scar patterns than items from the upper Pleistocene Terrace. A greater percentage of bend breaks from the deeper Pleistocene Terrace display evidence for modification. However, a closer inspection reveals that potential retouch scars on these items, when present, range in frequency from 2 to 2.5 scars per bend break,(less frequently than found on examples from the Pleistocene Sands), and are predominantly unevenly rather than uniformly distributed along the break margin. Such retouch could occur as the result of natural weathering processes or from lithic collision episodes. In fact, these patterns correspond satisfactorily with the proposition that the bend breaks from the lower Pleistocene Terrace are byproducts of natural processes such as sediment consolidation or natural breakage. However, other patterns are in agreement with a cultural origin for the terrace bend break

assemblage at Topper. The results in Table 7–23 show that modified bend breaks in both subunits are on average greater in size, have higher exterior surface scar counts, and exhibit a larger amount of 90 degree break angles than unmodified bend breaks. Accordingly, there does appear to be some relationship in the techno-morphological attributes of bend breaks and the incidence of modification within this stratigraphic unit. Based on these results, modified bend breaks at Topper consistently have a higher frequency of attributes indicative of human agency than bend breaks that lack modification.

Flake Formation Analysis Summary

The results of the flake formation analysis demonstrate that conchoidal flakes as well as bend break flakes occur in stratigraphic contexts that predate the Clovis deposits at Topper. The greatest percentage of conchoidal flakes are found in the Clovis deposits and reflect episodes of biface manufacture and core reduction. A corresponding decrease in the percentage of these flakes is evident with depth through the profile at the site. This pattern could reflect artifact displacement, or down-drift, as a result of bioturbation or even fluvial processes. However, based on the distribution of artifacts by size (Table A34–2) there is an apparent lack of size sorting of the piece plotted flakes when the Clovis, Pleistocene Sands, and Pleistocene Terrace assemblages are compared. While conchoidal flakes from the Pleistocene Terrace are smallest, the flakes from the Clovis deposits are smaller than those from the Pleistocene Sands. It should also be noted that although the mapping protocol called for a size threshold (> 2.5cm) in the recording of all lithic items encountered, artifacts smaller than the specified size limit were mapped if they were considered tools or byproducts of chipped stone tool manufacture.

The apparent lack of artifact size sorting at Topper is an indication that cultural processes could also be responsible for these patterns. Furthermore, the high incidence of modification

relative to unmodified flakes found to occur on flakes from the Pleistocene Sands (50.96%), and high patterned retouch scar counts (6) on conchoidal flakes from the Upper Pleistocene Terrace suggests that these artifacts are the product of human agency. The significant decrease in patterned retouch and retouch scar frequency found on conchoidal flakes from the mid to lower Pleistocene Terrace, combined with the smaller artifact sizes, and increased percentages of cortex for flakes recovered from these deposits suggests that these materials are more likely to have been influenced by post depositional processes such as bioturbation or *in situ* weathering than artifacts recovered from the overlying deposits.

In contrast to the flake assemblage, lithic artifacts that exhibit attributes consistent with bend break technologies are rare from the Clovis deposits at Topper, and increase in abundance with depth. The greatest percentage of bend breaks was identified from the Pleistocene Terrace. However, more square meters of excavation have been undertaken from this stratigraphic unit and modification on specimens from the deepest deposits of the lower Pleistocene Terrace are less uniform. Bend breaks from the Pleistocene Sands are larger and exhibit more attributes consistent with cultural modification than bend breaks from the Pleistocene Terrace. Moreover, artifacts associated with the production of bend breaks occur in the greatest quantities from the base of the Pleistocene Sands. The increased occurrence of anvil stones and cortical chert pebbles and the presence of split quartz pebbles with uniform margins together suggest the use of compression flaking in the manufacture of bend break flakes from the Pleistocene Sands. Modification retouch, when present on Pleistocene Terrace bend breaks, is more often inconsistent, and takes the form of fewer and intermittent retouch scars on the break margins. This pattern is most evident on items recovered from the lower Pleistocene Terrace deposits. As such, the prospect of human agency in the production of bend breaks from the lower Pleistocene

Terrace is less clear than it is for similar artifacts recovered from the Pleistocene Sands. The discovery of bend break and conchoidal flakes from the pre Clovis deposits at Topper warranted a subsequent analysis to determine if similar patterns are present in the distribution of stone tools through the stratigraphic profile at the site. The results of a stone tool analysis of the lithic materials identified from the Topper assemblage is presented in the following section.

Stone Tool Analysis

If people were making stone tools at Topper prior to Clovis, then it follows that there should be evidence for stone tools or stone tool production from the Pleistocene deposits at the site. Table 7–24 presents the counts and percentages of stone tools from the main strata using a morphological typology for chipped stone tools at Topper based on Andrefsky (2005:76). The typology is not intended to reflect the function of stone tools but is used to signify the morphology. The microwear analysis determined artifact function with greater precision. For this analysis, debitage was distinguished from stone tools when individual items were found to lack evidence of modification, or in the case of bend breaks, have two or fewer 90 degree break angles. Among the formal tools, six categories were defined that constitute 1,159 chipped stone tools. These include core tools (221), biface tools (75), flake tools (522), bend breaks (275), production tools (63), and choppers. The production tool class was not defined by Andrefsky (2005) but is defined here as any artifact that was used in the production of stone tools. The category is used in this study to help isolate and establish the lithic manufacture strategies that were incorporated in the production of chipped stone tools for each depositional unit. Examples of artifacts from each tool class by stratigraphic deposit are illustrated in Figures A35–1 to A35–53. The distribution of tools was compared for each stratigraphic deposit to evaluate the

Table 7–24

Morphological typology for all mapped chipped stone tools and Debitage at Topper Site. Counts and Percentages of tools by stratum.

	Core Tools	**Biface Tools**	**Flake Tools**	**Bend Breaks**	**Production**	**Total Debitage**	**Split Quartz**	**Total Tools**
Archaic and Clovis	48	75	79	8	26	172	12	236
P. Sands	109	2ǂ	188	39	20	562	42	358
Terrace	64	1†	255	236	17	2245	436	573
Total	221	78	522	283	63	2979	490	1167
	%	**%**	**%**	**%**	**%**			
Archaic and Clovis	20.3	31.77	33.47	3.38	11.01			100%
P. Sands	30.44	.55	52.51	10.89	5.58			100%
Terrace	11.16	.17	44.5	41.18	2.06			100%
Total	18.93	6.68	44.73	24.25	5.39			100%

* P. Sands = Pleistocene Sands; ǂ= biface and bifacial fragment from upper Pleistocene Sands; †=bifacial fragment from Pleistocene Terrace.

frequency and types of tools recovered from the Clovis and pre Clovis assemblages at Topper. Similarity in toolkit composition would indicate that: 1) either two groups of peoples, separated in time, were using the same technological strategies of tool production and use; or 2) the tools observed from pre Clovis contexts were redeposited from Clovis deposits into deeper strata at the site. In contrast, dissimilarity in toolkit composition would indicate that two groups of peoples, separated in time, were using different technological strategies of tool production and use. The distribution of formalized chipped stone tools by type is presented in the section that follows.

Core Tools

Based on the morphological typology, a total of 221 core tools were identified at Topper (Tables 7–24, 7–25). Core tools were recovered from each of the three stratigraphic deposits examined (Clovis, Pleistocene Sands, and Pleistocene Terrace). Most core tools were recovered from the Pleistocene Sands with fewer cores identified from the Pleistocene Terrace, and Clovis deposits. The lowest percentage of core tools derives from the Clovis deposits (Table7–25). Clovis cores consist of complete bifacial, blade, and flake unidirectional and multidirectional cores as well as core fragments (Appendix 35). Cores with unidirectional removal scars were rare from the Clovis deposits. Technological and morphological attributes of cores are presented in tables 7–26 and 7–27. Morphologically, Clovis core tools are smaller and weigh much less than cores that were identified from the deeper deposits; however, there is no significant difference in measurements of core length, width and thickness (Table 7–26). Clovis cores have fewer prior detachments scars than cores from deeper deposits (Table 7–26).

When Clovis cores were examined for the presence or absence of modification, six items were found to exhibit some form of modification. Clovis cores exhibit a lower incidence of

Table 7–25

Percentage of each tool type by stratigraphic unit at Topper Site. Numbers in parentheses reflect proportion of artifacts per level.

	Core Tools (n=221)	**Biface Tools (n=78)**	**Flk Tools (n=552)**	**Bend Breaks (n=283)**	**Production (n=63)**
Clovis	21.71 (.872)	95.18 (1.36)	15.13(1.33)	0 (0)	41.26(.472)
P. Sands	49.32(.350)	3.61 (.0064)	36.01 (.60)	14.18 (.125)	31.74(.064)
P. Terrace	28.95 (.188)	1.2 (.002)	48.85 (.75)	85.81 (.694)	26.98 (.05)

* P. Sands = Pleistocene Sands

Table 7–26

Core Tool Morphology showing results of One Way Analysis of variance.

	Clovis n=48	**PS n=109**	**PT n=64**	***df***	***F***	***p value***	***F crit***	
Length	85.9	88.27	81.80	2	0.2086	0.8118	3.034	Not Significant
Width	72.2	65.42	74.6	2	0.1813	0.8342	3.0349	Not Significant
Thickness	47.66	45.41	42.4	2	0.2613	0.7702	3.0350	Not Significant
Weight	174.9	713.12	714.69	2	0.7065	0.5489	2.6445	Not Significant
Scar Counts	9.35	11.09	9.5	2	1.0640	0.3467	3.0350	Not Significant
Modification	6	27	6					
Retouch	7.5	9	7.6	2	0.4367	0.6491	3.2317	Not Significant

PS=Pleistocene Sands; PT=Pleistocene Terrace; df=Degrees of Freedom.

Table 7–27
Core Tool Morphology showing minimum and maximum length of cores for each stratum at the Topper Site (38AL23).

Strata	Min. Length (mm)	Max Length (mm)	Length (mm)	Weight (g)	Min. Scars	Min. Scars	Avg. Scars
Clovis	25.8	154.44	85.9	174.9	1	41	9.35
Pleistocene Sands	5.5	300.3	88.27	713.12	1	59	11.09
Pleistocene Terrace	101.1	227.47	81.80	714.69g	1	45	9.5

modification compared with cores identified from the Pleistocene Sands and Terrace (Table–7–25). An examination of the condition of the exterior cortical surfaces of Clovis cores found that most examples are made on upland chert. Only a single Clovis core exhibits river staining on its exterior surface. Core tools are the dominant tool class identified from the Pleistocene Sands. Figures A35–4 to A35–6 present examples of cores and core tools from the Pleistocene Sands at Topper. These cores are typically larger than Clovis cores. However, the results of a one way analysis of variance show no significant difference in the morphology of cores from the Pleistocene Sands with those from other deposits Table 7–26. Technologically, cores identified from the Pleistocene Sands are predominantly multidirectional, although three cores were identified as blade cores.

Core tools from the Pleistocene Sands have higher exterior scar counts, although the difference is not significant based on the results of a One Way Analysis of variance compared with cores from the Clovis or Pleistocene Terrace (Table 7–26). An examination for the presence or absence of modification found that 36% of cores from the Pleistocene Sands exhibit some form of modification, a higher percentage than observed on cores from the Clovis (12.5%) or Pleistocene Terrace 9.3%) deposits. River staining was absent from on cores from the Pleistocene Sands while 13 tools exhibit thermal alteration. Finally, a significant percentage of cores from the Pleistocene Sands are fragmented, possibly resulting from testing to evaluate tool–stone quality.

A total of 64 cores were identified from the Pleistocene Terrace (Appendix 35, Tables 7–25 to 7–27). These cores are similar in morphology to cores from the Pleistocene Sands, although they are wider than cores from the other strata. Cores from the Pleistocene Terrace exhibit fewer exterior surface removal scars, although this difference is not statistically

significant (Table 7–26). These core tools predominantly have multidirectional removal scars and like examples identified from the Pleistocene Sands, are highly fragmented. Modification and retouch scars are few in number compared with core tools from the Pleistocene Sands.

Biface Tools

A total of 78 artifacts were classified as bifaces and broken bifaces (Table 7–24,25). When bifaces were tabulated by context, nearly all (95.18%) were recovered from the Archaic and Paleoindian deposits. These include 18 Middle to Late Archaic (MALA) bifaces (Figures A35–13 and A35–14), two Taylor projectile points (Figure A35–15), and 55 Clovis bifaces (Figures A35–16 and A35–17). Bifaces are considered the predominant tool form from the Holocene and terminal Pleistocene deposits on the Terrace at Topper.

Seven MALA bifaces were classified as finished points, while the remaining artifacts were categorized as preforms or broken fragments (Table 7–28). The mean morphological attributes of complete MALA bifaces are presented in tables A35–1 and Table 7–28. These artifacts are smaller than complete Clovis bifaces in all morphological categories with the exception of thickness. Of the MALA bifaces identified, eight were recovered from a cache that was designated Feature 48. When examined by condition, most MALA bifaces exhibit evidence of thermal alteration. Interestingly, bifaces from Feature 48 lack thermal alteration. Exterior surface removal scars on MALA less frequent than on Clovis bifaces. In addition to the complete MALA bifaces, three MALA point bases and two tips were also identified, although an examination for the potential of refits among these artifacts was not successful.

Fourteen complete biface preforms and 41 biface fragments were identified from the Clovis deposits from the study sample. Technological and Morphological attributes of these

Table 7–28
Morphological and Technological attributes of Bifaces and Biface tools from the Topper Site (38AL23).

	Sample	**complete**	**points**	**Min. L (mm)**	**Max. L (mm)**	**Avg. L (mm)**	**TA**	**River staining**	**RS (min)**	**RS (max)**	**Avg. RS**
MALA	18	13	7	8.6	71.8	62.33	10	1	4	19	13.75
Clovis	55	14	0	41.31	102.3	70.24	0	0	6	50	28.3
Broken Clovis	41	*	*	*	*	*	2	5	7	44	20.7
Pleistocene Sands	3	1	0	55.8	55.8	55.8	0	0	9	12	10.5

Avg. RS = Average retouch scars; Min. L = Minimum length; Max L. = Maximum Length; Avg. L = Average Length; TA = Thermal Alteration; RS = Retouch scar s

artifacts are presented in Table A35–1 and Table 7–28. Morphologically, complete Clovis bifaces are larger than those from other contexts at Topper. Smallwood (2010) found two size ranges for Clovis preforms at the Topper Site based on an analysis of 174 bifaces identified from the site. All but 20 were identified from the buried Topper hillside deposits. The larger morphological grouping has lengths and widths that "range from 115.0 to 144.80mm and from and from 55.1 to 56.2 mm, respectively" (Smallwood 2010:2417). By contrast, small preforms are "variable and range from 38.2 to 84.5 mm and widths vary between 22.3 and 41.9 mm" (Smallwood 2010:2417). Based on these findings, the Topper Clovis bifaces identified and examined for the present analysis from the Pleistocene Terrace are more similar in morphology to the small, variable grouping identified by Smallwood (2010).

Complete Clovis bifaces may be characterized as having multidirectional exterior surface removal scars with scar counts that typically exceed 20 in number, and tertiary, or lacking evidence of cortex. When examined by condition, all but four complete bifaces are interior, and completely lacking in cortex. The presence of thermal alteration was not observed on complete Clovis biface preforms from the study sample. Biface fragments exhibit multidirectional removal scars on the artifact exterior and scar counts that typically exceed 15. Unlike complete Clovis bifaces, a relatively high proportion of broken bifaces retain cortex on the exterior surface (25 of 41 or 60.9%). Moreover river staining and thermal alteration were more prevalent on broken specimens (Table 7–28).

Artifacts classified as bifaces from the Pleistocene Sands and Pleistocene Terrace consist of a single example and two flake fragments with bifacial flaking present on the exterior margin of each specimen. The single biface was recovered from the Upper Pleistocene Sands and is illustrated in Figures 7–2 and A35–17. This biface was recovered from unit N245.78 E138.20 at

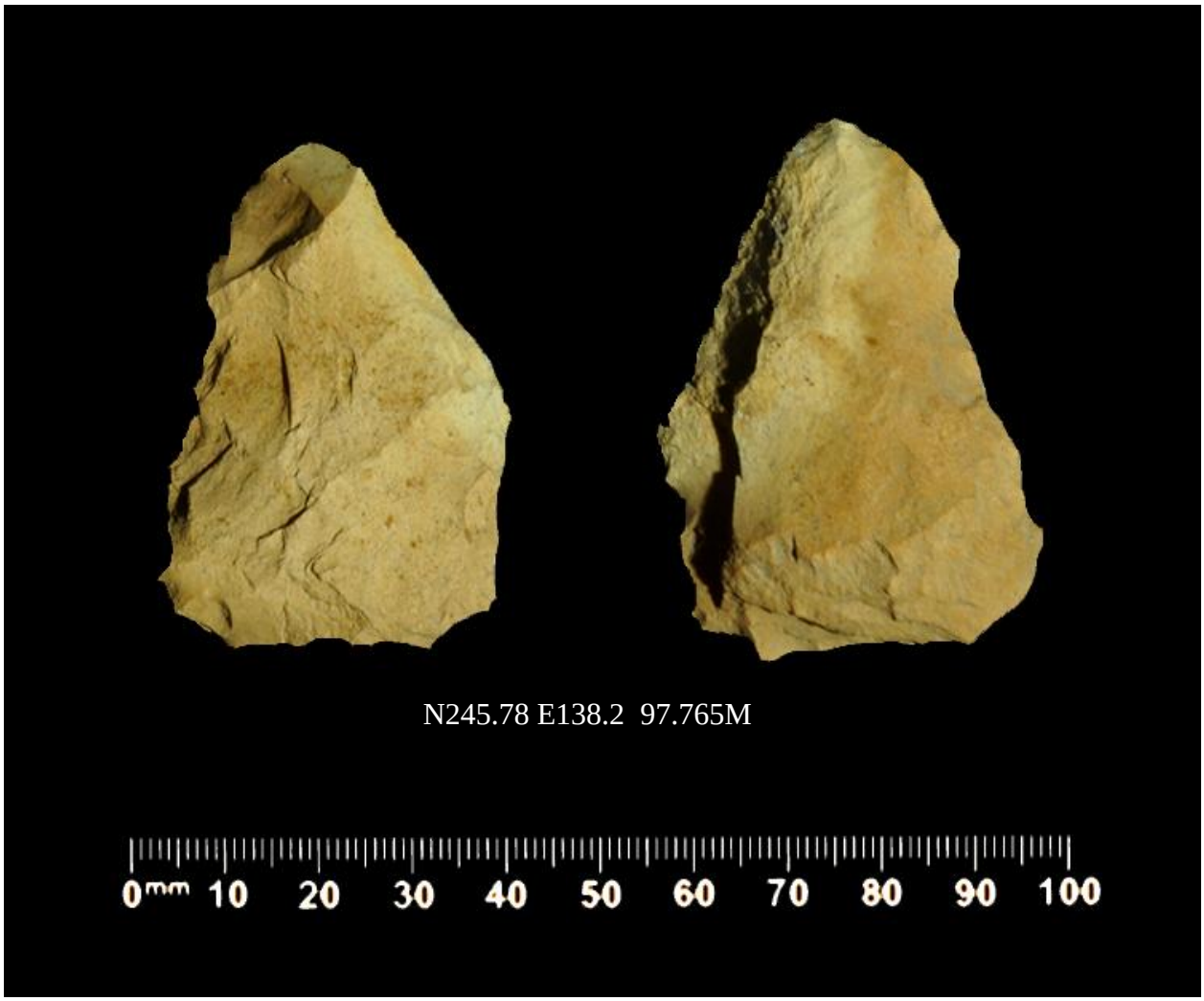


Figure 7–2
Biface from the Pleistocene Sands at the Topper Site (38AL23). N245.78 E138.2 at a depth of 97.765m

a depth of 97.765m approximately 20cm below the primary concentration of Clovis deposits from the study sample. The biface measures 55.8mm long and is in 37.76mm wide, and 13.4mm thick. This particular biface is interesting in that it was isolated and recovered below other materials attributed to the Clovis culture, but well above the potential pre Clovis materials from the Pleistocene Sands. Morphologically, the biface appears similar to projectile points recovered from the pre Clovis deposits at the Cactus Hill Site in Virginia, albeit lacking a concave base (McAvoy and McAvoy 1997). However, Smallwood has also noted that Clovis preforms at Topper can come in small sizes and "the production of small performs and other types of bifacial tools suggest Clovis people in the region adjusted the bifacial components of their toolkit and adapted to more variability in toolkit design" (Smallwood 2010:7). Using the flaking index developed by Miller and Smallwood (2010), which is a ratio of the total number of flake scars from both faces to the corresponding bifacial edge length, the biface from the study sample produced a value of .32. According to Smallwood's analysis, this flaking index value falls within the mean range of middle to late stage bifaces manufacture at Topper. At present, the precise age of the biface cannot be determined with certainty.

The two biface fragments from the Pleistocene Sands are considerably smaller than Holocene and Clovis bifaces. The morphological attributes of these fragments are presented in Table A35–1. River staining is present on one of these biface fragments. Technologically, this specimen is similar in form to bifaces recovered from Early Archaic contexts at the site, and may therefore represent redeposition or artifact displacement. Removal scars on the bifacial fragments recovered from Pleistocene contexts range from 9 to 12 with a mean of 10.5 scars per biface. Complete bifaces were absent from the Pleistocene Terrace although a single bifacially worked flake fragment was identified.

Flake Tools

Flake tools (n = 522) make up the largest tool class of the morphological typology at Topper (Table 7–24). Flake tools are flakes that have been modified by some means of further chipping or flaking. For this analysis, a number of tool categories are subsumed under the flake tool category and include utilized flakes, scrapers, and blades. The morphological attributes of flake tools are illustrated in Tables A35–18 to A35–33.

A utilized flake is defined as a flake that has flake scars resulting from use that extend less than 2 mm from the edge of the tool. Such removals can be but are not necessarily regularized and continuous along the edge of the flake margin. Scrapers are defined as flakes that display regularized edge retouch to produce a uniform and continuous edge along the flake margin. For simplicity, items classified as choppers and denticulates, although possibly serving an alternative function, were included within the scraper category. Blades are defined as any lithic detachment with two or more parallel removal scars on the exterior surface originating from the same plane or surface, and are usually twice as long as they are wide. Utilized flakes, scrapers and blades were recovered from all stratigraphic units at Topper, albeit in different proportions.

Interestingly, most flake tools (48.85%) at Topper were recovered from the Pleistocene Terrace, with fewer flake tools identified from the Pleistocene Sands (36.01%) and Clovis (15.13%) deposits (Table 7–24). However, when the distribution of flakes tools was compared by volume, on average, more flake tools were recovered from the Clovis deposits (1.33 flake tools per level) than from the Pleistocene Sands (.60 flake tools per level) or Pleistocene Terrace (.75 flake tools per level). Although the number of flake tools increases from the Clovis through the Pleistocene Sands, there is a decrease in the proportion of flake tools per level across this

interval. In the section that follows the morphological and technological attributes of flake tools from each depositional unit at Topper are discussed.

Clovis Flake Tools

The distribution of Clovis flake tools is presented in Table 7–29 and examples illustrated in Figure A35–18 through A35–20. The morphological attributes of Clovis flake tools are presented in Tables A35–2 and 7–30. The blades include eight complete examples and nine fragments including two distal fragments, three medial sections, and four blade proximal sections. Clovis blades from the study sample are short (52.13mm) compared with Topper blades that have been described from the Hillside portion of the site (61mm) (Sain 2011). Technological attributes that characterize the Clovis blade assemblage include exterior surfaces that are predominantly secondary or tertiary in form with removal scar patterns that are unidirectional. Scar counts typically exceed four and termination types are nearly exclusively feathered. When examined by condition, a single complete blade was found to have evidence of post detachment modification. Attributes of retouch on blades and other categories of flake tools are presented in Table A35–2. An additional four blade fragments have retouched margins and average 3.5 retouch scars per specimen. River staining was present on a small percentage (17.6%) of Clovis blades.

A total of 30 flake tools from the Clovis deposits were classified as scrapers (Figures A35–18 and A35–19). Morphologically, Clovis scrapers are larger than blades or utilized flakes from the same stratum (Table 7–30). Technological attributes of Clovis scrapers include scar patterns that are predominantly multidirectional with 10 or more prior detachment scars. By definition, all scrapers exhibit evidence of lateral edge retouch. Most scrapers (77%) are

Table 7–29
Number of Flake Tools by type and strata from the study sample at the Topper Site (38AL23).

	Blades	Scrapers	Utilized Flakes	Total
Clovis	17	30	32	**79**
P. Sands	10	52	126	**188**
Terrace	13	31	211	**255**
Total	**40**	**113**	**369**	**522**

Table 7–30
Morphological Attributes of blades by stratum.

Blades											
	Sample	**Min. L (mm)**	**Max. L (mm)**	**Avg. L (mm)**	**Avg. W**	**Avg. Th**	**TA**	**River St.**	**Rem. Scar (min)**	**Rem. Scar (max)**	**Avg. Rem. Scar**
Clovis	17	32.32	65.7	52.13	18.7	10.06	0	4	2	7	5.12
PS	10	12.5	45.8	31.57	17.37	9.56	0	0	2	6	2.8
PT	13	18.5	62.7	27.34	16.78	6.68	0	0	3	10	3.41
Scrapers											
Clovis	30	17.91	88.1	55.63	36.51	20.08	5	1	*	*	20.26
PS	52	11.8	178.3	69.48	51.53	28.41	2	0	2	47	13.86
PT	31	10.6	120.38	55.68	39.5	21.59		0			
Utilized Flakes											
Clovis	32	8.3	89.61	41.7	29.42	11.49	3	3	*	*	5.87
PS	126	13.03	48.78	217	35.36	17.86		0			
PT	211	13.3	88.4	38.42	28.17	16.17		0			

modified on the exterior surface of the lateral margin of the flake. The remaining 23% of scrapers exhibit modification on the interior surface. Technologically, a total of 16 scrapers were classified as end scrapers and 14 are side-scrapers. Attributes of retouch on Clovis scrapers are presented in Table A35–2. The frequency of retouch on scrapers is higher than was found to occur on Clovis blades or utilized flake tools. When examined by condition, a relatively high proportion of scrapers from the Clovis deposits exhibit thermal alteration. A single scraper exhibited river staining.

A total of 32 Clovis artifacts were classified as utilized flakes (Table 7–29). Morphologically, utilized flakes are smaller that Clovis blades or scrapers (Table 7–30). Unlike blades, Clovis utilized flakes have exterior surface removal scars that are predominantly multi-directional. Total scar counts on Clovis utilized flakes are fewer in number than found on blades or scrapers. An examination of the presence or absence of lateral edge modification shows that nine utilized flakes have multiple flake margins that exhibit modification. Retouch scars on utilized flakes occur in greater frequency than found on blades, but less than observed on scrapers (Table A35–2). When examined by condition three utilized Clovis flakes were found to have river staining on the flake exterior. Only a single flake has thermal alteration (Table 7–30).

Pleistocene Sands Flake Tools

There are 188 flake tools from the Pleistocene Sands (Table 7–29). These tools were further classified as either blades, scrapers, or utilized flakes. Figure A35–21 presents a sample of blades identified from the Pleistocene Sands. The piece plotted blade assemblage from the Pleistocene Sands includes three complete blades, four distal fragments, one medial segment, and two proximal sections. In addition to the piece plotted items, numerous small blades were also recovered from the screen. A sample of these items are presented in Figure A35–22.

Morphologically, blades from the Pleistocene Sands are small, and are more similar in form to bladelets (defined as blades smaller than 50mm in length) (Table A35–3). The morphological attributes of blades from the Pleistocene Sands are presented in Table 7–30. Complete blades from the Pleistocene Sands demonstrate a decrease in size compared with blades identified from the Clovis deposits. Technological attributes consistent with blades from the Pleistocene Sands include detachments that are secondary or tertiary removals, scar patterns that are predominantly unidirectional with fewer than three removal scars per blade, and feathered distal terminations as oppose to those that end in step or hinge fractures. A comparison of blade attributes from the Clovis and Pleistocene Sands shows that the items recovered from the Pleistocene Sands are not only smaller, but have fewer removal scars than blades from the Clovis deposits (Table 7–30). An examination of the condition of blades from the Pleistocene Sands found few (n = 3) that have evidence of modification or retouch. Retouch (Table A35–3) was limited to the lateral margin of the blade and typically consisted of three to four retouch scars. Thermal alteration and river staining were absent on blades from the deposits.

A substantial assemblage of scraper tools were identified from the Pleistocene Sands (n = 52). Examples of scrapers from these deposits are illustrated in Figure A35–23 to A35–28. Artifacts classified as scrapers include 31 complete tools, and 21 scraper fragments. In terms of morphology, scrapers represent the largest flake tool class identified from the depositional unit (Table 7–30).Technologically, scrapers from the Pleistocene Sands have removal scars that are nearly exclusively multi–directional. Only a single example has uni–directional removal scars and was produced on a flake distal fragment. This pattern differs from the attributes observed on scrapers from the Clovis assemblage which frequently have unidirectional scar patterns. When examined by cortex, most scrapers were made on secondary detachments while the remaining

artifacts are tertiary. The high incidence of partial cortex on scrapers from the Pleistocene deposits is indication that tools were completed prior to the total removal of all cortex from the artifact exterior. Further examination of the exterior surfaces of these scrapers found that scar counts are fewer in number compared with items from the Clovis deposits (Table 7–30).

Figures A35–25 to A35–28 show scrapers that have visible evidence of retouch or use. When examined for post detachment modification, all scrapers exhibited some form of retouch. The incidence of retouch on scrapers is similar to the frequency of retouch observed on scrapers from the Clovis assemblage (TableA35–2 and A35–3). A One Way Analysis of Variance Test (ANOVA) comparing the frequency of retouch scars for each assemblage shows that the two assemblages are not statistically different (df = 1; F = .00015; p value = 0.9901) (Table 7–31). When attributes of artifact condition were considered, a total of two scrapers were found to exhibit thermal damage in the form of potlids. River staining is absent on scrapers from the Pleistocene Sands (Table 7–30).

Utilized flakes comprise the largest assemblage of flake tools (n = 126) from the Pleistocene Sands. Interestingly, a high proportion of the utilized flakes from these deposits were broken or fragmented. A sample of fragmented utilized flakes is illustrated in Appendix 35. Most utilized flake tools (n=99) are flake fragments, whereas only 27 are complete. Utilized flakes from the Pleistocene Sands are larger in size than tools recovered from the Clovis deposits (Table 7–30).

When utilized flakes from the Pleistocene Sands were examined by the condition and frequency of prior detachment scars, most items have multidirectional removal scars. Most utilized flakes have partial cortex on the flake exterior (n=86) and are secondary flakes. A total of 39 flakes are tertiary and a single example is entirely cortical. A total of 74 utilized flakes

Table 7–31
Results of a One Way Analysis of Variance comparing Retouch scars on Flake Tools by strata.,

	Clovis	**PS**	**PT**	***df***	***F***	***p value***	**Significance**
Retouch Scars Scrapers	8.95	8.97	5.37	1	0.00015	0.9901	Not Significant
Retouch Scars Utilized Flakes	5.87	6.36	4.15	2	8.08	0.000389	

PS=Pleistocene Sands; PT= Pleistocene Terrace; df= Degree of Freedom.

Table 7–32
Distribution of cortex by type for the Clovis and Pleistocene Sands Flake Tool assemblage.

	% Cortical/Secondary/Upland Chert	**% Interior**	**% Cortical/Secondary River stained chert**
Clovis	53.05	38.15	8.8
P.Sands	72.7	26.8	0.5

have retouch scars. Retouch scar counts on utilized flakes range from 3 to 24 with a mean of 6.11 scars per item (Table 7–30). Accordingly, there is little difference in the frequency of retouch scars on utilized flakes when the Clovis and Pleistocene Sands assemblages are compared. When examined by condition, two utilized flakes are thermally damaged, and a single artifact exhibits river staining on the exterior surface.

A number of intriguing patterns were revealed when flake tools from the Pleistocene Sands were compared with tools from the same artifact class from the Clovis deposits. In terms of morphology, Clovis blades are larger than blades from the underlying Pleistocene Sands assemblage (Table 7–30). However, this pattern is reversed when the piece plotted Scraper and Utilized flake assemblages are considered. Artifacts from the Pleistocene Sands are larger and heavier than similar tool forms from the Clovis deposits. Based on the differential sizes of artifact types between the two assemblages, it is unlikely that the entire flake tool assemblage from the Pleistocene Sands resulted from bioturbation.

Patterns are also revealed when the technological attributes of the Topper Clovis and Pleistocene Sands flake tool assemblages are compared (Table 7–30). With the exception of utilized flakes, Clovis flake tools, on average, have a greater incidence of prior detachment scars that flake tools identified from the deeper deposits. This pattern could indicate that the tools from the Clovis assemblage were being reduced to a later stage of the reductive trajectory than tools from the Pleistocene Sands. Moreover, these findings could also indicate that greater time and effort were applied in the production of Clovis flake tools than was the case in the production of flake tools from the Pleistocene Sands. A comparison of scar counts on utilized flakes shows that scars on items from the Pleistocene Sands are slightly greater in number than Clovis utilized flakes, although this difference is not significant (Table 7–30). When the flake tools from each

assemblage were compared by degree and extent of modification, no statistical difference was observed in the frequency of retouch scars, although blades from the Clovis deposits tend to have slightly higher retouch scar counts (Table A35–2,3).

An attribute that distinguishes the Clovis and Pleistocene Sands flake tool assemblages is the general lack of river staining observed on the cortex of flake tools from the Pleistocene Sands deposits. Approximately 8.8% of the flake tools from the Clovis deposits exhibit river staining on the exterior surfaces of flake tools. In contrast, river staining was only found on a single item or less than 0.5% of flake tools from the Pleistocene Sands. These findings could indicate that river–stained cherts were not available at the time the Pleistocene Sands were deposited. It is also possible that weathering has obscured the presence of river staining on flakes from the Pleistocene Sands. The latter scenario, however, implies that weathering processes should also obscure the presence of upland cortex on flake tools from the Pleistocene Sands. To account for each possibility, the distribution of flake tools by cortical type was examined. The results, (Table 7–32) show that upland cortex was identified on a significant proportion of tools from the Clovis and Pleistocene Sands. Given these results, it is unlikely that weathering processes have obscured all evidence of river staining that could have formed on items deposited in the Pleistocene Sands, and the more plausible conclusion is that river–stained cherts were not exposed at the time the Pleistocene Sands were deposited.

Pleistocene Terrace Flake Tools

The morphological stone tool analysis resulted in the identification of 255 flake tools from the Pleistocene Terrace (Table 7–29). This number equates to a proportion of 0.75 flake tools per 5cm excavated level from the units examined for the study sample (number of tools = 255/ number of excavated 5cm levels $1x1m^2$ = 340) (Table 7–25). Flake tools from the

Pleistocene Terrace were separated according to three artifact categories consistent with the Clovis and Pleistocene Sands deposits; blades (n = 13), utilized flakes (n = 211), and scrapers, (n = 31) (Table 7–30). These artifacts are illustrated in Figures A35–36 and A35–37. Table 7–31 presents the morphological attributes of flake tools by type for the Pleistocene Terrace. By total quantity, blades make up the lowest proportion of flake tools identified from the Pleistocene Terrace. Morphologically blades are small. Compared with blades from the overlying deposits, examples from the Pleistocene Terrace (Figure A35–30) are small and are more similar in form to bladelets than to technological blades. Interestingly very few blade cores were identified from the Pleistocene Terrace deposits which might have been associated with blade production at the site.

When blades were examined by the condition of the exterior surface, most (n = 7) items were classified as tertiary blades. Four secondary and two decortication blades were identified. The removal scars on secondary and tertiary blades are predominantly unidirectional (n = 10), with bidirectional and multi-directional forms occurring with less frequency (n = 3).
Scar counts on blades are presented in Table 7–30 and occur with less frequency than removal scar counts on Clovis blades. When distal terminations types were examined, most blades had feathered terminations (n = 8) with step terminations less common (n = 5). No blades from the Pleistocene Terrace have hinge terminations.

An examination (Tables 7–30, A35–2 to A35–4, and Appendix 37) of the condition of blade tools from the Pleistocene Terrace resulted in a number of intriguing findings. For example, a slightly higher proportion of blades from the Pleistocene Terrace were found to have retouched margins (30.76%) than blades identified from the overlying Clovis (28.12%) or Pleistocene Sands (30%). Blades from the Pleistocene Terrace (Table A35–2 to A35–4) average

higher retouch scar counts than blades from the Pleistocene Sands and values are comparable to examples identified from the Clovis deposits. Moreover, retouch on all Pleistocene Terrace blades is exclusive to the exterior blade margin whereas at least a portion of blades from other deposits exhibit retouch on both the exterior and interior margins.

The Pleistocene Terrace scraper assemblage (Table 7–29) includes twenty three complete tools and eight broken or fragmented tools. Most complete examples were classified as end scrapers having retouch along the distal or proximal terminus of the tool as opposed to retouch along the lateral margins. Figures A 35–31 and A35–32 present selected end scrapers from the Pleistocene Terrace with retouch while Table 7–30 presents the morphological characteristics of the Pleistocene Terrace scraper assemblage. Pleistocene Terrace scrapers are comparatively small. The largest examples rarely exceed 100mm long and most (n = 20) are less than 20mm long. In terms of morphology, Pleistocene Terrace scrapers are more similar in size to Clovis scrapers and are significantly smaller than similar items from the Pleistocene Sands.

All Pleistocene Terrace scrapers were examined by technological attributes of the exterior and interior surfaces (Results obtained from Appendix 31–32). Scrapers from the Pleistocene Terrace are characterized as a product of secondary detachments, are fragmented, and have multidirectional removal scars on the exterior tool surface. Only a single example is entirely cortical. Accordingly, these items are comparable to scrapers recovered from the overlying deposits in terms of the presence and amount of exterior surface cortex. Scrapers from the Pleistocene Terrace tend to have significantly fewer removal scars than similar tools identified from the Clovis or Pleistocene Sands (Table 7–30).

When examined for the presence of post detachment modification, all scrapers from the Pleistocene Terrace exhibited some retouch. The incidence of modification found on scrapers

from the Pleistocene Terrace assemblage occurred in a much lower frequency than on items from the overlying deposits (Table A35–4). Moreover, examination of the nature of retouch scars shows that many are irregular in form, occurring intermittently and non-uniformly along the tool margin. It should be noted that modification typically considered the result of cultural processes usually consists of two or more uniform, parallel retouch scars taken from a given margin of the tool edge. The low incidence of retouch found on these tools combined with the smaller tool morphology calls into question whether retouched margins on scrapers from the Pleistocene Terrace were actually the product of natural as opposed to cultural formation processes.

A total of 211 utilized flakes were identified from the Pleistocene Terrace deposits at Topper. When examined by completeness the majority of utilized flakes are incomplete or broken fragments (n = 168). Only 43 complete utilized flakes were identified from the Pleistocene Terrace deposits. Figure A35–33 and A35–34 presents examples of utilized flakes from the Pleistocene Terrace. The flake fragment in Figure A35–34 has utilization along the exterior lateral margin of the specimen. Utilized flake morphologies are presented in Table 7–30. The utilized flake assemblage from the Pleistocene Terrace represents the smallest tool class in terms of size compared with similar flake tools identified from the overlying deposits. Technological attributes of the Pleistocene Terrace utilized flake assemblage include exterior surfaces that exhibit partial cortex or are cortical, removal scar patterns that are multidirectional, and comparatively few prior detachment scars. A total of 19 of the 211 (9 %) utilized flakes are entirely cortical. By contrast only two utilized flakes from the Pleistocene Sands and two examples from the Clovis deposits are cortical. Most Pleistocene Terrace flakes are secondary (n = 133). Although predominantly multidirectional, utilized flakes from the Pleistocene Terrace also have a high frequency of scar patterns that are uni–directional (n = 73 or 36.68%) compared

to similar flake tools identified from the overlying deposits (Pleistocene Sands = 20%; Clovis = 25.80%). Utilized flakes from the Clovis and Pleistocene Sands deposits have higher mean scar counts, possibly indicating greater intensity in reduction. The results of a One Way Analysis of Variance show a statistical difference in the frequency of removal scars on utilized flakes by depositional unit (df = 2; F = 8.08; p = 0.000389) (Table 7–31). When examined by termination type, most utilized flakes have feathered terminations (n = 122) although step terminations are also common (n = 65). Utilized flakes from the Pleistocene Terrace have a higher proportion of hinged terminations compared with the proportion of termination types observed on flakes from the overlying strata. An analysis (Table7–30) of the presence or absence of thermal alteration shows that 19 or 9.0% of utilized flakes from the deposit present evidence of thermal alteration. Most examples appear to take the form of thermal damage, pot–lidding or crazing as opposed to intentional heat treatment. Retouch modification occurs on all utilized flakes. Compared with similar tools from the Clovis and Pleistocene Sands, items from the Pleistocene Terrace have significantly fewer retouch scars (Table A35–4). Based on the morphological, technological, and conditional attributes of flake tools, items from the Pleistocene Terrace in general have fewer attributes of utility compared with tools from the Clovis and Pleistocene Sands.

Bend Break Tools

Based on the morphological typology, 283 piece plotted bend breaks were identified from the study sample (Table 7–2). All but eight of these bend breaks were recovered from the Pleistocene Sands (n = 39) and Pleistocene Terrace (n=236) deposits. Figures A35–36 to A35–38 presents examples of bend break tools from the Topper Site. Of the Clovis bend breaks only two are modified. An inspection of the two examples from the Clovis deposits suggests that these

items are snapped or broken biface fragments that exhibit retouched margins, modified prior to snapping.

Of the 275 bend breaks identified from Pleistocene contexts, nearly half (123) exhibit some form of modification and are therefore classified as tools. Of these, 17 bend break tools were recovered from the Pleistocene Sands and 94 from the Pleistocene Terrace. Bend breaks from the Pleistocene Sands and Terrace at Topper fall into two technological categories; modified bend breaks, and bend break gravers. Tables 7–33 through 7–35 present the morphological and technological attributes of modified bend breaks and bend break graver tools. Bend break gravers are distinguished from modified bend breaks by a protruding “spur “chipped along one or more break margins to possibly serve the purpose of grooving or gouging materials. Figure A35–7 provides examples of modified bend break and a bend break graver.

From the study sample, a total of 99 items were classified as modified bend breaks and 24 were identified as bend break gravers. When this distribution was further examined by depositional unit, 81 of 99 (81.81%) modified bend breaks and 23 of 24 (95.8%) bend break gravers were recovered from the Pleistocene Terrace. As such, bend break graver tools are nearly exclusive to the Pleistocene Terrace. All modified bend breaks and bend break gravers from the Pleistocene Sands and Pleistocene Terrace were compared by morphological and technological attributes (Tables 7–33 to 7–35). Bend break tools from the Pleistocene Sands are often larger than tools from the Pleistocene Terrace (Table 7–33). However, the results of a t-test(Table 7–34) show that there is no statistical difference in the morphological attributes of Pleistocene Terrace gravers and bend breaks. Bend break graver tools from both deposits are predominantly cortical and have multidirectional removal scars. When scar frequency is compared by tool type and stratum, higher scar counts are found on items from the Pleistocene Sands regardless of tool

Table 7–33

Morphological Attributes of Modified Bend Breaks and Bend Break Graver Tools at the Topper Site (38AL23).

	Number	Wt.	Length	Width	Thickness	Removal Scars
Pleistocene Sands						
Modified Bend Breaks	16	7.33	30.88	24.71	21.74	5.8
Bend Break Gravers	1	50.5	67.84	56.59	17.41	11
Pleistocene Terrace						
Modified Bend Breaks	81	9.40	29.20	22.14	10.23	3.06
Bend Break Gravers	23	7.50	27.37	27.48	11.65	3.52
Total	121					

Table 7–34

Results of a t-test comparing morphological attributes of modified bend breaks and bend break gravers from the Pleistocene Terrace.

Attribute	Modified	Graver	t-value	p value	Significance at .05 level
Length	29.20	27.37	642643	0.521957	*Not* significant
Width	22.14	27.48	1.227251	0.222668	*Not* significant
Thickness	10.23	11.65	0.907208	0.366545	*Not* significant
Weight	9.40	7.50	0.70085	0.48518	*Not* significant

Table 7–35
Technological attributes of modified bend breaks and bend break graver tools at the Topper Site (38AL23).

	Cortex			**Removal scar**			**TA**	**Scar**	**Ret.**	
	Prim.	Sec.	Tert.	Uni	Bi	Multi				
Pleistocene Sands										
Modified Bend Breaks	3 (20)	6 (40)	6 (40)	1 (6.66)	0	14 (93.3)	0	5.72	3.5	3.2
Bend Break Gravers	0	1	0	0	0	1	0	11	7	1
Pleistocene Terrace										
Modified Bend Breaks	11 (13.58)	52 (64.19)	18 (22.22)	28 (34.56)	2 (2.46)	51 (62.96)	0	2.83	2.35	3.04
Bend Break Gravers	8 (36.36)	7 (31.18)	7 (31.18)	7 (30.43)	0	16 (69.56)	0	3.52	2.65	3.15

type (Table 7–35). However, when just the Pleistocene Terrace is considered, bend break gravers have higher mean scar counts than modified bend breaks. These patterns might reflect the greater reduction requirements necessary to produce bend breaks with graver spurs. An examination of the presence and amount of retouch on bend breaks supports these same patterns. Examples from the Pleistocene Sands, regardless of tool type, have greater incidence of retouch, whereas bend break gravers from the Pleistocene Terrace average higher quantities of retouch scars than artifacts classified as modified bend breaks.

In addition to the incidence of retouch, all bend break tools were examined by the frequency of 90° break angles. Such angles are thought to have served as useful cutting or perforating tools (Goodyear Personal Communication). As such, artifacts with more break 90°angles would have also been of greater utility. The results of analysis show that most bend break tools (modified and graver) have 90° break angles that range in number from two to five (see Appendix 37). A comparison of the frequency of break angles on bend breaks by type (modified and graver) and stratum found no significant difference in break angle frequency by depth although modified bend breaks from the Pleistocene Sands have slightly higher mean break angles.

Chopping Tools

Apart from the tools presented in Table 7–24, 42 additional tools from the study sample were identified as chopping tools (Table 7–37). Choppers are similar to cores, but are defined as having flakes removed from a portion of their surface resulting in a sharpened edge useful for chopping, scraping, or cutting. Examples of choppers from the Topper Site are presented in Figures A35–to A38–43. All but two items classified as choppers were recovered from the Pleistocene Sands. These two items were recovered from the Upper Pleistocene Terrace. Table

Table 7–36
Morphological and Technological attributes of choppers from the Topper Site (38AL23). Sample size is 42.

	Min. Range	Max. Range	Mean
Length (mm)	70	200	150
Width (mm)	58	144	100.7
Thickness (mm)	38	104	64
Weight (g)	213	2,400	927.9
Removal scar (n)	5	22	9.6

Table 7–37
Results of Index of Modification analysis showing distribution of modified artifacts by depositional unit.

	Number Artifacts	**Modified Artifacts per 5cm level**	**Mean Index of Modification Score**
Clovis	37	0.62	4
Pleistocene Sands	112	0.36	3.79
Pleistocene Terrace	221	0.62	2.69

7–36 presents the morphological attributes of choppers. Morphologically, choppers are comparable in size to cores but are on average slightly larger and therefore represent the largest of the artifact categories examined.

Technologically, chert choppers at Topper have two to five areas of the edge or margin that exhibit battering in the form of flake removals. Such removals are feather or step terminations and depend on the type of material being worked. The flake removals from a given area of the lateral margin of a chopper typically exceed six in number. Two choppers have additional attributes including chipped or notched areas on the chopper surface that would have allowed the object to be secured in hand. The choppers in Figures A35–39 and A35–40 present two examples of artifacts that have chipped surfaces.

Production Tools

There are 63 artifacts classified as production tools at Topper. Production tools include hammerstones, hammerstone fragments, and anvil stones. Anvils are lithic objects that have been used as a support for the load application produced when an objective piece is being struck. Hammerstones are stone percussors used to strike an objective piece, whereas hammerstone fragments are hammerstones that have broken during stone tool production. Examples of production tools recovered at Topper are illustrated in Figures A35–45 to A35–50.

The production tool class is rather evenly distributed through the stratigraphic profile at Topper. Most artifacts associated with tool production were recovered from the Clovis deposits (41.26%), with lesser proportions occurring in the Pleistocene Sands (31.74%) and Pleistocene Terrace (26.98%) (Table 7–24). The distribution of production tools can inform about potential strategies of lithic tool production at Topper. For example, anvil stones (n = 10) are found in Pleistocene Sands contexts associated with core and bend break tools and in the Pleistocene

Terrace contexts associated with bend break tools. Evidence for compressive force application is evident on the anvil stone depicted in Figure A35–45. This weathered specimen fractured near the point of impact. Similar concentric rings of force are evident on the items presented in Figure A35–46 from the Pleistocene Terrace.

While anvil stones comprise nearly half of all production tools identified from the Pleistocene Sands, these artifact forms are absent from the Clovis deposits. In contrast, hammerstones occur in greater frequencies from the Clovis deposits and to a lesser extent from the Pleistocene Sands and are associated with biface and flake tool production accordingly. Figures A35–47 and A35–48 show selected hammerstones and broken hammerstones recovered from the Pleistocene Sands. Hammerstones are infrequent from the Pleistocene Terrace, and examples that do occur tend on average to be smaller in size than items recovered from the overlying deposits.

One discovery from the Pleistocene Terrace is the occurrence of split quartz pebbles. A sample of split quartz pebbles recovered from the upper Pleistocene Terrace at the Topper Site (38AL23) is presented in Figure A35–50 and the distribution of mapped quartz pebbles is presented in Appendix 44. These items occur in abundance throughout the Lower Pleistocene Sands and upper levels of the Pleistocene Terrace and are frequently recovered in association with bend breaks. All but two of the examples are in Figure A35–50 from the Upper Pleistocene Terrace above elevation 96.00m. As the Pleistocene Terrace represents a fining-up sequence whereby larger sediment particles are expected from lower (deeper) deposits, one should also expect an increase in quartz pebble sizes as well as an overall larger quantity of pebbles at greater depths through the Pleistocene Terrace profile. The mass and size grade analyses in chapter 9 present the distribution of quartz by size. In contrast to expectations, a high quantity of

relatively large split quartz pebbles co-occur with the fine grained clayey sand sediments of the upper Pleistocene Terrace. The small clast size of the sediment deposits commonly reflects low-energy environments of deposition. Combined with the angular to subangular condition of quartz recovered from the upper Pleistocene Terrace, the probability that these items formed exclusively as the direct result of fluvial activity is low.

One possible explanation for the presence of split quartz pebbles is that they served as small anvils to aid in the bipolar flaking process; with the pebbles occasionally fracturing upon impact. In such instances, the split pebbles would subsequently be subsumed under the debitage category; a byproduct of the manufacture process. An inspection of a number of the split quartz pebbles from the Pleistocene Sands and Pleistocene Terrace at Topper shows evidence of impact markers at the point of breakage which would imply that they could have been incorporated into the pre Clovis toolkit, used and in some cases broken.

Fiedel (2013:344) suggested that some alleged pre Clovis reports cite low ratios of debitage to tool counts for pre Clovis deposits, compared to later assemblages. Fiedel (2013:344) questions why the "tool-making activities of pre Clovis knappers produce less shatter than later peoples"? The decrease in debitage frequency is thought by critics to indicate 1) down-drift of smaller debitage through time, and 2) that the perceived stone tools in early deposits are the product of natural breakage imitating human manufacture or retouch. To examine whether or not this observation holds true at Topper, the tool-to-debitage ratios were calculated for each assemblage category. For comparative purposes, split quartz pebbles were included as a separate debitage category (Appendix 44), and evaluated relative to the distribution of bend breaks from each depositional unit. An inspection of the frequency of tool forms to potential production artifacts for each depositional unit reveals a number of notable patterns. The results of this

analysis are presented in Figures A35–9 and A35–10. There is a decrease in bifaces through the profile relative to the distribution of complete flakes (fewer tools, more flakes). This means that either the flakes are filtering through the profile, or that biface production was not being actively carried out at the site prior to the Clovis occupation. By contrast, bend breaks significantly increase throughout the profile relative to the number of complete flakes (more tools, fewer flakes).

The ratio of bend breaks to debris is similar when the Clovis and Pleistocene Sands deposits are compared, with fewer tools than debris. However, there is an increase in the number of bend breaks to debris in the Pleistocene Terrace (i.e. more tools, less debitage). When split quartz pebbles were examined, the ratio of bend breaks to quartz pebbles (>2.5 cm in diameter) was found to be close to 1:1 for the Clovis and Pleistocene Sands units. However, there are significantly more bend breaks and quartz pebbles in the Pleistocene Sands than in the Clovis deposits, although not so many as to fall outside the range of what might be expected of a typical lithic workstation. The proportion of quartz pebbles greater than 2.5cm increases in the Pleistocene Terrace where the ratio of split quartz pebbles to bend breaks is closer to 2:1 (more debitage, fewer tools) (Table 7–24). Based on these patterns, there is no evidence to suggest that quartz could not have been employed as a tool production implement; particularly in the lower Pleistocene Sands and possibly the Upper Pleistocene Terrace. Further examination is required to determine if there is an association between bend break manufacture and the use of quartz as a production implement. Chapter 11 examines this possibility in greater detail.

Stone Tool Analysis: Interpretation and Summary

The distribution of chipped stone tools at Topper can potentially inform about differential strategies of tool production through time. When the distribution of each of the five tool types is

examined in detail (Table7–24) a number of patterns emerge. For example, core tools are most abundant from the Pleistocene Sands and to a lesser extent from the Pleistocene Terrace. Biface tools are nearly exclusively found in the Holocene and Clovis deposits. Flake tools are predominantly recovered from the Pleistocene Terrace and the Pleistocene Sands. Bend break tools are also primarily a product of the Pleistocene Terrace but are rare in the Clovis deposits. Finally, production tools are evenly distributed throughout the depositional contexts at Topper, but depending on type can potentially inform about the types of tools that they were used to produce.

The results of the morphological typology demonstrate distinct patterns in the toolkit composition for each depositional unit at Topper and allow for the reconstruction of chipped stone tool technologies at the site. Clovis peoples were primarily focused on biface manufacture and to a lesser extent flake core production. There is little evidence for bifaces in the lower deposits at Topper implying that if there was a pre Clovis occupation at the site, then people were employing alternative lithic production technologies for the manufacture of stone tools.

The tool assemblage from the Pleistocene Sands reflects lithic technological strategies centered on core and flake tool manufacture and the use of bipolar production for the manufacture of bend breaks. The Pleistocene Terrace is dominated by bend breaks, and if these items are in fact a product of human agency, then they reflect a bipolar and compression flaked stone technology geared toward the production of bend break tools. The combined results of the morphological typology indicate a clear dissimilarity in toolkit composition at Topper between the Clovis and pre Clovis deposits. If the lithic assemblages from the Pleistocene Sands and Pleistocene Terrace are cultural, then the results suggest that at least two human populations, separated in time, were utilizing the chert outcrop at Topper for different technological strategies

of tool production at the site. However, natural processes can also produce attributes on lithic materials that could mimic those associated with chipped stone tool production technologies. To determine if natural processes were responsible for the occurrence of bend break flakes from the Pleistocene deposits at Topper, an experimental program was undertaken that examines the effects of various weathering agents on lithic materials. The results of this study are presented in chapter 8.

Modification and Lithic Microwear Analysis

A sample of items from the lithic assemblage at the Topper Site was examined for the presence of modification. For this study, two separate analyses were conducted. These analyses include a macroscopic edge modification analysis to evaluate whether the presence of edge modification on proposed chipped stone tools resulted from human use versus natural processes. Importantly, this study was employed to determine the technological attributes that are preferred for tool use. A second analysis included a microscopic microwear examination to determine if the pre Clovis assemblage consisted of utilized tools, and if so, what function or purpose such tools might have served.

Index of Modification

For the macroscopic approach Andrefsky's Index of Modification, or IM (Andrefsky 2013) (IM) was employed and accounts for the number of segments of an artifact that have been modified. The artifact is first placed under a grid containing eight segments. If retouch is visible within or on a margin of the artifact within a given segment, it is recorded. The total number of segments with modification is subsequently tallied. Figure 7–3 illustrates an example of the IM analysis. According to Andrefsky (2013), edge modification attributed to human use typically occurs within a range of 2 to5 segments of the artifact. By contrast, artifacts with two or fewer

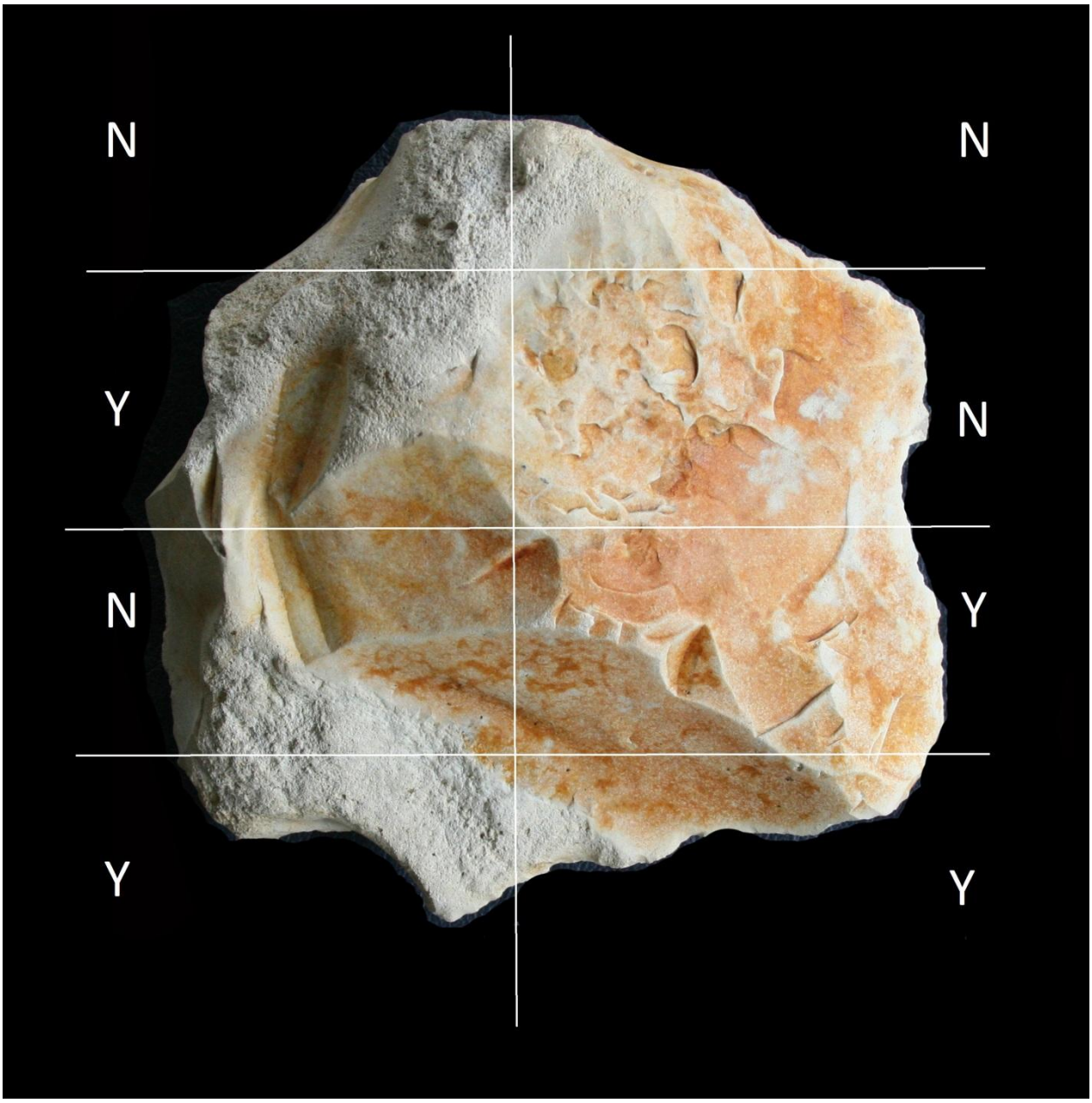


Figure 7–3
Example showing grid placement for index of modification analysis. Y/N reflect presence (yes)/absence (no) of modification. In this hypothetical example, this item would have four segments of modification.

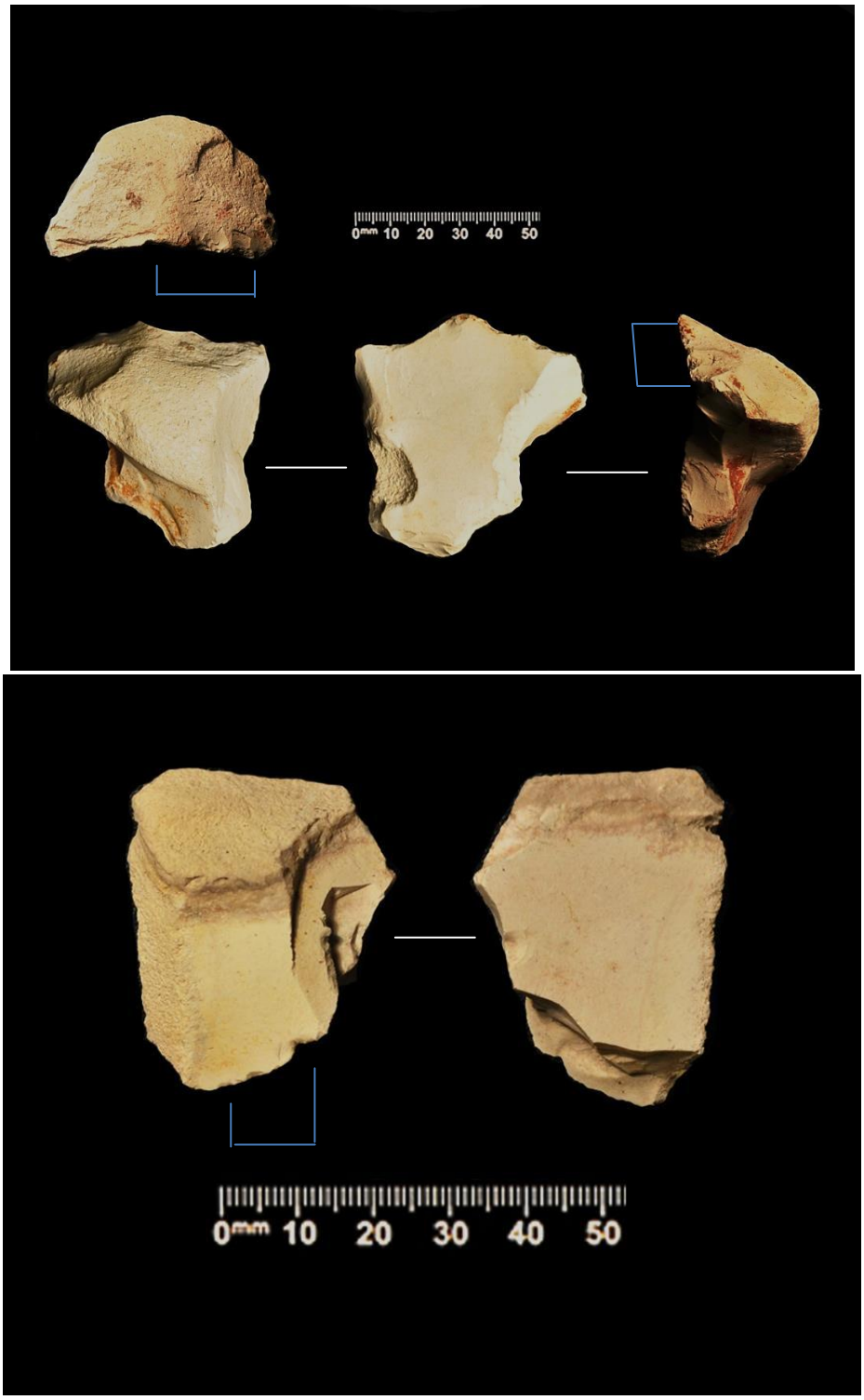


Figure 7–4
Images showing A; a chert scraper from the Pleistocene Sands with cultural retouch indicated by blue lines and B; A chert flake fragment from the Pleistocene Sands with naturally produced retouch highlighted. Natural retouch is less patterned, infrequent, and not as well-defined as cultural retouch.

segments or greater than 5 segments of modification are considered as byproducts of natural or post depositional processes. Figure 7–4 illustrates retouch on two artifacts from the Pleistocene Sands; one artifact, a scraper, has modification in the form of retouch on the end of the tool (Figure 7–4a). The modification is uniform and consists of more than three consecutive parallel retouch flake removals at the distal end of the tool. This artifact is evidence of cultural modification. In contrast, a chert flake also has removals along the distal end of the artifact but they are fewer in number, less uniform, and irregular in form (Figure 7–4b). The visible chipping on the flake is more likely evidence of modification incurred as the result of natural processes.

A total of 370 lithic items from the study sample were examined for the IM analysis. Table 7–37 presents the descriptive statistics for the distribution of modified artifacts by depositional unit. Based on the mean IM values, artifacts from each depositional unit at Topper fall within the range attributed to human modification. However, artifacts from the Clovis and Pleistocene Sands have higher mean IM values than do items from the Pleistocene Terrace. The results of a One Way Analysis of Variance test (ANOVA) show that the difference between the means is statistically significant and that the probability of this result by chance is less than .0001. ($df = 2$; $F = 25.01$; $P = < 0.00001$) (Table 7–38). To gain a better understanding of the results of the IM, the distribution of modified artifacts from each depositional unit were compared by type, technological attributes of the artifact exterior and interior surface, condition, and morphological attributes of length width and thickness.

Clovis

A total of 37 Clovis artifacts were examined for the presence and extent of modification, yielding a mean IM value of four (Table 7–37). A total of 33 of 37 artifacts have IM values that exceed two and 20 have values that exceed four (Table 7–39). Clovis artifacts identified from the

Table 7–38
Results of ANOVA comparing Index of Modification by stratum.

Stratum	**Sample**	**Mean Index of Modification Score**				
Clovis	37	4				
Pleistocene Sands	137	3.79				
Pleistocene Terrace	221	2.69				
ANOVA	**Sum Squares**	**Df**	**MS**	**F**	**P**	**F crit.**
Source of Variation	105.3018	2	52.65091	25.01359	8.02E–11	3.02
Between Groups	675.6704	321	2.104892			
Within Groups	780.9722	323				
Total						

Table 7–39
Number of modified artifacts from each stratum by Index of Modification value.

	IM Value							**Total**
	0	**1**	**2**	**3**	**4**	**5**	**6+**	
	Number Artifacts							
Clovis	0	4	4	9	7	4	9	37
Pleistocene Sands	1	5	28	27	37	29	20	147
Pleistocene Terrace	129	21	48	33	21	14	1	275
	Percentage of artifacts per IM value by Stratum							
Clovis	0	10.8	10.8	24.3	18.9	10.8	24.3	100
Pleistocene Sands	.6	3.4	19.04	18.36	25.17	19.72	13.6	100
Pleistocene Terrace	47	8	18	12	8	5	0.4	100

Table 7–40

The distribution of modified debitage for each stratum by interpretation categories.

Interpretation Free Category	**Number Modified Artifacts**			**Percent Modified Artifacts**			**Mean Index of Modification Value**		
	Clovis	PS	PT	Clovis	PS	PT	Clovis	PS	PT
Flake	5	8	13	13.51	7.47	5.93	4	4.87	3.25
Broken Flake	1	9	6	2.7	8.41	2.73	7	3.11	2.66
Flake Fragment	24	42	48	64.86	39.25	21.91	3.8	4.02	3.7
Debris	6	38	91	16.21	35.51	41.55	3.8	3.5	2.8
Amorphous debris	1	10	51	16.21	9.34	23.28	1	2.8	2.5
Pebble	0	0	10	2.7	0	4.56	0	0	2.1
Cortical Class									
Cortical	1	2	20	2.7	1.8	9.13	5	3.5	2.6
Secondary	19	78	137	51.35	70.9	62.55	4.2	3.65	2.9
Interior	17	30	62	45.94	30	28.31	3.64	3.9	2.9
Scar Directionality									
Uni	4	7	56	10.81	6.48	25.80	2.25	3.14	2.55
Bi	0	4	14	0	3.70	6.45	0	3.5	2.5
Multi	33	97	147	89.18	89.81	67.74	4.21	3.94	3.09
<10 scars	14	65	184	37.83	59.09	82.88	2.71	4.48	2.72
>10 scars	23	45	38	62.16	40.90	17.11	4.78	3.16	3.88
River stained chert	3	0	0	8.10	0	0	4.6	–	0
Upland Chert	34	108	219	91.89	100	100	3.9	–	2.9

IM analysis include 24 flake tools, three core tools and four biface tools. The distribution of modified Clovis debitage was further examined by interpretation categories (Table 7–40). Most modified debitage was found to fall within the flake fragment category with fewer items classified as broken flakes, debris, and amorphous debris. Complete flakes and broken flakes have higher mean IM values than items classified as flake fragments, debris or amorphous debris. These results imply that complete flakes exhibit a greater incidence of modification than items from the non – flake category.

When the distribution of modified artifacts was examined by morphology, longer items were found to typically have a higher IM value than items less than 50mm in length (Table 7–42). The results of a Pearson's correlation analysis comparing modified Clovis flake length by IM value found a weak positive relationship between these two attributes ($R = 0.4667$; $R^2 = 0.2178$) (Table 7–42). Likewise an analysis comparing the distribution of modified Clovis flakes by cortical class shows that the incidence of modification decreases with increasing reduction intensity (Table 7–40). Cortical and secondary flakes have higher mean IM values than interior/tertiary flakes. However, the opposite pattern is found when modification by scar frequency is considered. Flakes with more than 10 removal scars on the exterior surface have more than twice as many retouch scars as flakes with fewer than 10 exterior surface removal scars. When examined by condition, a higher incidence of modification was found on flakes that have multi–directional as opposed to uni–directional removal scars, and on flakes manufactured from river stained chert. Given these findings, the Clovis items best suited for use are those that are longer than 50 cm in length and show evidence of care taken in the manufacture process demonstrated by high exterior surface scar counts.

Table 7–41
Frequency of modified artifacts with Index of Modification values between 2 and 5.

Interpretation Free Artifact Category	Artifacts with IM values > 2 < 5	%	Artifacts with IM values >1 < 2 and > 5	%
Clovis				
Flake	3	12.5	1	7.6
Broken Flake	0	0	2	15.38
Flake Fragment	18	72	7	53.84
Debris	4	16.6	2	15.38
Amorphous debris	0	0	1	7.6
Pebbles	0	0	0	0
Pleistocene Sands				
Flake	5	5.37	3	17.64
Broken Flake	7	7.52	2	11.74
Flake Fragment	37	39.78	5	29.41
Debris	33	35.48	6	35.29
Amorphous debris	10	10.75	1	5.88
Pebbles	0	0	0	0
Pleistocene Terrace				
Flake	10	5.6	3	7.31
Broken Flake	6	3.38	0	0
Flake Fragment	39	22.03	8	19.51
Debris	73	41.24	18	43.9
Amorphous debris	42	23.72	9	21.95
Pebbles	7	3.95	3	7.31

Table 7–42

Mean Index of Modification values for artifacts greater than and less than 50mm in length by stratum at the Topper Site (38AL23) and results of Persons correlation comparing modified flake length by Index of Modification Value.

	IM for artifacts > 50mm	**IM for artifacts < 50mm**	**Correlation**	
			R	R2
Clovis	4.6	2.8	.4667	0.2178
P. Sands	4	3.4	.1385	.0192
P. Terrace	3.6	2.59		

Table 7–43

Results of a t-test comparing Mean Index of Modification score between artifacts recovered from the Clovis and Pleistocene Sands. There is no statistical difference between the two means.

	Sample	**Mean Index of Modification Score**	**Results of t–test**
Clovis	37	4	P=.4276
Pleistocene Sands	137	3.79	

Table 7–44

Number of artifacts by type for each depositional unit examined for the use-wear analysis.

Artifact	**Pleistocene Sands**	**Pleistocene Terrace**	**Total**
Scrapers	7	1	8
Utilized Flakes	10	5	15
Blades	1	0	1
Bend Breaks	6	20	26
Total	24	26	50

Pleistocene Sands

There are 147 modified lithic items from the Pleistocene Sands. According to Table 7–38 modified tools from these deposits have a lower mean IM value than found on modified flakes from the Clovis deposits. However, the results of a t-test comparing the IM values for Clovis and Pleistocene flakes found no statistical difference between the two samples (Table 7–43).

When examined by frequency, most artifacts from the Pleistocene Sands have IM values that range between 2 and 5 (Table 7–39). Artifacts that fall outside of this range typically consist of amorphous debris, debris, or flake fragments. An evaluation of the distribution of flake types by modification shows that items classified as flakes have higher IM values than items from other flake categories (Table 7–40). For example, items classified as flake fragments, broken flakes, debris, and amorphous debris have successively lower IM values than flakes. These patterns are similar to the results found on modified items from the Clovis deposits. The abundance of modified complete flakes with IM values between two and five suggests an emphasis on the utilization of these items over those classified as flake fragments and debris.

When the distribution of modified artifacts was examined by morphology, the items that were less than 50mm in length have IM values that are lower than modified artifacts that are longer than 50mm (Table 7–42). The results of a Pearson's correlation analysis comparing flake length by IM for flakes from the Pleistocene Sands shows a weak positive relationship between these two attributes (Table7–42**).**

All modified artifacts from the Pleistocene Sands were examined by technological attributes of the exterior and interior surface. An evaluation of the extent of cortex on artifacts by the IM value shows that higher values tend to occur on interior and secondary flakes than they do on cortical flakes. These findings are intriguing given that this is the opposite pattern from that

identified from the Clovis deposits where cortical and secondary flakes have higher modification values. When modified flakes were examined according to scar frequency, the flakes with more than 10 exterior surface removal scars were found to also have a higher mean IM values than flakes with less than 10 removal scars. This pattern is similar to the results identified on flakes from the Clovis deposits.

The scar patterns on modified flakes are predominantly multi–directional, with bi–directional and uni–directional scar patterns occurring with less frequency (Table7–40). The results of an analysis comparing flake scar directionality by IM demonstrate a comparatively high mean IM value on multi-directional fakes from the Pleistocene Sands (Table 7–40). Flakes with uni or bi-directional scar patterns have mean IM values that are on average, lower than values found on flakes with multi-directional scar patterns. However, the difference between these means is significantly less than was found to distinguish multi-directional and uni-directional flake patterns on items from the Clovis deposits. Unlike items from the Clovis deposits, all modified flakes from the Pleistocene Sands lack evidence of river staining, apparently a critical attribute used to distinguish lithic items between the two depositional units.

Pleistocene Terrace

A total of 275 modified lithic items were identified from the Pleistocene Terrace and underwent the IM analysis. The modified Pleistocene Terrace artifacts include 152 flake tools, 49 bend break tools and 20 core tools. The frequency of all modified Pleistocene Terrace artifacts was tabulated by interpretation free flake categories (Table 7–40). Fifty six items lacked discernable retouch scars and were excluded from this analysis. Accordingly, most modified items were classified as debris. Less than 10% of the population is made up of broken or complete flakes. However, when the mean IM values are compared by interpretation free

category (Table 7–40) items classified as flakes and flake fragments have higher mean IM values than items classified as debris, amorphous debris, or pebbles. When examined by frequency, most modified artifacts from the Pleistocene Terrace have IM values that range between 2 and 5. Additional analysis shows that the majority of these artifacts were classified as debris with lesser amounts having attributes classified as amorphous debris, flake fragments, or flakes. Artifacts that fall outside of this range typically consist of debris, amorphous debris, or flake fragments.

Table 7–41 presents the distribution of modified artifacts for each depositional unit by the IM value. According to the table, modified artifacts from the Pleistocene Terrace that have IM values between 2 and 5 are predominantly composed of debris or amorphous debris, whereas greater percentages of artifacts from the Clovis and Pleistocene Sands were classified as flakes and flake fragments. It appears that the percentage of modified items classified as debris or amorphous debris increases with depth whereas the opposite pattern is true for items classified as flakes and flake fragments. Moreover, when the artifacts with IM values < 2,or > 5 were considered, most artifacts were classified as debris, amorphous debris, or pebbles. These patterns demonstrate a correlation between the IM value, artifact location of origin, and the assigned interpretation free category. The relatively high proportion of modified debris from the Pleistocene Terrace deposits that have IM values less than two is suggestive of modification by natural rather than cultural processes.

All modified artifacts from the Pleistocene Terrace were examined by morphology (Table 7–42). Longer items typically have a higher IM value than items that are less than 50mm in length. Subsequently, all modified artifacts from the Pleistocene Terrace greater than 50mm in length were compared by the IM value to artifacts of similar morphological thresholds from the overlying deposits. The modified artifacts from the Clovis and Pleistocene Sands have higher IM

values than artifacts from the Pleistocene Terrace (Table 7–42).There is a decrease in the extent of modification observed on larger items as depth increases at the site.

An examination of the technological attributes of the exterior and interior surfaces of modified artifacts from the Pleistocene Terrace resulted in a number of intriguing findings (Table 7–40). Artifacts with cortex have lower IM values than artifacts that lack cortex. A comparison of the mean IM values for cortical class by depositional unit shows that items from the Clovis and Pleistocene Sands have higher mean IM values regardless of cortical class than do items identified from the Terrace. These findings imply that the modification observed on items from the higher deposits is more likely to have been the product of human agency than the relatively low values observed on artifacts recovered from the Pleistocene Terrace.

While the overall IM values are lower for items recovered from the Pleistocene Terrace compared to items recovered from the Pleistocene Sands, the two depositional units share the same general trend; that is an increase in IM value with decreasing rates of cortex (Table 7–40). However, compared to the Clovis deposits, the opposite pattern is evident. The IM values are highest on secondary flakes and lowest on interior specimens. These patterns imply that Clovis peoples were selecting the longer, secondary artifacts for use as tools. It should be noted that the results from the Clovis deposits are based on a much smaller sample size (n = 25) than the samples examined from the underlying deposits.

In addition to cortex, all modified items from the Pleistocene Terrace were evaluated by the number and directionality of prior removal scars (Table7–40). The flakes with more than 10 removal scars also have IM values that are higher than items with fewer than 10 removal scars. This pattern is similar to the results found for artifacts recovered from the overlying Clovis and Pleistocene Sands. When flake scar directionality was considered, flakes with multi-directional

scars were found to have higher mean IM values than flakes with bi-directional or uni-directional patterns.

A comparison of the mean IM values by scar directionality for the Clovis, Pleistocene Sands, and Pleistocene Terrace samples show a general decrease in IM value with depth (Table 7–40). These findings support the notion that artifacts from the Clovis and Pleistocene Sands, regardless of the scar patterning of the exterior surface, provide greater evidence for cultural modification than do the items identified from the Pleistocene Terrace. Unlike items from the Clovis deposits, all modified flakes from the Pleistocene Terrace lack evidence of river staining. To summarize the results of the IM analysis, artifacts that fall within the range of culturally modified flakes are present at Topper from all depositional units. However, a higher percentage of artifacts from the Clovis and Pleistocene Sands exhibit edge modification consistent with cultural retouch compared with items recovered from the Pleistocene Terrace.

Edge Damage and Microwear Analysis

Microscopic use wear analysis is a method often employed on items from an assemblage of chipped stone tools to identify tool function. This is accomplished by closely examining the working tool surfaces, margins, and edges with the aid of a low or high powered binocular microscope, and subsequently making interpretations based on the presence or absence of specific indicator variables such as polish, residue, or striations. The ultimate goal of microwear studies is to assess what kinds of wear could have been generated by specific types of activity (motion) and resistance.

Two prior microwear studies have been conducted on lithic items from the pre Clovis deposits at the Topper Site. In 2001 and 2002 Dr. Marvin Kay examined a sample of 50 possible tools selected by the project director, Dr. Albert C. Goodyear from the Pleistocene Sands.

Materials were selected that exhibited a low degree of weathering, since it has the potential to remove microwear traces. The results of this analysis only identified six artifacts with possible use-striae, and one with micro–plating (Kay 2002). Examples of trace microwear on Topper artifacts are presented in A37–1 and A37–2.

In 2007, a sample of eight lithic items from the Pleistocene Terrace and Pleistocene Sands were taken by Goodyear to Texas A&M University to undergo a microscopic analysis conducted by Jim Wiederhold. Included within this sample was the bend break graver from the Pleistocene Terrace illustrated in Figure A37–1. Microwear analysis on this item shows evidence of edge damage and striations (linear indicators) resulting from use. Although weathered in some locations, evidence of polish can be seen on the immediate edge with a suggestion of striations and step fractures that are visible possibly resulting from repeated scraping on a hard material. Microwear on a second bend break and a utilized flake are presented in Figures A37–2 and A37–3.

In addition to the 58 lithic items that have undergone microscopic microwear analysis from the Topper pre Clovis deposits to date, the present study involved the microscopic examination of an additional 50 artifacts for edge damage and use-wear that might be the byproduct of human agency. These items were arbitrarily selected from a sample of artifacts from the Pleistocene Sands and Terrace that had been identified in the field as blades, flake tools, and bend breaks, and in which the subsequent stone tool analysis confirmed these classifications. Tables 7–44 and 7–45 present the distribution of these artifacts by type and stratum. As is evident by the tables, most artifacts selected for analysis were classified as bend breaks, utilized flakes, or scrapers although a single blade was also examined. The tools examined include 24 artifacts from the Pleistocene Sands and 26 items from the Pleistocene Terrace.

Table 7–44
Number of artifacts by type for each depositional unit examined for the use-wear analysis.

Artifact	**Pleistocene Sands**	**Pleistocene Terrace**	**Total**
Scrapers	7	1	8
Utilized Flakes	10	5	15
Blades	1	0	1
Bend Breaks	6	20	26
Total	24	26	50

Table 7–45
Number and percentage of artifacts by use-wear condition for items examined from the Pleistocene Sands and Terrace at the Topper Site (38AL23).

	Polish	**Micro-chipping**	**Striae**	**Residue**	**Absence (n)**	**Obs**
Pleistocene Sands (n=24)						
Scrapers (n=7)	5 (71%)	6 (86%)	1 (14%)	1 (14%)	0 (100%)	13
Utilized Flakes (n=11)	9 (81%)	10 (90%)	1 (9%)	4 (36%)	1(9%)	24
Blades (n=1)	1(100%)	1 (100%)	0 (0%)	0 (0%)	0 (100%)	2
Bend Breaks (n=5)	3 (60%)	3 (60%)	1 (20%)	2 (40%)	0 (100%)	9
%	75%	83%	13%	29%	4%	
Pleistocene Terrace (n=26)						
Scrapers (n=1)	1 (100%)	1 (100%)	0	0	0 (100%)	2
Utilized Flakes (n=5)	4 (80%)	3 (60%)	1 (20%)	1 (20%)	0 (100%)	9
Blades (n=0)	–	–	–	–	–	
Bend Breaks (n=20)	10 (50%)	4 (20%)	7 (35%)	1 (5%)	8 (40%)	22
%	58%	31%	31%	8%	31%	
Total Observed	33	28	11	9		81

Obs = Observances

For this analysis, three categories of use wear and one category of edge damage (micro – chipping) were investigated. The microwear categories include polish, striations (linear indicators), and residue. Polishing is defined in this study as a type of form–altering agent that smoothens the lithic surface by a combination of tensile stress and mechanical removal of materials on the artifact microtopography. Striations are microscopic linear features on the surfaces of lithic materials that indicate evidence of contact on the tool's surface. Striations are also referred to as linear indicators and depending on orientation, can be used to reveal a tool's use-trajectory and serve as signatures of different tool functions. Evidence for edge damage takes the form of micro-chipping and rounding along one or both lateral margins or an end of the artifact. Keely (1980) recognized various types of polishes that can form on an artifacts surface caused by different materials. Polish for example can result from working bone, wood, hide as well as other materials. Keely incorporated high-powered magnification studies (100x to 400 x magnification) to determine the various activities that a given tool was being used for based on the presence, condition, and appearance of different forms of polish on a tools surface. Residue is defined as deposits of material that adhere to lithic objects that can occur from natural or human processes.

Tables 7–44 and 7–45 present the results of the microwear analysis. Based on the analysis, microwear was observed on a substantial proportion of the artifacts examined. Wear patterns were identified on 41 of the 50 artifacts. Traces of microwear identified include polish, striae, micro-chipping and residue (Table 7–45). A total of 81 separate examples of microwear were identified on 41 of the artifacts examined. Polish was the most common wear pattern identified on artifacts from the site, observed on 33 artifacts. Micro-chipping was observed on 28 artifacts. Unlike these trace microwear conditions, the occurrence of residue was only identified

on 9 specimens. The incidence of microwear was examined on four artifact categories from two depositional units; the Pleistocene Sands and Pleistocene Terrace. Table 7–45 presents the distribution of microwear patterns observed on artifacts by artifact type. Of the 24 artifacts examined from the Pleistocene Sands, microwear was observed on all artifact types, occurring on 23 of the items examined. The single blade exhibited microwear in the form of polish and micro-chipping; however, evidence for residue and striae were not visible on this item. When all other artifact types were examined from the deposit, use-wear patterns were ubiquitous across the sample. However, a number of patterns were identified when the frequency of microwear by condition was considered relative to the proportion of artifacts examined. For example, of the seven scrapers examined, micro-chipping was found to be the most common form of microwear identified, occurring on 86% of artifacts from the sample. Micro-chipping is a variable that can inform about the relative hardness of specific substrates. Artifacts that exhibit micro-chipping are more likely to have been used on harder substrates than those items that lack micro-chipping. When scrapers were examined for the presence of striae and residue, these microwear traces were less commonly observed on these artifact forms. A similar pattern was identified when the utilized flake assemblage was examined. Greater than 80% of all artifacts identified as utilized flakes were found to have evidence of polish and micro-chipping. However, one characteristic that distinguishes scrapers from utilized flakes was an evident increase in the percentage of utilized flakes that exhibit residue compared to the percentage of scrapers that exhibit this microwear condition. Combined with the high percentage of micro-chipping observed on scrapers, these findings suggest that scrapers were predominantly used on materials with hard or tough surfaces, and on items that infrequently leave behind traces of residue.

When the sample of bend breaks from the Pleistocene Sands was examined for microwear, the patterns of trace microwear were fairly evenly distributed by wear type for the study sample. However, the results do show lower percentages of polish and micro-chipping compared with the percentage of such patterns observed on other artifact categories. For example, polish, the most common form of microwear identified on bend breaks, was only observed on 60% of the sample. Although residue and striae were observed on bend breaks in lower proportions than polish and micro-chipping, such conditions were found to occur with greater frequency on bend breaks than on scrapers or utilized flakes. These results suggest that bend breaks may have been suitable for a greater variety of tool functions than other tool categories examined from the Pleistocene Sands whereas scrapers and utilized flakes may have been reserved for specialized tasks.

Of the 26 artifacts examined from the Pleistocene Terrace, trace microwear was observed on 18 artifacts (Table 7–28). Microwear was observed on 12 bend breaks, five utilized flakes, and a single scraper. The scraper was found to exhibit microwear in the form of polish and micro-chipping. Residue and striae were not visible on this item. These patterns are similar to the distribution of trace microwear observed on scrapers from the Pleistocene Sands. When the sample of utilized flakes was examined, a high proportion of artifacts were also found to exhibit polish and micro-chipping. However, there is an apparent decrease in the percentage of artifacts that exhibit these microwear patterns when the Pleistocene Terrace sample was compared to items from the Pleistocene Sands. Striae and residue were rare on utilized flakes, and were only observed on a single specimen.

A total of 20 bend breaks from the Pleistocene Terrace were examined for trace microwear. Of the artifacts examined, microwear was least visible on bend breaks. For example,

only 50% of the items examined had evidence of polish, and micro-chipping was only present on 20% of the items. Although striations were observed on 35% of bend breaks from the Pleistocene Terrace (the highest proportion for any artifact class), residue was only observed on a single specimen. Of the seven bend breaks that exhibit striae, polish was also observed in association with the direction of the striations, possibly indicating that the causal mechanisms for each attribute are related. An examination of the spatial distribution of these seven bend breaks shows that all were recovered from the upper 25cm of the Pleistocene Terrace. The eight bend breaks examined from the study sample that lack microwear were recovered from the lower Pleistocene Terrace deposits. Based on the proportion of lithic artifacts that exhibit trace microwear, it is apparent that the majority of items derive from the Pleistocene Sands and to a lesser extent from the Pleistocene Terrace.

One goal of the microwear analysis was to test the proposition that microscopic use-wear-like patterns were the product of fragmentation or post–depositional effects. Because it is possible that postdepositional processes can result in edge modification that might resemble the lateral margin of a culturally produced chipped stone artifact, it is essential that the microwear analyst distinguish the attributes resulting from natural processes from those that are a product of anthropogenic origin. Through experimental studies, Wiederhold and Pevny (2014) found that "regardless of the amount of trampling damage, 99% of all fractures and detachments" that are the result of these natural processes occurred in "random locations on edges" (Wiederhold and Pevny 2014:110). Fractures along the margins of lithic items that are the result of postdepositional processes are typically unpatterned, discontinuous, and occur on multiple surfaces of the artifact (Wiederhold and Pevny 2014:110). Moreover, striations that are irregular or that are perpendicular to a margin with unpatterned edge damage should also be considered

the result of natural formation processes. In contrast, trace microwear that results from anthropogenic modification occurs as patterned, regularly spaced removals along the margin of the tool edge that are continuous, overlapping, and uniform in size (Wiederhold and Pevny 2014:110; Odell 1981a). Moreover, evidence of polish and striations should be most prevalent "along the used edge of a tool or where a tool was held or hafted" and in conjunction with the occurrence of other forms of microwear such as micro-chipping (Wiederhold and Pevny 2014:110). The presence of multiple, co-occurring forms of microwear on a given item are stronger indications that the wear patterns identified are the result of anthropogenesis or anthropogenic origin. In the section that follows, the combination of microwear patterns on artifacts from the Topper Site are examined to interpret the types of activities for which specific tool categories may or may not have been used.

Table 7–45 shows the most common microwear patterns observed on items from the study sample as a proportion of all artifacts examined for each depositional unit. At Topper, the most common microwear signature identified was micro-chipping, occurring on 83% of artifacts from the Pleistocene Sands. Micro-chipping results from cutting, sawing, or scraping activities and can sometimes produce bending or conchoidal micro-flakes. Of the artifacts with micro-chipping, 20 also exhibit polish. However, only two of the artifacts with micro-chipping showed evidence of residue and a single bend break also had striations. The high percentage of artifacts having the co-occurrence of micro-chipping and polish are suggestive of the working of materials that are hard enough to result in the detachment of micro-flakes, and also leave behind aspirates in the form of polish on the artifact surface.

According to Kooyman (2000), worked materials can be categorized into a number of hardness types for micro-chipping analysis. These categories include hard (antler, bone dry

wood), medium hard (fresh hardwood, fresh antler), medium soft (soft woods, dry hides), and soft (meat, soft hides). Harder materials tend to produce micro-flakes that terminate in step or hinge terminations whereas soft materials result in feathered terminations. Polish forms as the result of abrasion or deposition of silica on the artifact's surface. Movement in soil can produce a generic polish that covers the entirety of the artifact's surface (Kooyman 2000). Greasy polish is typically associated with animal butchering whereas a bright polish is often associated with plant or wood processing. The image in Figure A37–3 shows micro-chipping along the lateral margin of a utilized flake from the Pleistocene Sands at the Topper Site. The micro-flake removals from this piece have feather terminations. Combined with the polish observed on the lateral margins on this piece, the morphology of the micro-flake removals suggests that this tool was likely used to work medium hard to medium soft materials such as fresh hardwood, fresh antler, soft woods or dry hides.

A total of 33 artifacts exhibit evidence of micro-polish (Table 7–45). These items include six scrapers, 13 utilized flakes, one blade, and 13 bend breaks. Polish occurs on two-thirds of the 50 artifacts examined. Of the items with evidence of polish, 20 artifacts also exhibit micro-chipping, 10 have striae, and seven exhibit residue. The high percentage of artifacts with microwear consisting of polish, micro-chipping, and striae can provide insight into the types of cultural activities that were ongoing at the site. However, such conditions might also inform about the various types of natural processes that can leave behind such trace micro-wear. Photomicrographs showing polish on the lateral margins of a bend break and polish on the lateral margins of a scraper are provided in Figure A37– 4. Interestingly, the polish on the bend break takes the form of the greasy variety, whereas the polish on the scraper is bright, resulting in a smooth and glossy, highly reflective surface. These findings suggest that at least two different

types of processes produced polish on artifacts at Topper. Moreover, striations visible on the surface of the scraper at an angle diagonal to the margin of the scraper provide evidence of the direction of item motion. The bright leveled surfaces along the rim of the flake scar margins and absence of such conditions within the concavities are indicative of cultural as opposed to natural abrasive processes.

In comparison with micro-chipping and polishing, a lower percentage of artifacts exhibited striae and residue at Topper. Striations were observed on a total of 11 artifacts from the study sample. Striations were most commonly observed on bend breaks comprising 73% of all artifacts having striations. Two scrapers and a utilized flake were also found to have striations. Most examples of striations took the form of parallel linear marks on the micro-topography of the lithic surface originating near the margin of the artifact and extending some distance to the interior of the lithic item at an angle diagonal to the artifact margin. However, four bend breaks from the Pleistocene Terrace had striae that are not uniform in nature, and appear as parallel lines that intersect other sets of striations on the artifact surface. These traces are characteristic of natural modification. A comparison of the additional microwear patterns on items that exhibit striations shows that polish occurs on two of three artifacts; residue is infrequent, only present on three items; and micro-chipping occurs on four artifacts.

The presence of residue was observed on nine artifacts from the study sample (Table 7–45). Artifact types on which residue was observed were fairly evenly distributed among bend breaks (n=3), utilized flakes (n=5), and scrapers (n=1). Potentially identifiable residues on chipped stone tools can include plant and animal tissues. Figure A37–7 shows unidentified residue along the margin of a scraper from the Pleistocene Sands. In cases where residue is the product of cultural activity, the wear patterns are predominantly oriented linearly and

perpendicular or sub-perpendicular to the artifact edges. The linear orientation is generally indicative of the artifacts movement along the work surface of the objective. By contrast, residue resulting from natural processes should lack evidence of linear features at angles that are perpendicular to the artifact margin. In the case of the residue on the scraper, there is no patterning that indicate that the residue was a byproduct of cultural activity or use. In fact, of all cases where residue was identified, there was little evidence of an identifiable pattern that would suggest that the residue observed was definitively attributed to humans. As such, of all the microwear categories considered for this analysis, residue provided the least evidence of human activity onsite.

The study of potential natural, manufacture, and use processes of chipped stone tools is essential for the determination of human versus natural site formation processes and artifact function. Based on the microwear analysis of a sample of 50 items from the Topper pre Clovis deposits, trace microwear attributed to human agency was identified in the form of micro–chipping, polish, and in lower frequencies, striations. The microwear is most prevalent on items from the Pleistocene Sands. Items recovered from the lower deposits of the Pleistocene Terrace have wear patterns more consistent with natural processes. In terms of tool function, the results of the microwear analysis show that use-wear polishes and micro-chipping were likely the result of working materials that are medium hard to medium soft such as fresh wood, bone and hide. However, it should also be noted that natural processes can also leave evidence of microwear such as residue.

Refit Analysis

A preliminary refit analysis was conducted as an aid to establish the origin of the lithic deposits at Topper, and to evaluate whether or not site integrity has been preserved. Appendix 26

presents the distribution and illustrations of refits identified from the study sample. The refit analysis was designed to locate vertically and horizontally translocated artifacts. Accordingly, lithic items that meet the minimum criteria of cultural artifacts and chipped stone debris and that are spatially clustered with regard to a common surface were considered intact archaeological deposits. Only mapped items (n = 4286) were included in the refit study. One to three minutes were given per item to examine artifact attributes and to evaluate refit potentiality. Refits were identified as encountered in the artifact attribute analysis. As such, the study is not comprehensive, and should therefore be considered preliminary as future examinations may produce additional refits with alternative results. The study therefore is best used to document the presence/absence of refits from the study sample, and by what mechanism, cultural, or natural that produced them, rather than informing about reduction intensity.

A total of 13 refit pairs were identified comprising 24 lithic items. When examined by strata, six refit pairs were identified from the Pleistocene Terrace. These include two natural /pebble refits, three debris refits, and a flake fragment refit. Six refit pairs were also identified from the Pleistocene Sands and include three broken quartz pebble/hammerstone refits, one flake fragment refit, one broken flake refit, and a natural/amorphous debris refit. Two biface fragments were found to refit from the Clovis deposits. Based on the attribute analysis, all but three refit pairs (23.08%) were found to meet the minimum criteria of a cultural chipped stone artifact.

The spatial analysis of all refit pairs found that no two refits were separated horizontally by more than 78cm. The mean horizontal separation between artifact refits was 15.02 cm, while the vertical displacement of refits had a mean separation of 2.33cm. The greatest vertical displacement between refits was 7.5cm for two natural chert pebble fragments When only the artifact refits with attributes consistent with human agency were considered, no two specimens

were separated along the vertical profile by more than 6.8cm and the overall average displacement decreased to 2.08cm.

Refits at Topper tend to cluster in three "zones" throughout the stratigraphic profile at the site. These zones are depicted in Figure 7–5. The first zone corresponds with the Clovis deposits and includes the two biface fragments that refit. The second zone, highlighted in yellow corresponds with the Pleistocene Sands. This zone has six refits including one natural /amorphous debris fragment that refits to a core. Most refits from the Pleistocene Sands were recovered from the lower Pleistocene Sands subunit and exhibit little evidence of vertical displacement. However, the single refit from the Upper Pleistocene Sands is vertical in orientation, a possible indication for the presence of bioturbation from the Upper Pleistocene Sands. The vertical displacement of this refit, consisting of two broken quartz pebbles, and recovered from unit N244 E142 is 5cm. The third zone where refits are common is from the lower Pleistocene Terrace. Four refits were recovered from this zone and include three debris fragments that refit to chert cores, and a flake fragment that refits to a chert core. These items have attributes of human agency. Two additional refits were identified from this zone and consist of amorphous debris items. These two refits are considered natural in origin. Overall, the results of the refit analysis show that there has been relatively minimal vertical movement of artifacts throughout the Clovis and Lower Pleistocene Sands at Topper and the horizontal displacement of artifacts can be explained as the probable byproduct of the manufacture and discard of chipped stone debris.

Chapter Summary

The lithic analysis of the chipped stone assemblage at the Topper Site included four analyses: interpretation free analysis, flake formation analysis, stone tool analysis, and

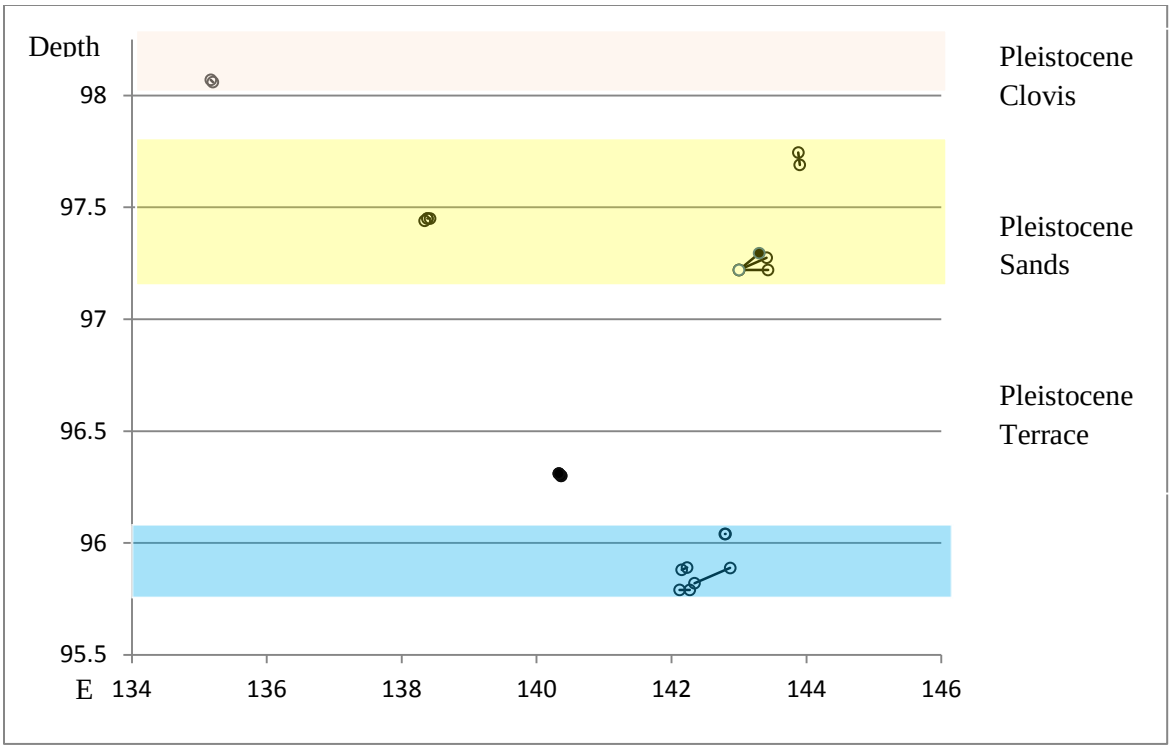


Figure 7–5
Vertical distribution of artifact refits from preliminary refit analysis from the study sample at Topper. Highlighted sections reflect stratigraphic zones where artifact refits are most prevalent. Shaded circles reflect refits consisting of natural pebbles. Unshaded circles reflect refits that exhibit one or more attributes characteristic of human agency. There is no significant vertical displacement between refits.

microwear analysis. The results of the interpretation free analysis show a significant difference in the distribution of debitage categories when the Clovis and pre Clovis units at the site were compared. The Clovis assemblage predominantly consists of complete flakes, broken flakes, and flake fragments, whereas the pre Clovis assemblage is dominated by debris, amorphous debris and pebbles.

A flake formation analysis was subsequently conducted to determine the lithic reduction technologies selected for the manufacture of chipped stone tools at Topper. For example, although the interpretation free analysis found high densities of debris from the Pleistocene Sands, the flake formation analysis was employed to evaluate whether such debris could be the byproduct of technological reduction strategies not related to biface manufacture. The results of the flake formation analysis found evidence that conchoidal flakes are the dominant flake type present from the Holocene and Clovis deposits. In contrast, conchoidal flakes as well as bend break flakes occur in stratigraphic contexts that predate the Clovis deposits at Topper. The debris items recovered from the Pleistocene Sands lack striking platforms and bulbs of force, and are considered possible byproducts of the manufacture of bend break flakes.

The results of the stone tool analysis demonstrate that bifaces are the most prevalent tool form from the Clovis deposits and correlate with the distribution of large quantities of conchoidal flakes. Bifaces were rare in the Pleistocene Sands and Terrace. In contrast, bend breaks were largely absent in the Clovis deposits, and only occur in significant quantities below these depths. Moreover, the bend break items that exhibit the greatest evidence for cultural modification occur from the Pleistocene Sands and upper deposits of the Pleistocene Terrace. Bend breaks from the Lower Pleistocene Terrace lack many of the technological attributes consistent with human agency. Core and flake tools were recovered from all stratigraphic deposits onsite, although they

were found to occur with greatest frequency from the Clovis and Pleistocene Sands deposits. Whereas bifaces are a good indicator of the technological manufacturing trajectories from the Clovis deposits, the co-occurrence of flake tools, core tools and chopper tools from the Pleistocene Sands present evidence for an alternative cultural toolkit from the underlying deposits. An analysis of production tools shows that hammerstones are prevalent throughout the Clovis deposits, whereas anvil stones and broken quartz pebbles are most abundant from the Pleistocene Sands and Pleistocene Terrace respectively. These findings also demonstrate possible differences in the reductive technologies between the depositional units at the site. The results of the tool modification analysis show a general decrease in the frequency of modified tools with depth. Artifacts from the Clovis and Pleistocene Sands deposits provide greater evidence of modification that conforms to attributes consistent with cultural modification than items from the Pleistocene Terrace. The occurrence of modified bend breaks from the Pleistocene Sands should not be mistaken for the manufacture of these tools. Rather modification should be taken to imply only tool use and maintenance. Although a high quantity of debris was identified from these deposits, potentially resulting from the manufacture of bend break flakes, such debris could also result from natural processes. As such, the distribution of modified bend breaks recovered from the Pleistocene Sands could reflect the expedient use of naturally broken chert debris. The presence of bend breaks with low IM scores from the Lower Pleistocene Terrace deposits implies that these items are less likely to be the result of human agency than are the items with higher IM scores identified from the overlying deposits.

The microwear analysis demonstrates the presence of use-wear attributed to human agency on lithic items from the Pleistocene Sands and Upper Terrace. Microwear was identified in the form of micro-chipping, polish, and in lower frequencies, striations. The microwear

identified on the bend break graver spur in Figure A37–1 is indisputable evidence of human modification. However, although this artifact was recovered approximately 30cm into the top of the Pleistocene Terrace, it should be noted that the artifact was recovered well within the footprint of BHT 17 and was vertical in orientation, and as such, the potential exits that its context could have been disturbed as a result of the BHT excavation process. The comparatively low percentage of microwear present on items from the Lower Terrace, combined with greater evidence of microwear attributable to natural processes from these deposits, are both factors used to differentiate the assemblages from each depositional unit at the site. In the following chapter the role of natural processes in the formation of lithic materials from the Pleistocene contexts at the Topper Site are examined.

CHAPTER VIII

EXPERIMENTAL ARCHAEOLOGY: EXPLORING NATURAL WEATHERING PROCESSES AND EVALUATING THEIR ROLE IN THE FORMATION OF LITHIC MATERIALS FROM THE TOPPER SITE

Introduction

Lithic materials are subject to a variety of natural processes that can affect the integrity of stone properties and can therefore influence the degree and speed to which lithic items may fracture or deteriorate over time. As discussed in chapter 6, natural weathering variables such as air temperature, moisture content, and water temperature can significantly alter the internal properties of lithic materials in such a way as to produce detachments that might be mistaken for artifacts of cultural origin. Figure 8–1 presents an example of a chert cobble that exhibits features characteristic of natural formation processes. This cobble was recovered from the Topper Site. The analysis reported herein was conducted to assess whether mechanical weathering agents, acting on a given mass of stone, can result in the detachment of lithic items that resemble artifacts of human agency. To test this proposition, four natural mechanical weathering simulation experiments were carried out on a sample of four unmodified cobbles of Allendale chert. The results were subsequently compared to the attributes identified on a control sample obtained from an off-site location, and to the lithic attributes on bend break flakes recovered from the Pleistocene deposits at Topper. The results of these analyses are presented in Tables 8–1 to 8–7and in Appendix 39. Data recorded for these experimental procedures include material condition, presence /absence of detachments, detachment morphology, and change in cobble weight per weathering cycle.

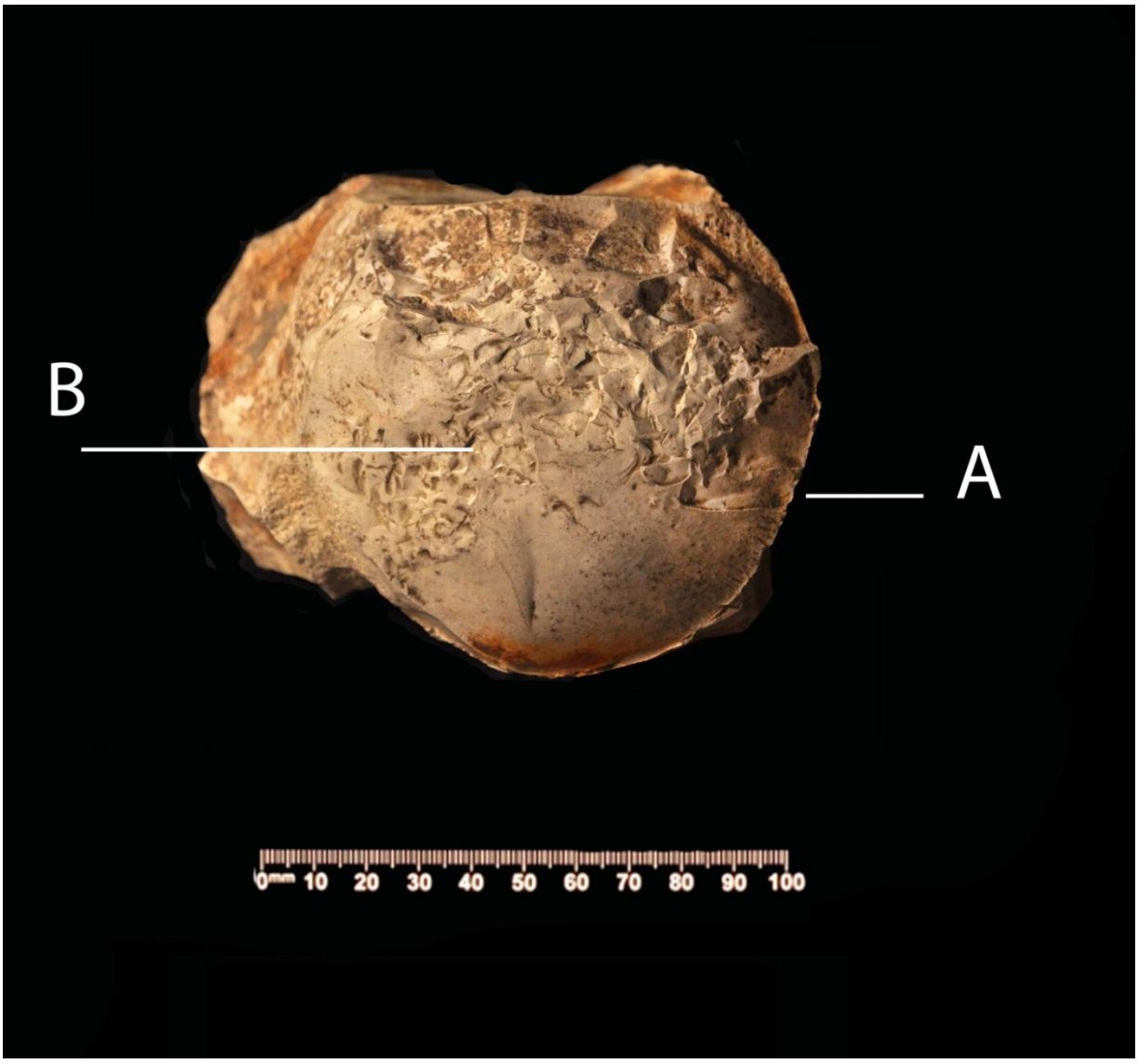


Figure 8–1
Chert cobble from the Topper Site (38AL23) that has surficial features characteristic of natural formation processes. A; Features resembling hinge or step terminations. These characteristics form as the result of natural weathering of the cobble exterior and can sometimes be mistaken for removal scars. B; pitted surface resulting from crazing, a thermal alteration phenomena that can occur when water is applied to heated stone.

Table 8–1
Number of detachments for each cortical class by Interpretation Free Category for detachments from Cobble Sample 2, Freeze, Thaw, Soak.

	Pebble	**Amorphous debris**	**Debris**
Cortical	32	5	0
Secondary	0	22	3
Interior	0	2	1

Table 8–2
Mean Morphological Attributes of Weathering Detachments by Interpretation Free Categories for detachments from Cobble Sample 2, Freeze, Thaw, Soak.

	L	W	T	We
Cortical Pebbles	16.9	11.46	6.37	1.13
Cortical Amorphous debris	29.66	15.18	8	2.45
Secondary Amorphous debris	30.75	19.68	8.28	5.12
Secondary Debris	61.36	291	12.1	13.5
Interior Amorphous debris	13.6	12.5	5.6	0.1
Interior Debris	19.8	7.7	2.1	0.2

L=Length; W=Width; T=Thickness; We=Weight

Table 8–3
Results of One Way Analysis of Variance comparing the morphological attributes of debris and amorphous debris detachments resulting from Cobble Sample 2 Freeze/Thaw Soak procedure.

	df	F	F–Crit	p value	Result
Length	2	14.71052	3.147791	0.00000611	Significantly Different
Width	2	7.399122	3.145258	0.001313	Significantly Different
Thickness	2	1.725565	3.145258	0.186514	Not Significant
Weight	2	2.583805	3.284918	0.09068	Not Significant

df=Degrees of Freedom

Table 8–4

Results of One Way Analysis of Variance comparing the morphological attributes of amorphous debris detachments by cortical class from the Cobble, Sample 2 Freeze/thaw Soak procedure.

Attribute	df	F	F crit	p value	Result
Length	2	1.445806	3.369016	0.253875	Not significant
Width	2	0.728042	3.369016	0.492438	Not significant
Thickness	2	0.306073	3.369016	0.73895	Not significant
Weight	2	0.521821	3.492828	0.521821	Not significant

df=Degrees of Freedom

Table 8–5

Number of lithic detachments for each weathering variable by Class and Interpretation Free Category. Percentage of detachments from each weathering cycle in parentheses. Detachments from Cobble Sample 2, Freeze/thaw Soak procedure.

	Soak	Freeze	Thaw	Total
Cortical Pebble	7 (70)	12 (35.2)	12 (60)	31
Cortical Amorphous debris	1 (10)	1 (2.9)	3 (15)	5
Secondary Amorphous debris	2 (20)	17 (50)	3 (15)	22
Secondary Debris	0	1 (2.9)	2 (10)	3
Interior Amorphous debris	0	2 (5.88)	0	2
Interior Debris	0	11 (2.9)	0	1
Total	10	34	20	64

Table 8–6

Morphological attributes of Detachments from Sample Cobble Sample 3: Freeze/Thaw/Soak/Warm.

Detachment	Length	Width	Thickness	Weight
1	6.9	1.4	1	.01
2	19.6	18.5	5	1.1
3	33.9	19.3	4.2	1.3

Table 8–7
Lithic debitage attributes and cultural interpretation.

Attribute	**Typical of natural processes**	**Typical of Cultural Processes**
Exterior Surface Attributes		
Cortex	Present	Absent
Removal scar counts	<2	>2
Removal scar directionality	Multidirectional	Uni/bidirectional
Termination type	Step, hinge, NA	Feathered
Modification retouch	Absent	Present
Interior Surface Attributes		
Bulb of Force	Absent	Present
Compression Rings	Absent	Present
Fissures	Absent	Present
Striking Platform	Absent	Present
Margins	Broken	Intact

Cobble Sample 1Analysis: Freeze/Thaw Simulation

For this analysis, a lithic cobble underwent 25 cycles of freezing and thawing for a total of 50 experimental tests (Tables A39–1 and A39–2). Figure 8–2 illustrates the chert cobble before and after undergoing 25 cycles of the experimental weathering process. Change in cobble weight and detachment frequency data are presented in Table A39–1. Little evidence for change in the mechanical integrity of the lithic cobble was evident over the course of the experiments. Four cracks in the surface of the cobble were identified (Table A39–1). Initial cracks ranged in width from 0.1–.8mm, and the longest crack (1) measured 6mm in length. At the completion of the simulation study, this crack had widened to 1.2m in width and 8 mm in length, although no evidence for additional fracture was observed. An examination of the origin of initial crack formation shows that cracks tended to form on the surface of the lithic cobble at angles perpendicular to one another. Figure A39–1 shows the change in cobble weight for each freeze/thaw weathering episode. Minor fluctuations in cobble weight occurred throughout the weathering process, with the greatest reductions occurring during freezing cycles. The number also indicates a general decline in cobble weight throughout the experimental procedure (Table A39–1). During freezing cycles, average cobble weights were found to be slightly more than during thawing cycles. A t-test comparing the distribution of weights for each freezing cycle by the weights for each thawing cycle found no statistically significant difference at the .05 level of significance (t value = –0.411664; p value = 0.6824; Table A39–2b).

The freeze/thaw simulation produced no detachments. However, the development of cracks in the surface of the lithic cobble suggest the potential that given enough time under such conditions, detachments could result from repeated freezing and thawing of Allendale chert. The

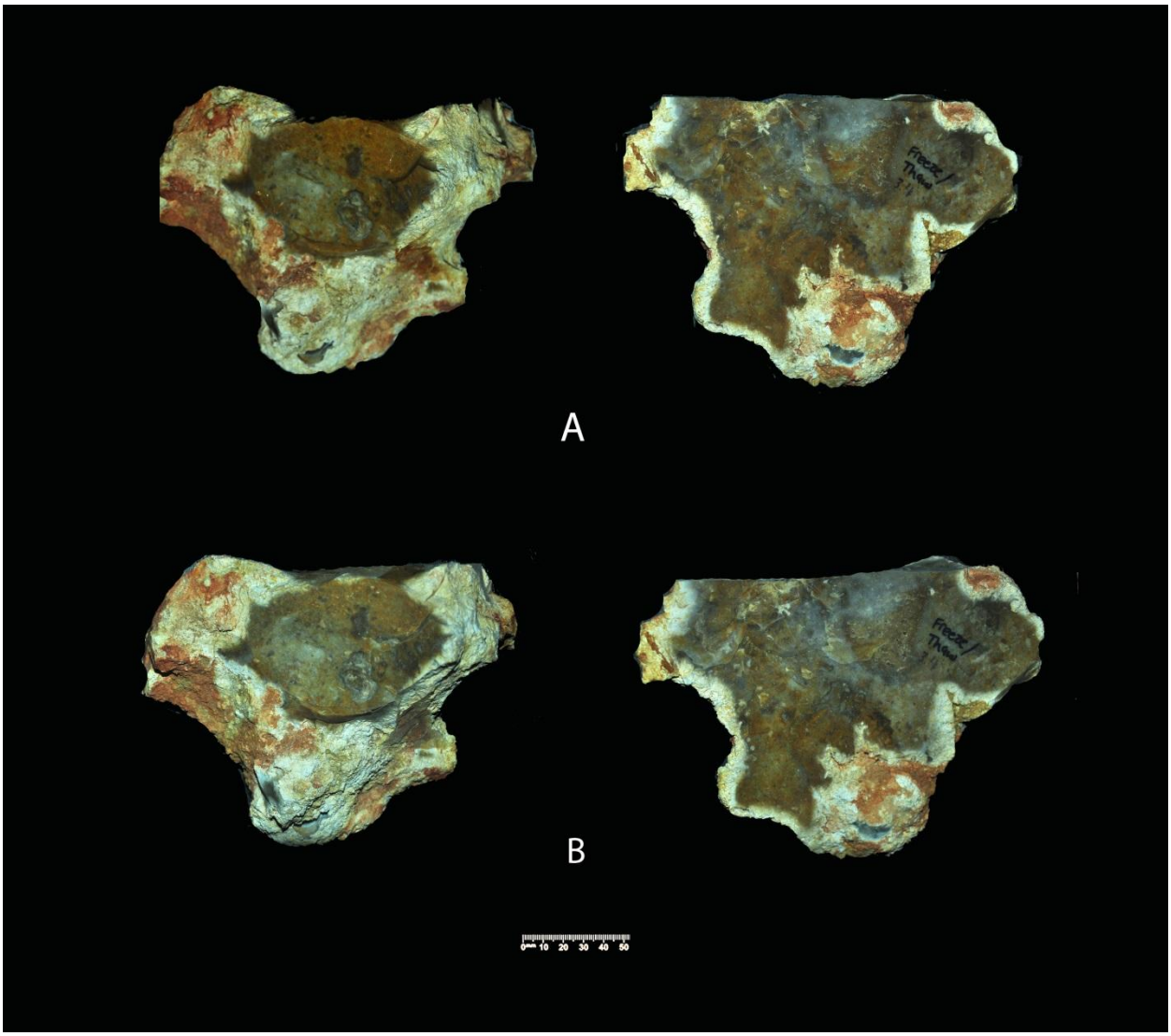


Figure 8–2
Chert cobble Sample 1 selected for Freeze/Thaw simulation prior to undergoing experimental weathering, and B after undergoing 25 cycles of the experimental weathering process. Note that very little change has occurred to the exterior surface of the cobble over the course of the study. Freezing and thawing alone had limited influence on lithic detachment.

observation of cracks forming at right angles on the surface of the test cobbles is intriguing, and could ultimately lead to the formation and detachment of items that resemble bend break flakes.

Cobble Sample 2 Analysis: Freeze/Thaw/Soak Simulation

An analysis was conducted to determine the effects of temperature and moisture on a sample of lithic materials. For this experiment cobble Sample 2 underwent 25 cycles of freezing thawing and soaking for a total of 75 experimental tests. The information is presented in Tables A39–3 to A39–6 for each weathering variable. Cobble Sample 2 is illustrated in Figure 8–3. The initial weight for Cobble Sample 2 was 1.36kg. Morphological attributes of detachments from Cobble Sample 2 are presented in Tables A39–7 to A39–9. Over the course of the experimental procedure the weathering simulation resulted in the detachment of 69 lithic items (totaling 153.2g) from cobble two as the result of the combined soaking, freezing, and thawing process (Tables A39–3 to A39–6). Figure A39–2 presents a series of time lapse photos taken of cobble two as the simulation of weathering cycles progressed. As is evident, the cobble underwent a series of fracture episodes whereby numerous detachments exfoliated from the exterior surface of the cobble. A number of fractures were angular and resulted in detachments that resembled bend break flakes. The development of one such fracture can be seen in Figure 8–5. The formation of fractures and cracks in the cobble exterior surface increased with each subsequent weathering cycle, eventually leading to the production of lithic detachments.

All 69 detachments were examined for specific lithic attributes for the purpose of an Interpretation Free Attribute analysis. Detachments produced during early cycles of the weathering simulation typically resulted in items classified as small cortical debris and cortical pebbles. In contrast, items detached during later cycles tended to exhibit tertiary exterior

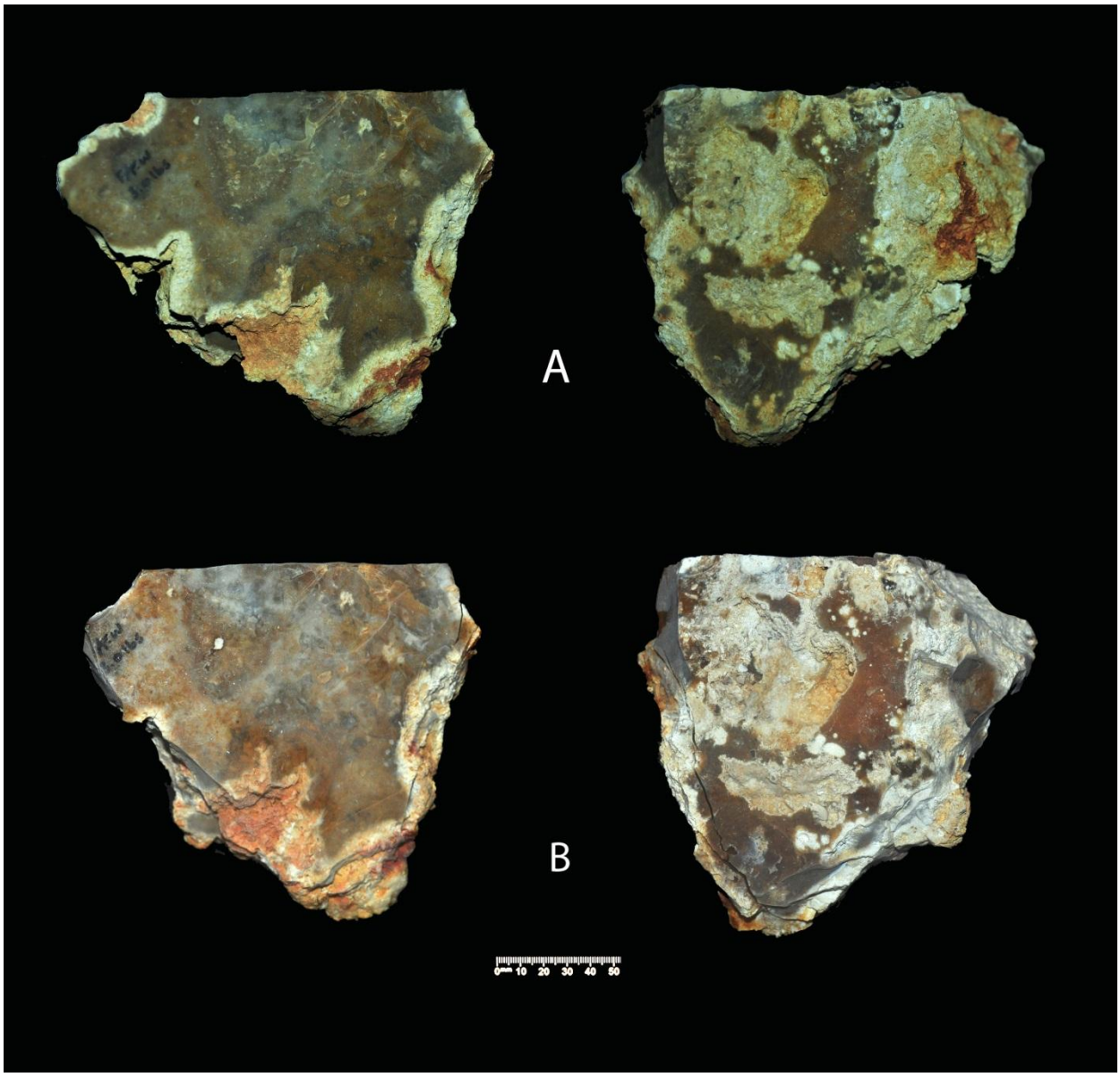


Figure 8–3
Chert Cobble Sample 2. Results of second experimental procedure comparing variables of soaking, freezing, and thawing a chert cobble. A; Cobble 2 shown prior to procedure. B; Cobble 2 after 12 of 25 weathering cycles showing fractures in cobble surface.

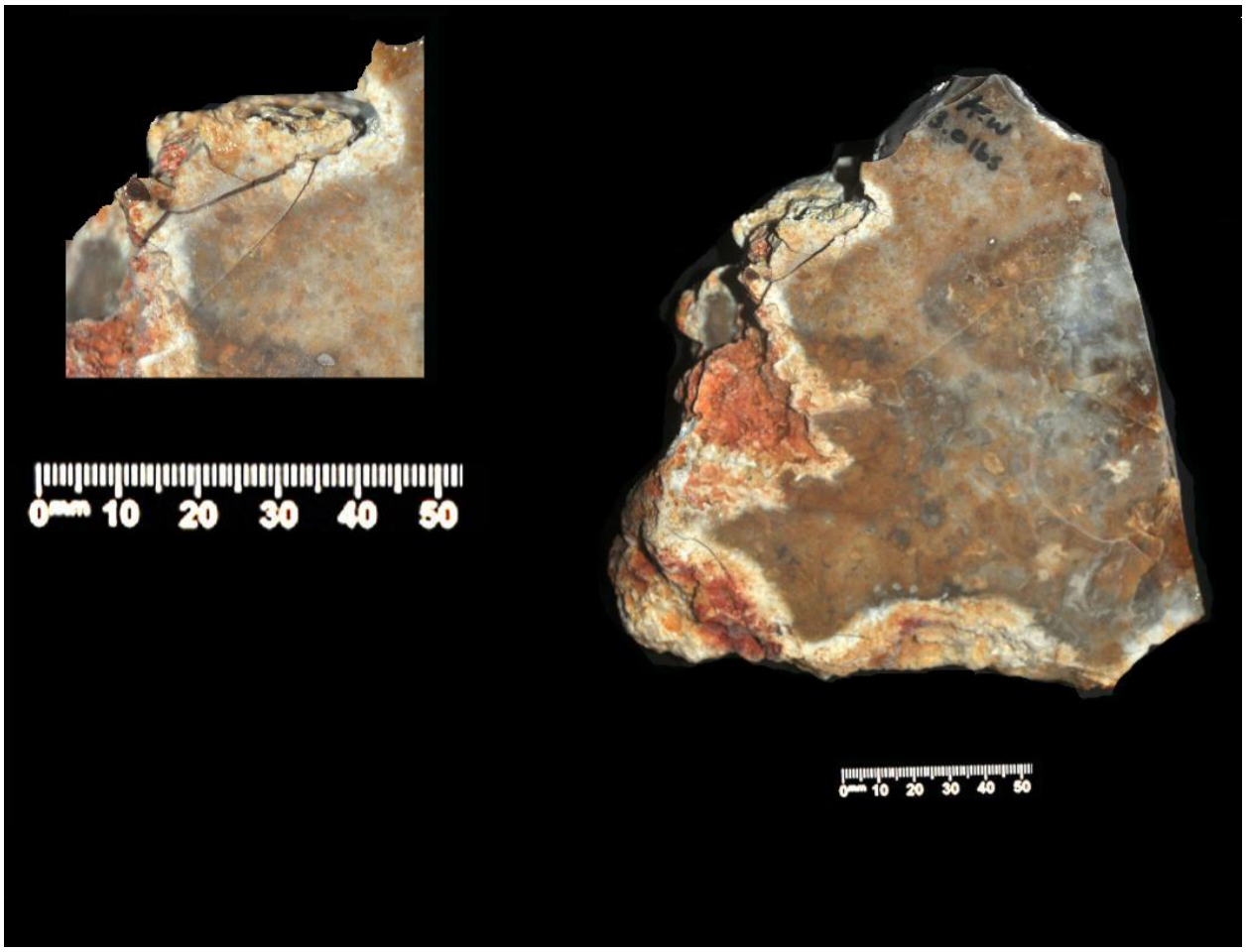


Figure 8–4
View of fractures in Cobble Sample 2 surface after 20 weathering cycles. Close–up at left shows formation of lithic detachment having morphological attributes similar to bend breaks.

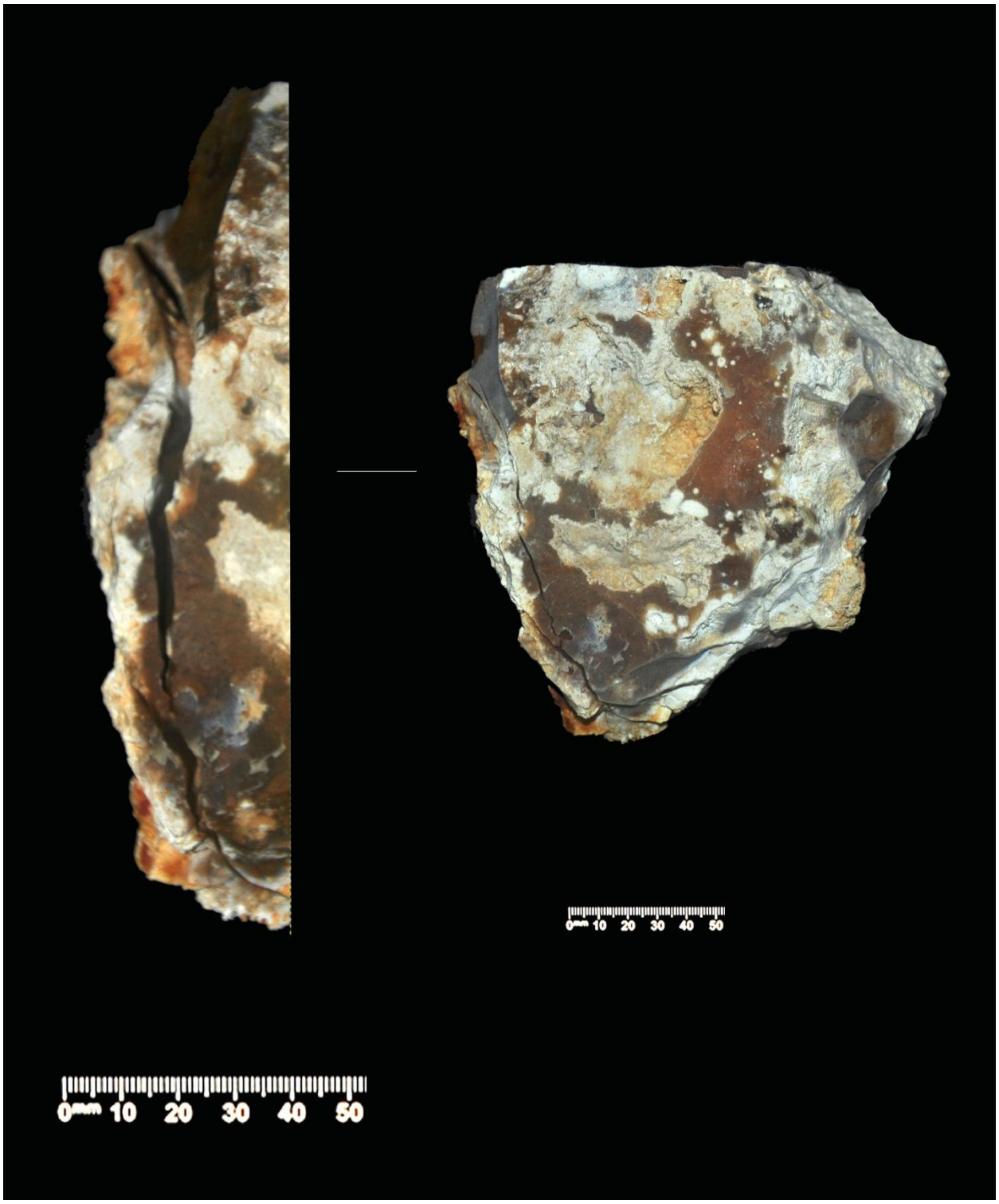


Figure 8–5
View of fractures in Cobble Sample 2 surface after 25 weathering cycles.

surfaces, were larger and heavier in size, and contained attribute states identified as amorphous debris.

A technological analysis of the lithic detachments shows that most items are cortical pebbles (Table 8–1; Figure 8–6 top). These items are completely cortical and resemble cortical pebbles as o detachment surface is apparent. The remaining detachments have attributes consistent with amorphous debris (Figure 8–6 bottom) or in rare instances debris (Figure 8–6 middle). Many of the detachments exhibit morphological attributes consistent with flakes, but lack technological attributes such as a striking platform, a bulb of force or compression rings (Figure 8–6 middle). The infrequent occurrence of lithic detachments that were classified as debris implies that the weathering simulations seldom produced items that exhibit compression rings. Table 8–2 presents the mean morphological attributes for each interpretation free category. The items classified as debris are largest, with amorphous debris and pebbles much smaller in size. A One Way Analysis of Variance comparing artifact morphology by interpretation free category shows a statistically significant difference in measures of length and width when detachments classified as debris were compared to items classified as amorphous debris (Table 8–3). However, when measures of detachment thickness and weight were considered, there was no statistical difference between the debris and amorphous debris assemblages.

When the morphology of detachments was further classified by cortex, the items that retain partial but not complete cortex are on average larger than items that are either cortical or tertiary. Interior or tertiary amorphous debris represent the smallest lithic category. A One Way Analysis of Variance comparing the amorphous debris detachment morphology by cortical class shows that the observed differences in size are not statistically significant (Table 8–4, Table A39–3). Cortical pebbles are significantly smaller than amorphous debris or debris.

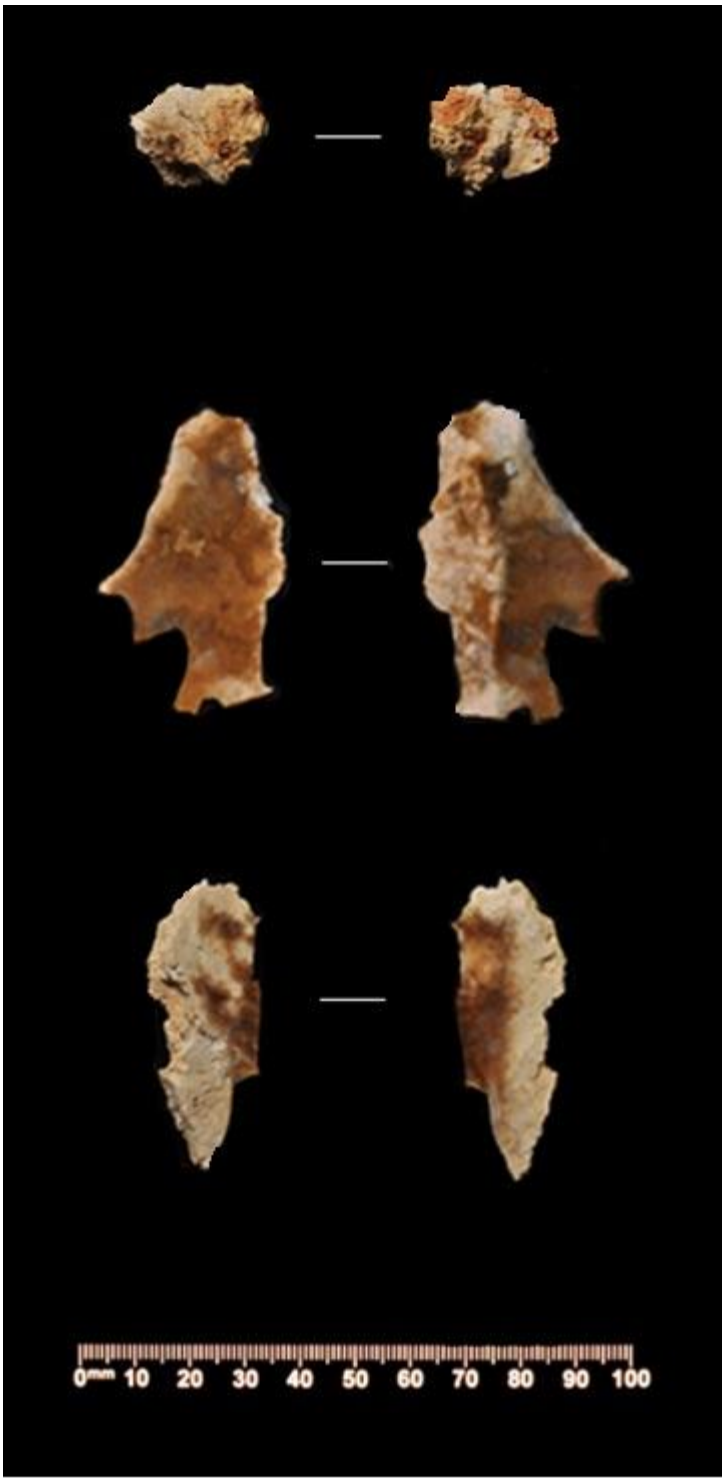


Figure 8–6
Detachments formed from Cobble Sample 2 subjected to the freeze/thaw soak weathering simulation.

The analysis failed to identify any detachments that could be classified as complete flakes, broken flakes, or flake fragments. However, two detachments display attributes consistent with bend break flakes. These items are presented in Figure 8–9 and are characterized by having two or more 90 degree break angles and interior surfaces, but lack evidence of ripple lines and compression rings. It is important to note that neither of these specimens exhibit evidence of removal or retouch scars that could be readily mistaken for human modification. Moreover, there is no evidence of impact markers that would typically be found on the exterior surfaces of bend breaks resulting from lithic reductive activities.

In addition to the cortical and morphological analysis, all lithic items were examined by the type of weathering variable that preceded its detachment. Table 8–5 shows the number and interpretation free category of detachments by weathering cycle. The soaking cycle predominantly produced items classified as cortical pebbles or cortical/secondary amorphous debris. The freezing cycle mostly produced items classified as cortical pebbles or secondary amorphous debris. The thawing cycle also produced high numbers of cortical pebbles. Most debris and interior tertiary fragments were detached during freezing cycles. To examine the effects of each weathering variable on the properties of lithic materials in greater detail, the soaking, freezing, and thawing cycles were evaluated independently (Tables A39–4 to A39–6). Accordingly, each individual weathering cycle for Cobble Sample 2 is discussed in the following section.

Soaking Cycle

Table A39–4 shows the variation in cobble weight recorded following each 12 hour soaking cycle. Ten lithic items detached from Cobble Sample 2 during soaking cycles. These

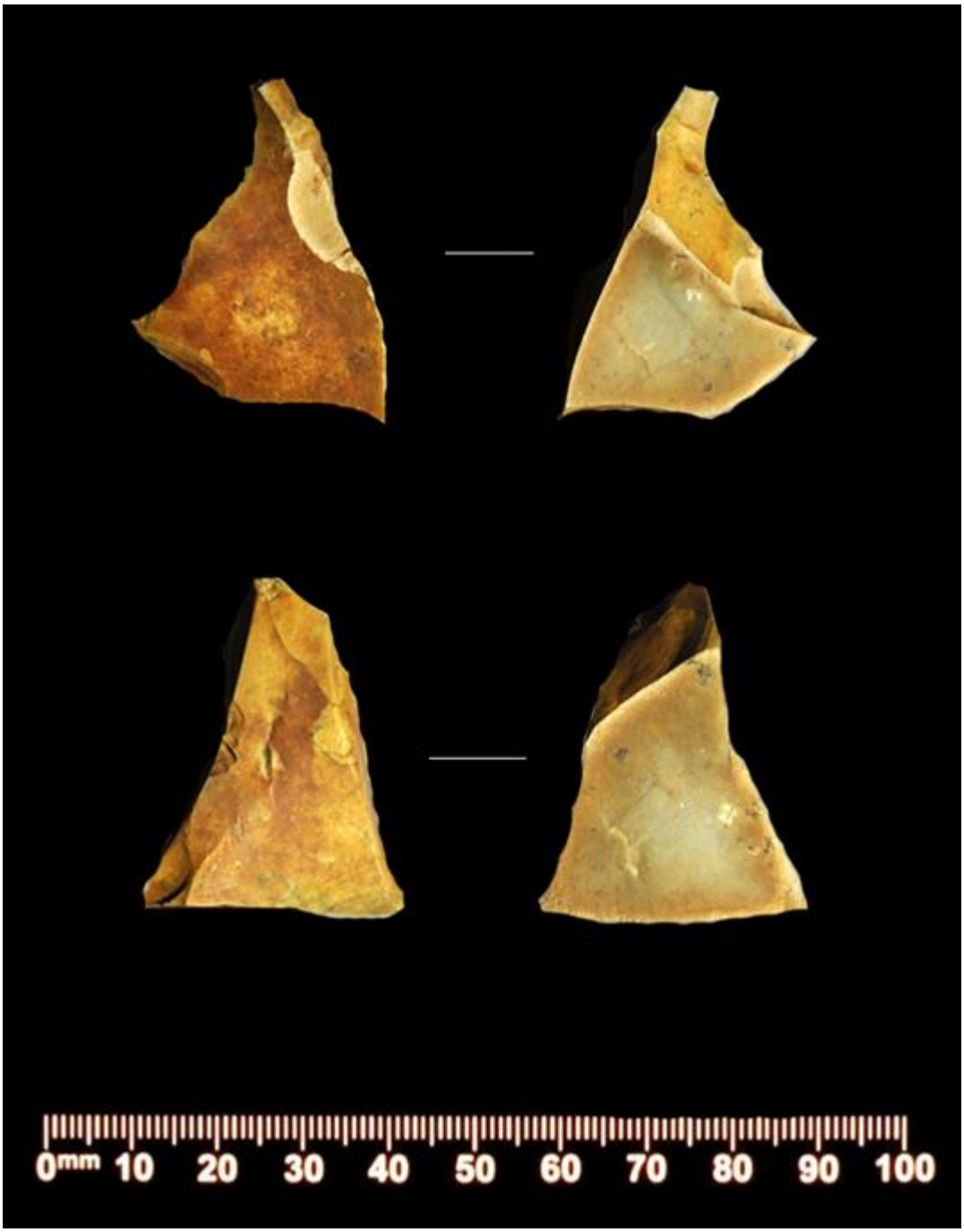


Figure 8–7
Lithic detachments having the morphological characteristics of bend breaks formed as a result of the freeze/thaw/soak weathering simulation Item detached from Cobble Sample 2. This example lacks a lip that often occurs on bend breaks formed by bending and compression flaking.

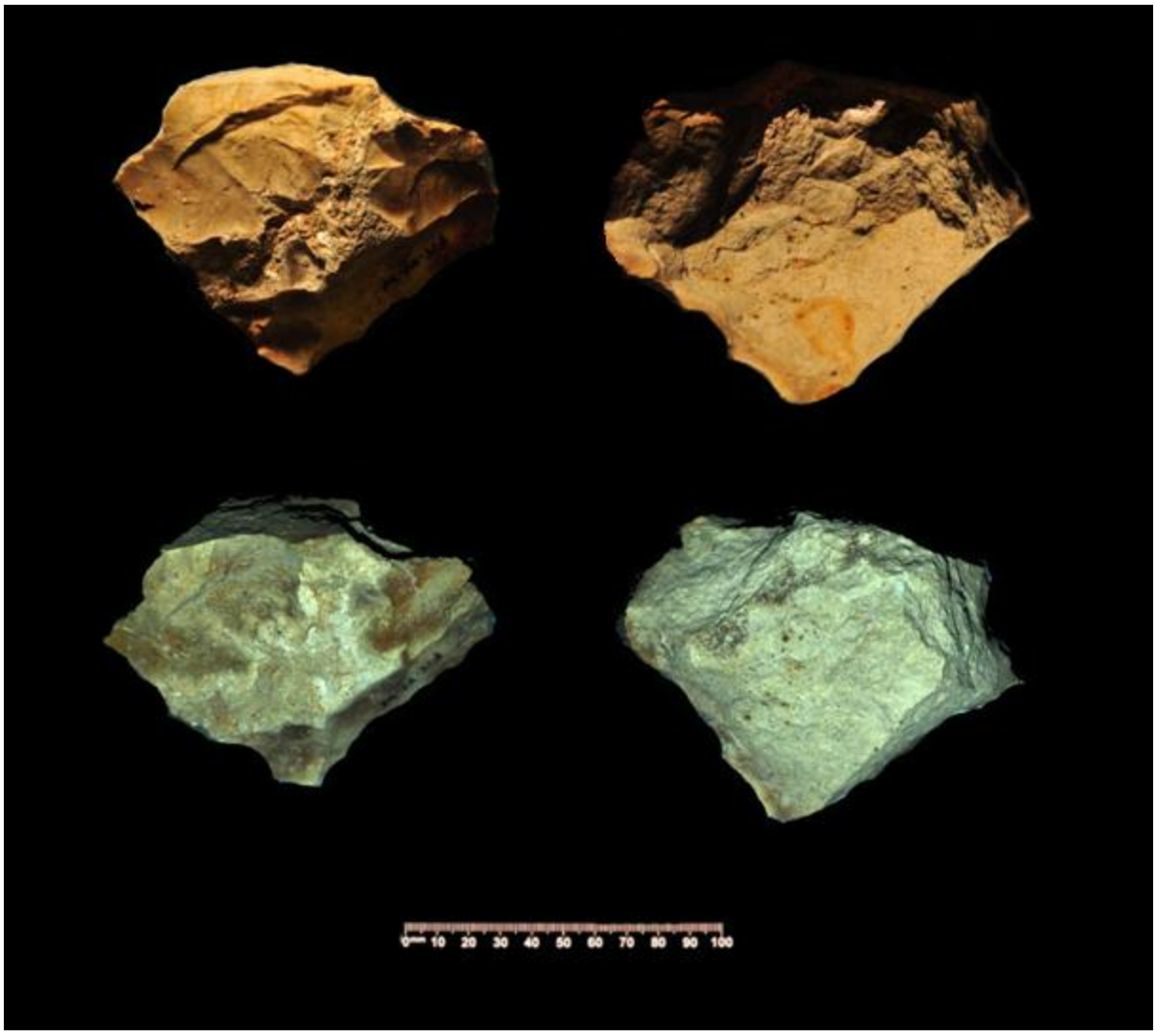


Figure 8–8

Lithic Cobble Sample 3subjected to freeze/thaw/warm/soak experiment. Top; Cobble 3 shown prior to procedure. Bottom; Cobble 3 after 12 of 25 weathering cycles showing little evidence of change in material integrity and physical properties of cobble.



Figure 8–9
Lithic items resembling bend breaks from an off–site control assemblage from Williamson County, TN.

detachments include cortical pebbles, secondary amorphous debris, and cortical amorphous debris. The frequency of detachments was found to increase as the number of soaking cycles also increased. Consequently, the average weight of the cobble also decreased through time as more detachments were separated from the cobble exterior. The morphology of all lithic detachments was recorded and the results are presented in Tables A39–7 and A39–8.. The materials produced from the soaking process were more often smaller but heavier than those produced by other weathering processes. A One Way Analysis of Variance shows that the observed differences in morphology for detachments produced by soaking are not significantly smaller than those produced by way of other weathering processes at the statistical .05 level (Table A39–9).When the morphology of lithic detachments for each soaking cycle was examined by Interpretation Free Category, detachments classified as secondary amorphous debris were found to be the largest. By contrast, detachments classified as cortical chert pebbles were the smallest (Table A39–8). It appears that the detachments that formed early in the experimental procedure have attribute characteristics that are similar to cortical pebbles and small cortical debris. Detachments produced during latter cycles of the experimental soaking procedure tend to produce smaller amounts of cortex on the exterior surface and are larger in size.

Freezing Cycle

The information recorded from the freezing cycle are presented in Table A39–6. A number of interesting patterns were identified from the morphological analysis of the chert cobble throughout the freezing experiment. The results of the analysis indicate that the cobble was typically lighter during freezing cycles than during soaking phases. This is likely the result of water absorption and evaporation and the result of fragmentation and detachment.

Twenty nine lithic detachments were observed from Cobble Sample 2 during the 25 freezing cycles in addition to five items that fragmented post detachment. These detachments include cortical pebbles, secondary amorphous debris, interior amorphous debris, cortical amorphous debris, secondary debris, and interior debris (Table A39–3). The morphological attributes of detachments formed during the freezing procedure are presented in Table A39–7. On average, detachments produced during freezing cycles are larger in size, yet slightly lighter than lithic detachments produced during the soaking cycles. When detachment weights were considered, those produced as a result of the freezing cycle were slightly lighter than those produced as a byproduct of soaking. An examination of the frequency of detachments by weathering condition found that freezing cycles tend to produce greater quantities of detachments per cycle than soaking episodes. Moreover, freezing cycles also tend to produce higher percentages of detachments during the early stages of the weathering experiment first 10 cycles) compared to the frequency of detachments observed during soaking cycles.

Thawing Cycle

The data from the thawing cycles for Cobble Sample 2 are presented in Table A39–6. Based on results of the study, the average cobble weights during thawing cycles were lower than were found to occur during either soaking or freezing cycles. In general, the thawing cycles produced higher quantities of lithic detachments than either soaking or freezing cycles. Such detachments were presumably formed as cracks that were formed during the freezing and soaking processes begin to contract during subsequent thawing cycles. The cumulative sum of 25 thawing cycles resulted in a total of 30 lithic detachments from sample cobble two. These detachments include cortical pebbles, cortical amorphous debris, secondary amorphous debris, and secondary debris. A sample of these detachments was subjected to subsequent freezing and

soaking cycles. This procedure resulted in the formation of an additional 10 cortical pebbles that resulted from the fragmentation of the lithic exterior prior to detachment.

All detachments formed during thawing cycles were examined by morphology and the results of analysis are presented in Tables A39–7 and A39–8.The detachments produced during thawing cycles are smaller than those produced during freezing cycles, but are larger than those resulting from soaking cycles. Interestingly, when detachment weights were compared, those produced as a result of the thawing process were considerably lighter than detachments resulting from the soaking or freezing cycles. An examination of the frequency of detachments by weathering condition found that thawing cycles tend to produce greater quantities of detachments per cycle than either freezing or soaking episodes (Table A39–7). In contrast to soaking and freezing simulations, the majority of the lithic detachments produced as a result of the thawing process were found to occur during the last few weathering cycles conducted; most occurring between cycles 17 and 23. No detachments occurred as a result of thawing until the 12th weathering cycle. On the contrary, detachments produced as a result of soaking or freezing were observed as early as the 4th and 5th cycle respectively.

Cobble Sample 2 Summary

The experimental weathering procedure demonstrates that the combined effects of air temperature and moisture content on Cobble Sample 2 have a greater influence on the mechanical integrity of lithic materials than the single variable air temperature alone. This discovery is evident by the absence of detachments observed on Cobble Sample 1 which was only subjected to freezing and thawing. Over the course of the weathering experiment, Cobble Sample 2 experienced a total weight loss in detachments of 153.2g for an average of 2.35g per detachment. These results imply that a combination of weathering processes rather than one

single variable are more likely to accelerate the mechanical breakdown and degradation of chert materials over time. Moreover, the detachments produced from the combined weathering variables predominantly exhibit attributes consistent with amorphous debris. As such, these items can be distinguished from conchoidal flakes that result from human lithic manufacture episodes by the absence of a striking platform, bulb of force, and ripples or compression rings on the interior surfaces of the detachments. Interestingly, a small percentage of detachments do exhibit attributes consistent with items classified as debris. These items have features on the interior surface of the detachment that resemble undulations and compression rings. Although items that were classified as amorphous debris and that fit the morphological description of bend breaks were produced from the procedure, no single detachment that was classified as debris was found to fit the technological description of bend or compression initiation flakes.

Results of Cobble Sample 3: Freeze/Thaw/Soak/Warm Simulation

The third weathering simulation examined the effects of water and air temperature on the material integrity of an Allendale chert cobble. The data recorded during this experiment are presented in Tables 8–6, A39–10to A39–12, and Figures 8–10, and A39–3. Morphological attributes were recorded for Cobble Sample 3 prior to undergoing the simulation experiment. The cobble initially measured 130.5mm in length, 95mm in width and 52m in thickness. Its initial weight was 0.45kg. Over the course of the experimental procedure the weathering simulation resulted in the detachment of three lithic items from the cobble (Table A39–11 and A39–12). Figure 8–8 presents a time lapse photo taken of this cobble as the simulation of weathering cycles progressed. Compared with the second weathering experiment, Cobble Sample 3 produced a much lower frequency of fracture episodes resulting in only three detachments.



Figure 8–10
Lithic items resembling flakes and flake fragments from the off–site control assemblage. These items lack modification, micro–wear, compression rings and impact markers attributed to applied force consistent with lithic reductive technologies. Specimen at top has differentially weathered exterior surface removal scars.

Moreover, very few changes were observed on the surface of Cobble Sample 3 compared with the cobbles from the two prior experimental procedures. The three detachments from sample Cobble Sample 3 were examined by attribute conditions for the purpose of an Interpretation Free Attribute analysis (Table 8–6). Detached items were classified as tertiary amorphous debris, cortical chert amorphous debris, or cortical chert pebbles. Morphological attributes for each detachment are presented in Table A39–12. The detachments increase in size as the number of weathering cycles also increases. An analysis of the exterior and interior surfaces of these detachments found no evidence for attributes that are consistent with either flake or bend break manufacture.

To examine the effects of each weathering variable on the properties of the lithic cobble in greater detail, the results of the warm soaking, freezing, and thawing cycles were evaluated independently. Table A39–10 shows the cobble weights recorded following each 12 hour warm/ soaking cycle. Over the course of the soaking cycles, the weight of the cobble fluctuated. Interestingly, the recorded weight of the cobble actually increased through the first 12 weathering cycles with lower recorded weights from cycles 13–25. This increase in weight is presented in Figure A39–3 which compares the cobble weight per cycle for each weathering condition. No visible change in the material integrity of the cobble was observed over the course of the first ten soaking cycles. Following weathering cycle 11, small cracks were observed along the exterior surface of the cobble. Theses cracks began to widen by the 21st weathering cycle and following the 23rd cycle, additional micro-fractures were observed on the cobble exterior. No detachments were observed as a direct result of the warm soaking procedure. On average, the weight of the cobble was lighter during freezing cycles potentially due to the evaporation of water from the pores on the exterior surface of the item (Table A39–11). Cracks along the cobble

surface began to form during the 9th freezing cycle leading to single detachment separating from the parent material during the 14th freezing cycle. The morphological attributes of this detachment are presented in Table 8–6. The item was classified as interior amorphous debris and was thin relative to its width. The lithic detachment lacked attributes consistent with those that might be expected to form by lithic production technologies.

The thawing cycle data for Cobble Sample 3 are presented in Table A39–12. Cobble weights exhibited greater variance over the course of this weathering cycle than observed during freezing or warm/soaking cycles. Interestingly, no visible cracks were seen to form during thawing cycles. However, two detachments formed during thawing cycle 17 and include one cortical pebble and a secondary amorphous debris fragment. These detachments were both larger than the single detachment formed during freezing cycle 14 but lacked attributes consistent with lithic production technologies (Table 8–6). Based on the results of this analysis, the combined effects of air temperature, moisture content, and moisture temperature on Cobble Sample 3 do not have as great an influence on the mechanical integrity of lithic materials as the weathering variables had on Cobble Sample 2. The best evidence for this conclusion comes from the small number of detachments formed over the course of the weathering simulation for this experiment compared with the number of detachments formed during weathering experiment two. It appears that variation in water temperature does not significantly affect the probability that a lithic detachment will form, and that the combination of air temperature and moisture *presence* (as seen in Cobble Sample 2) are better indicators for the probability of lithic detachment.

Results of Cobble Sample 4: Soak/Dry Simulation

The fourth weathering simulation examined the effects of moisture content on the material integrity of a lithic cobble. For this procedure the lithic cobble was immersed in water

for a period of 12 hours and subsequently left to dry at room temperature for a subsequent 12 hours. The cobble selected for analysis was completely cortical and significantly weathered. A total of 25 cycles were undertaken resulting in no change to the cobble exterior. The initial weight of Cobble Sample 4 was measured at 1.72 kg. Over the course of the weathering cycles, the cobble weight fluctuated from 1.72kg to a maximum of 1.90kg after having been soaked in water. No visible cracks, fractures or detachments were observed on Cobble Sample 4 as a result of the weathering simulation. The results of this experiment show that variation in moisture content alone will bear little influence on the probability that a lithic cobble will undergo modification or as a result of weathering. Rather, a combination of variables including air temperature *and* moisture content are more likely to result in changes to the mechanical integrity of lithic cobbles subjected to significant weathering episodes.

Weathering Simulation Summary

A number of conclusions may be drawn from the four experimental weathering procedures. The results demonstrate conclusively that lithic detachments can occur as a byproduct of multiple weathering conditions. For example, most detachments formed as the result of a combination of changes in air temperature and moisture content. In contrast, lithic detachments did not form as the direct consequence of a single weathering variable acting alone such as in experiment one and four. The outcome of the Cobble Sample 2 analysis corroborates these findings; immersing a cobble in water in between freezing and thawing cycles provides a greater probability that fracture and ultimate detachment will develop. Consequently, deposits that experience the combined effects of cyclic fluctuations in the water table and air temperature are more prone to contain lithic materials that have undergone significant weathering processes. Moreover, as each weathering process continues, the rate at which a lithic cobble fragments is

accelerated and increases exponentially. Lithic detachments that were subsequently exposed to additional cycles of weathering were observed to continue to degrade and disintegrate into smaller pieces. It should be of note that since only a single cobble underwent the experimental procedure, it is possible that these results could be due to chance and therefore future experimental tests and replication are necessary to validate or refute these results. Apart from these limitations the results of this study have important implications for the prospect that the pre Clovis assemblage at Topper is or is not cultural in origin. The results of this analysis show that many of the lithic detachments formed by weathering could be mistaken for chipped stone debris to the untrained eye. Lithic items that fit the morphological description of conchoidal and bend break flakes were produced over the course of the weathering simulations. However, these items lack specific technological attributes that distinguish them from artifacts of cultural origin. No detached items produced in the study exhibit compression rings, bulbs of force, or striking platforms, indicating that they could not have been produced using lithic production technologies. Alternatively, the lithic detachments that were produced are most similar to items classified as amorphous debris from the interpretation free analysis discussed in chapter 7.

Control Sample and Comparative Study

Lithic items that fit the morphological and technological description of conchoidal, compression and bend fracture flakes are present at Topper. However, natural processes can sometimes mimic the attributes of human lithic reduction technologies. Such items are often referred to as geofacts. The results of the weathering experiments demonstrate that the simulation of natural processes under controlled conditions can create lithic detachments that are morphologically similar to cultural artifacts but that lack many of the technological attributes produced by human agency. But what is not known is how well the results of the weathering

experiments actually compare with an “authentic” or actual natural assemblage of items that might be morphologically similar to flakes and bend breaks. The following analysis examined the material and morphological attributes of a “control” assemblage of lithic items that resemble flakes and bend breaks. These items presumably formed under natural conditions and in deposits where diagnostic material culture is absent. The items that comprise the control assemblage are of Fort Payne chert and were recovered in June, 2012 from alluvial clay and colluvial silt loam deposits from Williamson County, Tennessee (approximate latitude N 35.8650, longitude W -86.7071. Table 8–7 and Tables A39 – 13 to A39 –23 present the attributes examined for the analysis. Examples of these chert items are presented in Figures 8–9 and 8–10. The control sample consists of 70 items. These include 50 specimens preliminarily classified (based on morphology) as bend breaks and 20 preliminarily classified as conchoidal flakes and flake fragments. The results of analysis were compared to the morphological and technological attributes of the Topper flake and bend break assemblages as well as the attributes of the detachments formed from the weathering simulation study (Table 8–8). The descriptive statistics obtained from the attributes of the comparative analysis were used to form the basis of more robust statistical analyses including t–tests and One Way Analysis of Variance (ANOVA). The results of the morphological attribute analysis are presented first. The results of a comparative attribute scoring analysis are presented in Appendix 39.

Bend Break Morphology

Tables 8–8 and A39–14 to A39-21 present the analytic results of the control analysis. The previous section demonstrated that despite the marked differences in the technological attributes of the experimental and Topper assemblages, there is similarity in the morphology of lithic

Table 8–8
Results of comparative descriptive statistics for control, experimental, and Topper bend break and flake Assemblages. Numbers refer to mean values from entire assemblage for each attribute.

Sample	Length	Width	Th.	Weight	RS	TS	BA	Av. R	RI
Control Flakes	30.42	21.59	10.55	11.38	2.42	4.05	0.578	0.21	1
Experimental Flakes	23.97	15.01	7.25	4.08	0.468	1.468	na	0	0
Topper Flakes	33.14	23.13	11.37	12.45	4.04	5.33	3.34	.817	3.64
Control Bend Breaks	31.29	20.36	8.24	7.10	1.76	4.4	2.3	.08	1
Experimental Bend Breaks	51.53	33.56	9.13	10.7	2.33	3.33	2.0	0	0
Topper Bend Breaks	25.17	19.14	9.41	5.6	3.06	4.32	3.03	.41	2.68

* TH = thickness; RS = removal scar; TS = total detachment scars; BA = break angles; Av.R = average retouch scars; RI = Retouch index.

detachments from these two assemblages. Based on the evaluation of the control assemblage, some of these same patterns are consistent. On average, bend breaks from the control sample are longer and heavier than Topper bend breaks, while widths and thicknesses are essentially identical (Table 8–8, Figures A39–4 and A39–5). Bend breaks from the experimental assemblage are longer, wider and heavier than items from the Topper or control assemblages. This difference could be explained as a result of the small sample size (n=3) of the relatively large bend breaks produced from the experimental assemblage. While the descriptive statistics indicate the occurrence of morphological similarity between the lithic assemblages under scrutiny, additional analyses were undertaken to establish whether the observed differences were statistically significant. The results of a One Way Analysis of Variance show that the observed differences in artifact length and width are actually statistically significant when all three assemblages are compared, while no statistical difference was found for attributes of artifact thickness and weight. The small p values for artifact lengths imply that it is unlikely that the observed differences are due to random sampling.

Table A39–15 lists the p values obtained from a two-way t-test comparison of bend break morphology from the Topper and control samples. Only artifact length and weight are statistically different at the .05 Alpha–level. No evidence was found to suggest that measures of width and thickness represent statistically different populations. When bend breaks from the Topper and experimental assemblages were compared, there is evidence for association in measures of artifact length, thickness and weight but not for artifact width. As a test to examine the statistical relatedness between the control and experimental assemblages, the p values were also obtained for attributes of morphology. The variation present in artifact width for the two samples is statistically significant. By contrast, because the p values for the other variables

(length, thickness, and weight) fell outside of the .05 alpha level, the analysis did not achieve statistical significance.

Flake Morphology

The morphological attributes of the flakes from the Topper, control, and experimental assemblages were also examined. Figures A39–7 and A39–8 present a series of bar charts that show the average flake size for each lithic assemblage. When the Topper flake assemblage was compared to the control assemblage, the results indicate strong similarity in size. Flakes from the experimental assemblage are on average, smaller and lighter than flakes from the Topper and control assemblages. To examine these patterns in greater detail, a One Way Analysis of Variance test was conducted comparing the morphological attributes of flakes from each assemblage. This test compared all three lithic assemblages to determine if one or more are statistically different in terms of artifact morphology. The results of this test are presented in Table A39–16 and show that flakes from the Topper, control, and experimental assemblages are not statistically different at the .05 significance level in terms of morphology.

The morphology of items that resemble flake detachments from the experimental and control assemblages do not differ significantly from the lithic items classified as flakes from the pre Clovis deposits at the Topper Site.

While the results of the ANOVA analysis are useful for establishing the degree of similarity between three or more lithic assemblages, a t-test was also employed to directly compare 1) the Topper and control assemblage 2) the Topper and experimental assemblage and 3) the control and experimental assemblages separately (Table A39–17). Table A39–17 presents the p values obtained from a two–way comparison of the metric attributes from each of the flake assemblages. When the Topper and control assemblages were compared the p values for all

variables of flake size fell outside of the 0.05 alpha level implying that the analysis did not achieve statistical significance. The two samples are not statistically different. The same patterns were also found when the Topper and experimental assemblages were compared; that is there is no statistical difference in the morphology of flakes between the two assemblages. However, when the control and experimental flake assemblages were compared, there is a statistically significant difference in the morphology of flake width, thickness and weight at the $p = 0.05$ level, and a statistically significant difference in flake length albeit at the $p = 0.1$ level. As such, there is less than a 10% chance that the two samples are statistically related. These findings suggest that items classified as flakes from the control assemblages share similarity in morphology with flakes from the pre Clovis Topper flake assemblage.

The results of the comparative analysis demonstrate that bend breaks and flakes recovered from the Pleistocene deposits at Topper are morphologically similar to items recovered from an off-site independent control sample that was produced by natural processes. However, the results also indicate that the Topper assemblage presents greater evidence for technological attributes that are consistent with human use than either the control or the experimental assemblages. Given these results, at most the Topper and Control assemblage could have formed under similar conditions that resulted in comparable morphologies, but only the Topper assemblage has been subjected to "technological" processes that could potentially have been the product of anthropogenic behavior. However, it is also important to note that any observed differences in morphology could be the result of variation in raw material type between each sample.

Technological Analysis

Because lithic items that form in nature can also have attributes that appear similar to the attributes visible on cultural flakes, a technological attribute analysis of the lithic items from the control assemblage was undertaken. The results were subsequently compared to the technological attributes found on items classified as bend breaks and flakes from the Topper pre Clovis and experimental assemblages. For this analysis, each assemblage was evaluated by the number and condition of exterior surface removal scars (Table 8–8). Flakes and bend breaks from both the control assemblage and the experimental assemblage exhibit much fewer exterior surface removal scars than items from the Topper assemblage. Topper flakes exhibit nearly twice as many removal scars as flakes from the control assemblage, whereas flakes from the experimental assemblage average less than one removal scar per lithic item. Of note, when the mean number of cumulative detachment scars on bend breaks were considered for each assemblage, there was found to be little variance.

To test if the observed differences between the group means for the variable "removal scar count" for the flake categories are statistically significant, a one way analysis of variance (ANOVA) calculation was performed (Table A39–18). The p value was used to test the null hypothesis that all group population means are equal versus the alternative that at least one group is not equal. The results of the test provided an extremely low p value of 3.80E–18 indicating that there is a significant difference in terms of removal scar count between the means of the three independent (unrelated) groups. A Brown–Forsyth test was conducted to account for the unequal variance. Based on the results, the p value is still extremely small, $p < 0.001$ and therefore the null hypothesis that all group population means are equal is rejected (Table A39–19).

Next, the lateral margins of lithics from each of the three assemblages were examined for possible retouch. The results of this analysis are presented in Table A39–13 and following Andrefsky's (2012) Index of Modification, reflect the average number of retouched segments on bend breaks and flakes from each assemblage (designated as Av. R), and the average number of retouched segments for items having at least one retouch scar (IR). No items from the experimental assemblage have evidence for retouch. When the control and Topper assemblages were compared, the Topper Site was found to consist of a much greater percentage of bend breaks and flakes that have high retouch indexes. To determine whether these results were statistically significant, an ANOVA test was performed for each of the bend break and flake artifact categories. The results of these analyses are presented in Tables A 39–20 and A39–21. There is a statistically significant difference between the means of the three independent (unrelated) groups for the flake category. The results for the bend break category are similar although less conclusive. The ANOVA comparing the control, experimental, and Topper assemblages resulted in a p value of .09, indicating that although strong, analysis did not achieve statistical significance at the .05 alpha level. There is therefore a 9% chance of finding such an association in the incidence of bend break retouch among the two samples due to random chance.

Finally, the number of break angles on bend breaks for each of the three assemblages was evaluated to determine if there were any patterns of similarity or difference. Of the three bend breaks identified from the experimental assemblage, each consisted of two identifiable 90 degree break angles. Similar patterns were found on bend breaks from the control assemblage. By contrast, bend breaks from the Topper assemblage were found to have a higher mean break angle per item than either of the other two assemblages sampled. Because these break angles form sharp protrusions that could have been suitable for a number of grooving, drilling, or gouging

activities, they are considered for the purpose of this study as a technological attribute rather than a morphological attribute. Combined with the higher incidence of retouch and removal scars found on bend breaks from the Topper sample, break angles are a third technological attribute that distinguish the Topper sample from the control and experimental assemblages.

The results of the comparative analysis demonstrate that bend breaks and flakes recovered from the Pleistocene deposits at Topper are morphologically similar to items recovered from an off-site independent control sample that was produced by natural processes. However, the results also indicate that the Topper assemblage presents greater evidence for technological attributes that are consistent with human production than either the control or the experimental assemblages. These results support the conclusion that at most the Topper and Control assemblage could have formed under similar conditions that resulted in comparable morphologies, but only the Topper assemblage has been subjected to "technological" processes that could potentially have been the product of anthropogenic behavior.

CHAPTER IX

CORTICAL ANALYSIS

All cortical pebbles, quartz pebbles, and lithic debitage recovered from the 1/8 inch screen bags from the sampled units at Topper were examined by quantity and weight. The primary data for these analyses are presented in Appendix 41. Each of these material byproducts are considered variables that can inform about cultural or natural site formation processes that were active at the site in the past. For example, the presence of cortex, cortical debris, and cortical pebbles indicate either: 1) the byproduct of human chipped stone tool production, or 2) produced from mechanical weathering processes that degrade lithic materials over time (Figure 9–1). Quartz indicate the input by fluvial processes from a river or stream. Figure 9–2 illustrates the stratigraphic distribution of quartz pebbles from the Pleistocene Sands of 2m x 2m unit N246 E138 at Topper. Where a high occurrence of debitage is found in association with quartz, there is a greater likelihood that the flakes were either redeposited or actually formed by the contact between quartz and brittle solids such as chert. Finally, the amount and distribution of debitage onsite can be used as an indicator of the intensity of onsite lithic reduction. The debitage category is further classified by condition (river stained cortex, thermal alteration) and can inform about changing patterns of tool stone availability or preference through time. Appendix 41 presents the distribution of cortex and quartz for each level and unit at Topper across the study sample.

In this section, the results of the cortical analysis for three stratigraphic deposits at Topper are presented: the Clovis, Pleistocene Sands, and Pleistocene Terrace. Three excavations were considered for this analysis and include the 2010–2011 4m x 4m block excavation; the 2002–2012 5x9 block, consisting of the southern and northern terrace excavations; and the 2000



Figure 9–1
Image showing examples of weathered cortical pebbles from the Topper Site (38AL23).



Figure 9–2
Photo showing quartz pebble lenses from the Pleistocene Sands of North profile wall of unit N246 E138

4m x 8m block (Figures 9–3 and 9–4). All materials examined for this analysis derive from the screen and do not include mapped items.

It is important to note that some 1m x 1m units from the Pleistocene Sands have been excavated to greater depths than other areas that may have originally been a part of the same 2m x 2m unit. Once the terrace surface was reached, some units were selected for continued excavation into the Pleistocene Terrace itself, while excavation in other units was halted at the Pleistocene Terrace surface. The 2000 4m x 8m block excavation was only excavated to the Pleistocene Terrace surface and as such, only includes materials from the Holocene and Pleistocene Sands deposits. One 2m x 2m unit from this block was analyzed and is presented in Table A41–1.The 2010–2011 4m x 4m block only includes materials from the Pleistocene Sands. The results of the cortical analysis for these units are presented in Table A41–2.

A total of 14 1m x 1m units from the 5m x 9m block excavation were excavated from the Holocene deposits to the base of the Pleistocene Terrace. The results of the cortical analysis for these 1m x 1m units are presented in Tables A41–3 to A39–17. An additional 21 1m x 1m units were excavated from the Holocene deposits to the base of the Pleistocene Sands, the results of which are presented in Tables A41–18 to A41–24.

Distribution of cortical, quartz, and flake debris

Cortical Pebbles

Table 9–1 presents the distribution in weight (g) of all lithic materials by category recovered from the 1/8 inch screened deposits at Topper. Over six hundred kilograms of lithic materials were recovered from these deposits, of which 185,632.67g were identified as cortical pebbles. Overall, cortical pebbles make up the lowest percentage of lithic material (in weight) from the Clovis deposits. Items classified as quartz and flakes from the Clovis deposits weigh

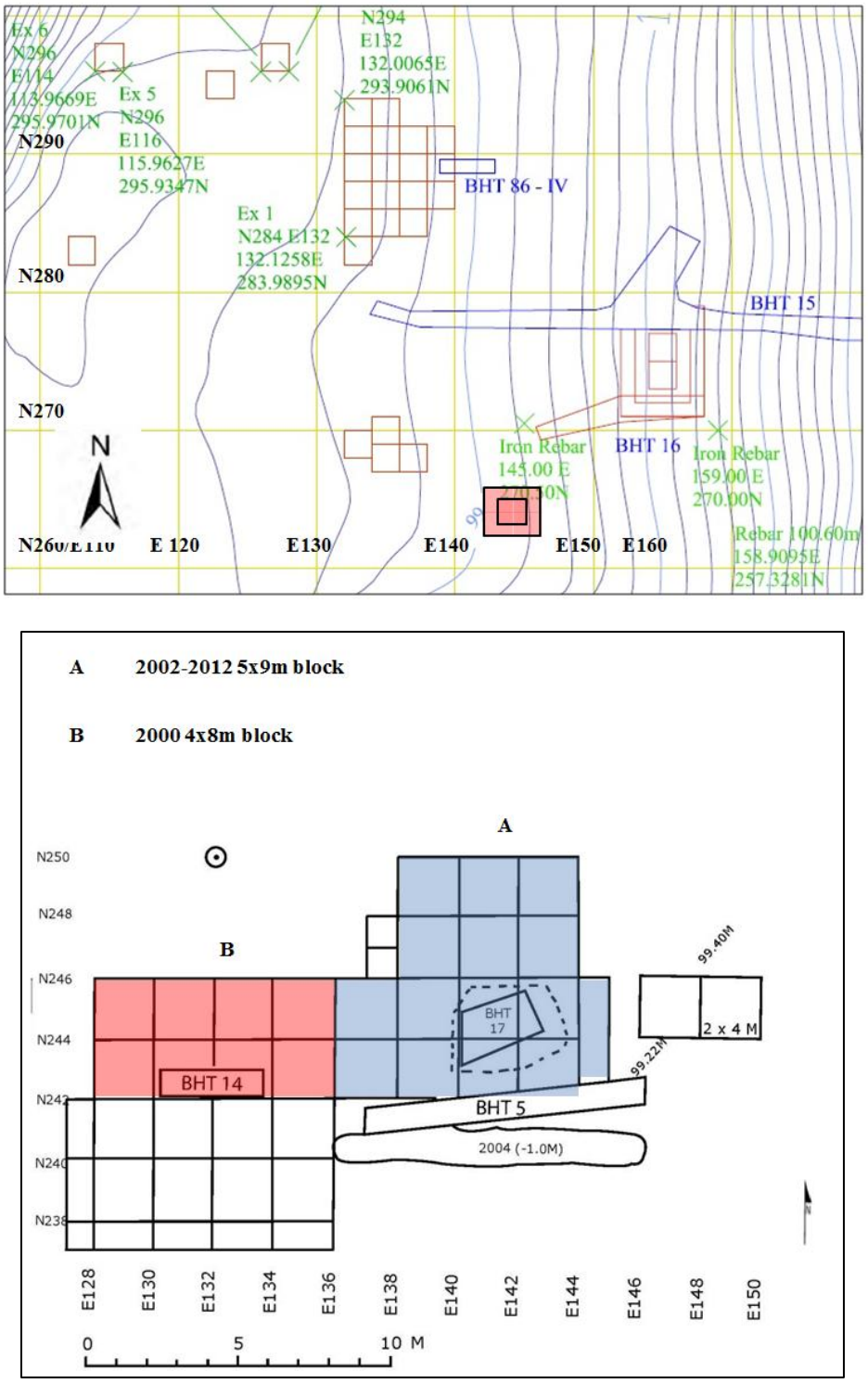


Figure 9–3and 9–4

Location of 2010–2011 4m x 4m block excavation and inset pre Clovis 2m x 2m unit highlighted (at top). At bottom, map showing A, the location of the 2002–2012 5m x 9m block excavation, and B, the 2000 4m x 8m block excavation

Table 9–1
Distribution of lithic weight by depositional stratum for materials recovered from 1/8 inch screen.

	Cortical Weight (g)	(%) stratum	Percentage deviation (O/E)	Quartz Weight (g)	(%) stratum	Percentage deviation (O/E)	Flake Weight (g)	(%) stratum	Percentage deviation (O/E)	Total (g)	Number Flakes
*Clovis	3,925.3	27.61	–8.8%	4,772.7	33.57%	–48.7%	5,517.4	38.81%	+811.2%	14,215.4	11,638
P. Sands	108,113.75	26.07	–13.9%	291,193.54	70.22%	+7.3%	15,372.50	3.70%	–13%	414,679	42,484
Terrace	73,593.62	39.93%	+31.9%	105,459.66	57.22%	–12.6%	5,227.08	2.84%	–33.4%	184,280.36	15,952
Total	185,632.67			401,425.9			26,116.98			**613,174.76**	**70,074**
Total percent of lithic material type by stratum											
		Cortical			Quartz			Flake			
		% Type			% Type			% Type			
Clovis	3,925.3	2.11		4,772.7	1.18		5,517.4	21.11			
P.Sands	108,113.75	58.24		291,193.54	72.53		15,372.50	58.86			
Terrace	73,593.62	39.64		105,459.66	26.28		5,227.08	20.02			
Total	185,632.67	100		401,425.9	100		26,116.98	100			

significantly more than cortical pebbles. Compared to the cumulative amount of lithic items recovered onsite, the items classified as Clovis cortical pebbles account for very little of the total sum of all lithic categories recovered from the site. Given the observed sum weights for each material type by stratum, it is possible to determine how much each category varies from the expected weight. The variation between the observed and expected values can be calculated as a percentage of deviation. Table 9–1 also shows the expected percentage deviation in weight for each lithic category by stratigraphic deposit. Accordingly, Clovis cortical pebbles comprise a lower proportion of the cumulative Clovis bulk weight assemblage compared with flake weight.

Figures A41–1 to A41–15 present the distribution of all lithic materials by category for each stratigraphic deposit at Topper. There is a general increase in the amount of cortical materials by weight through time; beginning with the initial Clovis period, and peaking at the elevation depth of 98.20m.This pattern is followed by a decreasing trend in cortical weight extending into the subsequent Early Archaic deposits (Figures A41–1 to A41–15) The greatest abundance of cortical pebbles from the Paleoindian and Archaic deposits co-occur with the greatest abundance of chipped stone artifacts and debris.

A total of 108,113.75g grams of cortical pebbles were recovered from the 1/8 inch screened Pleistocene Sands deposits (Table 9–1). There is no significant change in the percentage of cortical pebbles when the deposits from the Pleistocene Sands are compared with the proportion of items from the Clovis deposits. Most cortical pebbles by weight was recovered from the lower 40cm of the Pleistocene Sands and at the contact with the Pleistocene Terrace (Figures A41–1 to A41–15). These levels range between 97.15 and 97.55m. There is a decrease in total cortical pebble weight throughout the Upper Pleistocene Sands. These levels range in

depth from 97.65m to 97.95m.The cortical pebbles from the Pleistocene Sands deposits are also not sorted by weight (e.g. with a continual increase or decrease in weight through the profile).

These results of the size grade analysis have implications for the potential for postdepositional transformation of the archaeological deposits at the site. If materials were being sorted by size and weight then the expectation favors downward migration of the smaller lighter pieces toward the base of a given deposit. If such processes are occurring, then there should also be a visible trend in artifact weight through the depositional profile. At Topper this is not the case. The heavier cortical materials occur first within the Clovis deposits, subsequently decrease in weight throughout the upper Pleistocene Sands, and finally increase in weight again at the base of the Pleistocene Sands. There is little evidence for significant size sorting by weight of lighter cortical pieces downward through the profile at Topper, and there is also no decreasing trend in cortical weight through the depositional profile. These finds imply that bioturbation is not responsible for significantly altering the stratigraphic contexts and distribution of cortical pebbles throughout the Lower Pleistocene Sands at the site.

A total of 184,280.36 g of lithic materials were recovered from the Pleistocene Terrace. Approximately 40% of the screened materials from the unit were identified as cortical pebbles. A higher percentage of cortical pebbles were identified from these deposits than from the Clovis or Pleistocene Sands (Table 9–1). Moreover, cortical pebbles from the Pleistocene Terrace make up a higher than expected proportion of the cumulative bulk weight assemblage compared with quartz or flake weight (Table 9–1).This implies that, given the total weight of lithic material from the Pleistocene Terrace, the observed cortical weight differs by 31.9% from the expected weight by volume. However, when examined by depth, the amount of cortex by level remains relatively low throughout much of the Upper Pleistocene Terrace levels. Cortical weights for

these levels average less than 200g/level between elevations 97.10m and 96.10m (Appendix 41). By contrast, the lower 20cm of excavated Pleistocene Terrace deposits average more than 1000g of cortical pebbles by weight. Below the 96.19m elevation, there is an apparent incremental increase in the amount of cortex by weight extending to the base of the Pleistocene Terrace excavation at 95.35m (Appendix 41). The increase in cortical materials at the base of the Pleistocene Terrace excavation correlates with an increase in flake and quartz weights from these deposits, and could reflect the deterioration by weathering of larger chert boulders within the sediment matrix at these levels.

Quartz Pebbles

Over 400 kilograms of quartz pebbles were recovered from the screen bags from excavation sample (Table 9–1). Clovis quartz comprises a higher percentage of the cumulative total of lithic material from the unit than the percentage of cortical materials. The vertical distribution of quartz is presented in Figures A41–1 to A41–15. The distribution of quartz pebbles decreases in weight through time. Quartz pebbles are most abundant from the Upper Pleistocene Sands (97.65m) and decrease in abundance through the Early Archaic deposits 98.30m.This pattern could reflect a change in the channel regime of the Savannah River from a braided system to that of a meandering system over the course of the Late Pleistocene. This adjustment would have resulted in the lowering of quartz deposition at the site through time.

When classified by type, quartz pebbles makeup the greatest percentage of lithic materials from the screen bags from Pleistocene Sands (Table 9–1). Quartz from the Pleistocene Sands comprise 70% of all lithic items recovered from the screen from this depositional unit. There is a significant increase in the abundance of quartz from the Pleistocene Sands compared to the Clovis deposits. The results of a two sample t-test comparing the percentage of pebbles

from each deposit shows that the two assemblages are statistically different (T–statistic = 54.61; p =< 0.00001) (Table 9–2).

The stratigraphic position of quartz pebbles from the Pleistocene Sands is illustrated in Figure A41–18. These pebbles presumably resulted from periodic flooding episodes of the Savannah River, sheet wash, or chute channels that drained into the river prior to 15,000 cal yr B.P. The highest concentrations of pebbles occur in levels between 97.40m and 97.65m, approximately 40–50cm cm *above* the Pleistocene Terrace surface (Appendix 41).

King (2012) conducted a correlation analysis of these deposits in 2009 to determine if there was a relationship between lithic debitage and the co-occurrence of quartz pebbles from a sample of units from the 5x9 block excavation. The results of her analysis showed a direct association between items identified as lithic debitage and the distribution of quartz pebbles, suggesting that non-cultural and potential cultural materials were likely deposited at the same time. The present study largely corroborates King's findings with regard to the distribution of quartz pebbles. That is, higher concentrations of quartz deposits are found within the Pleistocene Sands. Although there is an incremental increase in the distribution of quartz pebbles by depth throughout the Upper Pleistocene Sands, below 97.50m the amount by weight of quartz pebbles actually decreases each 5cm level until reaching the Pleistocene Terrace surface.

As mentioned above, the greatest abundance of quartz pebbles occur between 97.40m and 97.65m (Figure 9–5). Interestingly, and contrary to King's findings, the distribution of flakes does not correlate precisely with this pattern. There is a disproportionate increase in the amount of flakes by weight from the Pleistocene Terrace surface extending to a depth of 97.35m (Figure 9–5). Below the Clovis deposits, the amount of flakes by weight decrease, with a subsequent increase between 97.35 and 97.00m As such, the highest concentrations of quartz deposits do

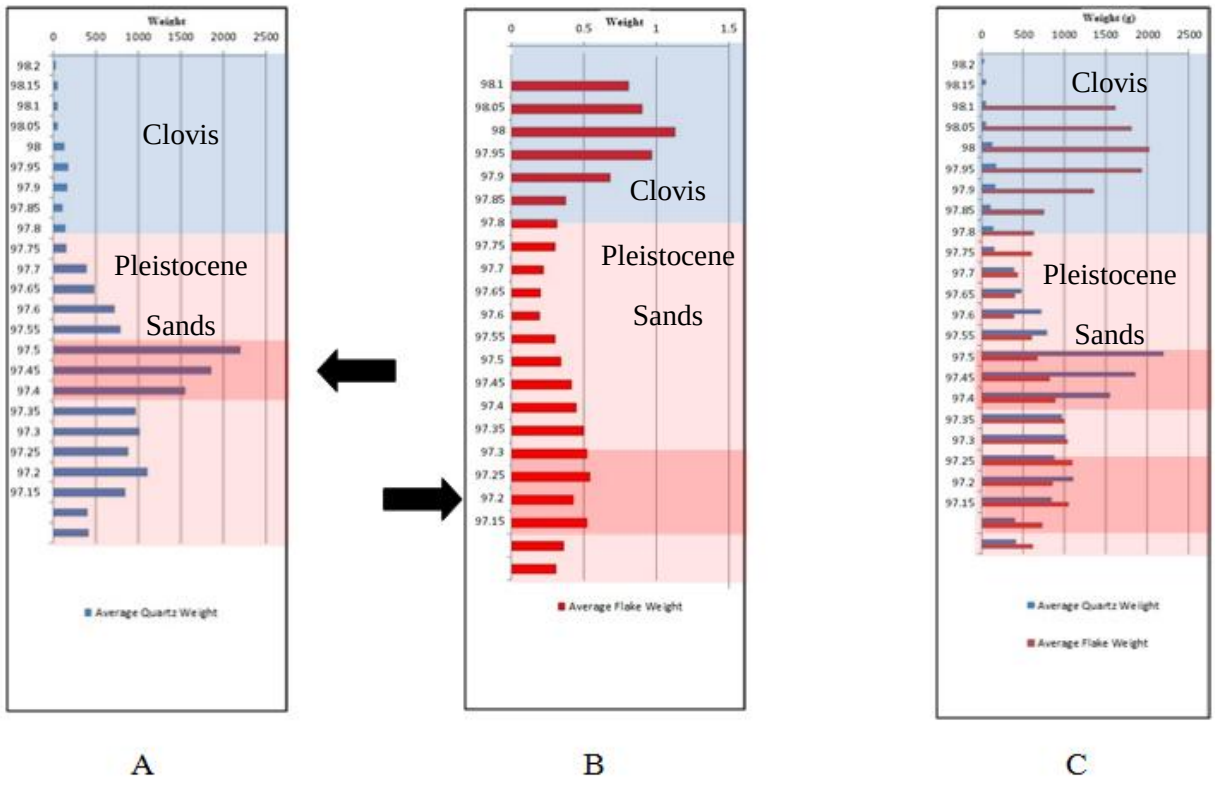


Figure 9–5

Illustration showing A; the average weight of quartz pebbles per level for all units exmined, B; the average fake weight per level for all units examined, C; Comparison of average quartz weight by average flake weight (x2k) per level. Highest average flake weights for Pleistocene Sands do not overlap with highest average quartz weights.Arrows indicate highest average quartz and flake weights below Clovis respectively.

Table 9–2
The results of a two sample t-test comparing the percentage of Quartz Pebbles from the Clovis and Pleistocene Sands.

			t statistic	**p value**
Clovis	4,772.7	33.57%	54.61	p = <0.00001
P. Sands	291,193.54	70.22%		

Table 9–3
Number of river stained cortex and thermally altered flakes recovered from 1/8 inch screen by stratum.

Stratum	**Flakes (n)**	**River stained cortex Flakes (n)**	**Thermally Altered Flakes (n)**
Clovis	11,638	1,054	1,292
Pleistocene Sands	42,484	46	582
Pleistocene Terrace	15,952	0	541
Total	70,074	1,100	2,415

not rest on the Pleistocene Terrace surface, the location of the highest abundance of flakes from the deposit. These patterns are best illustrated in Figure 9–5 which shows that the level of greatest flake weight (97.25–97.15m) and the level of greatest quartz weight (97.50–97.40m) are offset by 25cm.

These results imply that flakes could have been present within the lower 25cm of the Pleistocene Sands *prior to* the onset of fluvial events that resulted in the deposition of the greatest abundance of quartz pebbles. Thus the high influx of quartz pebbles between elevations 97.50–97.40m could have disturbed, removed, or dislocated an existing assemblage of flakes. An alternative interpretation is that flakes from the Clovis levels have filtered through the quartz deposits of the Upper Pleistocene Sands and have accumulated at the base of the Pleistocene Sands. In this latter case, only flakes of small size grades should be present within these lower deposits.

When classified by type, quartz pebbles were found to make up 57% of the lithic materials by weight from the Pleistocene Terrace and 27% of all quartz identified from the site (Table 9–1) In total 105,459.66g of quartz pebbles were recovered from Pleistocene Terrace deposits; The quartz deposits from the Pleistocene Terrace were presumably deposited by low energy overbank flood deposits from the adjacent Savannah River. Unlike the dense quartz lenses from the Upper Pleistocene Sands, there is little evidence for high intensity flooding episodes from the deposits of the Pleistocene Terrace.

There are no abrupt spikes in the distribution of quartz pebbles within the Upper and Middle Pleistocene Terrace deposits. Rather, the distribution of quartz by level varies little between elevations 97.10–96.10m (Figures A41–3 to A41–7). By contrast, an incremental increase in the abundance of quartz by level occurs beginning at elevation 96.10m and extending

to the base of the Pleistocene Terrace profile at 95.35m. Levels from the Lower Pleistocene Terrace average greater than 1,500g of quartz per level (Tables A41–3 to A41–24). These deposits include quartz pebble sizes that are larger than items from the overlying deposits and form the basis of a fining up sequence that characterizes the geomorphological composition of the Pleistocene Terrace structure (Harris 2010).

Flakes and Debitage

Over 26 kg of flake debitage were recovered from the excavation sample (Table 9–1). Of all lithic categories examined, flakes were the most abundant and heaviest category from the Clovis deposits, accounting for more than 5,000g of individual flakes and flake fragments. In most cases, flake counts range from 50–100 per 1m x 1m unit for the basal levels of the Clovis deposits. By contrast, levels that correspond with the "peak" of the Clovis occupation typically have as many as 500 flakes per level.

A total of 15,372.50g of flakes were identified from the screen bags from the Pleistocene Sands. This includes a total of 42,484 flakes and debitage. These flakes comprise the least abundant material type by weight from the depositional unit. However, when the cumulative distribution of flakes was examined across all depositional units from the site, nearly 60% of all flakes by weight derive from the Pleistocene Sands. These percentages demonstrate the dense nature of the lithic materials recovered from the Pleistocene Sands. When the observed versus expected percentage deviation in flake weight for the Pleistocene Sands was considered, fewer flakes by weight were observed than the statistically expected outcome.

A total of 5,227.8g of flakes were identified from the 1/8 inch screen materials from the Pleistocene Terrace (Table 9–1). This number represents approximately 20% of all flakes identified from the research sample. As was found for the Pleistocene Sands, flakes also

represent the least abundant lithic type from the Pleistocene Terrace in terms of weight, comprising less than 4% of all materials identified. An analysis of the Pleistocene Terrace deposits by flake count resulted in the identification of 15,952 flakes. This number accounts for approximately 23% of all flakes identified from the 1/8 inch screen sample at the site.

A comparison of the cumulative flake totals for each stratum shows a number of intriguing patterns. For example, nearly four times as many flakes were recovered from the Pleistocene Sands than from the overlying Clovis deposits (Table 9–1). When standardized by volume, the Clovis levels consist of relatively high flake totals per level, whereas the Pleistocene Sands exhibit more moderate flake counts distributed over a greater number of excavated levels (Figure 9–6). On average, more than 400 flakes were recovered per level from the 1/8 inch screened Clovis deposits. Flake counts decrease with depth beneath these deposits to an elevation of 97.85m. Flakes recovered from the Upper Pleistocene Sands are often fragmented, and frequently lack attributes associated with biface manufacture. However, there is a subsequent increase in flake counts throughout the lower Pleistocene Sands beginning at elevation 97.60m and extending to the contact with the Pleistocene Terrace surface between 97.15m and 97.00m. Compared with the density of flakes from the overlying Holocene and Pleistocene Sands, the density of flakes from the Pleistocene Terrace tends to be much lower. Flakes from the Pleistocene Terrace rarely average greater than twenty items per level (Figure 9–6), whereas deposits from the Pleistocene Sands were frequently found to average more than 100 flakes per level. It appears that the majority of flakes occur within three distinct zones of the Pleistocene Terrace. Zone one ranges from the Pleistocene Terrace surface to elevation 96.90m. A middle zone ranges in depth from 96.25m–95.90m. Finally, a third and deeper zone consists of a cluster of chert flakes that range in depth from 95.50m–95.30m (Figure 9–6). It should be noted that the

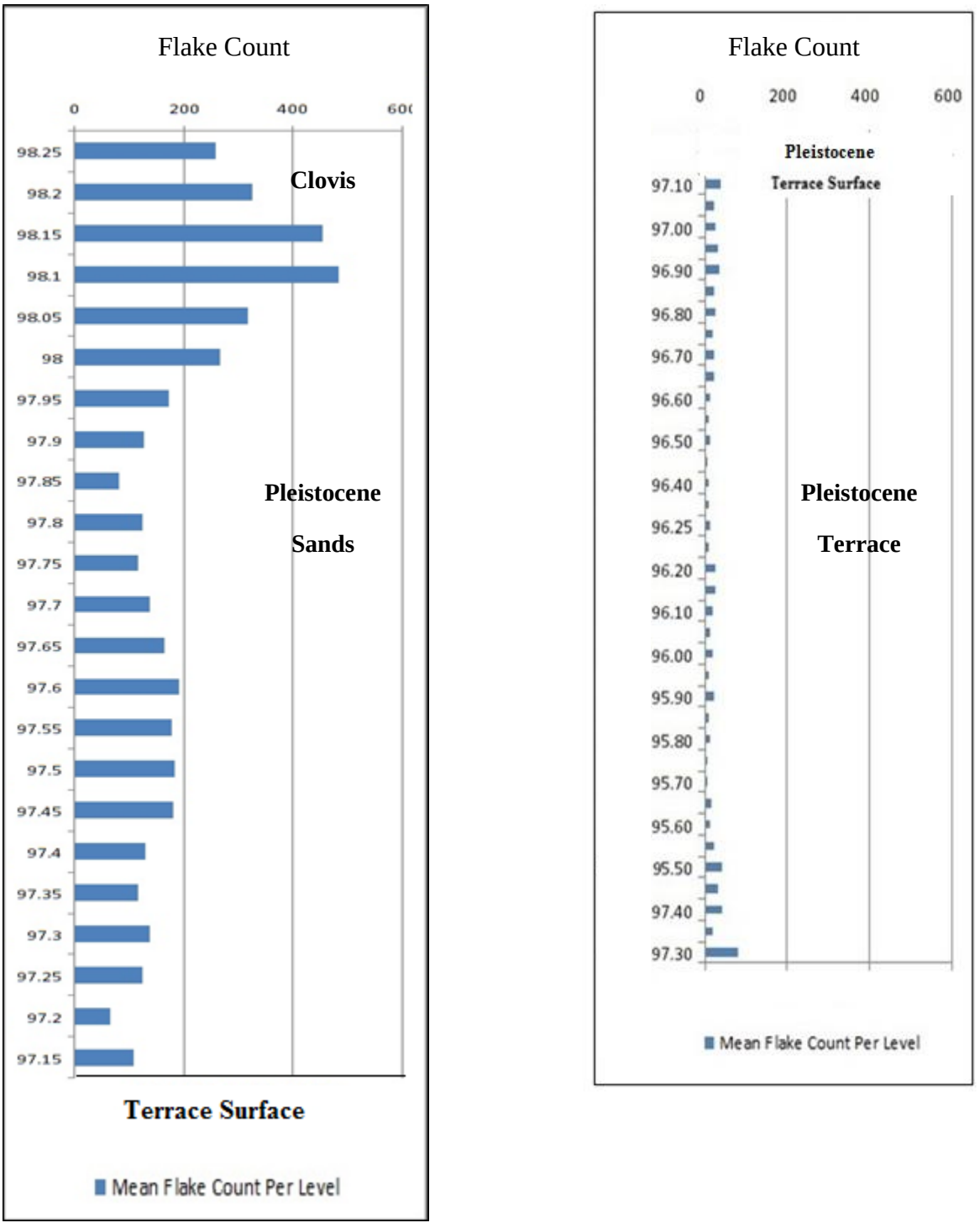
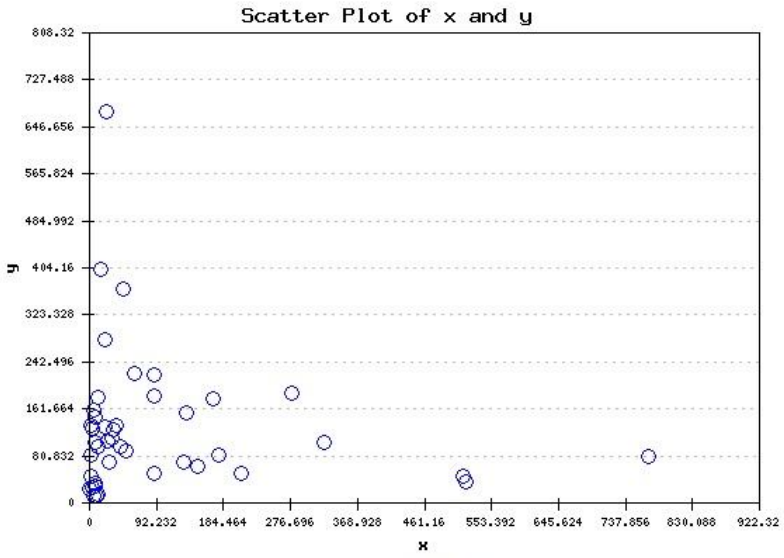


Figure 9–6
Average flake count by level for all flakes and debitage recovered from the Holocene and Pleistocene Sands. Due to the depth of the Pleistocene Terrace excavations, the vertical scale is compressed on the right hand side of the figure.

discrete patterns visible in the distribution of flakes throughout the Pleistocene Terrace should not alone be considered as evidence of human occupation, as postdepositional processes could also account for these patterns.

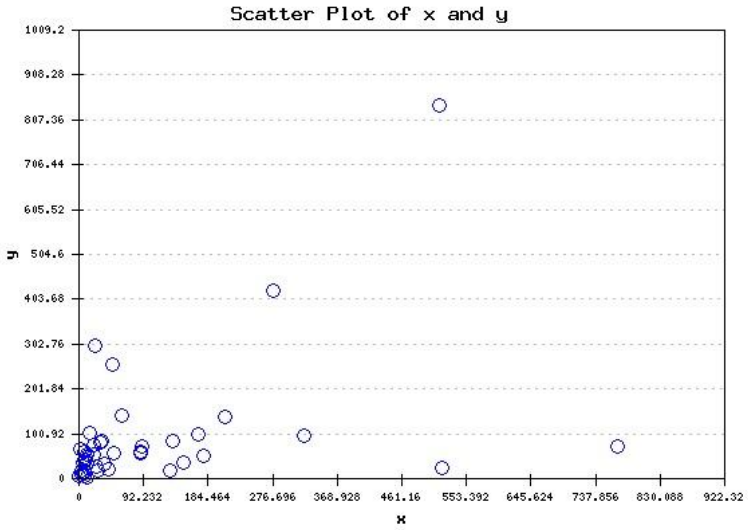
To determine if a correlation exists in the vertical distribution of flakes and other lithic categories by stratum, a Pearson Correlation coefficient analysis was conducted. All flakes from the Clovis contexts were compared against the distribution of cortical and quartz pebbles (Figure 9–7). The results of the Pearson correlation test show a negative correlation between the distribution of the flake and quartz assemblages. However, a weak positive association is indicated by a value of .4340 when the Clovis flake assemblage was compared to the distribution of cortical pebbles. These patterns show that there is no substantial relationship between the distribution of flakes and other lithic categories from the deposit, and that the distributions are independent.

Next, all flakes from the Pleistocene Sands were compared against the distribution of cortical and quartz pebbles (Figure 9–8).There is a weak positive correlation in the distribution of flakes relative to quartz pebbles ($r = 0.3573$), and a weak positive correlation in the distribution of flakes relative to cortical pebbles from the Pleistocene Sands ($r = 0.3535$). These results differ in some respects from the correlation analysis conducted for the Clovis deposits, but are similar in other aspects. For example, whereas there is a stronger correlation between flakes and quartz pebbles from the Pleistocene Sands ($r = 0.3537$, $p = 0.003$) compared with the Clovis deposits ($r = 0.1423$, $p = 0.0001$), both stratigraphic deposits exhibit similar weakly positive correlations when the change in distribution of flakes was compared to cortical pebbles. It appears that the association between flakes and quartz is stronger in the Upper Pleistocene



r = - .1423

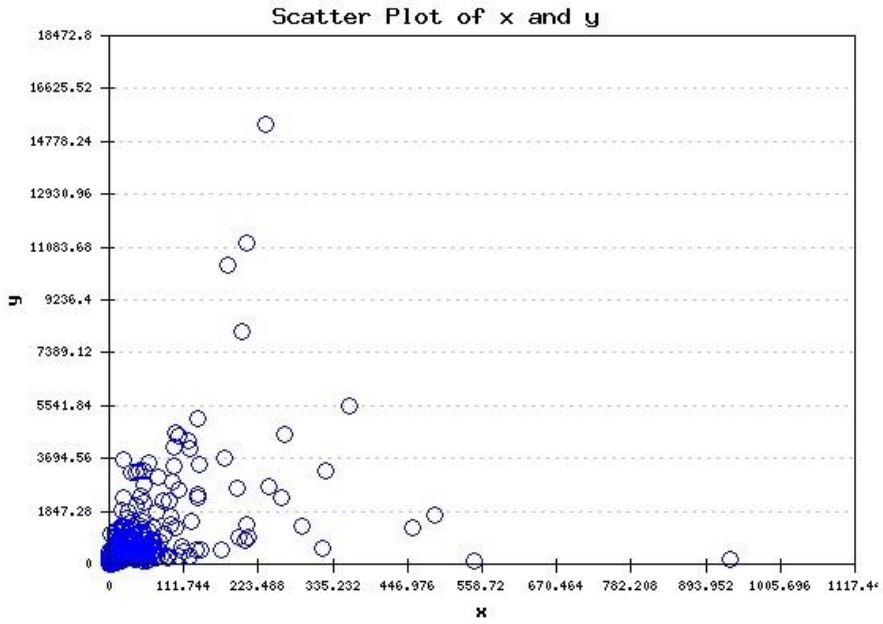
A



r = .4340

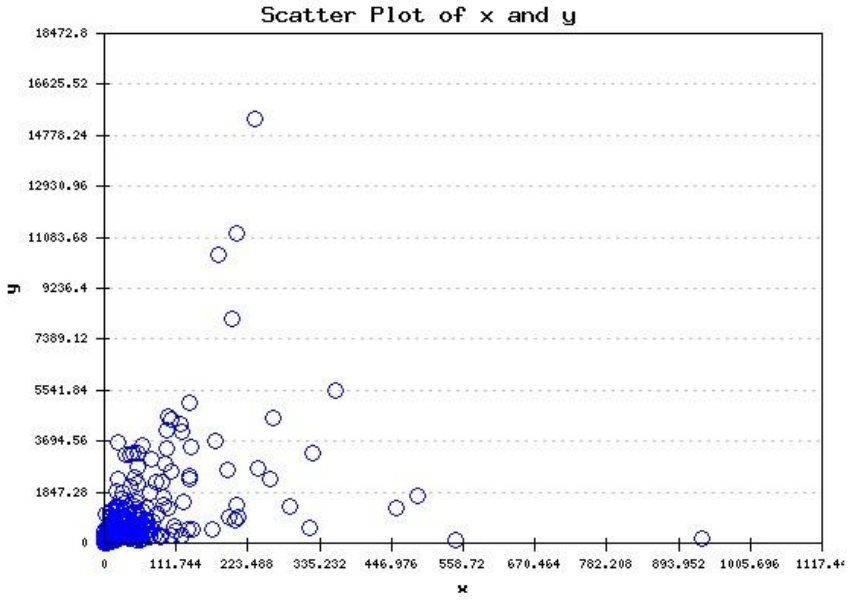
B

Figure 9–7
Results of Pearsons Correlation Test. A; Negative correlation for flake weights by quartz weights for levels from the Clovis deposits (p = 0.320). B; Weak positive correlation for flake weights by cortical weights for levels from the Clovis deposits (p = 0.001639).



r = .3573

A



r = .3535

B

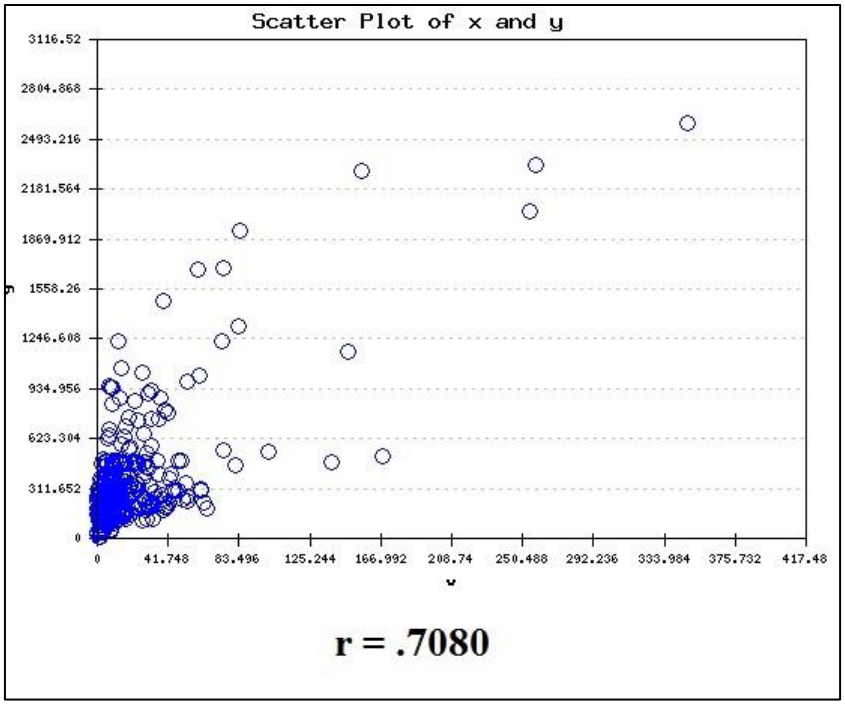
Figure 9–8

Results of Pearsons Correlation Test. A; weak positive correlation for flake weights by quartz pebble weights from Pleistocene Sands (p = .0002). B; weak positive correlation for flake weights by cortical pebble weights from Pleistocene Sands (p = 0.0003).

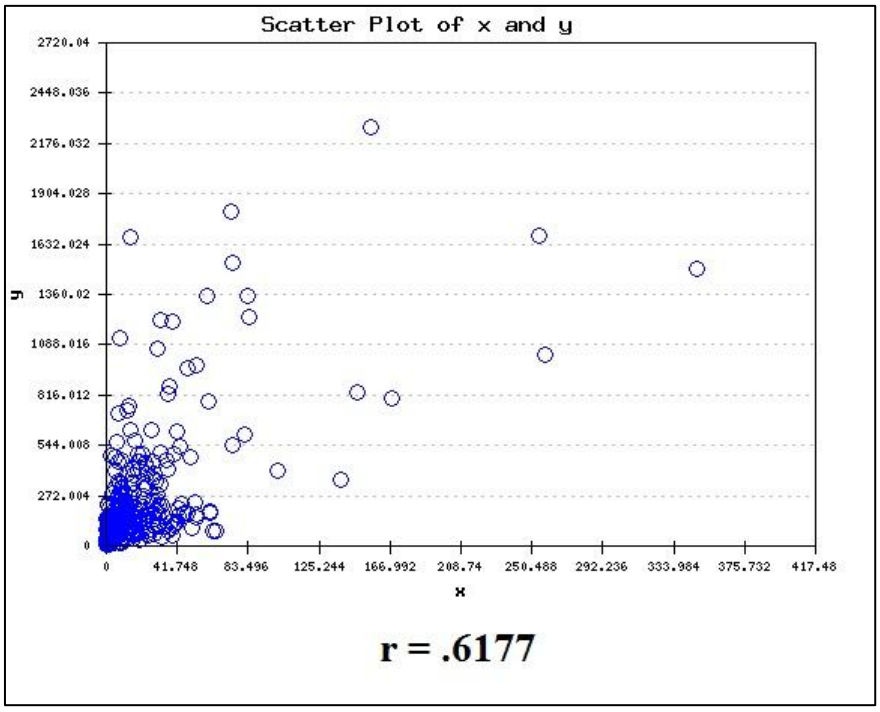
Sands than it is in the Clovis levels whereas the relationship between flakes and cortical pebble/material remains the same for both depositional units.

Finally, a Pearson Correlation coefficient was conducted to test for the degree of similarity between the flake, cortical pebbles and quartz pebble assemblages from the Pleistocene Terrace (Figure 9–9). There is a moderate positive correlation ($r = 0.7080$, $p = 0.0003$) when the distribution of flakes by weight was compared to the vertical distribution of quartz by weight. Similarly, when the distribution of flakes was compared to the vertical distribution of cortical materials throughout the Pleistocene Terrace, the results also found a moderate positive correlation ($r = 0.6177$, $p = <0.0001$). It appears that the distribution of flakes from the Pleistocene Terrace, as a measure of weight, correlate with both cortical and quartz pebble materials.

The debitage categories for each stratum were further examined with regard to condition (Table 9–3). For this analysis debitage recovered from the 1/8 inch screen was observed noting river stained cortex and thermal alteration (Table 9–3). A total of 1,054 flakes or flake fragments that exhibit evidence of river staining or river stained cortex on the flake exterior was identified from the Clovis levels. This number reflects approximately 9% of all flakes identified from the Clovis 1/8 inch screened deposits. In terms of morphology, the flakes that exhibit river stained cortex from the Clovis deposits tend to be larger than flakes from corresponding levels that lack river stained cortex. The presence of river stained cortex on Clovis chert flakes suggests that Clovis peoples were extracting cobbles from the nearby Savannah River, exposed as the result of the river down-cutting through the deposits containing the high quality tool-stone. At Topper, the frequency of flakes having river stained cortex increase in abundance during the Early and Middle Paleoindian period, with a subsequent decline observed for the terminal Pleistocene



A



B

Figure 9–9

Results of Pearsons Correlation Test. A; positive correlation for flake weights by quartz pebble weights from Pleistocene Terrace (p = <.00001). B; positive correlation for flake weights by cortical pebble weights from Pleistocene Terrace (p = <0.00001).

(Figure 9–10). Such flakes then decrease in abundance throughout the Early and Middle Archaic period at Topper.

When the flakes from the Pleistocene Sands were examined, there is a significant decrease in the amount of river–stained cortex in the Pleistocene Sands compared with the overlying Clovis deposits. In total, only 46 flakes were found to display evidence of river stained cortex from the Pleistocene Sands. This value reflects only 4.3% of all river stained cortex chert identified in the study compared with nearly 96% of the population identified from the Clovis levels. River stained cortex from the Pleistocene Sands comprises .065% of all flakes identified from the 1/8 inch size grade screen mesh.

When thermally altered flakes were considered, the analysis identified 1,291 flakes from the Clovis deposits. While Clovis is not typically associated with the heat treatment of tool-stone, the presence of thermally altered lithics from these deposits could be explained as the result of bioturbation or downward drift of small flakes from the overlying Archaic deposits. A comparison of the morphology of the thermally altered flakes from these deposits found that most tend to be smaller than flakes that lack thermal alteration. Thermal alteration could also have resulted if detached items were discarded and subsequently burned with refuse. Compared with the lower deposits, more flakes were classified as thermally altered or as river stained cortex from the Clovis deposits than from any other stratum examined onsite.

A total of 582 flakes display evidence of thermal alteration from the Pleistocene Sands. This figure makes up approximately 1.3% of all flakes identified from the Pleistocene Sands and is less than the percentage of thermally altered flakes identified from the Clovis deposits (11%). When the distribution of thermally altered flakes was examined by depth, there is a decreasing trend in the average number of flakes per level below the Clovis deposits. This trend begins at

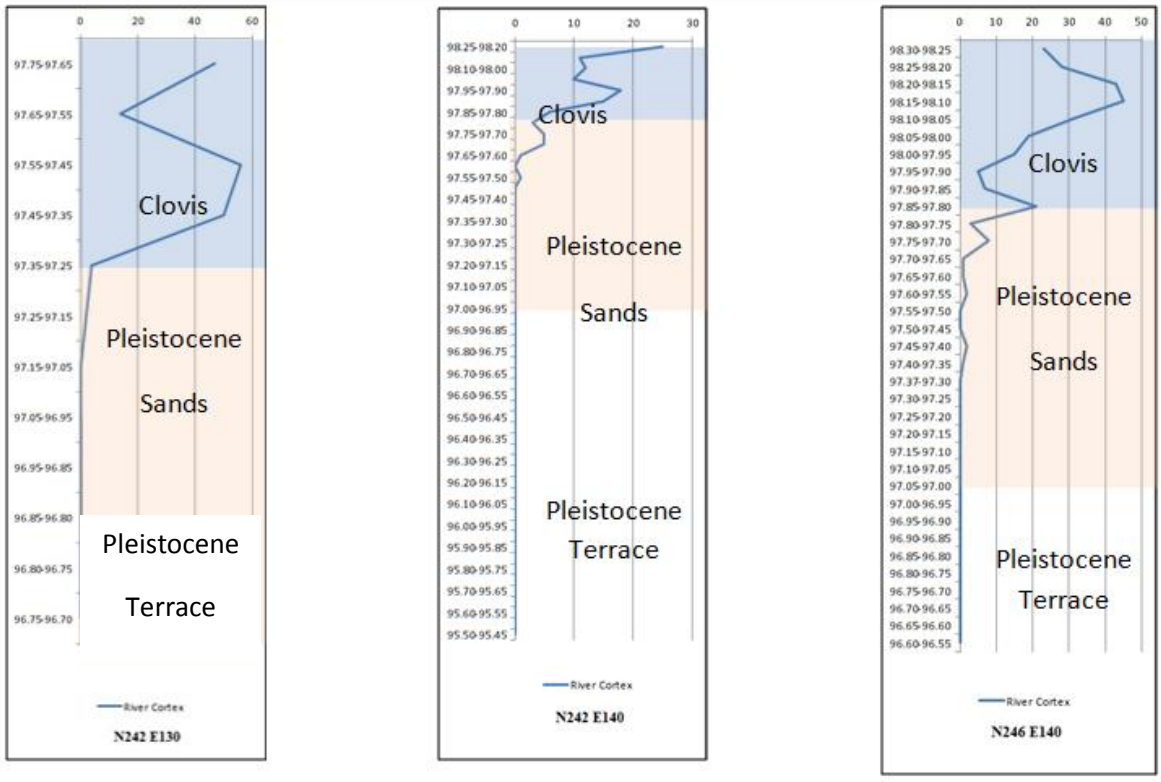


Figure 9–10
Distribution of river stained cortex by stratum for units N242 E130, N242 E140, and N246 E140. There is an abrupt decrease in the number of flakes that exhibit river stained cortex below the Clovis contexts at Topper.

the base of the Holocene colluvium and extends to a depth of 97.50m, well within the Pleistocene Sands (Figure A41–23). Thermally altered flake counts decrease in frequency between 97.50m and 97.25m. Interestingly, this is the region of greatest quartz influx. This decreasing pattern is an indication that thermally altered lithic items from the Holocene deposits could have been subjected to post depositional processes resulting in vertical dispersion and downward migration through the stratigraphic profile from the Clovis deposits and into the Upper Pleistocene Sands.

Below the Upper Pleistocene Sands, a second spike in the number of thermally altered flakes was identified at the base of the Pleistocene Sands and extends into the Upper portion of the Pleistocene Terrace. This spike is evident in Figure 9–11 between elevations 97.15m and 97.00m in the diagram to the right. It is possible that this deeper distribution of flakes could have formed as a byproduct of the nature of the sediments themselves. Accordingly, small flakes migrating downward through the loose Pleistocene - aged sands could have accumulated on the Pleistocene Terrace surface, thus creating what appears to be a lithic deposit or surface than could falsely be interpreted as cultural. These patterns alone do not confirm or reject the hypothesis that the lithics found within pre Clovis aged sediment were the result of human manufacturing processes, only that two distinct lithic concentrations of thermally altered flakes are present within the stratigraphic profile of the Pleistocene Sands at the site. The discovery of thermally altered flakes within the Pleistocene Sands is interesting given that many lithic items from the deposit have undergone significant weathering. It appears that at least a portion of flakes from the unit may have undergone differential rates of weathering than others (allowing some flakes to retain evidence of thermal alteration).

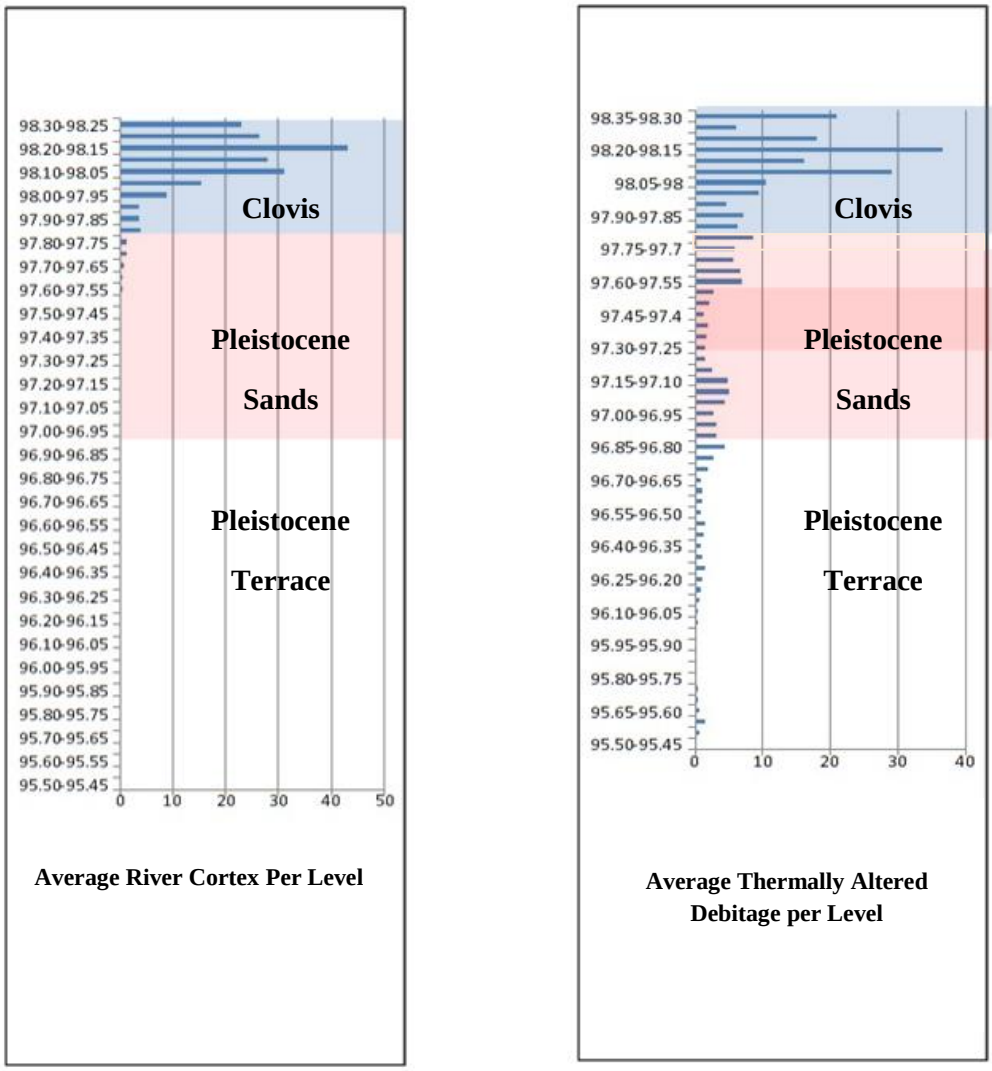


Figure 9–11

Average number of river–stained and thermally altered flakes by level at the Topper Site (38AL23). Dark red shaded area at right indicates levels with highest average quartz content.

A total of 541 thermally altered flakes were identified from the Pleistocene Terrace. This figure comprises 22.4 % of all thermally altered flakes from the study sample. The vertical distribution of thermally altered flakes show a strong positive correlation with the distribution of the entire Pleistocene Terrace flake assemblage as a whole (Figures 9–6,9–11).The Pearson Correlation test resulted in an r value of 0.7402, and indicates that a linear relationship exists between the two flake assemblages. Therefore based on the vertical distribution, it appears that there are three zones or concentrations of thermally altered flakes within the Pleistocene Terrace formation, and that these concentrations correlate with the spatial locations of the three zones identified for the entire flake assemblage as described above.

Figure 9–9 presents the average number of river–stained and thermally altered flakes by level at Topper. There is a rapid drop in the percentage of river stained cortex flakes per level beginning at the base of the Holocene colluvium at 97.80m. The decline in flake count is far greater and more precipitous than observed for the thermally altered flake category. Moreover, there is no evidence for a secondary spike in the distribution of river stained cortex flakes at the base of the Pleistocene Sands similar to that found for the thermally altered flake category. Moreover, not a single lithic item from the Pleistocene Terrace exhibited river stained cortex on the exterior surface. These discoveries have a number of potential implications regarding site integrity. The findings imply that either: 1), very few river stained cortex flakes are migrating downward through the stratigraphic profile at Topper, 2), river stained chert was not available for exploitation prior to the Clovis occupation at the site, 3), river stained cortex flakes are migrating through the stratigraphic profile in higher than observed frequencies, yet many examples have failed identification as they have undergone severe weathering resulting in leached exterior surfaces, or 4), river stained cortex flakes have weathered to unrecognizability

in the Pleistocene Sands. If weathering processes had obscured the presence of river staining on chert flakes from the Pleistocene Sands as described in examples three and four above, then it follows that the same processes should have also led to the weathering of the thermally altered flakes, thus obscuring their presence as well. The results suggest that this is not the case. The thermally altered flakes occur in far greater percentages from the Pleistocene Sands than examples of river stained cortex. Furthermore there is no confirmation that weathering has been sufficient enough to remove evidence of thermal alteration on flakes, to obscure an unknown percentage of the thermally altered flakes from the Pleistocene assemblage. Given these patterns, it is more probable that either very few river stained cortex flakes are migrating downward through the stratigraphic profile at Topper, or the relative absence of river stained cortex on flakes from the Pleistocene Sands reflects an absence of exposed tool–stone from the Savannah River prior to 15,000 B.P. The absence of river-stained chert from the Pleistocene Terrace in deposits where upland cortex and thermally altered flakes are present support the proposition that river stained chert was not exposed during the period of deposition of material that became the Pleistocene Terrace following incision, and that postdepositional processes resulting in the vertical movement of lithic items have not affected the stratigraphic integrity of the lithic assemblage contained within the Pleistocene Terrace at Topper.

Chapter Summary

This analysis demonstrates that cortical materials are most abundant from three strata on the alluvial terrace at the Topper Site. These strata include the Clovis deposits, the Lower Pleistocene Sands, and the Lower Pleistocene Terrace. The Clovis and Lower Pleistocene Sands correlate with the highest concentrations of 1/8 inch flake debris and flake debris by weight, and could reflect two discrete cultural occupations. The co-occurrence of these two lithic categories

could reflect initial cobble testing or the decortication of large cobbles. Given the similar patterns in percentage of cortical weight from the Clovis and Lower Pleistocene Sands, the occurrence of cortical pebbles from both deposits is likely a product of similar formation processes. In this case, the majority of cortical pebbles likely relates to lithic reductive processes; Clovis cortex produced during the decortication process, and pre Clovis cortical pebbles and debris produced during bipolar reduction.

Quartz pebbles occur in the lowest percentages from the Clovis deposits and in the Upper Pleistocene Terrace. Such pebbles occur with in greater percentages from the Upper Pleistocene Sands and from the Lower Pleistocene Terrace. These quartz lenses have been interpreted as chute channels resulting from fluvial events prior to 15,000 cal yr B.P. (Goodyear personal communication 2014; Leigh 2006, 2008). Quartz occurs in moderate amounts throughout much of the Pleistocene Terrace, increasing substantially in weight per level at the base of the excavation.

Chert flakes occur in high quantities in the Clovis deposits and to a lesser extent at the base of the Pleistocene Sands. These flakes are sparsely distributed throughout the Pleistocene Terrace. Flakes from the terrace are concentrated in three zones which also correlate with the distribution of thermally altered flakes. Thermally altered flakes from all deposits at Topper could reflect intentional human alteration or could represent old surfaces where occasional burning occurred. Although thermally altered flakes are present throughout the stratigraphic profile at Topper, the presence of river stained cortex flakes is restricted to the Holocene and Clovis deposits and to the Upper Pleistocene Sands

Based on the results of the cortical analysis, two cultural occupations were tentatively identified below the Holocene deposits at Topper. These cultural occupations include a Clovis

component identified by high concentrations of flakes between elevation 98.10–97.85m and a second, deeper pre Clovis cultural component demonstrated by elevated flake counts associated with lower levels of quartz in the Lower Pleistocene Sands between elevations 97.25m–97.00m.

CHAPTER X

RESULTS OF ANALYSIS: MASS AND SIZE GRADE ANALYSIS

All lithic materials recovered from each 5cm level from the Holocene, Clovis, Pleistocene Sands, and Pleistocene Terrace screen and artifact bags at Topper underwent mass and size grade analysis. This process began by sorting all screen materials from (screen and artifact bags) from each level by category. Lithic materials were then classified as flakes (complete or fragmentary), cortical chert debris, or quartz pebbles. Each lithic category from every level was subsequently sorted by total weight according to 5 screen sizes. For this step, the flakes, cortical pebbles, and quartz pebbles were independently passed through a series of nested U.S.A. Standard Testing Sieves, using five screen sizes: 2.5in, 1in, ½ in, ¼ in, and 1/8 in (Appendix 41–44).

Although mass and size grade analysis have traditionally been used to differentiate between separate stages of a lithic reductive cycle in the manufacture of chipped stone tools, the procedure is also beneficial for evaluating issues relating to site formation and disturbance such as bioturbation, sediment consolidation, or fluvial transport, among others. For the purpose of this study, mass and size grade analysis was conducted as a means to present and compare the vertical distribution of flakes, quartz pebbles, and cortical pebbles throughout the complete stratigraphic profile at Topper.

First, the cumulative size grade of flakes, quartz pebbles, and cortical pebbles was assessed by depth. The goal of the analysis was to determine whether or not any variation exists in artifact size by lithic category throughout the stratigraphic profile at the site, and if such differences could be attributed to postdepositional site formation processes.

For the flake analysis, three separate Pearson's correlation procedures were carried out. These procedures examined 1) level flake weight by depth, 2) the percentage of flake weight by size grade, and 3, the linear relationship of flake size grade by depth. If an assemblage has not been affected by natural processes, then there should be no correlation in flake size with vertical depth and flakes should not be well sorted. By contrast, a strong positive relationship in flake size with vertical depth implies that the assemblage contents may have been subjected to disturbance, thus compromising site integrity and the contexts of any archaeological assemblages. The independent cortical analysis was conducted to determine the degree to which mechanical weathering processes have occurred onsite whereas the quartz pebble analysis was employed to assess the extent to which fluvial processes may have led to site disturbance.

Next, the cumulative mass and size of each lithic category was compared. For this procedure, the distribution of flakes was compared to the mass and size of cortical and quartz pebbles throughout the vertical profile at the site. A positive correlation in total flake weight with total quartz weight would imply that the extant assemblage may have been disturbed, reworked, or size sorted as quartz pebbles entered by fluvial activity. A negative correlation indicates a negative association between the flake and quartz deposits and would imply that fluvial processes had little effect on the integrity of the flake assemblage.

Cortex can either form as the byproduct of lithic reduction activities or from the deterioration and weathering of lithic materials over time. An absence of a correlation in the distribution of cortical pebbles and flake weight would provide strong evidence that the cortical deposits likely formed by natural weathering episodes, and therefore that the extant distribution should not be considered associated with the production of the flake debris. Although a positive correlation in total cortical weight and total flake weight by level could reflect a direct

association between the amount of tool manufacture debris and the material byproducts of lithic reduction, other factors could also result in these patterns. For example, a positive correlation might imply that the existing deposits have undergone size sorting by weight, or that higher concentrations of cortical pebbles indicate the greater likelihood that items that look like artifacts might be present. To differentiate between these possibilities, the cortical and flake materials were examined relative to the distribution of quartz pebbles. If the flake and cortical pebble assemblages have undergone size sorting by weight, and such patterns are due to natural processes, then the agents responsible for such size sorting should also result in the size sorting of quartz pebbles. Therefore, well-sorted materials resulting from natural processes are identified by a strong positive correlation in the combined total weight of flakes, cortical pebbles and quartz pebbles. By contrast, where there is only a correlation in the weight of flakes and cortical pebbles, the distribution is interpreted as a stratigraphically intact assemblage of lithic debris resulting from episodes of lithic tool production. Quartz pebbles can be employed as a proxy to differentiate between site formation processes and episodes of tool production. The sections below provide the results of the mass and size grade analysis for the flake, quartz pebble, and cortical assemblages at Topper.

Mass and Size Grade Analysis: Distribution of Flakes

The distribution of flakes for each size grade at Topper is presented in Appendix 42. Far more flakes occur within the Clovis deposits at the site. Average flake weights for the Clovis deposits range from 60g to 90g per level. Below the Clovis horizon, the abundance of flakes by size grade exhibits a sharp decline in weight. For example, between elevations 97.95–97.75m the cumulative flake weights are less than 10g per level prior to increasing again between elevations 97.70 and 9.15m (Figure 10–1). Although this increase in flakes does not reach amounts

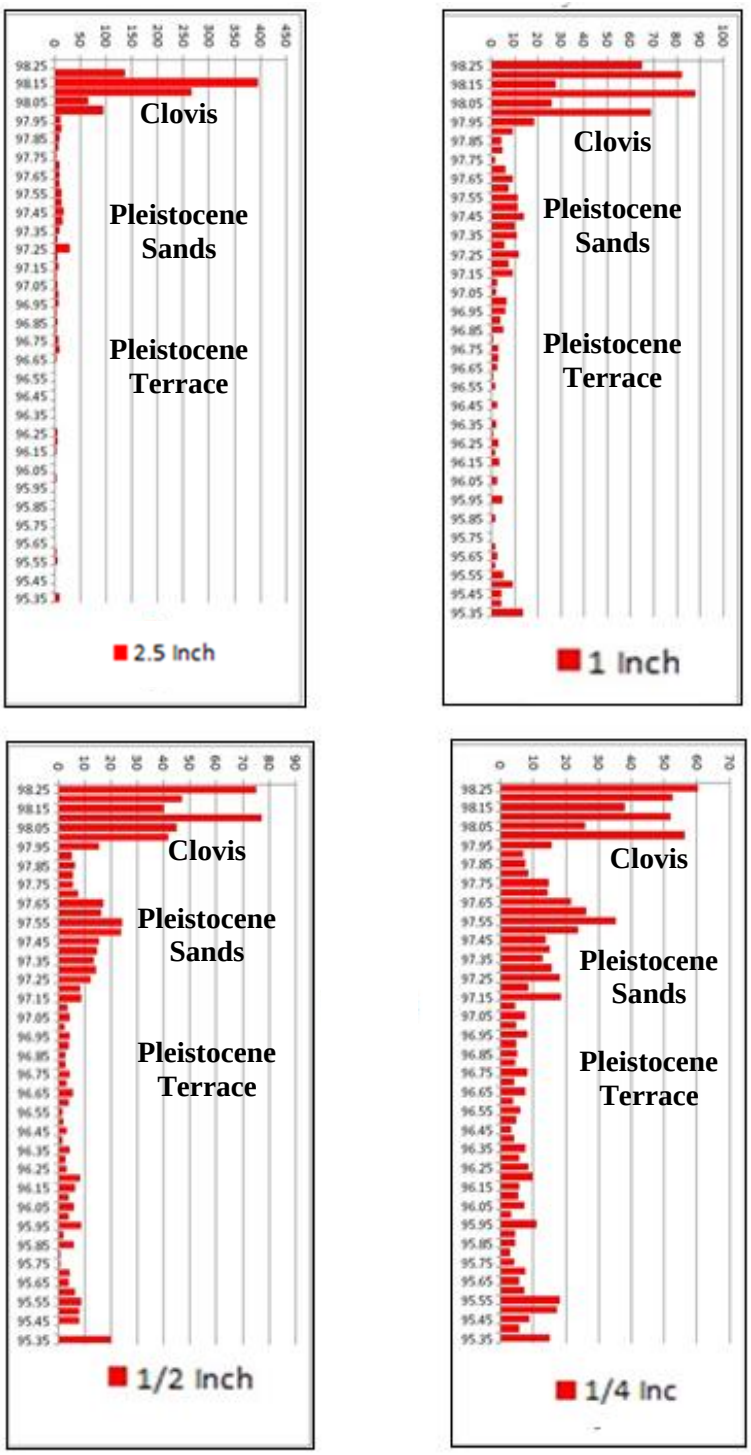


Figure 10–1
Distribution of flakes by average weight per level for each size grade.

typical from the Clovis deposits, flakes do increase to a maximum average of 35g per level for the Lower Pleistocene Sands. Below the Pleistocene Sands, the abundance in weight of flakes decreases significantly throughout the Pleistocene Terrace, and varies little until reaching the base of the Pleistocene Terrace excavation where flakes again increase to 20g per level.

When the distribution of flakes was examined by size grade, nearly 50% of all flakes from the Clovis deposits were recovered from the 2.5 inch sieve (Table 1, Figure 10–1). Overall, there is a decrease in the percentage of Clovis flakes per level for each incrementally smaller size grade. The low percentage of small flakes from the Clovis deposits could imply the use of specific kinds of reduction activities at the site. For example, the abundance of large flakes could either be a product of the site's positioning close to a source of raw material or reflect early stage tool production.. Alternatively, the low percentages of small flakes could also reflect the removal of smaller flakes from the cultural horizon by one or more natural processes.

Below Clovis, flakes from the 1/4 inch and 1/8 inch size class increase in abundance throughout the Upper Pleistocene Sands. This percentage increase in small flakes also corresponds with a significant decrease in the percentage of large flakes from the deposits. Only 14% of the flake assemblage from the Upper Pleistocene Sands fell within the 2.5 inch size grade; a considerable reduction in quantity compared with the percentage of Clovis flakes from the 2.5 inch size grade (Table A42–1). These findings indicate a strong likelihood that postdepositional processes have led to the downward migration of smaller flakes from the Clovis deposits and into the Upper Pleistocene Sands and corroborate the findings of King (2012).

By contrast, the present analysis did identify a spike in the relative quantity of larger flakes at the base of the Pleistocene Sands. This pattern could imply that the extent of vertical disturbance did not extend below the uppermost deposits of the Pleistocene Sands at 97.55m, and

Table 10–1

Results of Correlation analysis comparing the percentage of total flake weight per size class from the Clovis deposits by underlying stratum. R coefficients closer to 1 indicate a positive relationship.

	t statistic	**r coefficient**	**Relationship**
Clovis and Upper Pleistocene Sands	0.61	.203	Weak Positive
Clovis and Lower Pleistocene Sands	.359	.332	Moderate Positive
Clovis and Pleistocene Terrace	-.9	-.461	Moderate Negative
Upper Pleistocene Sands and Pleistocene Terrace	5.941	.922	Strong Positive

*Degrees of Freedom=3

that the deeper flakes reflect a cultural component between elevations 97.00m to 97.25m. Although it is possible that the movement of larger items could have been prohibited by the contact of the Pleistocene Terrace, resulting in an accumulation of larger flakes and artifacts on the Terrace surface, under such circumstances the distribution of artifacts should be similar between both strata. The results of analysis show that this is not the case. Nearly one-third of all artifacts greater than 2.5cm from the Clovis deposits are biface tools whereas 50% of all tools from the Pleistocene Sands of this size grade are flake tools. Because bifaces are absent from the Pleistocene Sands, unless nature is selecting against the displacement of bifaces through the stratigraphic profile, it is unlikely that the distribution of lithic items on the Pleistocene Terrace surface is the product of larger items being stopped by this surface.

Correlation Analysis: Flake Weight by Depth

A correlation analysis was performed to determine if a relationship exists between the mean weight of flakes and vertical depth (Figure 10–2). A positive correlation could indicate that post depositional processes have altered, reworked, or displaced the extant distribution from its original position of discard through winnowing, bioturbation, or fluvial activity. Figure 10–2 shows that no correlation was observed in the weight of flakes by level for the Clovis ($r = 0.003$; $p = 0.499$), Lower Pleistocene Sands($r= 0.1689$; $p = 0.358$), and Pleistocene Terrace deposits ($r =.067$; $p=.344$). By contrast, a positive correlation was identified for the deposits from the Upper Pleistocene Sands ($r = 0.9043$; $p = 0.002$) (Figure 10–2). The strong correlation in flake size by weight for this unit indicates sorting, and implies a greater likelihood that the deposits have been subjected to natural processes such as bioturbation.

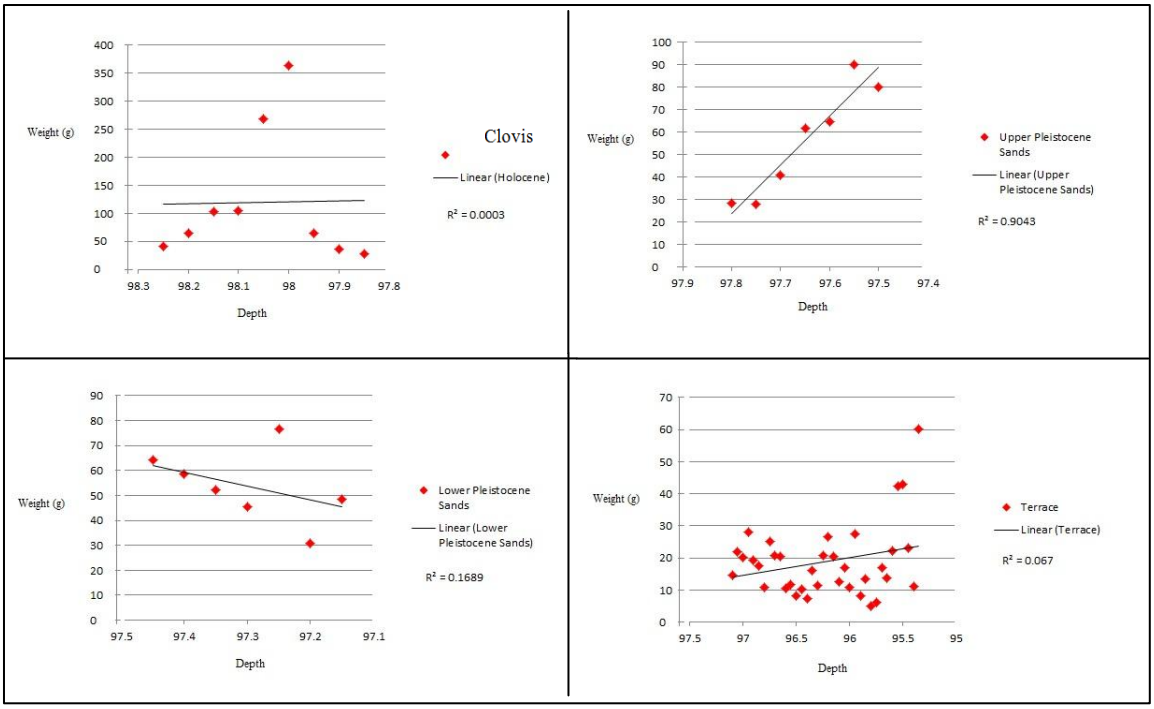


Figure 10–2A
Relationship between mean flake weight per level and depth for different stratigraphic units at Topper. There is a positive correlation in flake weight by depth for Upper Pleistocene Sands and a weak association for the Clovis, Lower Pleistocene Sands and Pleistocene Terrace.

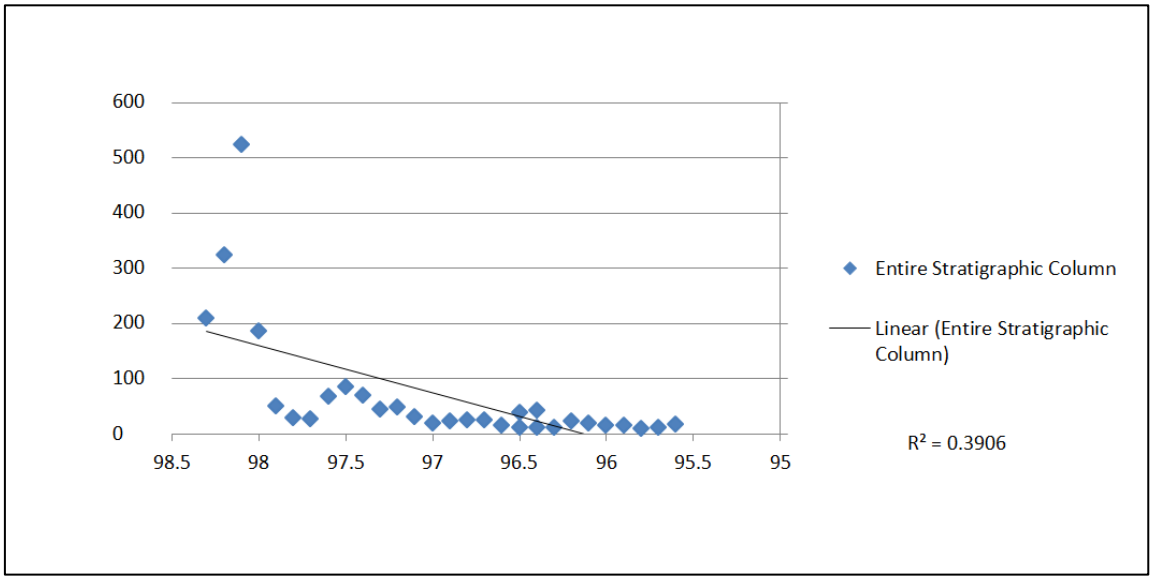


Figure 10–2B
Mean flake weight per level and depth for entire stratigraphic column at the Topper Site.

Flakes decrease in size at the base of the Clovis deposits, and into the Upper Pleistocene Sands. An increase in flake weight was observed between elevations 97.80 and 97.40m. After reaching a maximum average of 90g per level at elevation 97.40m, average flake weights tend to stabilize throughout the remaining levels of the Pleistocene Sands. Average flake weights are low throughout the Pleistocene Terrace, typically ranging between 10 and 30g per level (Table A42–2).

Correlation Analysis: Percentage of Flake Weight by Size Grade

An analysis was conducted to examine the average weight of flakes for each size grade per level. Flakes from the smaller size grades (e.g. 1/4 inch and 1/8 inch) tend to occur in higher percentages from the Upper Pleistocene Sands, while the Clovis and Lower Pleistocene Sands have much higher percentages of larger chert flakes (Tables A42–1 and A42–2). This distribution is illustrated in Figure 10–3, which shows the relationship of flake size by depth. There is a positive trend in artifact size grade for the Lower Pleistocene Sands (e.g. an increase in flakes of larger sizes with depth) and a negative trend in artifact size for the Upper Pleistocene Sands (e.g. a decrease in flakes of larger sizes with depth). Given these results, the likelihood is greater that flakes of small sizes are migrating downward through the stratigraphic profile from the Clovis deposits and into the Upper Pleistocene Sands than there is for artifact migration through the Lower Pleistocene Sands. The same pattern is not evident when the Upper and Lower Pleistocene Sands are compared. There is little evidence for the movement of flakes between the Upper and Lower Pleistocene Sands.

To test if there is a statistical significance in the distribution of flakes by size grade for the Clovis and Pleistocene Sands, a Pearson's correlation test was performed comparing the percentage of total flake weight per size grade from the Clovis deposits against each underlying

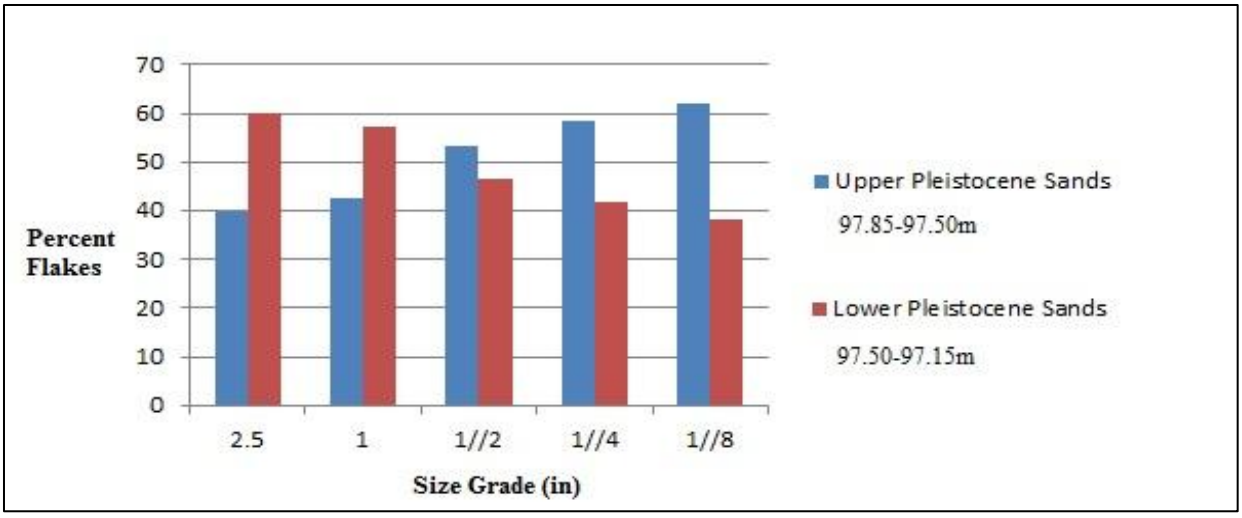


Figure 10–3.
Percentage of flakes by size grade for the upper (blue) and lower (red) Pleistocene Sands. There is a decrease in the weight of smaller flakes with depth. Higher percentages of larger flakes occur in the Lower Pleistocene Sands.

stratum. This test was done to evaluate how well the Clovis flake assemblage compares to the other presumptive flake bearing deposits onsite (Table 10–1). For this test, a positive correlation between two units would imply that the percentage of flake weight per size grade for each compared assemblages is similar. Since the Clovis deposits reflect a known cultural horizon, it is assumed that the stronger the correlation between the two assemblages, the greater the likelihood that the underlying assemblage also reflects a cultural occupation. By contrast, a negative correlation would indicate that the percentage distribution of flake weight by size grade for each assemblage was dissimilar.

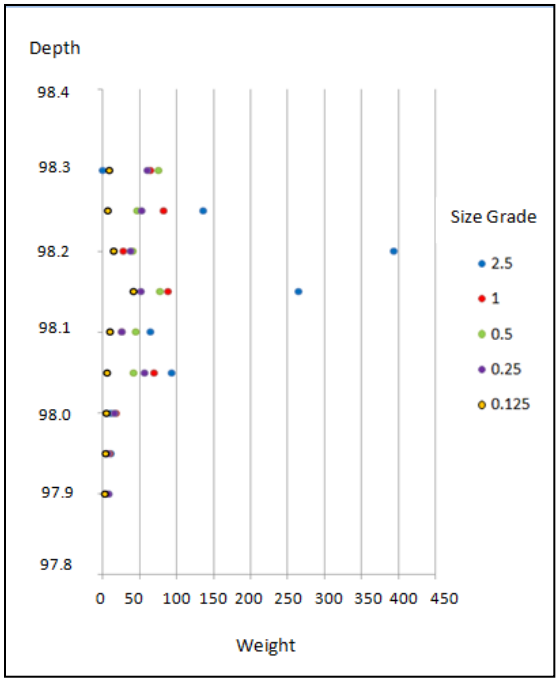
When the Clovis assemblage was compared to the Upper Pleistocene Sands, the correlation analysis resulted in an r coefficient of 0.203 implying that the association between the two variables is weak. The relationship between the Clovis and Lower Pleistocene Sands deposits resulted in an r value of 0.332. Although this value is slightly higher, the r value only reflects a moderate positive relationship between the two variables. When the Clovis and Pleistocene Terrace deposits were compared, the correlation analysis resulted in an r value of –.461, implying a negative association between the two assemblages. A fourth analysis compared the Upper Pleistocene Sands to the Pleistocene Terrace and shows a strong positive correlation (Table 10–1).The results of these analyses show that the Clovis and Lower Pleistocene Sands deposits exhibit the greatest strength in similarity, although still comparatively weak.

Correlation Analysis: Comparing Flake Size Grade by Depth

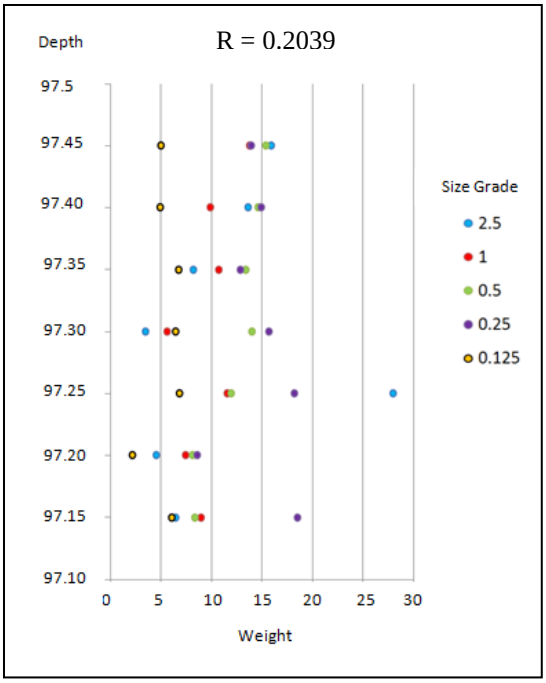
Flake size is an important attribute that can inform about the potential for site disturbance. Small debitage is more susceptible to movement by natural processes such as bioturbation and fluvial activity. By contrast, increasingly larger items are more likely to stay in place when subjected to the same natural site formation processes responsible for the movement

of smaller items. Because successive stages of the lithic manufacture process have been considered to result in flakes that are progressively smaller in size, it follows that in areas where all stages of the lithic reductive process may have been carried out, barring mixing, there should exist flakes of a variety of size grades. Overtime, if similar reductive activities were occurring on-site, and controlling for the effects of raw material variability, admixture, and differential flint knapping styles, there should be little change in the distribution of flake debris by size grade, This should result in an absence of well sorted deposits, and consequently a lack of correlation in artifact size grade through the stratigraphic profile. In essence, a change in the abundance of flakes of large (2.5inch) size grades should not necessitate a change in the abundance of flakes of small size grades. Potential evidence for site disturbance is more likely indicated by: 1) high peaks of large flakes in a given level followed by 2) high peaks of small flakes in subsequent levels (a potential consequence of bioturbation or artifact translocation by fluvial activity). The size grade analysis operates under the assumption that a positive correlation in the distribution of flakes by size reflects disturbance by natural processes or if cultural, then alternative patterns of reduction intensity. A negative or neutral association indicates an absence of disturbance. Once an archaeological assemblage has been subjected to processes that result in artifact alteration or mixing, the use of mass analysis is no longer suitable for informing about lithic reductive activities at the site (Andrefsky 2006).

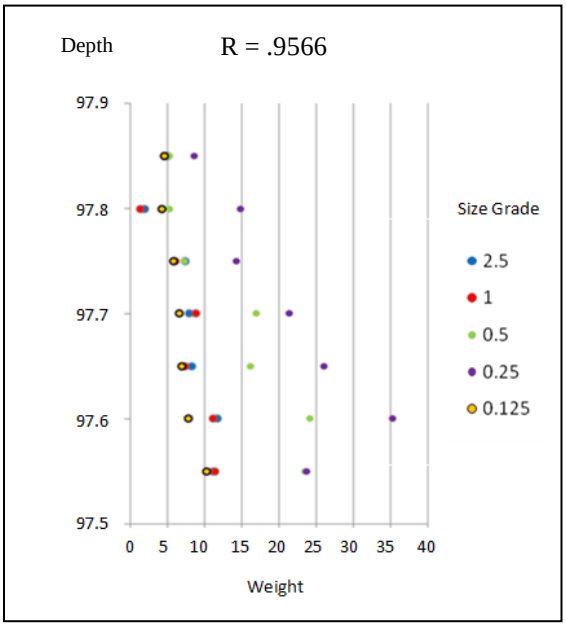
The distribution of artifacts for each size grade at Topper were compared and subsequently cross-tabulated against the vertical profile to determine if a significant correlations exists between the distribution of artifact size classes through time (Figure 10–4). There is a moderate positive correlation (Pearson's) for the Clovis deposits indicated by the low density of large flakes at the base of deposits. Apart from the 2.5inch size grade, there is a lack of



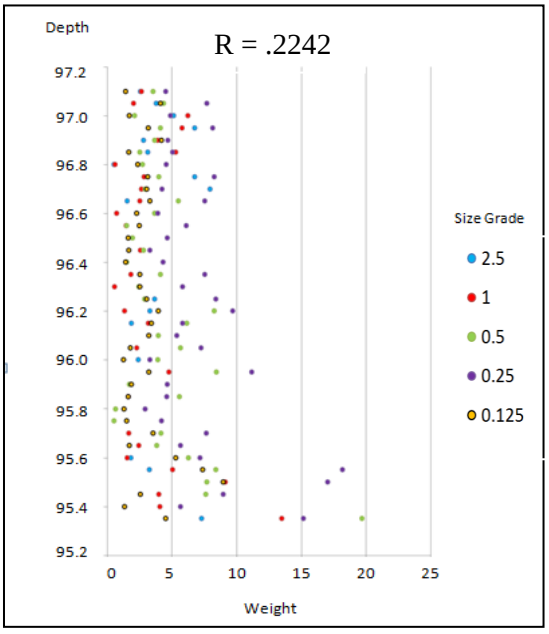
Clovis



Lower Pleistocene Sands



Upper Pleistocene Sands



Pleistocene Terrace

Figure 10–4
Results of size grade analysis showing the variation in artifact weight by depth for the Clovis, Upper and Lower Pleistocene Sands, and Pleistocene Terrace. The variation in flake weight by size grade is strongly correlated with depth for the Upper Pleistocene Sands indicating that these deposits were likely subjected to post depositional processes

corresponding flake size increase or decrease throughout this stratigraphic profile (Figure 10–4). By contrast, flakes of all size grades are strongly correlated by size from the Pleistocene Sands. Both small and large flakes increase in weight concurrently with each successive level and the flake deposits are well sorted. These findings imply that postdepositional processes were likely responsible for reworking the deposits of the Upper Pleistocene Sands. The flake deposits from the Lower Pleistocene Sands differ significantly from the Upper Pleistocene Sands. Figure 10–4 demonstrates no correlation in flake size by depth, indicating that post depositional processes are less likely to have altered the original contexts of the flakes from these levels. Likewise, the distribution of flake sizes from Pleistocene Terrace does not show evidence for a positive correlation between the large and small flakes.

To evaluate variation in flake size in greater detail, a Pearson's correlation coefficient analysis was conducted to statistically examine the linear relationship between large and small flake sizes through the stratigraphic profile at Topper (Figure 10–5). There is a moderate positive correlation in small and large flakes for the Clovis deposits. There is only a slight tendency for a change in the abundance of flakes from the 2.5 inch size grade where there is a corresponding change in the number of flakes from the 1/8 inch size grade. The Clovis deposits are thus not likely to have been heavily disturbed by postdepositional processes. By contrast, the Upper Pleistocene Sands have an r value very close to 1 reflecting a strong positive correlation (Figure 10–5). This pattern shows that variation in large flake sizes tend to correlate directly with variation in small flake sizes throughout the stratigraphic deposit. This discovery supports the results in Figure 10–4. Downward movement of flakes is likely when small flakes are consistently placed in a lower stratigraphic position compared to the frequency peaks of larger flakes, suggesting that they were originally deposited in the same levels, but that the smaller

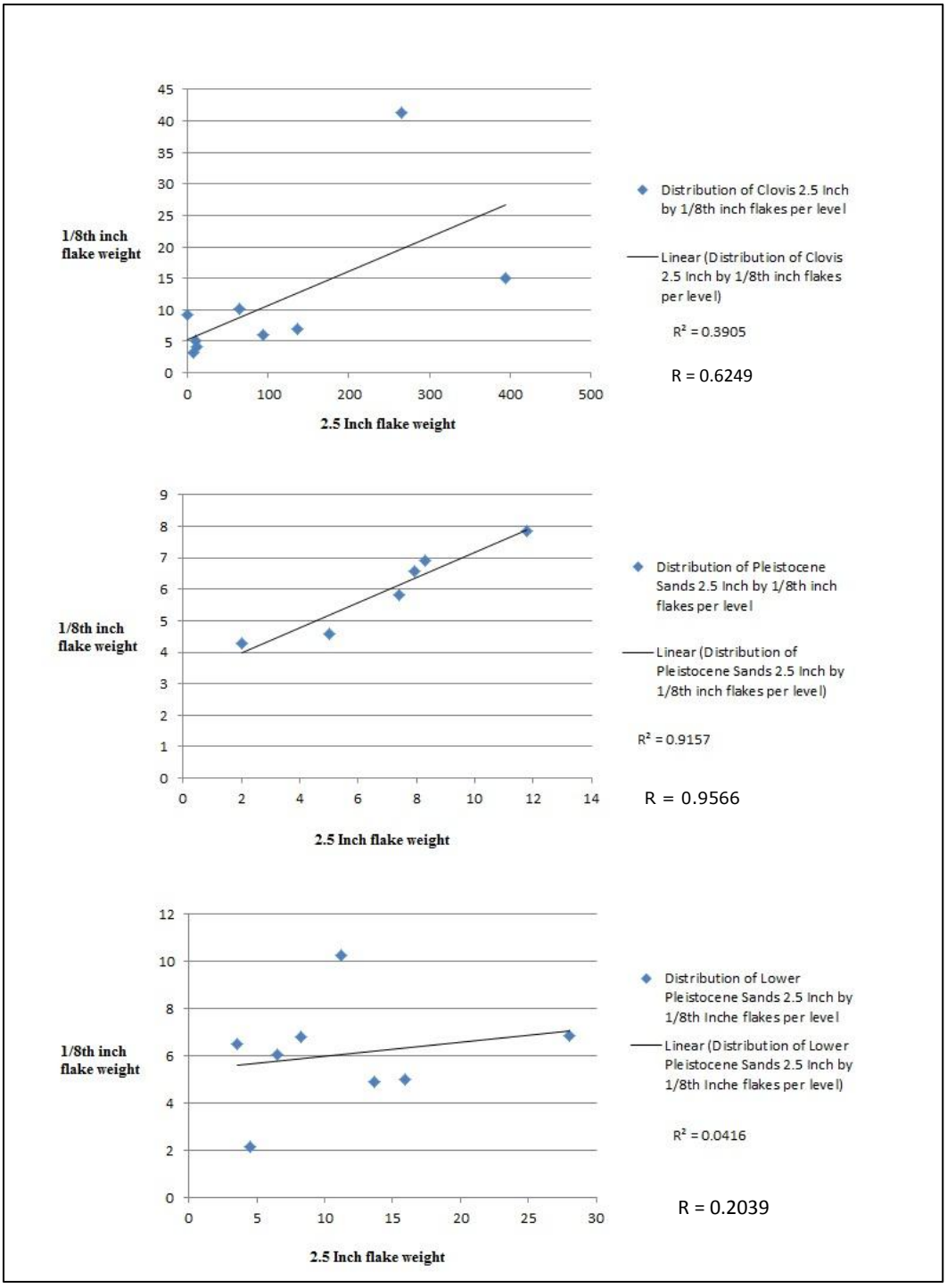


Figure 10–5A

Results of a Pearson correlation test showing the linear relationship between the masses of large and small flakes in different portions of the stratigraphic profile at Topper. The low r value for the Lower Pleistocene Sands indicates an absence of vertical movement of small flakes across this portion of the stratagraphic deposit whereas the high r value for the Upper Pleistocene Sands indicates a greater likelihood of displacement throughout this strata.

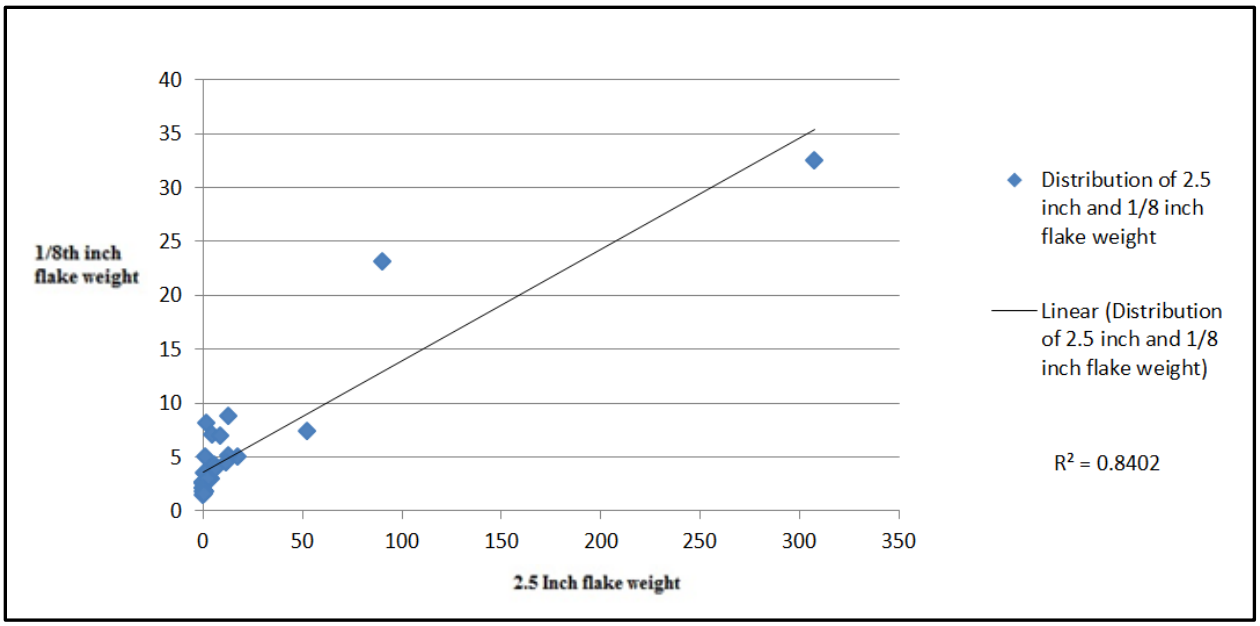


Figure 10–5B
Results of a Pearson correlation test showing the linear relationship between the masses of large and small flakes for the entire stratigraphic profile at Topper.

pieces were subsequently displaced downward. The line graph in Figure 10–6 shows this pattern and implies that small flakes from the base of the Clovis deposits are likely being redeposited into the Upper Pleistocene Sands.

The analysis of the Lower Pleistocene Sands produced a low r value indicating a weak positive correlation for large and small flake size (Figure 10–5). Where there is a change in the quantity by weight of flakes from the 2.5 inch size grade, there is little corresponding change in the quantity of flakes from smaller size grades. Between elevations 97.50 and 97.25m there has been little movement of heavier or lighter artifacts through the sediment matrix compared with the overlying Upper Pleistocene Sands. An examination of the frequency peaks by size grade for the Lower Pleistocene Sands shows that the peaks for large and small flakes are in alignment, indicating that flakes from the smallest size grades are not being redeposited (Figure 10–6). The absence of a strong positive Pearson's correlation for the Clovis and Lower Pleistocene Sands supports the conclusion that postdepositional processes have affected these deposits to a lesser extent than the Upper Pleistocene Sands.

It should be noted that a lack of evidence for vertical movement of flakes within the Lower Pleistocene Sands deposits does not imply that these units have not been subjected to alternative processes that might have 1) led to the horizontal displacement of some existing cultural assemblage from off-site contexts, or 2) led to the creation and subsequent deposition of naturally formed flakes by fluvial or colluvial processes. To examine these possibilities in greater detail, it was necessary to perform a size grade analysis of the distribution of all cortical and quartz materials and to subsequently compare the results to the extant distribution flakes at the site.

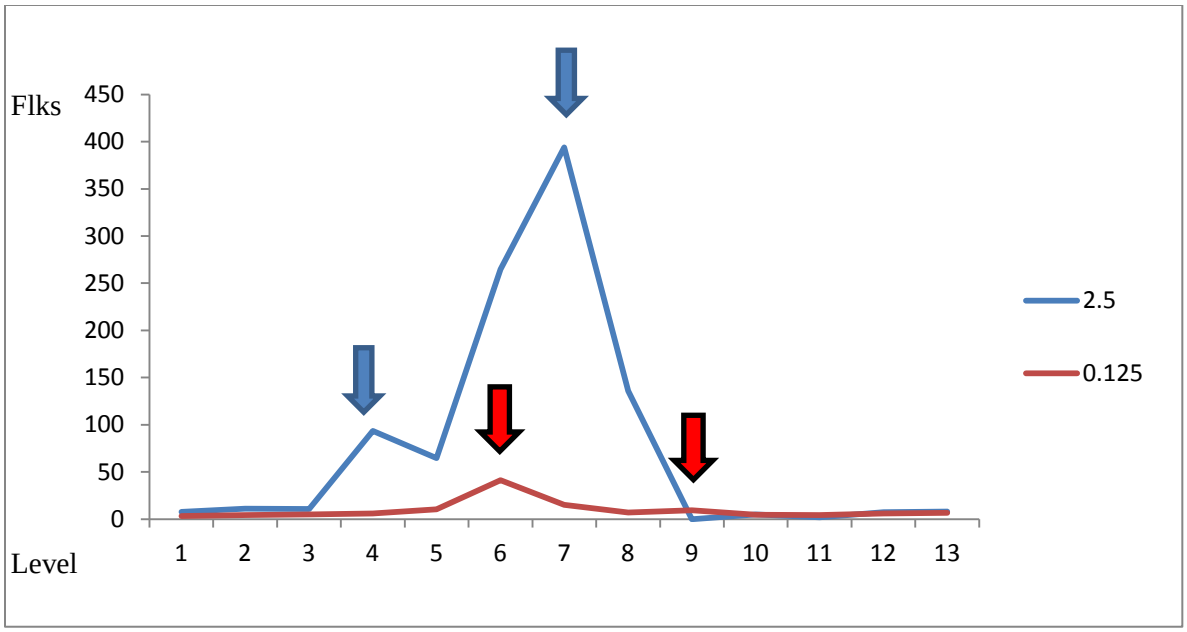


Figure 10–6A

The weight (y-axis) in flakes of large and small size grades by level (x–axis) through the Clovis and Upper Pleistocene Sands. Levels with spikes in flake weight for each size grade are depicted as arrows. Spikes for small size grades are offset relative to large size grades indicating extent of artifact displacement.

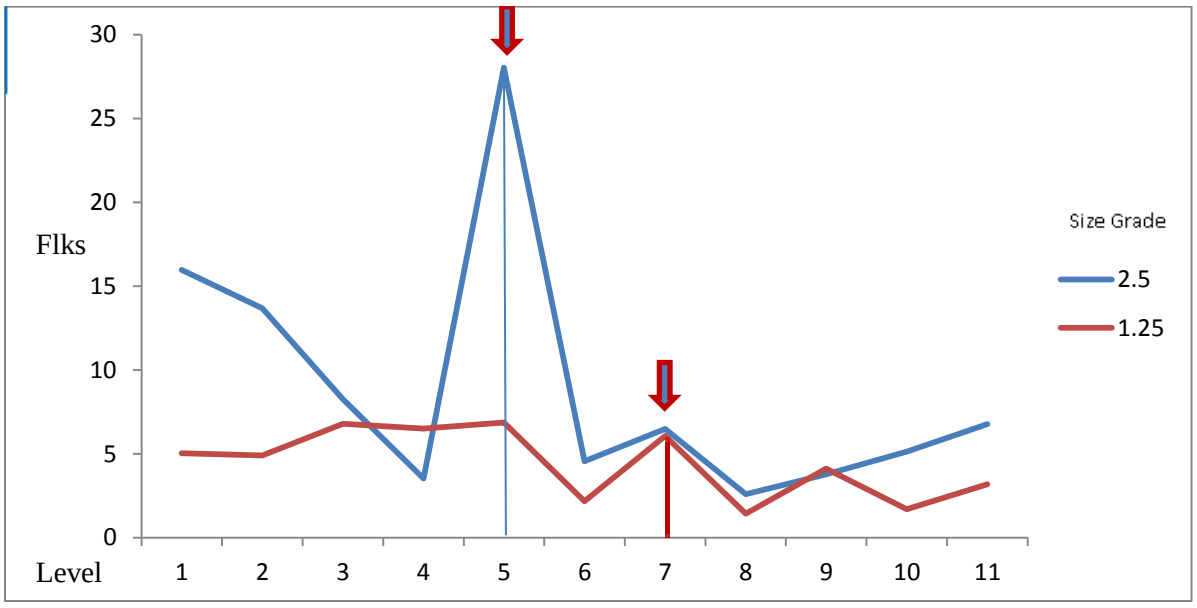


Figure 10–6B

Distribution of flakes from the Lower Pleistocene Sands. There is no offset in the placement of spikes of flake quantity by weight for the 2.5 inch and 1/8 inch size grades from the Lower Pleistocene Sands deposits. Small flakes have not been redeposited relative to large flakes.

Mass and Size Grade Analysis: Distribution of Quartz Pebbles

In addition to flakes, all quartz pebbles were passed through nested screens to assess the presence and degree of fluctuation in quartz size by vertical depth. The distribution of quartz by weight for each size grade from the screened sample is presented in Figure 10–7.Quartz pebbles vary significantly by size throughout the stratigraphic profile at Topper. The largest quartz pebbles (1 inch or larger) occur with the greatest frequency from the base of the Pleistocene Terrace deposits, and are infrequent in the Holocene and Clovis deposits, and rarely comprise more than 40g of material per level in the Pleistocene Sands.

By contrast, quartz pebbles that are 1/4inch or smaller in size occur with the greatest frequencies in the Pleistocene Sands and to a lesser extent at the base of the Pleistocene Terrace. Quartz was rarely identified from the Clovis deposits, only occurring in significant quantities from the base of the cultural deposits. Below Clovis, the distribution of quartz dramatically increases in abundance throughout the Upper Pleistocene Sands, predominantly occurring in size grades that are small, and less than 1/4inch in size. The base of the Pleistocene Sands is characterized by a reduction in quartz pebbles of all size grades to the contact with the Pleistocene Terrace (Figure 10–7). However, the underlying Pleistocene Terrace deposits are distinguished by a fining up sequence whereby smaller quartz pebbles are present in greater quantities from the Upper Terrace deposits and larger pebbles occur in high frequencies from the Lower Pleistocene Terrace.

As a supplement to these findings, a Pearson's correlation analysis was performed to determine if there exists any relationship in the weight of quartz pebbles for each level by depth. There is a weak to moderate positive relationship between the abundance of quartz pebbles and depth. For the Clovis, Upper Pleistocene Sands, and Pleistocene Terrace, the abundance of

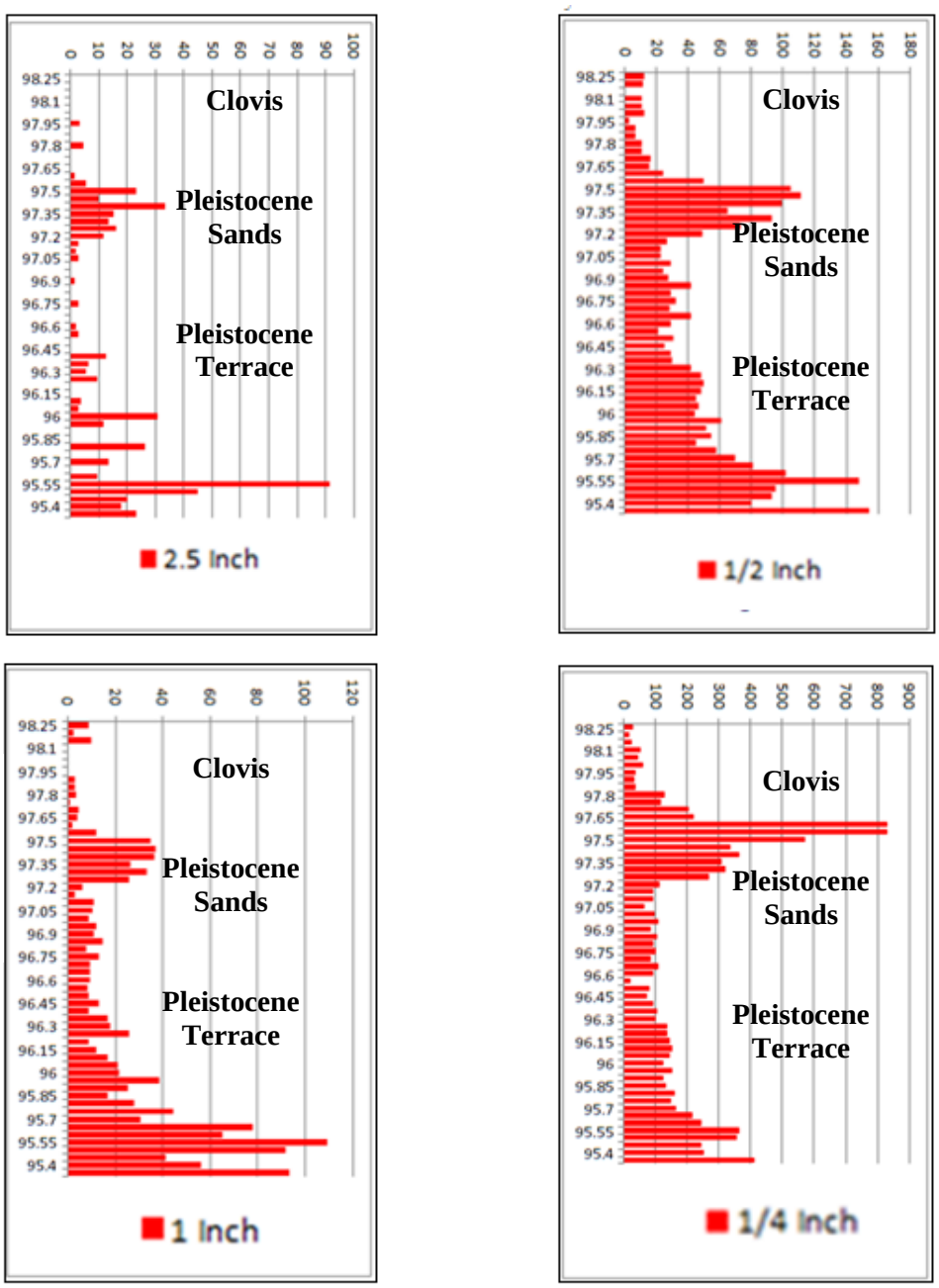


Figure 10–7
Distribution of quartz by average weight per level for each size grade.

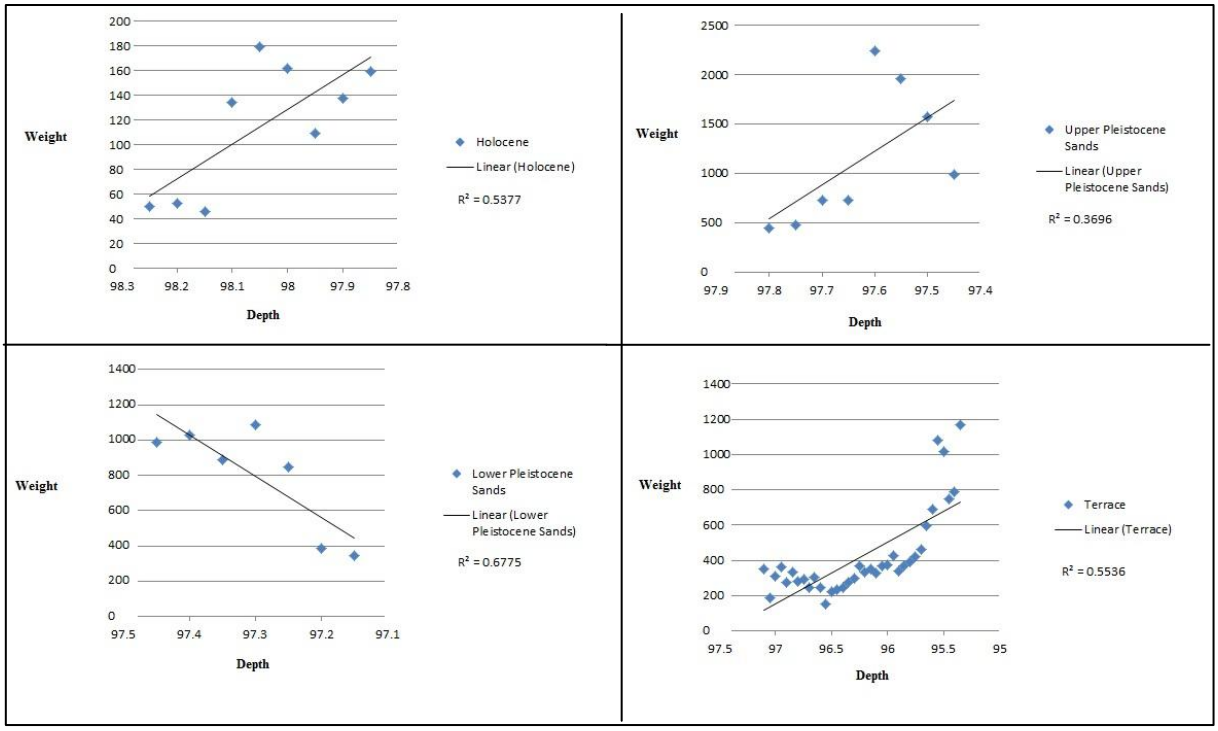


Figure 10–8A

Relationship between quartz pebble weight per level and depth (g) for different stratigraphic units at Topper (at top). Results demonstrate a weak to moderate positive correlation in quartz pebble weight by depth for all units sampled. Quartz pebbles decreases in weight with depth throughout the Lower Pleistocene Sands, and increases in weight for all other stratigraphic units. The decrease in average quartz weight for the Lower Pleistocene Sands indicates a greater likelihood that these deposits were not subject to displacement by way of fluvial activity.

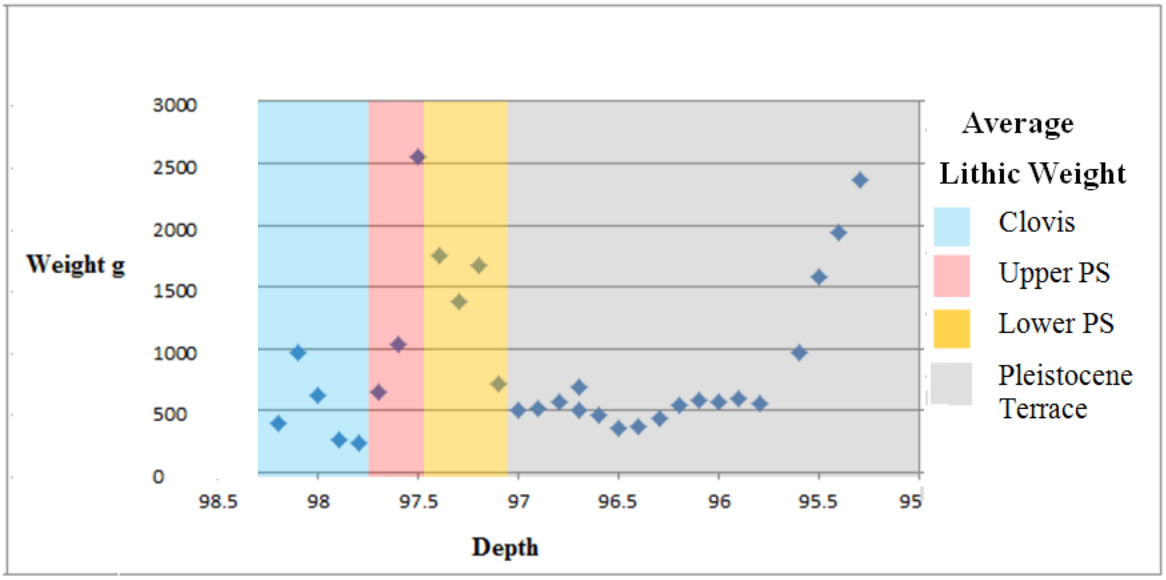


Figure 10–8B
Relationship between average lithic weight (g) per level, and depth for combined stratum at Topper.

quartz pebbles increases per level. For the Lower Pleistocene Sands, quartz pebbles were found to decrease with depth. Quartz pebbles from the base of the Pleistocene Sands occur in approximately the same frequency by weight they do from the base of the Clovis deposits. The decrease in average quartz pebble weight for the Lower Pleistocene Sands corresponds with an increase in flake weight and increases in larger flake sizes for these levels.

To test if there is a statistical significance in the distribution of quartz pebbles by size grade for the Holocene and Pleistocene deposits, a Pearson's correlation test was performed. This test examined the linear relationship between large and small quartz pebbles through the stratigraphic profile at Topper. For this analysis, quartz pebble weight by level for the largest size class (1.0–2.5 inch) were compared to quartz pebble weight from the smallest size class (1/4to 1/8inch) for each individual unit. A positive correlation means that as the weight of large quartz pebbles increase, so too does the distribution of small quartz pebbles. An absence of correlation is indicated by an increase in the weight of one size grade relative to the other. A negative correlation is indicated by an increase in the weight of one size grade with a corresponding decrease in the weight of the other size grade. This analysis operates under the assumption that a positive correlation in the distribution of quartz pebble weight by size reflects a higher probability of disturbance by natural processes. The results of the Pearson's correlation analysis are presented in Figure 10–9. There is a weak association in the Holocene and Clovis deposits. The weight of quartz pebbles does not vary by one size grade relative to the other through the stratum. There is a weak positive relationship for the Upper and Lower Pleistocene Sands, although the relationship is stronger for the Lower Pleistocene Sands (Figure 10–9). By contrast, the relationship between the weight of small and large pebbles through the stratigraphic profile is

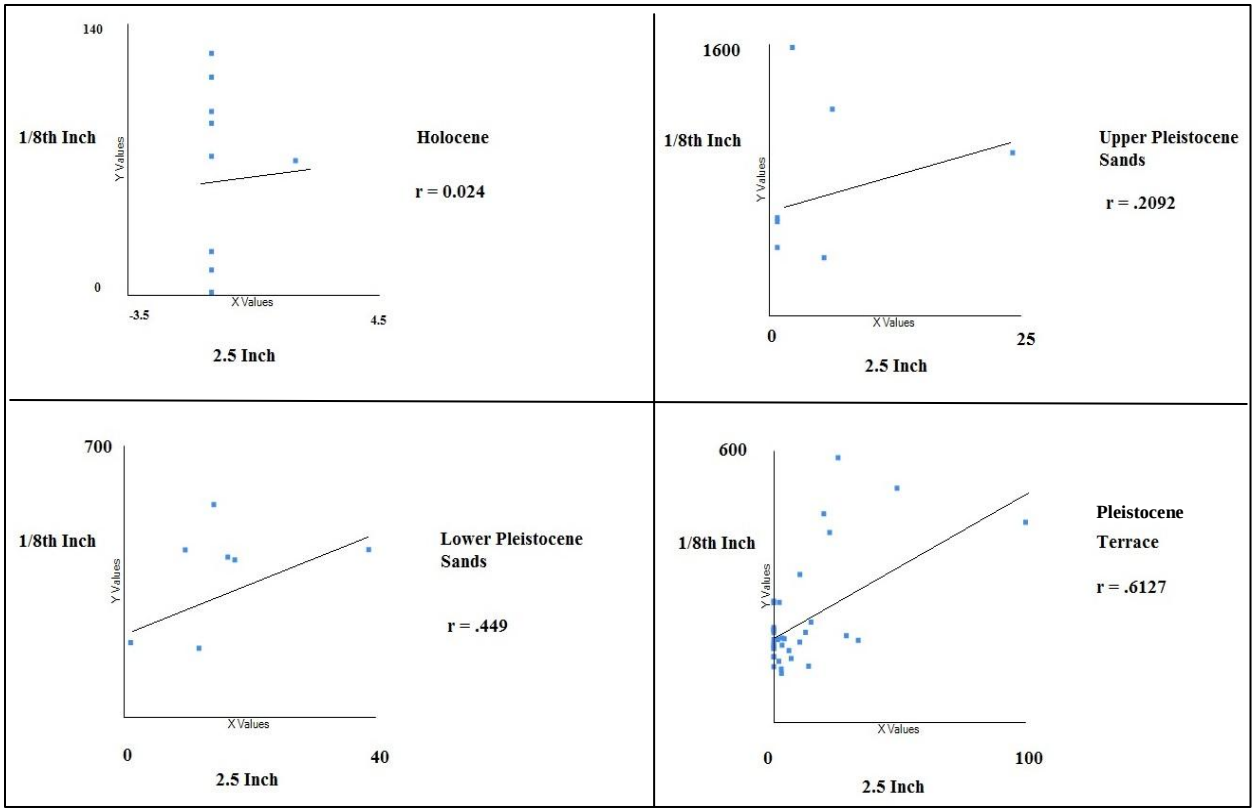


Figure 10–9
Results of a Pearson's correlation test showing the linear relationship between large and small quartz pebbles (by size grade) in different strata at Topper. The r value for the Pleistocene deposits reflect a moderate positive correlation suggesting a tenancy for high X variables to correlate with high Y variables. r values for the overlying Holocene deposits are lower indicating an absence of correlation in large and small quartz pebbles. r values increase with depth. r values close to 1 indicate areas of the profile that have been size sorted by weight. Compare with correlation of flakes in Figure 10–5.

much stronger for the Pleistocene Terrace. As there is an increase in pebbles from the 2.5inch size class there is a corresponding increase in the distribution of smaller pebbles (Figure 10–9).

Mass and Size Grade Analysis: Distribution of Cortical Pebbles

The distribution in weight of cortical pebbles by size grade is presented in Figure 10–10 and in Tables A42–4 and A42–5). Based on the graph it is evident that cortical pebbles vary significantly by quantity and by size throughout the stratigraphic profile at Topper. The Clovis deposits are characterized by large quantities of cortical pebbles from the largest (2.5 inch) size class, minute quantities of cortical pebbles from the 1inch, 1/2inch, and 1/4inch size class, and moderate quantities of pebbles from the 1/8 inch size class.

Below the Clovis deposits there is a significant decrease in the amount of cortical pebbles of large size classes from the Upper Pleistocene Sands compared with the Clovis deposits. This distribution is followed by an abrupt increase in cortical pebbles of larger sizes throughout the Lower Pleistocene Sands. The abundance of large cortical pebbles is low throughout much of the Pleistocene Terrace, but increases significantly at the Pleistocene Terrace base. This pattern forms an equivalent association with the "fining upwards" sequence Harris (2010) has identified from the particle size analysis of the Pleistocene Terrace formation for sediments.

To examine the distribution of cortical pebbles in greater detail, a regression analysis was performed to determine if there exists any relationship in the cumulative weight of cortical pebbles for each level by depth. The results of this analysis are presented in Figure 10–11 and show that there is a decrease in the mean weight of cortical pebbles with depth (regardless of size) throughout the Clovis and the Lower Pleistocene Sands. By contrast, cortical weight was found to increase with depth throughout the Upper Pleistocene Sands and Pleistocene Terrace (Figure 10–11).

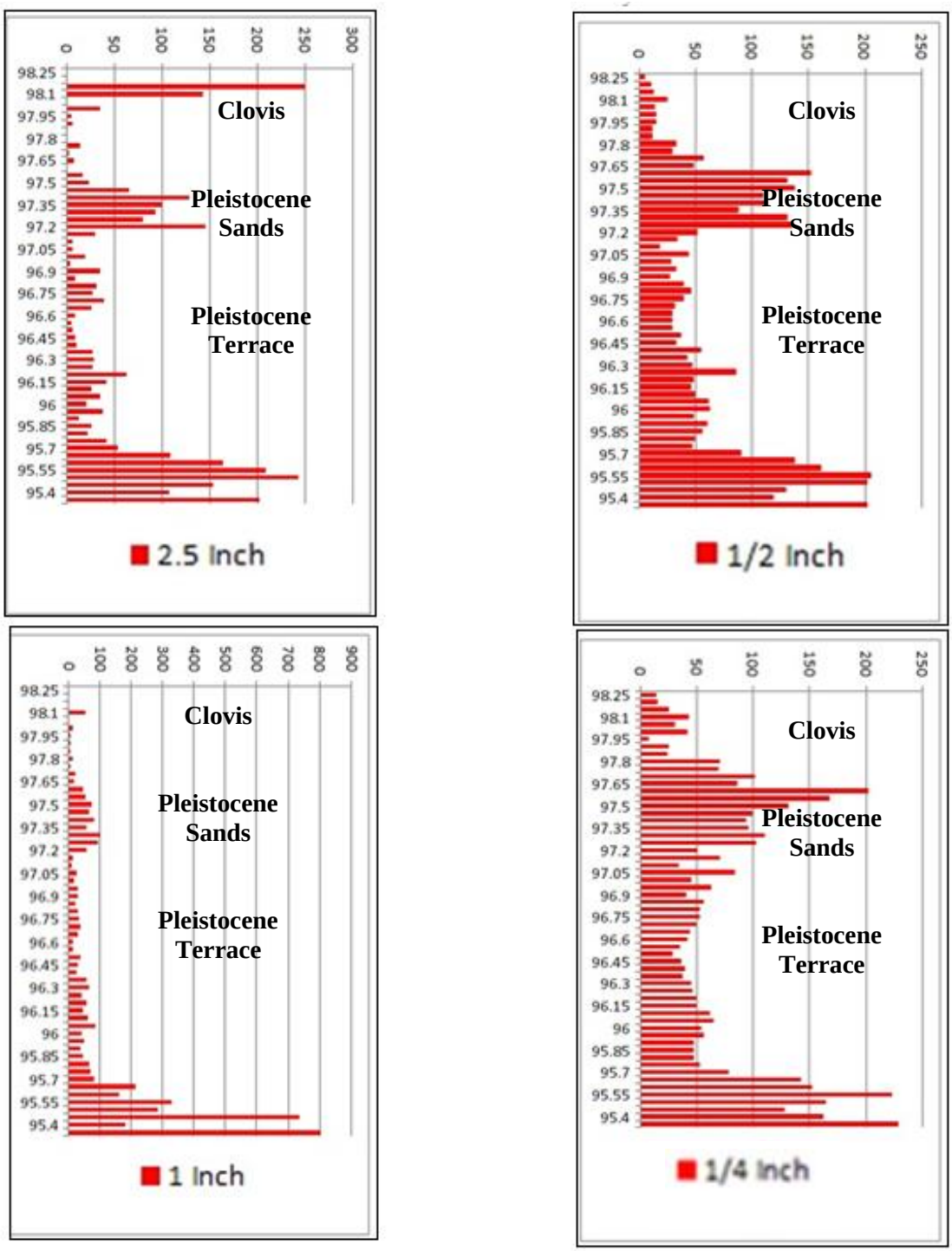


Figure 10–10
Distribution of cortical pebbles by average weight per level for each size grade.

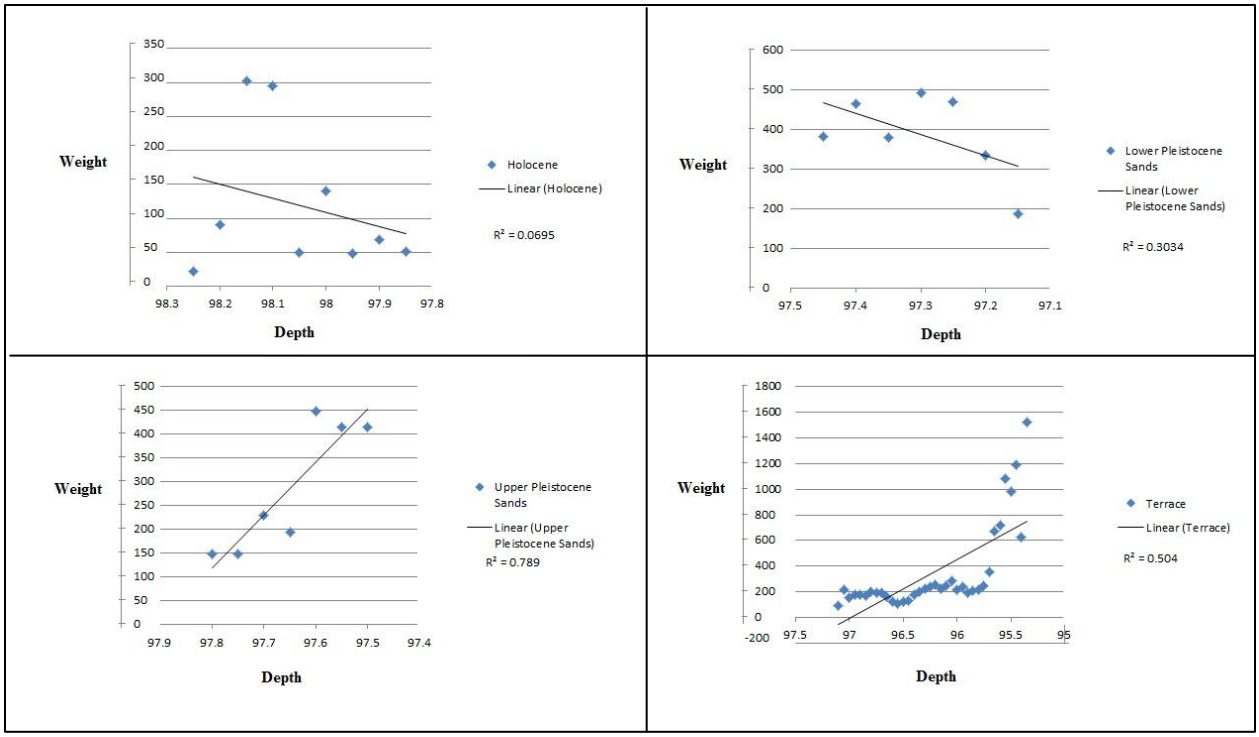


Figure 10–11
Relationship between cortical pebble weight (g) and depth for different stratigraphic units at Topper. Results demonstrate a weak correlation for the Clovis and Lower Pleistocene Sands deposits, a strong positive correlation for the Upper Pleistocene Sands and a moderate positive correlation for the Pleistocene Terrace. Cortical pebbles decreases in abundance with depth for the Clovis and Lower Pleistocene Sands, and increase for all other stratigraphic units.

A Persons correlation test was performed to evaluate the linear relationship between large and small cortical pebbles through the stratigraphic profile at Topper and is employed to assess the potential that the assemblage has been subjected to natural disturbance (Figure 10–12)

When the distribution of large and small Clovis cortical pebbles was examined, there is no correlation in cortical pebble weight for the two size grades (Figure 10–12). Directly below the Clovis deposits, the Pearson's correlation test for the Upper Pleistocene Sands revealed a very weak positive association implying very little change in the distribution of small cortical pebbles when associated with an increase in the amount of large pebbles. The Lower Pleistocene Sands exhibit a weak negative association. Accordingly, increases in the amount of large cortical pebbles at the contact with the Pleistocene Terrace weakly correlate with decreasing quantities of small pebbles. When the Pleistocene Terrace was examined, the results of the Pearson's correlation test show a strong positive correlation (Figure 10–12). These results confirm that increases in the distribution of larger cortical pebbles throughout the Pleistocene Terrace correlate with similar rates of increases in smaller pebbles and that the deposits could be sorted by size.

Interassemblage Comparison of Flakes, Quartz and Cortical Pebbles

King (2012) noted that the Pleistocene Sands have considerable quantities of quartz and cortical pebbles that may have resulted from high energy input by stream flow. Based on the Mass and Size grade analysis from the present study, flakes from multiple size grades were found to co-occur with quartz pebbles and cortical pebbles from the Upper Pleistocene Sands, suggesting the potential for disturbance of this depositional unit. These findings are important given that the arrangement of flakes in archaeological contexts are often considered more likely to be modified in high energy settings than under low-energy environmental conditions.

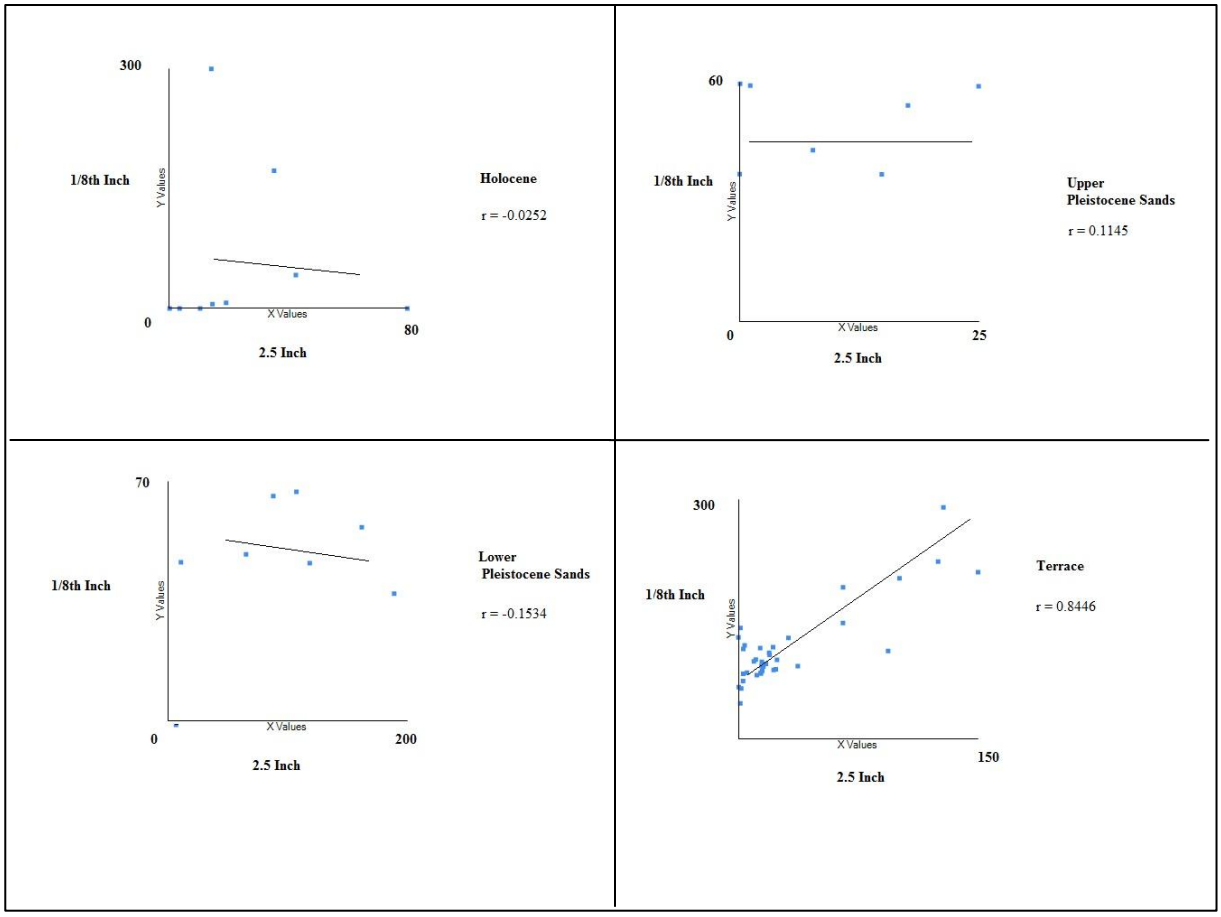
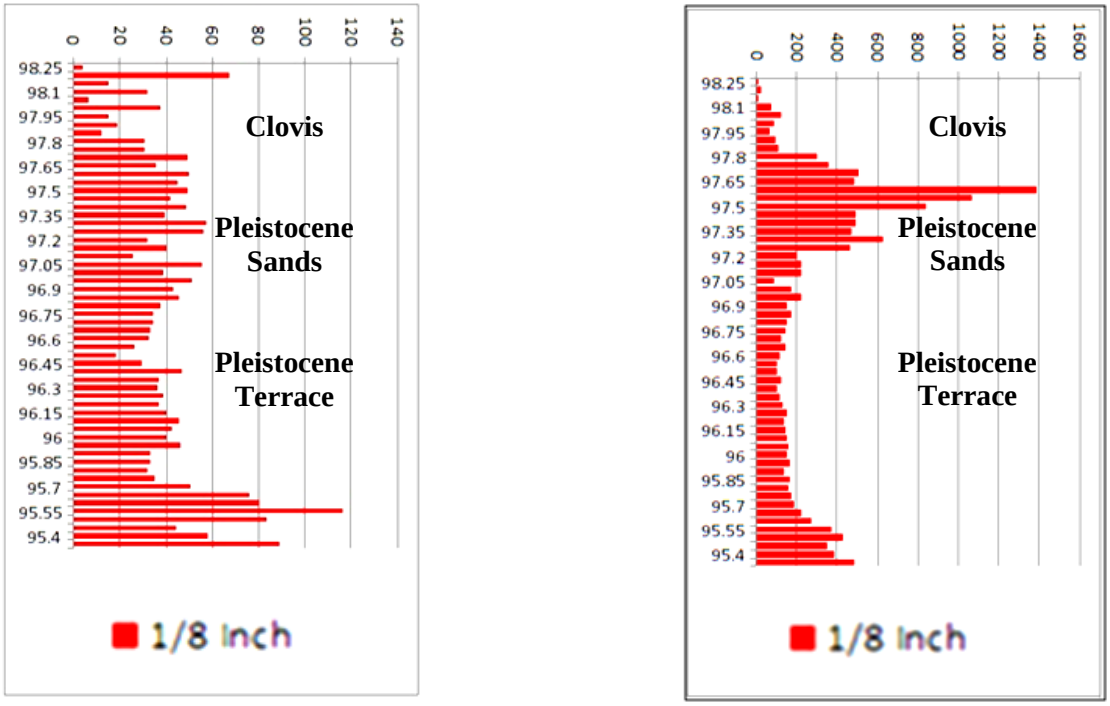


Figure 10–12
Results of a Pearson correlation test showing the linear relationship between large and small cortical pebbles (size grade) in different strata at Topper. The r value for the Pleistocene Terrace reflects a strong positive correlation suggesting that increases in large pebbles correlate with increases in small pebbles and vice versa.



A B

Figure10–13
Distribution of cortical pebbles by 1/8 size grade (A) and quartz pebbles by 1/8 size grade (B).

Petraglia and Potts (1994) caution, however, that low-energy systems can also be responsible for the translocation of high percentages of smaller items from their original archaeological settings. It is reasonable to assume therefore that site disturbance by high energy systems should correlate with the co-occurrence of large quartz pebbles (as input from fluvial deposition) and a mix of both small and large flakes. By contrast, low-energy systems should result in the co-occurrence of quartz pebbles with flakes of larger size grade as low-energy environments can transport small particles. Unaltered assemblages should exhibit little evidence of size sorting and should occur in association with fine grained sediments. In cases where the potential for sediment consolidation is high, large quartz or cortical pebbles should correlate with flakes and flake fragments of small sizes that may have broken as the result of increased load application from the weight of the overlying sediment.

King noted a positive correlation in the distribution of small debitage with quartz pebbles from the Pleistocene Sands, indicating that the cultural and non-cultural material components were likely deposited at the same time (King 2012:120). However, an extensive examination of a much larger sample of materials from the block excavation from the present study shows that: 1) A higher percentage of flakes occur from the Lower Pleistocene Sands than from the Upper Pleistocene Sands (Table A42–1) and such flakes are found in deposits of decreasing percentages of quartz pebbles by weight; 2) The highest density of quartz pebbles occur from the Upper Pleistocene Sands (A42–3). Based on the size grade analysis performed on the flake assemblage described above, it appears that flakes are differentially distributed throughout the stratigraphic profile at Topper, with flakes of smaller size grades occurring in higher quantities from the Upper Pleistocene Sands (and associated with higher concentrations of quartz pebbles) and larger flakes predominantly distributed in the Lower Pleistocene Sands, and at the contact with the

Pleistocene Terrace surface in sediments with reduced quartz pebble content. This relationship suggests that the Pleistocene Sands have undergone differential processes of deposition resulting in multiple assemblage configurations. In the section below the degree to which flakes correlate with quartz and cortical pebbles with regard to morphological attributes of weight and size is examined.

Flakes and Quartz

Two regression analyses were conducted to determine if there was any relationship between the amount of lithic debitage by size grade and the co-occurrence of quartz pebbles. The first analysis (Table 10–2) compared the average weight (for each level within a given stratum) for each size grade of flakes to the amount in weight of quartz pebbles for each corresponding size grade. A positive correlation in the distribution of quartz pebbles and flake weight by size grade is considered evidence that the deposits are well sorted and are likely disturbed. By contrast, a strong negative correlation indicates either disturbance by low-energy input resulting in diminished quartz weight (due to smaller quartz size) and elevated flake weights, or disturbance by high energy fluvial input resulting in elevated quartz weight and diminished flake weight. The material byproducts formed under high energy processes may also form by sediment consolidation. A lack of correlation in the distribution of quartz pebbles and flake weight implies that the processes responsible for the deposition of quartz have had little impact on the distribution of flakes.

The second regression analysis compared the average weights of quartz pebbles from the largest size grade (2.5 inch) to the average weight of flakes from the smallest size grade and vice versa (Table 10–3). A strong positive correlation between these two attributes would imply that the processes responsible for the deposition of large, heavy quartz items also likely led to the

Table 10–2

The Results of a linear regression comparing averages of quartz and flake weights per level by size grade. There is a weak correlation for quartz and flakes from the Clovis and, for most size grades, the Lower Pleistocene Sands indicated by low correlation and r values. By contrast a positive correlation is evident for the upper Pleistocene Sands.

	Size Grade				
	1/8	1/4th	1/2	1	2.5
Clovis	Weak	Weak	Mod	Weak	Weak
Correlation	–0.115	0.094	0.545	–0.088	–0.270
R^2	0.717	0.895	0.726	0.801	0.210
P r>f	0.023	0.0011	0.021	0.008	0.494
Upper Pleistocene Sands	Moderate	Strong	Strong	Strong	Moderate
Correlation	0.593	0.885	0.760	0.684	0.548
R^2	0.960	0.740	0.932	.811	0.816
P r>f	.002	.068	.005	0.036	.034
Lower Pleistocene Sands	Moderate	Weak	Strong	Weak	Weak
Correlation	0.558	0.096	0.925	0.352	0.273
R^2	0.607	0.856	.873	0.863	0.285
P r>f	.155	.021	0.016	.019	.511
Pleistocene Terrace	Moderate	Strong	Strong	Moderate	Weak
Correlation	.524	.752	0.686	0.543	0.011
R^2	0.408	0.691	0.707	0.662	0.404
P r>f	0.000176	< 0.0001	< 0.0001	< 0.0001	0.0001968

Table 10–3

Results of a linear regression comparing the average weights of large (2.5 inch) quartz and cortical pebbles to small (1/8inch) flakes and small quartz and cortical pebbles to large flakes. There is a strong correlation in large quartz and small flakes for the Upper Pleistocene Sands. There is no correlation in large quartz and small flakes for the Clovis and Lower Pleistocene Sands deposits.

	Quartz/Flakes	Cortex/Flakes	Quartz/Flakes	Cortex/Flakes
	2.5/ 1/8th	2.5/ 1/8th	1/8th/2.5	1/8th/2.5
Clovis				
Correlation	–0.196	0.596	–.1333	0.686
R^2	0.158	0.128	0.0178	.4706
P r>f	.596	.662		
Upper PS				
Correlation	0.803	0.639	.6635	0.7916
R^2	0.962	0.909	0.4402	0.6266
P r>f	.003	.008		
Lower PS				
Correlation	–0.040	–0.595	0.2368	0.4428
R^2	0.290	0.103	0.0561	0.1961
P r>f	.503	.805		
Terrace				
Correlation	0.591	0.722	0.3795	0.0838
R^2	0.275	0.633	.031	0.007
P r>f	.005	< 0.0001		

formation of the small, light flakes from the same deposits. Sediment consolidation often leads to the occurrence of small broken flakes associated with larger lithic bodies and is one interpretation of a positive correlation under such a scenario. The absence of correlation implies that the quartz deposits played little role in the formation or distribution of the flake assemblage.

The results of the linear regression analyses are presented in Tables 10–2 and 10–3. The predominant weak correlation identified for the Clovis deposits implies that the distribution of quartz pebbles and flakes are not associated, indicating that the deposits have undergone little postdepositional modification by fluvial activity. By contrast, the distribution of quartz pebbles and flakes from the Upper Pleistocene Sands demonstrate a moderate to strong association for all size grades. These results suggest that changes in the size distribution of quartz correlate with similar changes in flake size. The deposits have in all likelihood been reworked by fluvial activity at some point following the point of original deposition. According to Waters, the sediments containing these materials appear to have been deposited in "acruate channels" that were "potentially part of a braided stream" and reflect the last time fluvial deposition occurred at the site (Waters et al. 2009:1308)

When the distribution of quartz pebbles and flakes from the Lower Pleistocene Sands was compared, the results indicate a weak association for most size grades (1/4inch, 1 inch, and 2.5 inch). The remaining two size grades (1/8 inch and ½ inch) reflect a moderate and strong positive correlation respectively. These results demonstrate that the degree to which flakes and quartz pebbles correlate within the Lower Pleistocene Sands is largely dependent on artifact size. Accordingly, large lithic categories of quartz pebbles and flakes do not correlate by weight, whereas small categories exhibit moderate to strong correlations. Further examination of the regression analysis in Table 10–2 shows that the flake and quartz debris from the Pleistocene

Terrace tend to correlate for all size classes with the exception of the 2.5 inch size grade. In fact, large lithic size classes were found to exhibit weak associations for the Pleistocene Terrace compared with small size grades. This pattern is similar to the results from the Lower Pleistocene Sands.

Table 10–3 presents the linear regression comparing the average weight of large quartz pebbles to small flakes. The results of this analysis show an absence of correlation in lithic weight for both the Clovis and Lower Pleistocene Sands. This finding implies that processes leading to the deposition of quartz pebbles had no or little influence on the flake deposits from these strata. Moreover, the lack of correlation also indicates that sediment consolidation was also not responsible for the formation of the flake assemblage from the Lower Pleistocene Sands. In contrast, the Upper Pleistocene Sands exhibit a strong positive correlation. These results suggest that processes such as fluvial input and sediment consolidation are more likely to have affected or formed the flake deposits from the Upper Pleistocene Sands.

The results of the regression analysis indicate that, by size grade, the distribution of flakes and quartz pebbles from the Clovis and Lower Pleistocene Sands are most comparable. The strong positive correlation found for the flake and quartz assemblages from the Upper Pleistocene Sands is evidence that moderate energy by fluvial and /or hydraulic processes resulting in the formation of chute channels were likely responsible for the deposition and ultimately reworking of materials within the unit. Moreover, the influx of quartz pebbles indicated by the high weight content for the Upper Pleistocene Sands likely led to the removal and translocation of a portion of the small flake assemblage from the Upper Pleistocene Sands. The average weight per level of the small flake items is low compared to the average weight of small quartz pebbles and may represent the cutoff weight under which lithic items were moved

into and out of the locality by low-energy hydraulic action, e.g. sheet wash. The quantitative ratio between the large and small fractions differs for the flake and unmodified quartz materials when the Clovis and Upper Pleistocene Sands components are compared (Table 10–3). This relationship between the large and small size grades for each lithic category implies that the small fraction of flakes from the Upper Pleistocene Sands had undergone postdepositional hydraulic winnowing (indicated by a decrease in average flake weight per level for the 1/8 inch size grade). The processes that resulted in the apparent increase in quartz pebbles is the depositional agent likely responsible for the eventual displacement of the flake deposits indicated by the predominant increase in small quartz pebbles into the Upper Pleistocene Sands.

Flakes and Cortex

A regression analysis was also performed to determine if there was any relationship between the amount of lithic debitage by size grade and the co-occurrence of cortical pebbles. The presence of cortical pebbles in association with flakes could be attributed to either mechanical weathering processes, or as the byproducts of lithic manufacture. For this procedure the average weight for each size grade of flakes was compared (regressed) against the amount in weight of cortical pebbles from the same size grade for each stratum. The results of this analysis are presented in Table 10–4.

Clovis

The regression analysis for the Clovis deposits show no correlation between the distribution of flakes and cortical pebbles from the small size grades indicating that the two assemblages are likely unrelated. By contrast, when flakes and cortex from the 2.5 inch size grade were evaluated, a strong positive correlation was indicated (Table 10–4). Based on these results, there is a positive relationship in the weight of flakes and cortex for items of the largest

Table 10–4

Results of a linear regression comparing the averages weight of cortical pebbles and flakes by size grade for each stratigraphic deposit. Correlation coefficients close to 1 indicate a strong positive correlation whereas coefficients close to 0 indicate no correlation.

	1/8	1/4th	1/2	1	2.5
Clovis	Weak Positive	Weak Positive	Weak Positive	Weak Positive	Strong Positive
correlation	0.099	0.240	0.168	0.495	0.947
R^2	0.158	0.797	0.837	0.662	0.291
P r>f	0.403	0.008	0.004	0.039	0.357
Upper Pleistocene Sands	Strong Positive	Strong Positive	Strong Positive	Strong Positive	Weak Positive
correlation	0.701	0.796	0.804	0.841	0.390
R^2	.919	0.733	0.942	0.902	0.875
P r>f	0.007	0.071	0.003	.010	.016
Lower Pleistocene Sands	Mod Positive	Weak Positive	Strong Positive	Weak Negative	Weak Negative
correlation	0.649	0.499	0.791	–0.080	–0.165
R^2	0.034	0.643	0.918	0.522	0.108
P r>f	.934	.128	.003	0.228	0.795
Terrace	Strong Positive	Strong Positive	Mod Positive	Mod Positive	Weak Positive
correlation	0.708	0.724	0.587	0.624	0.062
R^2	0.317	0.456	0.597	0.457	0.665
P r>f	0.002	< 0.0001	< 0.0001	< 0.0001	< 0.0001

size grades, implying that the conditions leading to the formation and extant distribution of these two samples could be related. Although these results could imply that postdepositional processes have altered the integrity of the deposits thus leading to the eventual size sorting by weight of all materials within the strata, the possibility also exists that these patterns may have formed as the byproduct of tool production. For example, one possible explanation for the occurrence of this association concerns the initial reduction or decortication process, whereby large, heavy cortical items are detached concurrent with primary flakes.

According to Bradbury and Carr (2004) a high average weight of materials from large lithic size grades is often indicative of biface tool production (Bradbury and Carr 2004). Since higher percentages of sizeable cortex are frequently removed from an objective piece during early stages of the biface manufacture process, it follows that such items should correlate with larger primary flakes, and occur with less frequency during latter stages of the Clovis lithic reduction sequence where smaller, lighter flakes are more common.

The variation observed in cortical pebble weight for the smaller size grades is more likely to result from natural weathering as cortical material is broken down by mechanical weathering into irregular distributions that do not correlate with flake weights for these size grades. Therefore, as flake size increases throughout the Clovis deposits (given each size grade), there is a corresponding increase in the probability that cortical pebbles weight will also correlate with flake weight.

Upper Pleistocene Sands

Next, the regression analysis was conducted comparing the flake and cortical pebble assemblages from the Upper Pleistocene Sands by size. This procedure demonstrated a number of alternative conclusions when evaluated relative to the results from the Clovis analysis

described above. An examination of Table 10–4 shows a strong positive correlation between flake and cortical materials for the 1/8inch, 1/4inch, ½ inch and 1 inch size grades, and a weak positive correlation for the 2.5 inch size grade. These results differ, and directly contradict the results obtained from the Clovis analysis. The positive correlation in flake and cortical pebble weight across multiple size grades for the Upper Pleistocene Sands could be interpreted as evidence of artifact size sorting. The absence of correlation evident for the 2.5in size grade implies that the processes responsible for the production of large cortical items are not the same processes as those that are responsible for the production of flakes of similar sizes throughout the deposit. In summary, based on the weight and size grade analysis of the cortical and flake material, the evidence supports the notion that cultural activity in the form of lithic production is less discernible from the Upper Pleistocene Sands than it is from the Clovis bearing deposits, possibly owing to a combination of bioturbation and fluvial input.

Lower Pleistocene Sands

The results of the regression analysis for the Upper Pleistocene Sands show some similarities and differences when evaluated with regard to the results from the Clovis and Upper Pleistocene Sands. When cortical and flake weight were regressed for the 1/8 inch size grade, the results demonstrate a moderate positive association. When the 1/4inch size grade was evaluated, the results indicate a weak positive correlation that is comparable to the results obtained from the Clovis deposits for the same size grade. By contrast, the ½ inch size grade produced a strong positive correlation coefficient indicating greater similarity with the Upper Pleistocene Sands. The largest two size grades examined (1 inch and 2.5 inch) resulted in very weak correlation coefficients, suggesting that cortical pebble weight from the Lower Pleistocene Sands does not correlate with flake weight for the 1 inch and 2.5 inch size grades.

The results demonstrate high percentages of heavier cortical pieces and evenly distributed flake weights for the largest two size grades. As cortical weight increases across these size thresholds, there is no corresponding trend in flake weight. However, it should be noted that given the probability values, these results are not statistically significant at the .05 level ($p = 0.228$ and 0.795). Even so, these patterns differ considerably compared against the regression analysis undertaken for the largest two size grades from the Clovis and Upper Pleistocene Sands. The weak correlation coefficients for the large size grades suggest that: 1, cortical and flake materials from the Lower Pleistocene Sands have not undergone postdepositional disturbances (e.g. agents responsible for bioturbation and size sorting have not altered the Lower Pleistocene Sands to the extent that they have for the Upper Pleistocene Sands) and; 2, the same or similar cultural lithic manufacture processes that were responsible for the co-occurrence of large, heavy cortex and flakes from the Clovis levels (primary biface core reduction) were not occurring at the time the Lower Pleistocene Sands were deposited. However, it should be noted that these results do not rule out the possibility that alternative lithic reductive technologies were responsible for the patterns of assemblage composition evident for the Lower Pleistocene Sands. Potts (2012) has found that bipolar reduction often results in flaking debris patterns that consist of high percentages of heavy cortical materials recovered from large size grades and evenly distributed weight percentages of flakes from similar size grades. The patterns from the Lower Pleistocene Sands deposits at Topper seem to best fit best with the description of bipolar reduction provided by Potts (2012).

Pleistocene Terrace

The distribution of all cortical and flake materials from the Pleistocene Terrace were compared by morphological attributes of size and weight. The regression analysis presented in

Table 10–4 reveals a moderate to strong positive correlation between the weight of flakes and cortical pebbles per level for the four smallest size grades. Combined with the distribution of quartz pebbles from the Pleistocene Terrace, the size grade analysis of cortical and flake weights for this unit support the conclusion that items from the smallest size grades have been moderately to well-sorted by weight. That is, the distribution of small materials has likely been disturbed to some degree by postdepositional processes. However, a weak correlation was found when the 2.5 inch size grade was examined (Table 10–4). It appears that as the size of lithic items increases throughout the Pleistocene Terrace, the degree to which materials are well sorted by weight diminishes. In other words, the weight of large Flakes and cortical pebbles is increasingly variable or patchily distributed throughout the profile. This pattern is in agreement with what Potts (2012) describes as evidence for bipolar reduction (high percentages of heavy cortical materials recovered from large size grades and evenly distributed weight percentages of flakes from similar size grades). Based on these findings, the associated distribution of large cortical cobbles and flaking debris from the Upper Pleistocene Terrace, recovered in fine grained sediments, could reflect flake/tool production by compression or anvil flaking. By contrast, the distribution of smaller flakes and cortical pebbles from basal levels of the Pleistocene Terrace are more likely to be the product of mechanical weathering or sediment consolidation than resulting from tool production.

Chapter Summary and Conclusion

Based on the technological analysis of the lithic items recovered from the Alluvial terrace at Topper, at least two strata have evidence of chipped stone artifacts and debris. The results of the mass and size grade analysis demonstrate that postdepositional processes are likely responsible for the formation or alteration of the lithic contents of the Upper Pleistocene Sands.

The analyses of unmodified quartz from the Upper Pleistocene Sands strongly indicate that these lithic items were introduced by fluvial activity that included moderate-energy flooding indicated by the presence of chute channels, in addition to low-energy sheet-wash originating from the hill-side slope. These processes may subsequently have led to the hydraulic winnowing of an extant assemblage of cultural lithic items as evidenced by a decrease in mean weight of small flakes throughout the Upper Pleistocene Sands thus the presence of quartz pebbles within the Upper Pleistocene deposits is most parsimoniously interpreted as a product of fluvial transport into the locality, and subsequent mixing with lithic artifacts.

The analysis also shows, however, that deposits from the Clovis and Lower Pleistocene Sands have not been subjected to recognizable post depositional site formation processes. For these deposits there is no correlation in lithic size by weight with vertical depth. At least two discrete Pleistocene Human occupation events are indicated by the results of this study.
It is suggested that the first human occupation at the site post-dated the deposition of the heavy quartz fraction from the basal levels of the Pleistocene Terrace but predated the deposition of the chute channels from the Upper Pleistocene Sands. Although quartz pebbles are present from the Lower Pleistocene Sands, pebble sizes are comparatively small, with a higher proportion of larger quartz pebbles deriving from the Upper Pleistocene Sands. Moreover, a close inspection of the visible characteristic of the flake materials from these deposits found no evidence of abrasion or rounding that would imply that the flakes had been exposed to long term fluvial activity. The presence of large heavy cortical materials and associated non-rounded compression flakes of various sizes in the fine grained sediments of the Upper Pleistocene Terrace is consistent with the attributes expected from a cultural assemblage and reflects the earliest occupation of the site.

CHAPTER XI

SPATIAL ANALYSIS

Natural disturbances may have created or altered the lithic assemblages at the Topper Site. Processes such as slopewash , bioturbation, and mechanical weathering can significantly impact the vertical and horizontal integrity of the lithic deposits. Miller (2007) tested the possibility that natural processes have affected the Clovis deposits on the Hillside at Topper and found that preservation was differentially distributed across that portion of the site. A goal of the present study is to determine if the original spatial relationships between the lithic items from the research sample have been preserved. Therefore spatial analyses were conducted for all mapped lithic items in the study sample from the Clovis, Pleistocene Sands, and Pleistocene Terrace at Topper. These analyses were conducted to determine if there is any non-random horizontal or vertical patterning in the distribution of items from each assemblage. To account for the distribution of materials recovered in the screen, the screen items were examined by size across the spatial extent of the study area for each deposit.

If the Topper assemblage is a byproduct of taphonomic disturbance or represents the downward drift of flakes from the Clovis contexts above, then the spatial distribution of the assemblage should either 1) consist of a random pattern throughout the horizontal and vertical profile or 2) consist of a clustered pattern containing an accumulation of items of small size grades (due to sorting by downdrift) on a common surface if stable surfaces were encountered prohibiting the further movement of items through the profile. By contrast, a non-random (clustered) pattern, whereby items of multiple size grades co-occur, would indicate site integrity. This spatial pattern reflects an isolated, discrete, cultural deposit prior to the Clovis occupation at the site. Therefore this analysis operates under the assumption that non-random patterns within

the vertical and horizontal distribution of an unsorted assemblage should exist if: 1, the distribution of lithic artifacts is a byproduct of human manufacture, and 2, site integrity has been preserved.

Three analytic procedures were conducted to assess horizontal and vertical spatial patterning at Topper; nearest neighbor analysis and k–means analysis; size grade spatial analysis; and cluster shape analysis. The nearest neighbor and k-means analyses were conducted to determine if the assemblages are statistically clustered and if so, to determine the number of clusters in the distribution. The size grade spatial analysis examined the presence or absence of spatial patterning in the horizontal distribution of flakes from different size grades across the site. Finally, the cluster shape analysis was employed to determine if the vertical distribution of artifact clusters were circular or elliptical (horizontal) in nature, with the assumption that clusters conforming to a circular shape are more likely to be the product of natural formation processes. Accordingly, chert weathering in situ in sediment will break away from the parent material in such a way that overtime, and barring additional postdepositional processes, will form in a "ringed" pattern around the parent material. Unlike this pattern, artifact clusters produced from cultural processes should build up over time, resulting in cluster patterns that are elliptical in form.

Nearest Neighbor Analysis

Nearest neighbor analysis operates with the assumption that non-random patterning within a given site assemblage should occur only where the spatial array of items from the assemblage has been preserved. Miller (2010) used nearest neighbor analysis to demonstrate the occurrence of significant clustering of some artifact types from the Clovis assemblage on the Topper Hillside. The present study incorporates a similar analytic design strategy. First, the

positions of three dimensionally mapped artifacts from each assemblage (Clovis, Pleistocene Sands, and Pleistocene Terrace) were projected against the vertical profile for each deposit using ArcGIS 10.2 (Clark and Evans 1954; Whallon 1974). The program designates continuous values that quantify the amount of non-random patterning within the sample. The output provides a numerical value that ranges between 0 and 2.149, with values closest to 0 indicating clustered samples. By contrast, values closest to 1 represent more randomly distributed samples whereas values greater than 1 indicate distributions that are increasingly "more regularly spaced." (Miller 2010:48). Moreover, standard Z-scores are calculated to assess levels of statistical significance. The significance level describes the probability that a pattern could be the result of random chance. A significant-value for this study is a pattern that has less than a 5% chance of being random ($\alpha = .05$).

The nearest neighbor analyses were conducted to establish the horizontal integrity of the lithic assemblages at the Topper Site. Two block excavations were chosen for the spatial analysis (Figure 11–1). These were the original 5x9 block excavation excavated from 2002–2012 that extends from N242–N250 and E136–145. All mapped items from this block have been examined with summary information presented in chapters 7–10; more specific detail on the individual artifacts is provided in the appendices. The second block excavation chosen for the nearest neighbor analysis consists of the 2000–2002 5x10m block situated adjacent to and to the south and west of the primary block. This block now extends from N236–N246 and E128–138. Only the mapped items from units N240 E130, N242 E130, N240 E132, and N242 E132 within this block have been thoroughly examined and discussed in the previous chapters.

A total of five sets of nearest neighbor tests were conducted to determine the extent of horizontal clustering. The assemblages examined include lithic materials recovered from the

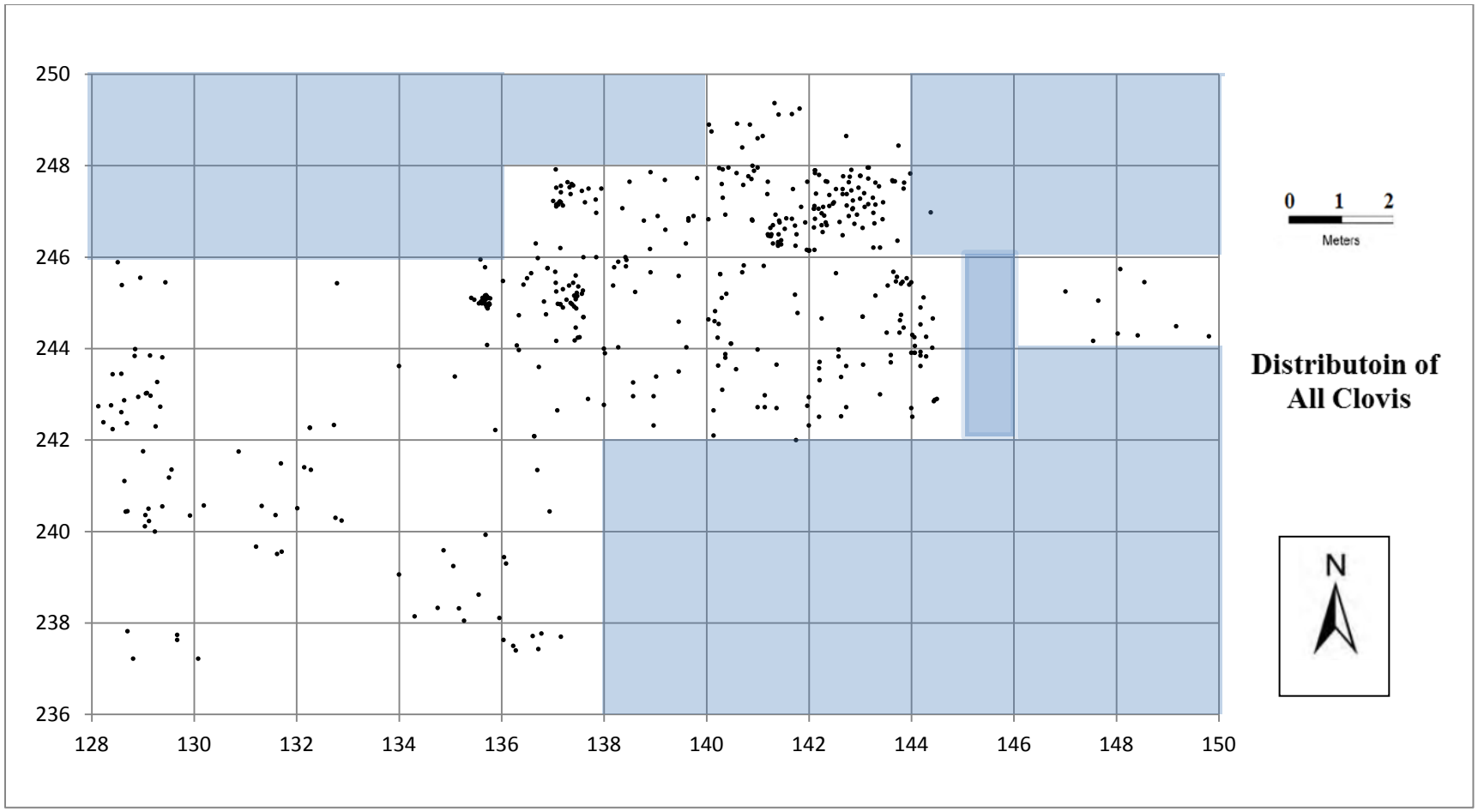


Figure 11–1
Distribution of all piece plotted Clovis Artifacts (N=561). NN statistic = .779; p = <.0001.

Clovis deposits at the base of the Holocene colluvium (98.30–97.80m); the putative pre Clovis assemblage from the base of the Pleistocene Sands resting at the contact with the Pleistocene Terrace (97.70–97.00m); and lithic materials from three distinct levels within the Pleistocene Terrace that correspond with what Goodyear (personal communication) describes as three stratigraphically separated lithic reduction zones. Areas from the Pleistocene Terrace that were examined range in depth from 1) 96.90–96.70 m, 2) 96.15–95.95 m, and 3) 95.35–95.55 m. For each assemblage a nearest neighbor test was conducted first for the entirety of the assemblage, and subsequently for each tool class within each assemblage. Because the depth associated with each deposit, vertical grouping, and refit analyses were conducted to better account for the potential of vertical mixing within the deposits.

Results of Nearest Neighbor Analysis: Clovis Sample

A total of 561 plotted artifacts from the Clovis deposits were examined for spatial patterning (Appendix 43). These materials were recovered from deposits ranging in depth from 98.30–97.80 m from the study area. The nearest neighbor analysis found significant clustering for the entire Clovis assemblage (NN statistic = 0.779; p = <0.0001) (Figure 11–1, Table 11–1). Given the Z–score of –0.9.96, there is less than a 1 percent probability that the observed clustered pattern could be the result of random chance. The Clovis assemblage was subsequently subdivided into six groups based on tool type, and nearest neighbor analyses were conducted on each. Tool types considered for this analysis included biface tools, flake tools, production tools, core tools, bend break tools, and non-tools. The non-tool category consists of flakes and debitage.

Table 11–1
Results of Nearest Neighbor Analysis by Artifact Category and Major Excavation Strata.

	NN stat	**p value**	**Z Score**	**Result**	**Artifacts**	**Area m^2**
All Plotted Clovis 98.30 – 98.70m	0.779	<.0001	–9.9600689	Clustered	561	160
Flake Tool	0.706323	0.00000	–7.516694	Clustered	179	160
Biface Tool	0.7567	<.0001	–4.083587	Clustered	77	160
Prod. Tool	0.794709	0.041279	–2.040713	Clustered	27	160
Core Tool	0.818271	0.005415	–2.781278	Clustered	64	160
Bend Break Tool	0.1690	0.000002	–4.767794	Clustered	9	160
Non Tool	0.654634	0.0	–6.705465	Clustered	103	160
All Plotted PS 97.80 – 97.00m	0.645695	0.0	–27.323376	Clustered	1625	132
Flake Tool	0.745219	0.0	–6.447879	Clustered	175	132
Production Tool	0.505208	0.00	–8.466399	Clustered	80	132
Core Tool	0.535683	0.00	–9.170315	Clustered	115	132
Bend Break Tool	0.593679	0.0	–6.266961	Clustered	65	132
Bend Break Tool A	0.866249	0.039119	2.062932	Clustered	65	62
Non Tool	0.449510	0.00	–16.850	Clustered	256	132
Cobbles	0.563823	0.00	–21.614985	Clustered	671	
Southern Terrace						
96.90–96.70m						
All plotted	1.33433	0.00	7.962982	Dispersed	155	6
Bend Breaks	1.05260	0.607844	0.513153	Random	26	6
Flake Tools	1.10794	0.456538	0.744560	Random	13	6
Non–Tools	1.61923	0.0000	8.943892	Dispersed	57	6
Pebbles	0.98996	0.887764	0.141134	Random	54	6
96.15–95.95m						
All Plotted	0.95942	0.220598	1.224939	Random	250	6
Bend Breaks	0.92444	0.488190	0.693190	Clustered	23	6
Flake Tools	0.898365	0.361778	0.911982	Clustered	22	6
Non Tools	1.04942	1.086248	0.277369	Random	133	6
Pebbles	0.95145	0.468222	0.725375	Random	72	6
95.55–95.35m						
All Plotted	0.91656	0.009234	–2.603255	Clustered	266	6
Bend Breaks	0.96112	0.715583	–0.364368	Random	24	6
Flake Tools	0.88929	0.320542	–0.993344	Clustered	22	6
Non Tools	0.91258	0.053781	–1.928592	Clustered	133	6
Pebbles	0.88092	0.048514	–1.972840	Clustered	75	6
Northern Terrace						
96.90–96.70m	1.15353	0.00	7.085964	Dispersed	583	8
Bend Breaks	1.11850	0.256974	1.133573	Dispersed	25	8
Flake Tools	7.74709	0.00	73.016806	Dispersed	32	8
Non Tools				Dispersed	178	8
Pebbles	50.273414	0.000	1753.40235	Dispersed	347	8

Biface Tools

All bifaces and biface fragments (n = 77) from the Clovis deposits were examined for spatial patterning (Figure A43–2). These artifacts were combined into a single group as they provide evidence of biface manufacture. Based on the size of the block excavations, an area value of 160 was used when calculating the nearest neighbor statistic. The results of the nearest neighbor analysis show that bifaces from these deposits are significantly clustered (NN statistic =0.7567; p = <.00001) (Table 11–1).

Clovis Flake Tools

Next all flake tools were examined for the presence of spatial patterning. A total of 179 flake tools were considered for this analysis, the most of any artifact category for the cultural deposit (Figure A44–3). Flake tools considered for this analysis include blades, scrapers, unifaces, denticulates, and modified flakes. The results of the nearest neighbor analysis found that flake tools tend to cluster (NN statistic = 0.706323; p = 0.00000. Based on the Z–score of –7.516694, there is less than 1% likelihood that the clustered pattern could be the result of random chance.

Clovis Production Tools

For the purpose of this study, production tools are considered those lithic objects used for the manufacture of stone tools and include hammerstones, hammerstone fragments, and anvils. The spatial distribution of Clovis production tools is presented in Figure A43–4. A total of twenty seven production tools were considered for the nearest neighbor analysis. The results of the nearest neighbor analysis found that Clovis production tools are clustered (NN statistic = 0.794709; p = 0.041279). However, these results demonstrate that the distribution of production

tools is more randomly distributed than biface or flake tools. Given the Z–score of –2.04, there is less than a 5% likelihood that this clustered pattern could be the result of random chance.

Clovis Core Tools

Next all Clovis core tools were examined to assess whether or not the distribution of artifacts represents spatial patterning. Appendix A43–5 shows the distribution of core tools from the excavation blocks considered in this analysis. The core tool category (n = 64) includes all flake, biface and blade cores, and core fragments. The results of the nearest neighbor analysis also found the distribution of core tools to be significantly clustered (NN statistic = 0.818271; p =0 .005415). Based on the Z–score (–2.78), there is less than 1% chance that the clustered distribution of cores could be the result of random chance.

Clovis Bend Break Tools

A total of nine bend break tools were recovered from the Clovis contexts encompassed within the excavation blocks examined for this study. The spatial distribution of these bend breaks is presented in Figure A43–6. Based on the nearest neighbor analysis (NN statistic = .1690; p = 0.0000002) the distribution is significantly clustered. Based on the Z–score (–2.78), there less than a 1% chance that the clustered distribution of bend break tools could be the result of random chance. Given the area (160sqm) from which distribution was analyzed, bend breaks are the most clustered artifact category. However, the high nearest neighbor statistic may also be due to the relatively small sample size for the artifact category.

Clovis Non-Tools

The Clovis non-tool category consists of all unmodified flakes and debitage recovered from the sample area. A total of 103 items were classified as Clovis non-tools. This category does not include chert cobbles and pebbles that might have formed as the result of natural

processes. When all non–tools were examined for the presence of spatial patterning, there was a clustered distribution for this artifact category (NN statistic = .654634; p = 0.0001). The Clovis non-tool category registered the lowest neighbor static (and least clustered) of any test for the Clovis artifact categories.

Results of Nearest Neighbor Analysis: Pleistocene Sands Sample

Figure 11–2 presents the spatial distribution of lithic items mapped from the Upper (97.80-97.50 m) and Lower Pleistocene Sands (97.50–92.0m). A total of 1,625 items were mapped from an area of 132 square meters. The deposits were further separated into two vertically restricted samples to see if any spatial patterns exist within the deposits that could indicate vertical mixing. A total of 1,362 items were part of the study sample and include 423 piece-plots from the Upper Pleistocene Sands and 939 piece-plots from the Lower Pleistocene Sands. When the total distribution was examined using the nearest neighbor analysis, the results show significant clustering (NN statistic = .645695; p = 0.000) for the entire pre Clovis assemblage from the Pleistocene Sands deposits (Table 11–1). In addition to examining the assemblage as a whole, the spatial patterning of individual tool classes from the Pleistocene Sands was also considered using the nearest neighbor analysis. Individual tool classes analyzed include flake tools, core tools, production tools, bend break tools, non-tool flakes and debitage, and cobble/pebbles. Apart from a single specimen, Bifaces were absent from the Pleistocene sands.

Pleistocene Sands Flake Tools

All flake tools from the Pleistocene Sands were examined to assess their spatial relationship within the site grid (Figure A43–8). Flake tools considered for this analysis, and recovered from the Pleistocene sands include blades and blade fragments, scrapers, unifaces,

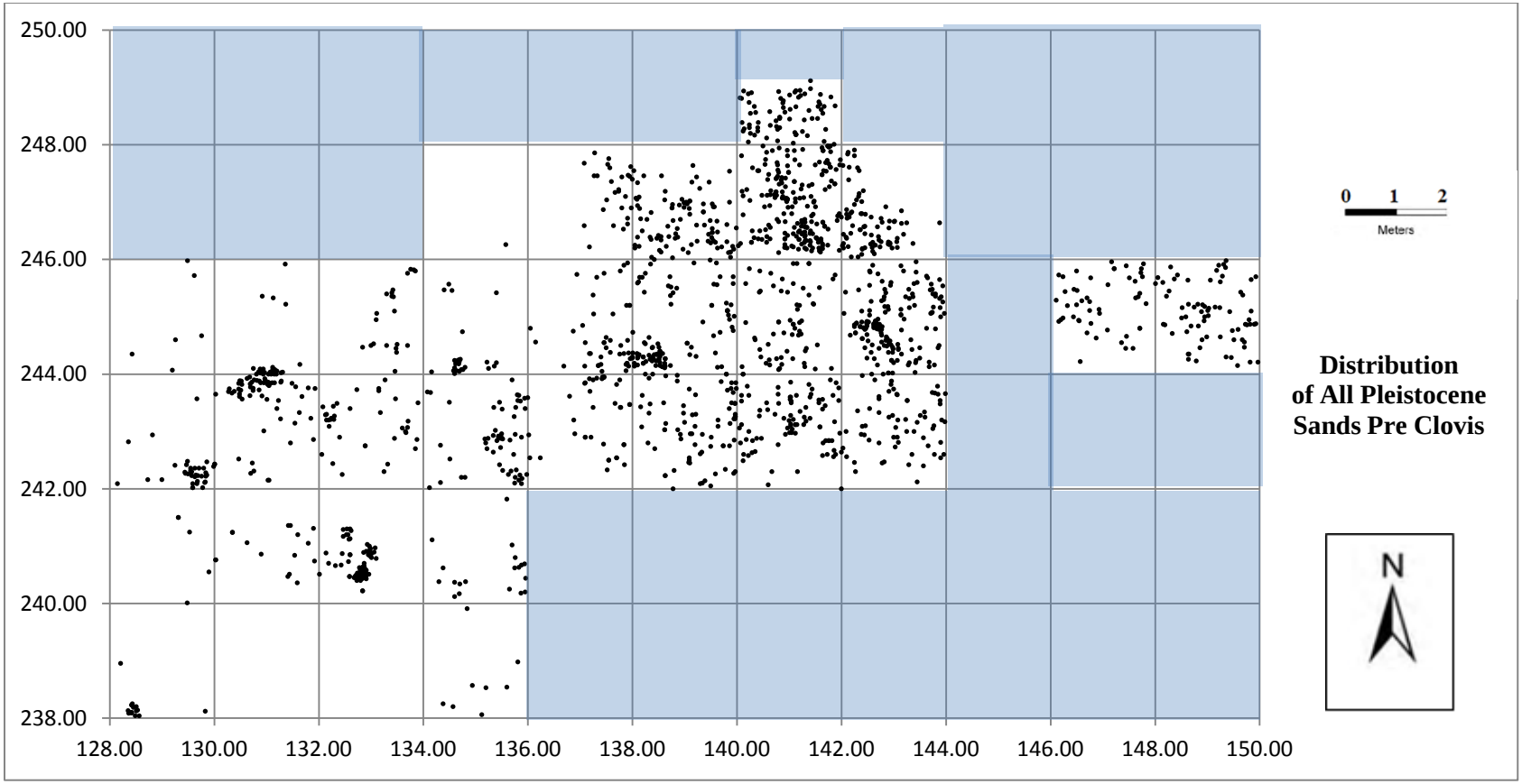


Figure 11–2
Distribution of all pre Clovis mapped items from the Pleistocene Sands. (97.70–97.20m; n=1625).

denticulates, modified flakes, and burins. A total of 175 flake tools were identified from these deposits. When the spatial patterning of flake tools was examined, there is a clustered distribution (NN statistic = 0.745219; p = 0.000). The spatial distribution of flake tools is non-randomly dispersed across the block excavation.

Pleistocene Sands Bend Break Tools

A total of 65 bend breaks were mapped from the Pleistocene Sands. The results of the nearest neighbor analysis show that the distribution of bend breaks is significantly clustered (NN statistic = 0.593679; p = 0.00000). There is less than a 1% chance that the clustered pattern could be the result of random chance. However, it should be noted that all but two bend breaks were recovered from the 2002–2012 5m x 9m block excavation and it is evident that prior to 2001, bend breaks were not recorded as an artifact category in the level records. As such, the spatial distribution of bend breaks presented in Figure A43–7 likely underestimates the actual number and distribution of items from the western block excavated from 2000–2002. If this is in fact the case then the nearest neighbor statistic is likely skewed towards a clustered distribution as it does not take into account the potential for the bend breaks that were not recorded as such from the early field seasons. To compensate for this issue, a second nearest neighbor analysis was conducted for the bend break category using only the areal coverage of the original 5x9 excavation (62 square meters as opposed to 132) and excluding the two bend breaks from the 2000–2002 block excavation. When the nearest neighbor analysis was recalculated using the adjusted areal parameter, the results still show a clustered distribution (NN statistic 0.866249; p = 0.039119); however, the nearest neighbor statistic is closer to 1 indicating a low likelihood that the clustered distribution is the product of random chance.

Pleistocene Sands Production Tools

A total of 80 lithic items were identified as production tools from the Pleistocene Sands deposits of the two block excavations (Figure A43–9). These include hammerstones (n = 28), battered quartz pebbles (n = 47), and anvil stones (n = 5). When the distribution of all pre Clovis production tools from the Pleistocene Sands was examined, the results demonstrate a significantly clustered pattern (NN statistic 0.505208; p = 0.000). It appears that production tools have the lowest nearest neighbor statistic for any tool category (excluding flakes and debitage) from the Pleistocene Sands. However, when just the hammerstones were considered, the nearest neighbor statistic was closer to 1 but was still clustered (NN statistic = 0.777329; p = 0.0217791).

Pleistocene Sands Core Tools

The next class of artifacts examined was the pre Clovis Core Tools. Most of these artifacts are flake cores with little evidence of formal patterning. A total of 115 lithic items were identified as cores from the Pleistocene Sands deposits of the two block excavations (Figure A44–10). Most of these items were recovered from the 2002–2012 5x9 block excavation. When the spatial distribution of these artifacts was examined, the nearest neighbor analysis for core tools resulted in a clustered distribution (NN statistic = 0.535683; p = 0.00).

Pleistocene Sands Non-Tools

A total of 256 lithic items were identified as broken flakes or debitage from the Pleistocene Sands. These items are distinguished from the flake tool category by the lack of modification observed on the flake margins. The spatial distribution of Pleistocene Sands Non-Tools is presented in Figure A43–11. Apart from the chert cobble and pebble class, the non-tool category comprises the largest artifact category examined from the Pleistocene Sands deposits.

The nearest neighbor analysis found that non-tools are significantly clustered in the excavation blocks examined (NN statistic = 0.449510; p = 0.00). It appears that items identified as waste products of the manufacture process have lower nearest neighbor statistics compared with the tool categories. However, this pattern may be a product of the high number of artifacts classified as non-tool debitage.

Pleistocene Sands Cobbles and Pebbles

The final category examined was the cobble and pebble class. These lithic items can be a product of natural processes but may also have been incorporated into the cultural system to aid in the lithic manufacture process. A total of 671 lithic items were classified as unmodified cobbles or pebbles from the Pleistocene Sands deposits; the largest lithic category examined. Figure A43–12 presents the spatial distribution of cobble/pebble items from the Pleistocene Sands. Many of these lithics comprise the items Goodyear classifies as cobble clusters associated with the manufacture of bend break and microlithic tools (Goodyear 2005). As such most cobbles and pebbles are associated with lithic features identified from the Pleistocene contexts at the site. The results of a nearest neighbor analysis found the cobble pebble class clustered (NN statistic = 0.563823; p = 0.0). In addition to the items listed above, a total of 262 mapped items that were excavated from the 2000–2002 5m x10 m Pleistocene Sands block excavation were not assigned to a specific artifact category and thus were not used for the nearest neighbor analysis. The results of the nearest neighbor analyses for the Pleistocene Sands show that all artifact classes are clustered.

Comparison of Upper and Lower Pleistocene Sands

Because the Pleistocene Sands consist of materials from 80cm of vertical distribution, it was necessary to separate the deposits into two vertically restricted samples to see if any spatial

patterns exist within the deposits that could indicate vertical mixing. Figures A43–30 through A43–34 present the spatial distribution of mapped artifacts from the Upper and Lower Pleistocene Sands. A number of patterns were revealed when the two distributions were compared. More than twice as many lithic items were identified from the Lower Pleistocene Sands than from the Upper Pleistocene Sands. According to Table A43–2 and 3, a higher percentage of artifacts from each lithic category were identified from the Lower Pleistocene Sands. Although cobbles and pebbles are the most abundant lithic category for both deposits, a much higher percentage of cobbles and pebbles were identified from the Upper Pleistocene Sands (Table A43–3). A chi square comparison of tool types for each deposit shows a significant difference between the two samples (Table A43 – 4A). These patterns demonstrate a decline in artifact abundance for the Upper Pleistocene Sands when compared with the underlying strata. Although the increase in abundance of artifacts on the Terrace surface could indicate that these items have been displaced from above and have migrated downward through the profile, the rarity of bifaces from the Pleistocene Sands suggests that this is not the case. The results of a nearest neighbor analysis for the Upper and Lower Pleistocene Sands are presented in Table A43 -4B. All lithic and artifact categories for each deposit were found to cluster. Moreover, the NN statistics for the complete assemblage from each deposit were found to be nearly identical (NN Upper PS = .6024, NN Lower PS = .6060). However, a comparison of each artifact category shows that core and flake tools from the Upper Pleistocene Sands have the highest NN statistics from the deposit, whereas production and flake tools have the highest NN statistics from the Lower Pleistocene Sands. The flake tool category was found to exhibit the greatest disparity in NN statistic with a differenc of .201813 seperating the Upper from Lower Pleistocene Sands.

These results demonstrate increased clustering for this artifact category with depth through the Pleistocene Sands

Results of Nearest Neighbor Analysis: Pleistocene Terrace Sample

For the nearest neighbor analysis of the Pleistocene Terrace, the unit was divided into three separate 20cm thick sections; an upper section ranging from 96.90–96.70 m; a middle section ranging in depth from 96.15–95.95 m; and a lower section ranging in depth from 95.35–95.55 m (Table 11–2). As was conducted for the Holocene, Clovis, and Pleistocene Sands assemblages, each of the three terrace sections was analyzed and artifacts were broken down into six artifact categories based on tool type; bend break tools, flake tools, production tools; core tools, and non-tools. A sixth category that includes cobbles and pebbles was also examined.

Table 11–2

Extent of Excavation for each depositional stratum of the Alluvial Terrace at the Topper Site (38AL23).

	Beginning Depth	Ending Depth
Holocene and Clovis	99.30	97.80
Pleistocene Sands pre Clovis	97.80	97.00
Pleistocene Terrace 1	96.70	96.90
Pleistocene Terrace 2	95.95	96.15
Pleistocene Terrace 3	95.35	95.5m

Moreover, two separate block excavations were examined; the 2005–2009 Southern Terrace block, and the 2009–2012 Northern Terrace block. It should be noted that far fewer horizontal m^2 of Pleistocene Terrace sediments have been excavated at Topper compared with the Clovis and Pleistocene Sands deposits. For example, whereas a total of 160m^2 of Clovis deposits and 132m^2 of Pleistocene Sands deposits were included in the spatial analysis, an aerial extent of only 14m^2 Pleistocene Terrace sediments have been excavated (6m^2 for the Southern Pleistocene Terrace and 8m^2 for the Northern Terrace). These factors make recognition of spatial patterning from the lower deposits at the site more difficult, if not impossible. In the following section the results of the nearest neighbor analysis for the Pleistocene Terrace deposits at Topper are presented.

Southern Pleistocene Terrace Block

Figure A43–13 presents the spatial distribution of lithic items mapped from the Upper Pleistocene Terrace from the Southern block excavation (96.90–96.70m). A total of 155 items were plotted from these deposits including 26 bend breaks, three cores, two hammerstones, 13 flake tools and 57 unmodified flakes and flake debris. In addition these items, 54 chert cobbles or pebbles were also mapped. The results of the nearest neighbor analysis found that the upper deposits from the Pleistocene Terrace as a whole reflect a random distribution (NN statistic = 1.334333; p = 0.00). When the spatial patterning of individual artifact categories was considered, there is a random distribution for the bend break tool (NN statistic = 1.052605), flake tool (NN statistic = 1.107944), and Pebble categories (NN statistic = 0.989961), and a dispersed pattern for the non-tool flake category (1.619239). Evidence is absent for horizontal clustering in the distribution of artifacts from the Upper Pleistocene Terrace. The spatial patterning for the Middle deposits of the Pleistocene Terrace section (96.15–95.95m) of the Southern block excavation is presented in Figure A43–14. These levels produced a total of 250 mapped items including 23

bend breaks, 22 flake tools, 133 non-tool flakes, and 72 pebbles. The results of the nearest neighbor analysis for the Middle deposits of the Pleistocene Terrace were similar to the overlying Pleistocene Terrace deposits and show a random association for most artifact categories (Table 11–1). The flake tool and bend break classes have the lowest nearest neighbor statistics (n=0.898365 and n=0.92444) but are not statistically significant (p = 0.3617; 0.488190).

A total of 266 lithic items were mapped from the lower deposits of the Pleistocene Terrace from the Southern block excavation and includes 24 bend breaks, 22 flake tools, 133 non-tool flakes and 75 pebbles. Twelve additional artifacts were classified as cores. The spatial distribution of artifacts from the lower section of the Pleistocene Terrace is presented in Figure A43–15. The results of the nearest neighbor analysis show that bend breaks exhibit a random distribution with a NN statistic close to 1 (NN statistic = 0.961122; p = 0.715583) whereas flakes tools have a lower NN statistic and are clustered (NN statistic =0 .889297; p = 0.320542). The non-tool flake and pebble categories are also clustered (NN statistic = 0.912585; p = 0.0535781 and NN statistic = 0.880922; p = 0.048514 respectively). However, even where clustering was found to occur for the flake and pebble categories, only the pebble class fell within the.05 α level of statistical significance. It would appear that the higher density of mapped artifacts per square meter for the Pleistocene Terrace combined with the smaller area tested ($6m^2$) could be resulting in the higher nearest neighbor values for this area of the site compared with the overlying Clovis and Pleistocene Sands; giving a false indication that the deposits are random. Therefore the excavation of a larger area of the Pleistocene Terrace might provide alternative results.

Northern Pleistocene Terrace Block

A single 20cm section of the northern Pleistocene Terrace block was examined for the presence of horizontal spatial patterning (96.90–96.70m). Only one section was selected for

analysis because the Pleistocene Terrace surface is at a lower elevation in the northern block (97.10m) than in the Southern block (97.30m), and excavation in the northern block has only reached a depth of 96.50m. Figure A43–16 presents the spatial distribution of the mapped items from the Northern block. A total of 583 artifacts were mapped from the upper deposits of this region of the site. Artifacts identified include 25 bend break tools; 32 flake tools consisting of unifaces, scrapers and blades; 178 non-tool flakes; and 347 pebbles or cobbles. The nearest neighbor analysis found a dispersed pattern for all artifact categories with the exception of the bend breaks, which were randomly distributed. Horizontal clustering was absent from the spatial distribution of artifacts from the Northern Pleistocene Terrace block excavation. The excavation of additional units to widen the footprint of this block might aid in determining whether or not the observed spatial patterns are representative of a random distribution for a much greater area of the site.

K–Means Analysis

The results of the nearest neighbor analyses provided evidence for non-random patterns in the distribution of artifact classes at the site. The Clovis and Pleistocene Sands exhibit the greatest evidence for artifact clustering. Having identified the presence of non-random patterns within the horizontal distribution of artifacts from these deposits, k-means cluster analysis was used to identify the optimal number of clusters (cluster solution) for each stratigraphic deposit, and to identify the horizontal spatial patterning of artifacts within each individual cluster assignment. K-means analysis searches for non-random patterns that minimize the squared distance between a cluster's centroid and points in the cluster (Kintigh and Ammerman 1982). The optimal cluster number for each assemblage was established based on the plot of Within Sum of Squares (SSE) by the number of clusters.

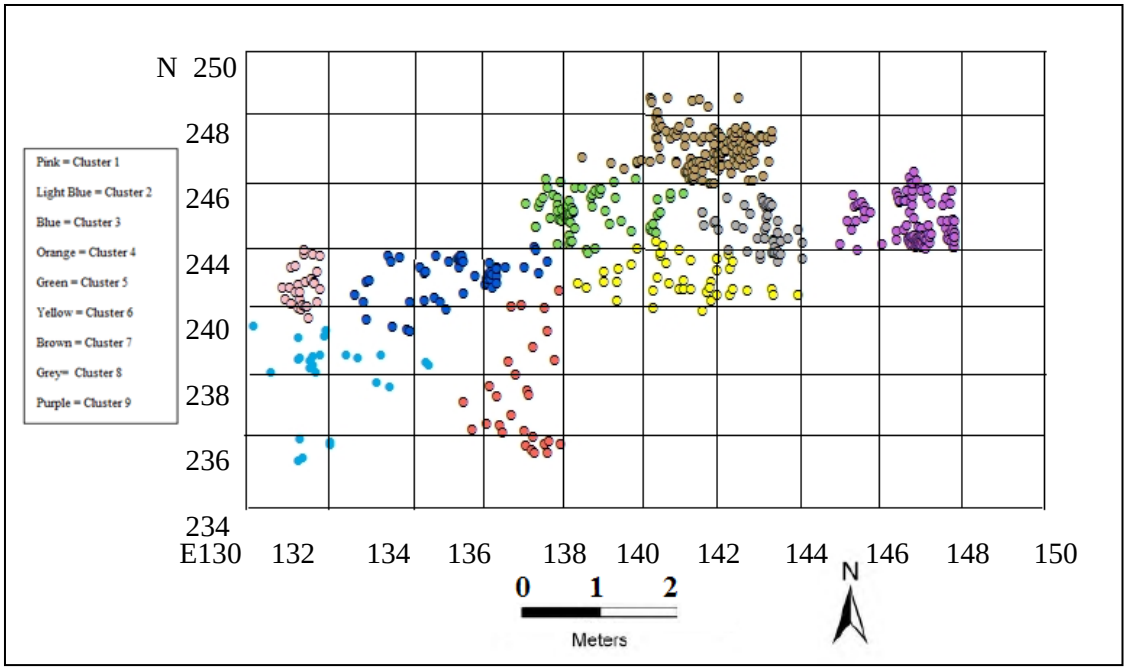


Figure 11–3

K–means analysis cluster assignment for all piece plotted artifacts from the Clovis deposits Y–axis, northing, X–axis, easting.

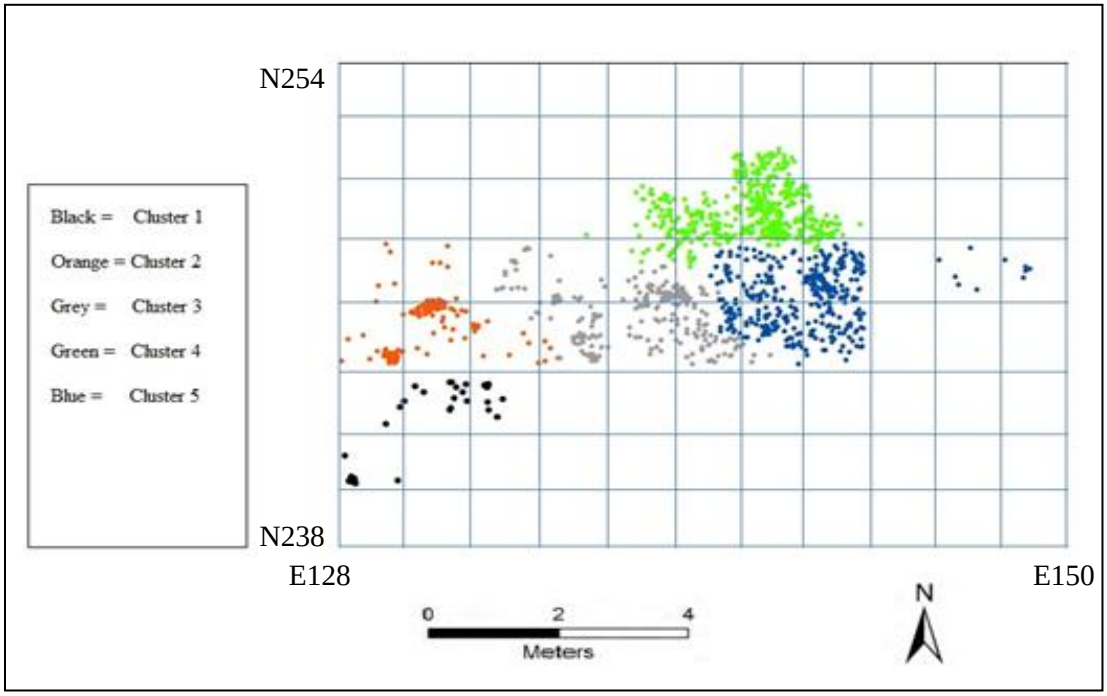


Figure 11–4

K–means analysis cluster assignments for all piece plotted artifacts from the Pleistocene Sands. Y–axis, northing, X–axis, easting.

Based on the K–means analysis, a nine cluster solution was optimal for the Clovis assemblage and a five cluster solution was optimal for the Pleistocene Sands assemblage. The results of the cluster solutions and corresponding distribution of mapped artifacts for each cluster are presented in Figures 11–3 and 11–4. To better understand the spatial patterning of individual clusters, a kernel density function was calculated to illustrate local density concentrations. The kernel density tool in ARC GIS 10.2 calculates a magnitude per unit area from point features using a kernel function to fit a smoothly tapered surface to each point. Contours reflect high and low frequencies in the data. Figures 11–5 and 11–6 present kernel density maps for each assemblage that show high density locations associated with individual artifact clusters. Clusters from each assemblage were subsequently examined by assemblage composition. Individual clusters were compared using Chi-Square analysis to determine if the contents vary in terms of the frequency of tool types and the results are presented below.

Clovis Assemblage

The k–means analysis identified a total of nine optimal artifact clusters for the Clovis deposits. Apart from flakes, bifaces and flake tools were on average the most common artifact category for each cluster. Table 11–3 presents the observed versus expected number of artifacts by type for each cluster. Spikes in bifaces are found in clusters three and six. Bifaces were absent from cluster four. Clusters one, two, three and six have more than the expected number of bifaces while the expected number of bifaces in cluster five is less than expected. The observed value of bifaces is close to expected for clusters four, six, eight, and nine. Therefore, clusters three and six may best be interpreted as areas of primary reduction and initial Clovis biface manufacture. When flake tools are considered, clusters one, two, six, and eight have higher than expected numbers of flake tools. By contrast, clusters three, five, and seven have less than

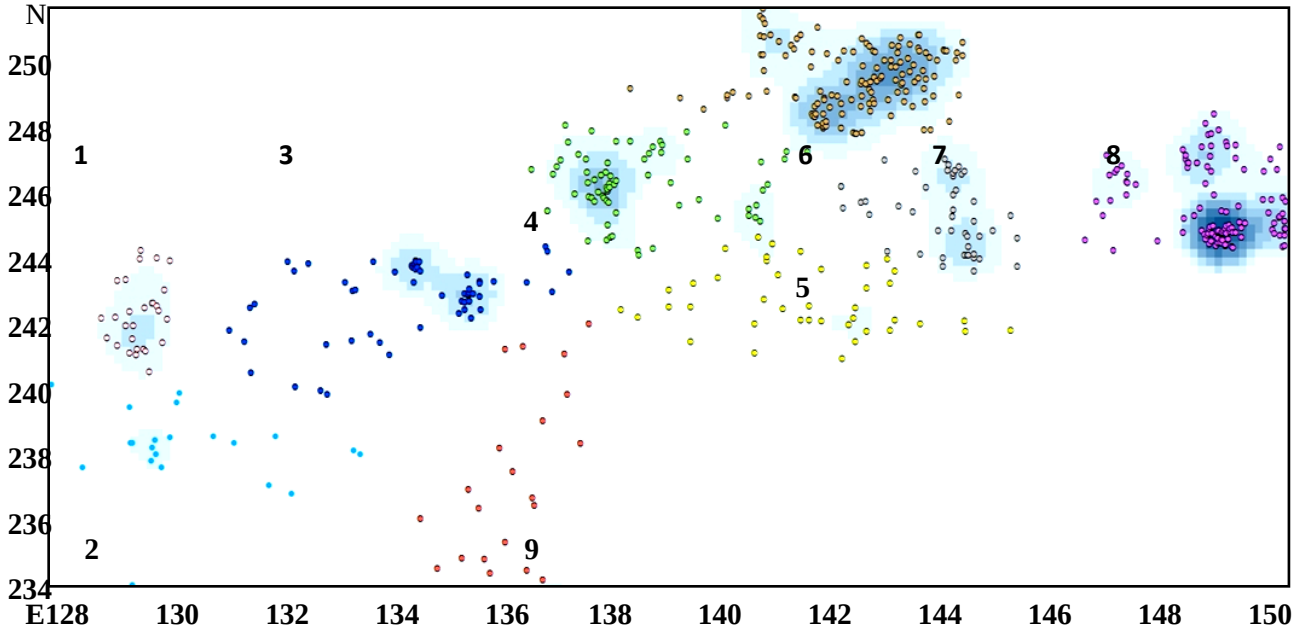


Figure 11–5
Kernel density plot map for all piece plotted artifacts from the Clovis assemblage at the Topper Site.

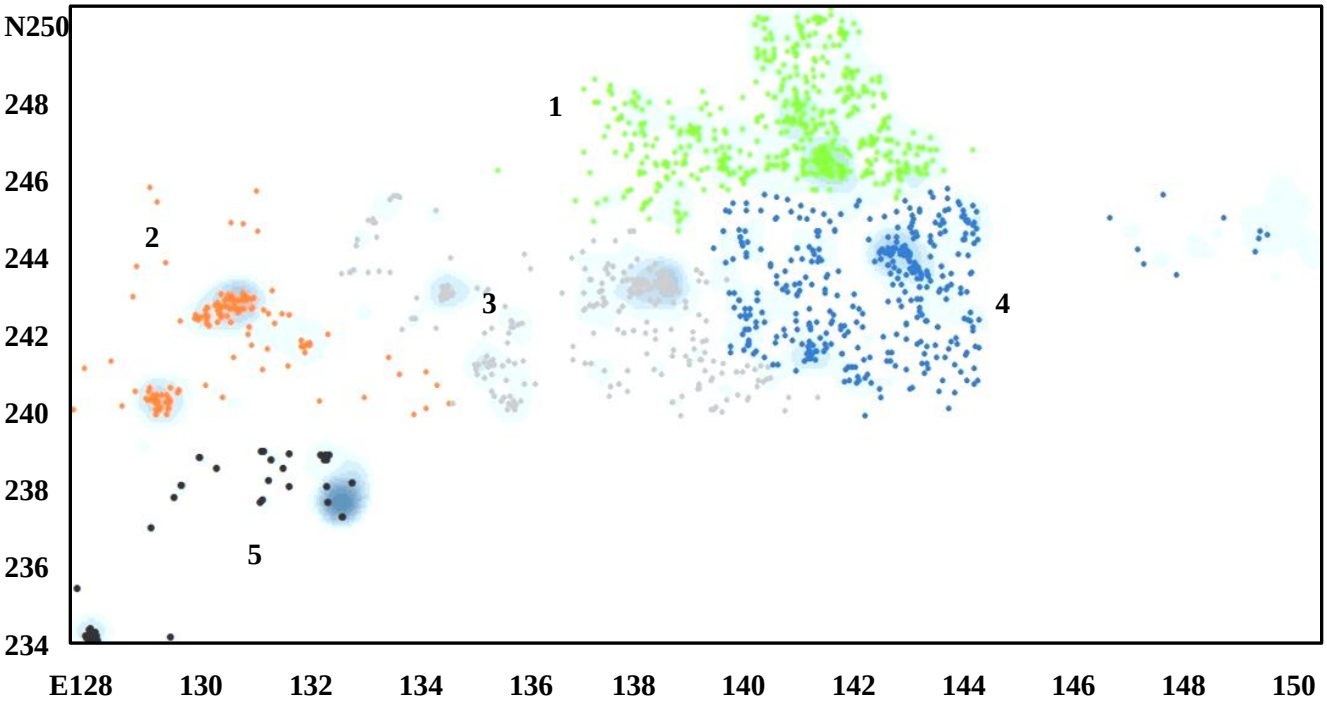


Figure 11–6
Kernel density plot map for all piece plotted artifacts from the Pleistocene Sands assemblage at the Topper Site.

Table11–3
Results of observed versus expected analysis for Holocene Clovis k-means clusters.

Cluster	Artifacts (N)	Bifaces	Flake Tools	Cores	Production	Bend Breaks	Flakes	Pebbles
1	25	4 (2.54)	12 (3.61)	1 (1.74)	0 (.9)	0 (.491)	8 (13.03)	0 (2.76)
2	28	7 (2.85)	10 (4.05)	0 (1.95)	2 (.9)	0 (.55)	6 (14.6)	3 (3.1)
3	70	14 (7.125)	7 (10.125)	7 (4.78)	4 (2.25)	0 (1.375)	35 (36.5)	3 (7.75)
4	41	5 (4.17)	4 (5.93)	5 (2.85)	2 (1.31)	0 (.805)	21 (21.37)	4 (4.53)
5	118	0 (12.01)	0 (17.06)	0 (8.21)	0 (3.79)	0 (2.31)	114 (61.52)	4 (13.06)
6	143	13 (14.55)	28 (20.68)	12 (9.95)	6 (4.59)	6 (2.8)	44 (74.56)	34 (15.83)
7	29	4 (2.95)	0 (4.19)	5 (2.01)	2 (.93)	5 (.569)	12 (15.12)	1 (3.21)
8	47	4 (4.78)	13 (6.79)	7 (3.27)	0 (1.51)	0 (.923)	11 (24.5)	12 (5.2)
9	59	6 (6)	7 (8.53)	2 (4.1)	2 (1.89)	0 (1.15)	41 (30.76)	1 (6.63)
Total	560	57	81	39	18	11	292	62

P = 2.79643E–36 = < 0.00001

Table 11–4
Results of observed versus expected analysis for Pleistocene Sands k-means clusters.

Cluster	Artifacts (N)	Bend Breaks	Flake Tools	Cores	Production	Flakes	Cobbles	
1	43	0 (2.11)	4 (5.51)	8 (3.62)	0 (2.49)	12 (8.10)	19 (21.15)	43
2	399	27 (19.59)	72 (19.59)	46 (33.64)	26 (23.10)	30 (75.17)	198 (196.98)	399
3	504	31 (24.75)	36 (64.66)	19 (42.49)	35 (29.19)	162 (94.96)	221 (247.93)	504
4	279	5 (13.70)	50 (35.79)	38 (23.52)	8 (16.15)	42 (52.56)	136 (137.25)	279
5	139	4 (6.82)	13 (17.83)	4 (11.71)	10 (8.05)	11 (26.18)	97 (68.37)	139
	1364	67	175	115	79	257	671	1364

P = 3.53666E–56 = < 0.00001

expected numbers of flake tools. Only in clusters one and two are both flake tools and bifaces found in higher than expected frequencies. When the distribution of cores was examined, clusters three, four, and six through eight have higher than expected numbers of core tools. Interestingly, clusters that have higher than expected core tool frequencies also have higher than expected numbers of production tools (hammerstones). These findings could imply the use of hammerstones in the reduction of cores onsite. At Topper, bend break tools were only found in clusters six and seven from the Clovis deposits and only in the former cluster were they found to occur in higher than expected frequencies. Interestingly, cluster five has the highest density of flakes, yet bifaces and flake tools are absent from this area of the site. Finally, pebbles only occur in higher than expected frequencies from cluster six.

The results of the analysis can be used to make inferences about Clovis tool production behavior at Topper. Given the distribution of artifact types from each cluster, a number of patterns emerge. The results indicate at least four distinct lithic reduction activities were carried out by Clovis occupants at the site. These include 1) flake and biface production dominated by high occurrences of these artifacts in clusters one and two; 2) core reduction indicated by high densities of cores in clusters four and seven; 3) biface core reduction based on relatively high proportions of bifaces and cores in clusters three, six, and eight; and 4) flake reduction indicated by high quantities of debitage in cluster five coupled with an absence of formalized tools. The differences in the relative frequencies of tool types and flakes suggest that lithic reduction strategies during the Clovis occupation varied across the Topper Terrace. While multiple tool categories are represented throughout the Clovis deposits from the block, the relative frequencies of tool types significantly vary from cluster to cluster ($p = < 0.005$). Based on the results of the observed versus expected test, significant differences occur in the relative frequencies of tool

types by cluster for the Clovis deposits at Topper and based on probability (p = 2. 79643E–36); these differences are not due to random chance.

Pleistocene Sands Assemblage

Based on the k-means analysis, five lithic clusters were identified from the Pleistocene Sands assemblage on the Pleistocene Terrace at Topper. Tool types identified from the Pleistocene Sands include bend breaks, cores, flake tools (including utilized flakes, blades, unifaces, and burins), production tools (hammerstones and anvils), flakes and flake fragments, and cobble clusters. Many of the clusters identified from the k–means analysis are associated with lithic concentrations that have been assigned feature numbers. For example, Features 77–80, 82, and 83 are associated with optimal cluster one, Feature 87 is associated with cluster three, and Features 67, 68, 86 and 88 are associated with optimal cluster five. A list of pre Clovis features and their contents is provided in Appendix 20.

Table 11–4 presents the observed versus expected artifact counts by type for each of the five optimal clusters identified from the Pleistocene Sands. Spikes in bend break tools were found in clusters two and three. Cluster two also has higher than expected frequencies of flake, core, and production tools. Below average frequencies of bend breaks was found for Clusters one, four, and five. When the distribution of flake tools was considered, the results demonstrate higher than expected frequencies of such tools from Cluster two and four, and below expected values for Clusters one, three, and five. Clusters with higher than expected numbers of cores include Clusters one, two, and four, while production tools were found to occur in high frequencies from Clusters two, three, and five. When the distribution of unmodified flakes and flake fragments was considered, flake counts were relatively lower than expected for most Clusters with the exception of cluster three. The only cluster with higher than expected cobbles

was Cluster five. Based on the comparisons, there are significant differences in the relative frequencies of artifacts between clusters ($p = <0.00001$).

A number of patterns are evident from an examination of the spatial distribution of specific technological activities at Topper. Based on the analysis, Cluster one contains more than expected flakes and cores, and might reflect an area of flake core production. Clusters two and four are interpreted as tool production areas based on higher than expected flake tools, core tools, and production tools including hammerstones, hammerstone fragments, and anvil stones. Cluster three has higher than expected bend breaks and production tools but lower than expected cores and flake tools. Thus Cluster three could be an area where bend break manufacture was predominant. Cluster five is interesting given the high number of production tools but generally lower than expected values for all other tool categories.

Spatial Analysis of Artifact Size Grade: Horizontal Postdepositional Displacement

Natural as well as cultural site formation processes can affect the spatial distribution of lithic materials (Schiffer 1983). Petraglia and Potts (1994:226) have found a relationship between artifact size and the artifact's place of origin. Artifacts that are closer to their relative position of origin are typically larger in size than those that are recovered at some distance from the area of proposed origin. Gunn and Foss (1997:53) made similar discoveries and suggested that in aeolian deposits, artifacts greater than 5cm were more stable than those less than 5cm (Gunn and Foss 1997:53; Miller 2010). The absence of small lithics is one potential indicator for postdepositional disturbance by wind or water (Bar Yosef 1993:18). In addition to size, artifact orientation is also an indicator of postdepositional disturbance. For example assemblages that are found to share a common orientation or strike are considered to reflect winnowed deposits whereby slopewash or fluvial activity has re-oriented artifacts to a common angle.

Goodyear has suggested that chute channels with gravel lenses in the Pleistocene Sands deposits at Topper could be the result of fluvial activity as water transports lithics down-slope (Goodyear personal communication). These processes could result in the disturbance of archaeological assemblages situated within the Pleistocene Sands deposits. To date, artifact size grade data have been obtained from the analysis of the bulk screen and artifact assemblages from 24m² of excavated sediments ranging in depth from Clovis to the base of the Pleistocene Terrace. However, data on artifact orientation (strike) have only been systematically recorded since 2005, subsequent to the excavation of large portions of the Holocene and Pleistocene Sands deposits. While artifacts were occasionally drawn in plan-view on the level forms, these records are not consistent throughout the duration of excavation. As such, in the absence of artifact orientation data, artifact size is an alternative indicator for the potential occurrence of site disturbance by postdepositional processes.

To account for the possibility of postdepositional horizontal size sorting at Topper, the relationship between large and small artifacts from the Pleistocene Sands of the primary block excavations was examined as a means to establish if there was any spatial patterning in the distribution of small artifacts across the block. The distribution of artifacts by size was examined by calculating the weight of (in grams) of flakes from the 1/2 and larger size grade, and the 1/8 size grade for the Clovis and Pleistocene Sands screen deposits. The lithics from these deposits were subsequently standardized by the area of the provenience (per m^2) from which they derive to obtain a density measurement of artifact weight per square meter. The values were then projected using ArcGis 10.1 to produce chloropleth maps of the densities for each size grade by assemblage.

The results demonstrate some similarities when the distribution of 1/2 and 1/8 inch flake weights were compared across the entire block excavation. Spikes in 1/2 and 1/8 inch flake weights occur in units N242 E140 and N242 E130. By contrast, low flake weight densities were found for unit N246 E140. Based on the maps in Figures 11–7 and 11–8, some units do not show a correlation between the densities of the 1/2 and 1/8 inch size grades, suggesting variation in the distribution of flake weight by size grade. An examination of the results shows high flake weight densities for the 1/2 inch category for units N248 E140SE, N246 E138SW and N242 E142 NE. By contrast, these same units exhibit a decrease in flake weight from the 1/8 inch size grade. There also appears to be an increase in flake weight for the 1/8tth inch size grade for unit N242 E130 compared with the 1/2 inch category. The higher density of smaller flakes from unit N242 E130, the western most unit in the study, could be interpreted as disturbance by fluvial transport of flakes down slope. However, these results could also reflect variation in lithic reduction intensity. To quantify these graphical observations, linear regression was employed to compare the density of the 1/2 inch and 1/8 inch size grades for each unit. When the values of all units were compared, the densities of the 1/2 size grade were not found to predict the densities of the 1/8 inch size grades, and the R^2 value is not statistically significant ($R^2 = 0.0298$; $p = 0.890062$) (Figure11–9).

To see if this pattern was similar at a smaller scale, the densities of the 1/2 size grade were compared against the 1/8 size grade densities for each of five 2m x 2m units and two 1x2m units. The results are presented in Figures 11–9 and 11–10. Of the seven units examined, four have good relationships between large and small artifact size grades. These units are N242 E138, ($R^2 = 0.8048$, $p = <0.0001$), N242 E142 ($R^2 = 0.6375$, $p = <0.0001$), and N246 E138 and N248 E140. Units N246 E138 and N248 E140 only have two density values each that show a positive

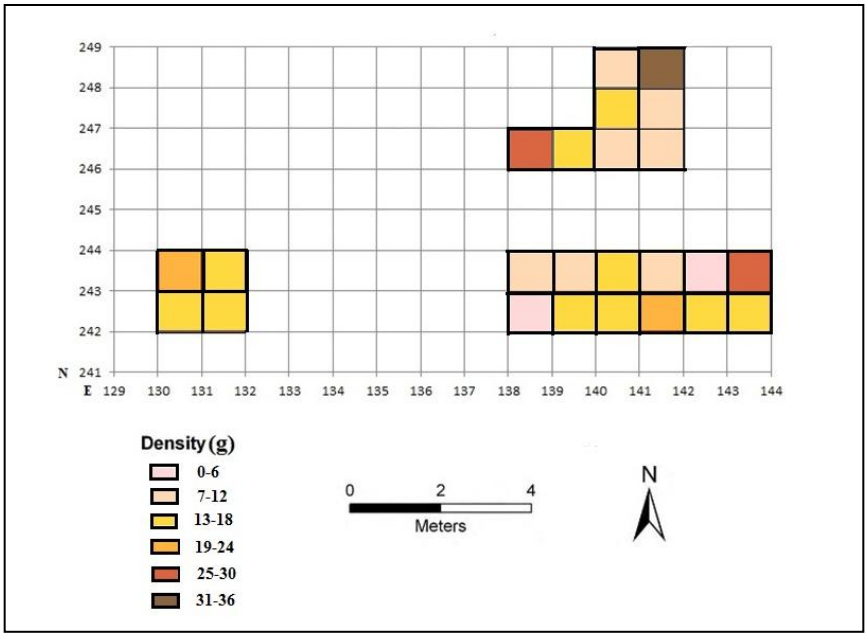


Figure 11–7
Map illustrating the density of flakes per 5cm level from the 1/2 inch and larger size grade from 24 1m x 1m units from the Pleistocene Sands sample (97.70–97.20m).

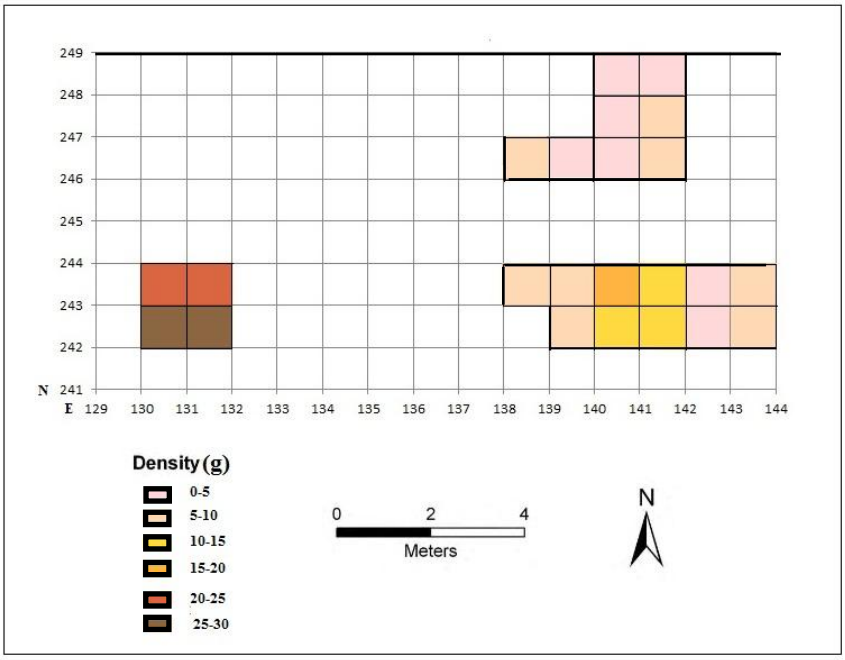


Figure 11–8
Map illustrating the density of flakes per 5cm level from the 1/8 inch size grade from 24 1m x 1m units from the Pleistocene Sands sample (97.70–97.20m).

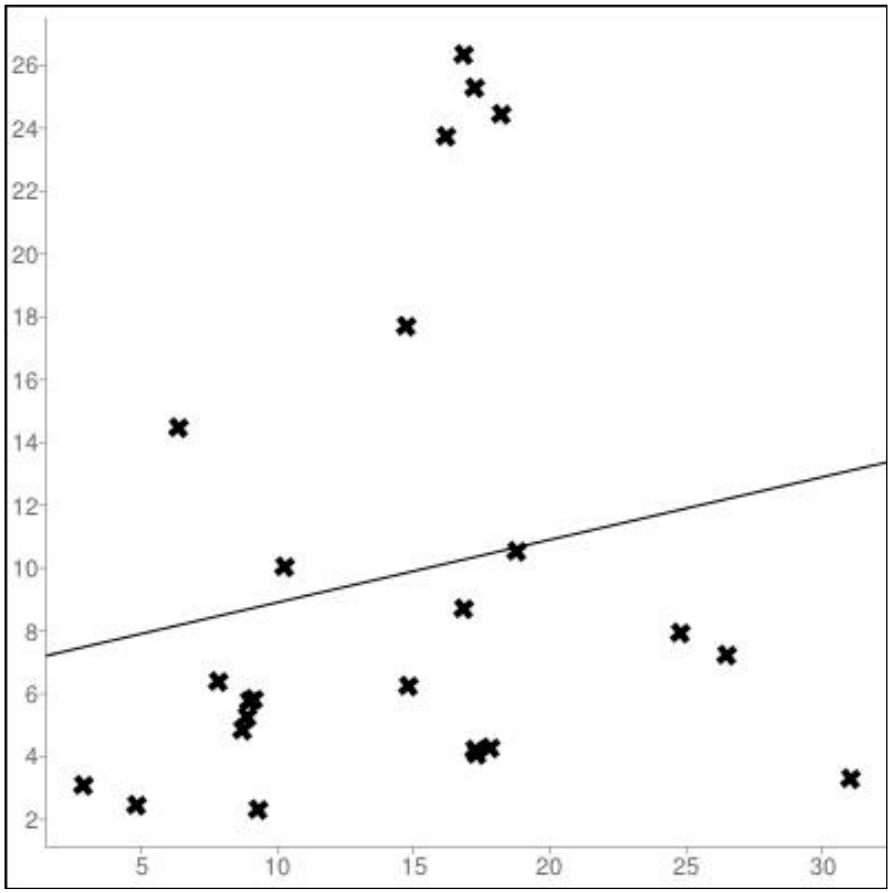
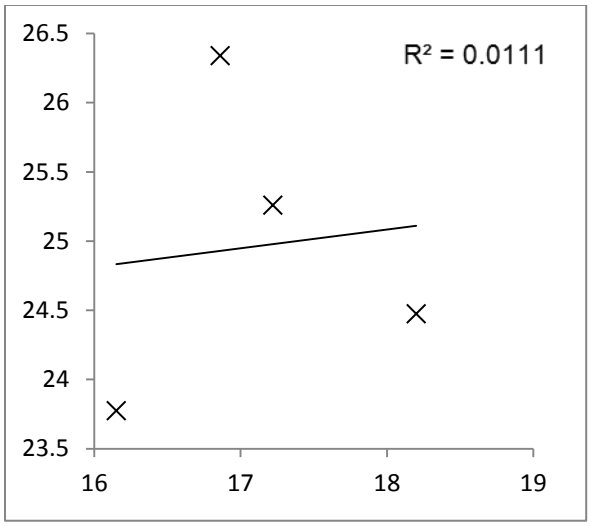
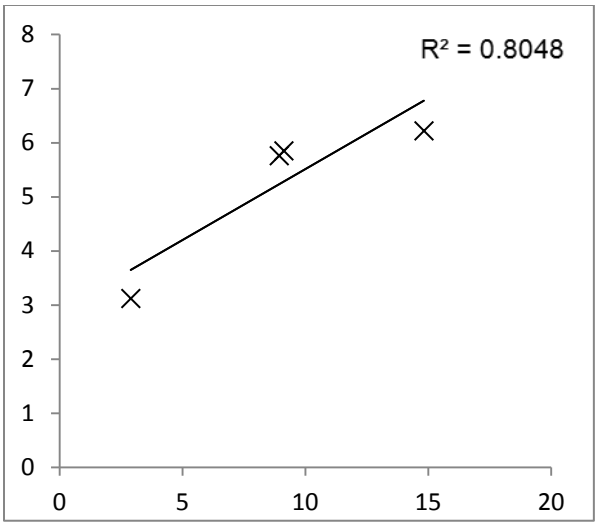


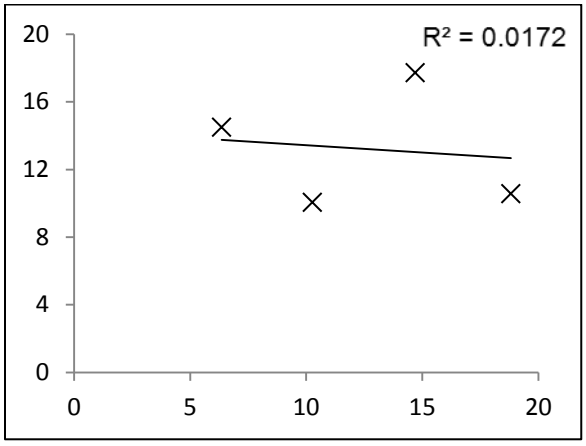
Figure 11–9
Artifact Densities (g/m^2) – 1/2 Size Grade Regressed Against 1/8" Size Grade for all Pleistocene Sands units at the Topper Site (38AL123). R^2 value = 0.0298; p = 0. 890062.



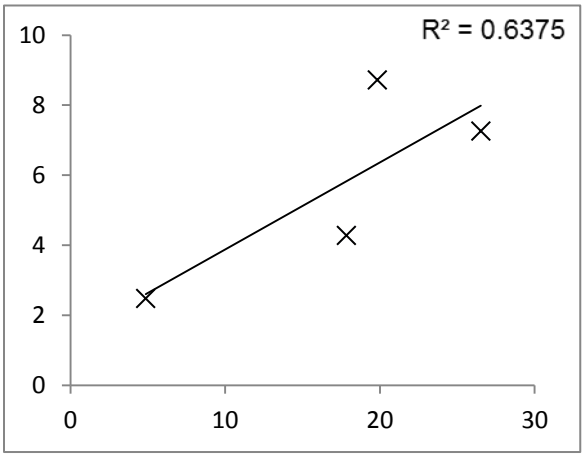
N242 E130



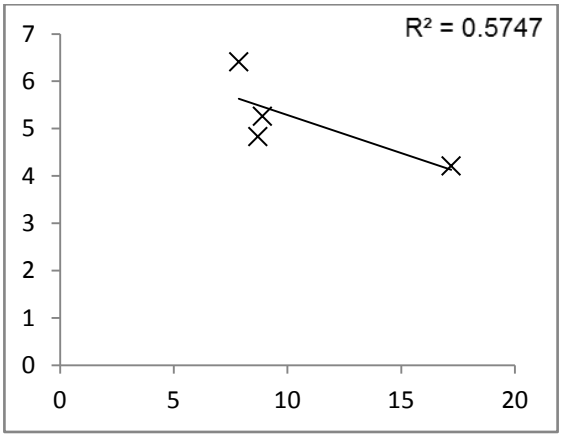
N242 E138



N242 E140



N242 E142



N246 E140

Figure 11–10
Artifact Densities for 1/2” size grade flakes (y–axis) regressed Against 1/8th" size grade flakes (x axis) for select 2m x 2m units.

correlation but lack enough values to statistically conduct the linear regression. Units with poor relationships between large and small size grades are units N242 E130 (R^2= 0 .0111), N242 E140 R^2= 0.0172, and N246 E140 R^2= 0.5747. For these units, the 1/ 2 inch size grade failed to predict the density of the 1/8 inch size grade (Figure 11–10). Based on these results, there is no trend in slope for the horizontal distribution of flakes by size grade. For a total of 12m² of the excavation block, the density of the ½ inch size grade flakes accurately predicts the density of the 1/8 inch flakes. For the remaining three units (12m²), the density of the ½ inch size graded flakes is a poor predictor of the density of smaller flakes. Based on the relative positions of these units, there is little evidence for patterning that suggest that one deposit across the majority of the excavation block has artifact densities of larger size grades that accurately predict the density of the smaller ones. Rather, the distribution appears to be patchy. The results of this analysis demonstrate that while disturbances may have removed a portion of the flakes from some areas of the site, such processes were not responsible for the widespread disturbance of large contiguous areas of the Pleistocene Sands deposits at the site. Alternatively, other mechanisms could also explain these distributions such as the nature of the tasks being undertaken.

Spatial Analysis of the Vertical Distribution of the Topper Assemblages

Archaeologists often employ the technique of back-plotting the precise position(s) of artifacts within an archaeological assemblage against the vertical profile to obtain some indication of the temporal or cultural context of the assemblage. At Topper artifacts have been recovered from the hillside and hilltop excavations as well as the Pleistocene Terrace, and are susceptible to a variety of postdepositional processes which might result in artifact displacement. For example, Miller (2010) found "relatively minimal vertical movement of artifacts between stratigraphic deposits" based on the combined refit analysis and the positioning of temporally diagnostic

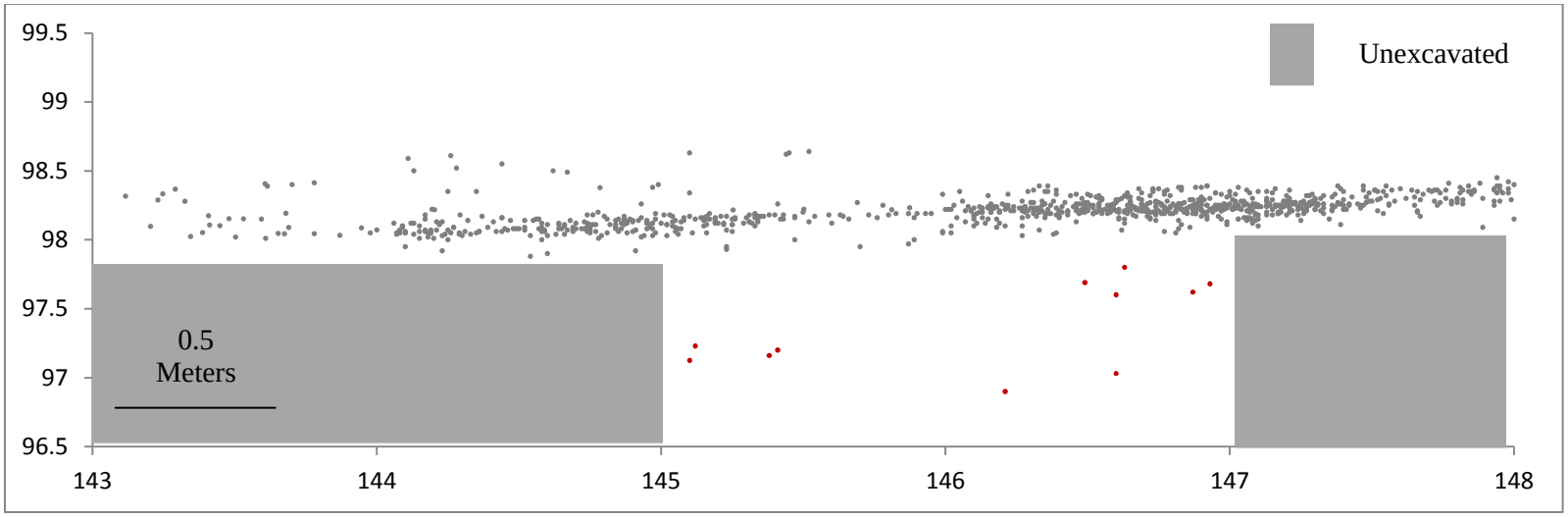


Figure 11–11
Profile map of the distribution of all mapped artifacts from the Holocene, Clovis (Black n = 1,185) and Pleistocene Sands (Red n = 11) units of the 2010–2011 4m x 4m block excavation. Compare distribution of pre Clovis with 2002–2012 block excavation in figure 11–12.

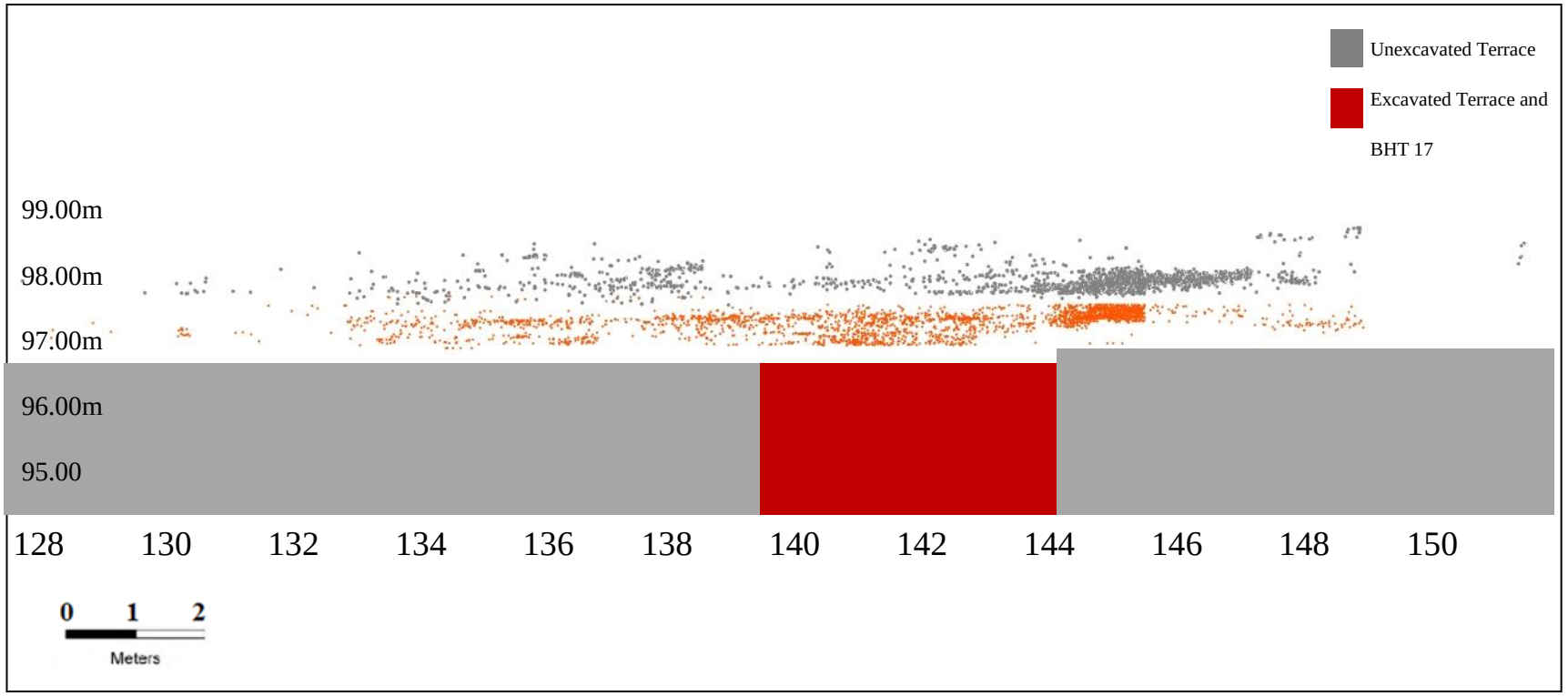


Figure 11–12
Profile map of the distribution of all mapped artifacts from the Holocene, Clovis (Black n = 2,898) and Pleistocene Sands (Red n = 2,991) units of the primary 2002–2012 block excavation.

artifacts in this area of the site (Miller 2007:28). Figure 11–11 12 presents the distribution mapped artifacts from the Clovis and pre Clovis study sample at Topper. On the Terrace, one method to identify discrete intact deposits is to project the position of artifacts against their vertical profiles and to note any differences in the technological composition of the tool assemblages recovered from each deposit. This method works best when artifacts such as Clovis points that are diagnostic to a specific age bracket occur in discreetly buried intact deposits across a site. However, not all archaeological sites or assemblages contain artifacts that are temporally diagnostic. In the potential absence of temporally diagnostic artifacts, making distinctions between what represents an archaeological assemblage and what may represents a natural assemblage becomes more difficult.

An alternative method to distinguish cultural from natural deposits is to examine the spatial relationship and orientation of individual artifact clusters with regard to their shape. Lithic assemblages that occur in buried contexts as the byproduct of weathering are prone to develop distribution patterns that form spherical or circular concentrations of debris that radiate outward from the parent body when viewed in profile. Such patterns occur because sediment particles fill the void space between the detached piece and the base of the parent material and act to limit the movement of materials that break away from larger bodies as the result of weathering. Such concentrations take the form of a bulls-eye when viewed in profile. In contrast, assemblages that are the product of human behavior are often deposited on a common surface, and undergo vertical alteration once buried. Barring artifact displacement, the spatial patterning of cultural assemblages that are deposited in clusters, when viewed in profile, should be distributed horizontally as opposed to perpendicular to a common surface, and should be elongated, or elliptical in form. Therefore this analysis operates under the assumption that lithic materials

deposited on a common surface will build up in accretional formations that when viewed in profile are elongated or elliptical in form as opposed to circular.

The present analysis examined the vertical distribution of piece plotted artifacts from the Holocene, Clovis, Pleistocene Sands, and Pleistocene Terrace deposits at Topper. All items 2.5cm or greater in diameter, regardless of the presence or absence of visible flaking were piece plotted against the vertical profile. Figures A43–18 to A43–20 present the vertical distribution of all three dimensionally mapped artifacts at 2m intervals along the E136–E144 gridlines at Topper. Figure A43–21 shows the spatial distribution of all lithic Clovis and pre Clovis items from the Holocene and Pleistocene Sands in plan-view.

Vertical Grouping Analysis

To examine the vertical distribution of the Holocene and Pleistocene assemblages at Topper, the location of all piece plotted artifacts was projected in ArcGis using artifact easting and depth coordinates. Because piece plots were predicated on a size threshold as opposed to attributes of technology, the analytical protocol makes no prior assumption that a given artifact belongs to specific culture or time period. Rather, the basis for the analysis was to identify the presence or absence of spatial patterning in the vertical profile. Units analyzed include a portion of the 2000–2002 block extending from N242 E130 to N244–E132, and the 2002–2012 Primary block from N242 E138–E144 to N248 E140. A grouping analysis function in ArcGis 10.2 was employed as an exploratory tool to search for clusters in the data across the entire vertical profile at the site. Artifact piece plot z (or depth) data was used as a variable and modeled to search for the optimum number of groupings (Jain 2009). The results were subsequently compared to original artifact classifications made in the field as a goodness of fit-test to see how well the clusters matched cultural designations.

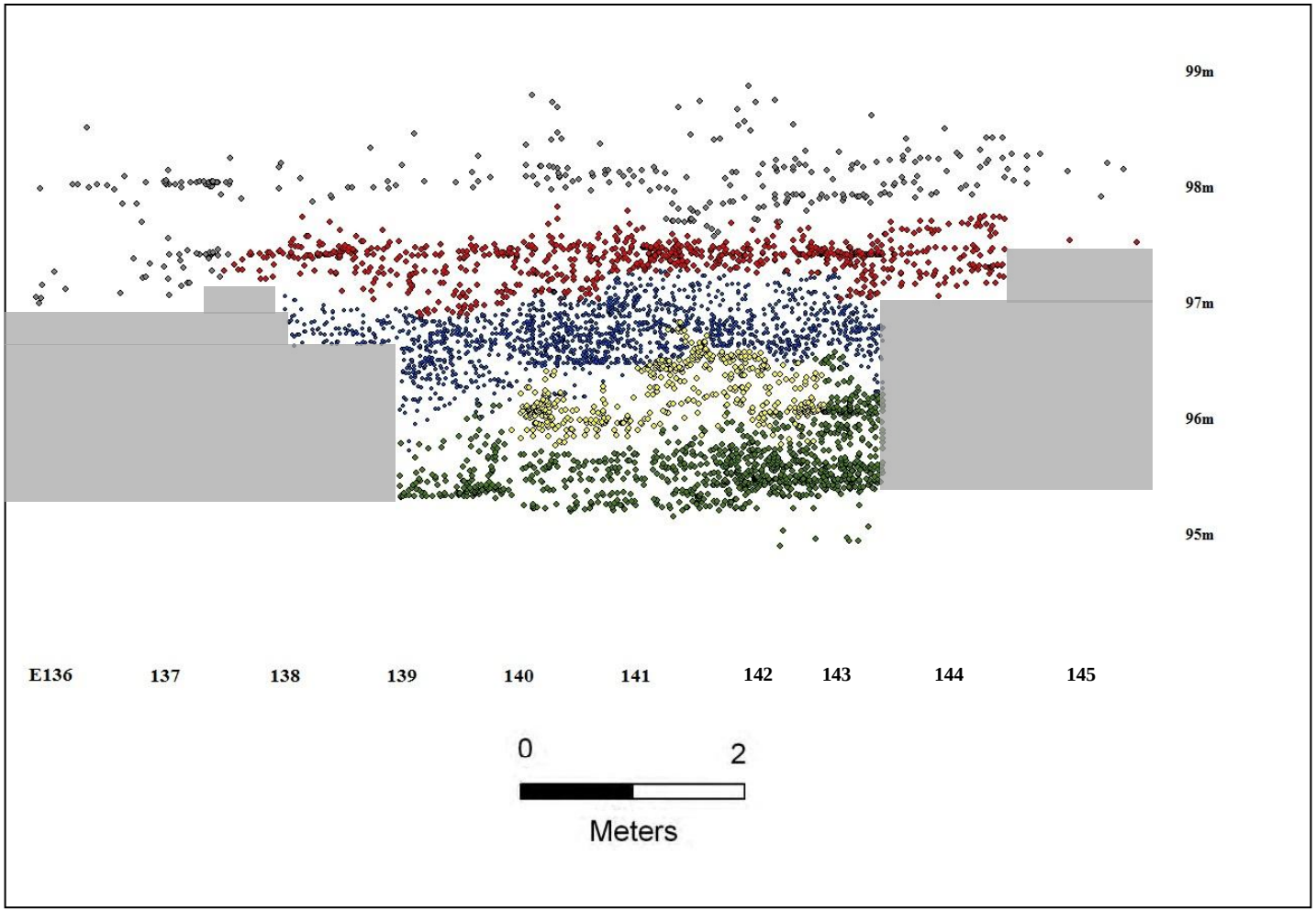


Figure 11–13
Grouping analysis cluster assignments by vertical depth for of all piece-plotted artifacts (4,649) from the Holocene, Pleistocene Sands and Pleistocene Terrace units from the 2002–2012 block excavation. Five optimal clusters were identified from the grouping analysis. (Terrace surface at 97.35m along E144 gridline. Data from N242–N248).

The results of the grouping analysis are presented in Figure11–13, which shows five optimal groupings through the vertical profile of the deposits. Optimal groupings were determined by the grouping analysis function in ArcGis 10.2. Interestingly, these groupings correlate with five stratigraphic deposits from the site; 1) Holocene and Clovis Colluvial Sands, 2) Pleistocene Sands, 3) Upper Pleistocene Terrace, 4) Middle Pleistocene Terrace, and 5) Lower Pleistocene Terrace. One requirement for the analytic protocol calls for the inclusion of data excavated from contiguous units. Because data from the E134–E136 block were not thoroughly examined, it was necessary to omit from the grouping analysis the 2m x 2m units between grid–coordinates E128–E134. Their inclusion might present a false grouping signature. A43–23 shows the same artifact piece plot data, only this time classified by variation in lithic technology. Note that bifaces are exclusive to the Holocene and Upper Pleistocene Sands deposits, whereas bend breaks are absent from the Holocene and Clovis deposits. Based on initial visual observations of these maps, the five optimal groupings projected from the GIS program appear similar in form to some of the "technological groupings" associated with the artifact classifications.

It should be noted that the grouping tool is best used as a heuristic measure to present where patterns might be evident within a given set of data. As such, a closer examination of the map in Figure 11–13 shows some irregularities. For example, between the E136 and E137 gridlines, cluster one intersects with cluster two. Below this, situated in the terrace, parts of Cluster four, (highlighted in yellow) appear to associate more with Cluster three (highlighted in blue). These irregularities could stem from variations in the slope of the landform across the site which was not taken into consideration as a variable for the analysis. Despite the inconsistencies in the visual output of the grouping analysis, the results can be compared with the results of the

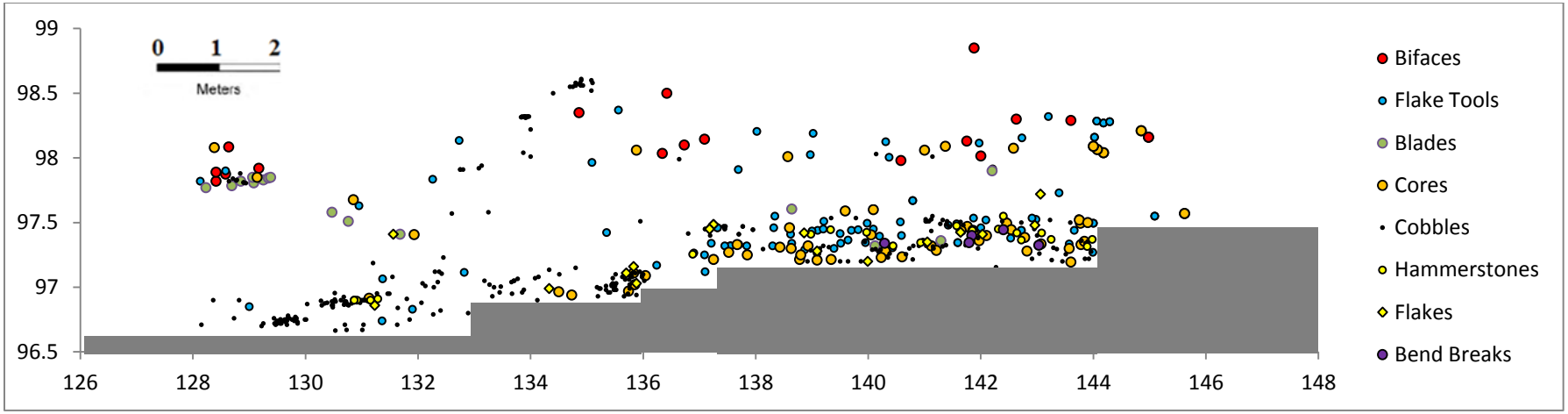


Figure 11–14
Vertical distribution of artifacts by type for the Holocene and Pleistocene Sands 2002–2012 5x9 excavation block at gridline N242.

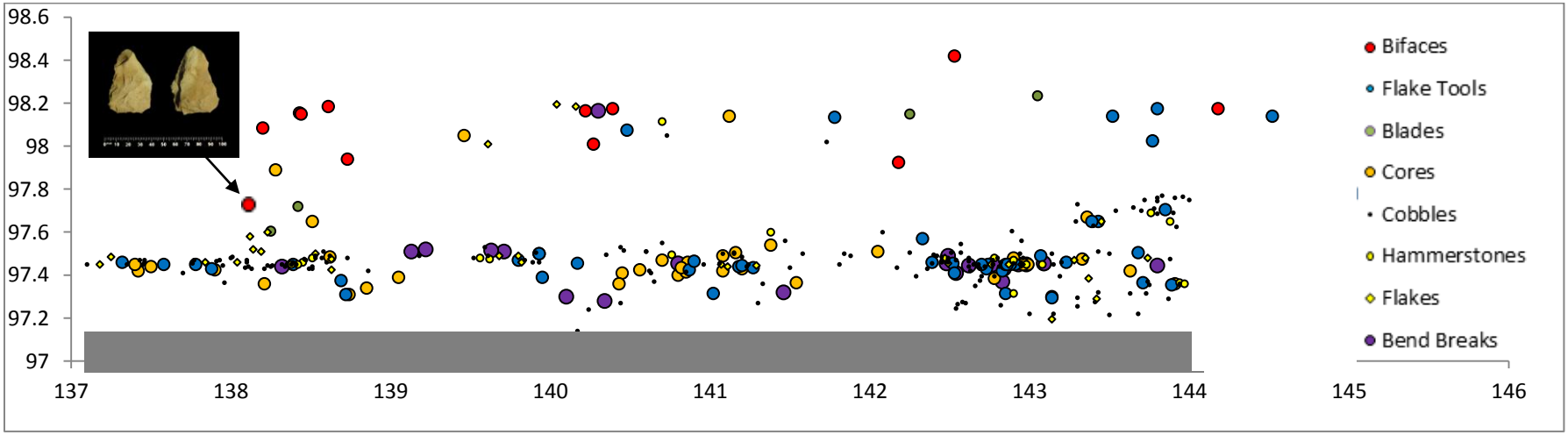


Figure 11–15
Vertical distribution of artifacts by type for the Holocene and Pleistocene Sands 2002–2012 5 x 9m excavation block at gridline N244. Arrow points to position of the possible pre Clovis biface recovered from Upper Pleistocene Sands.

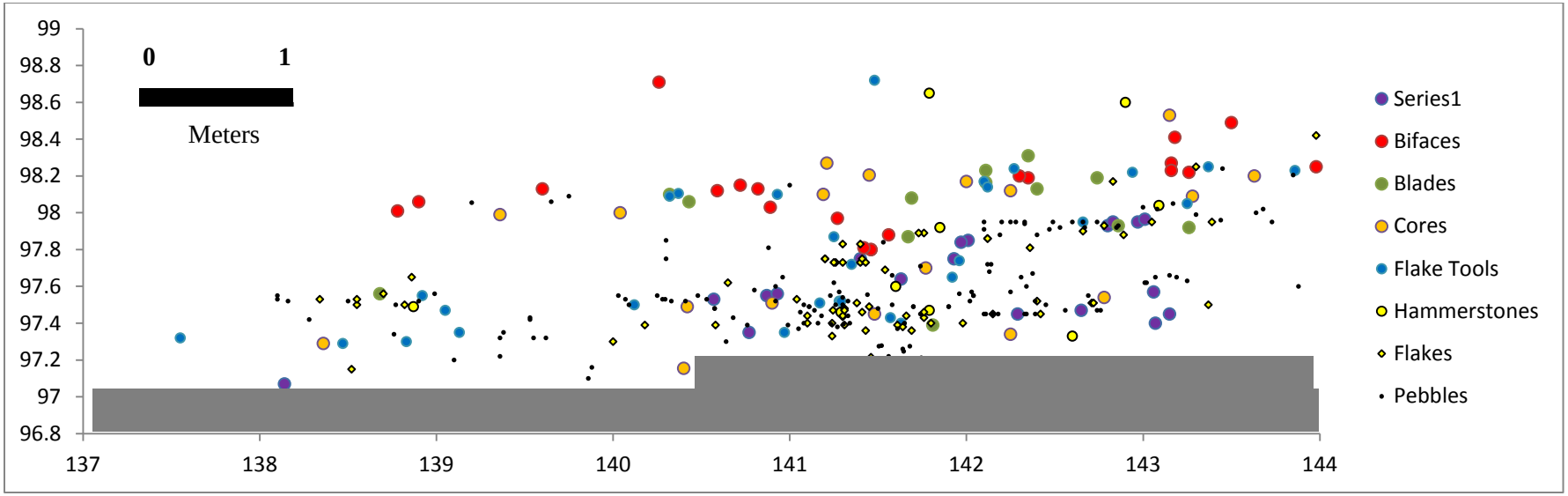


Figure 11–16
Vertical distribution of artifacts by type for the Holocene and Pleistocene Sands 2002–2012 5x9m excavation block at gridline N246.

spatial distribution of artifact types from each deposit to determine how well the grouping analysis predicts variation in lithic technology. Figures 11–14 to 11–16 show the vertical distribution of all mapped items by type from the Holocene and Pleistocene deposits in increments of 2m along the north gridline. A number of interesting patterns are revealed when these figures are compared with the results of the grouping analysis. First, bifaces are restricted to Cluster 1 from the grouping analysis, and are not found below 97.80m in depth. Second, bend breaks are absent from Cluster 1, but are found in all other clusters below 97.80m (n = 2 to 5). Third, cores occur in the greatest concentrations from Cluster two, which forms a linear surface from 97.50–97.40m between East gridlines E136–144. This "surface" corresponds with the slope of the top of the Pleistocene Terrace. Flake tools, flakes, and hammerstones are more evenly distributed throughout the vertical profile, while the highest density of pebbles occurs within the Pleistocene Terrace and areas associated with Clusters 3 and 4. Based on these observations the results demonstrate that spatial patterning does exist within the lithic assemblage at Topper and that the grouping analysis accurately predicts the distribution of some artifact classes at the site.

Vertical Analysis: Cluster Shape Morphology

To examine the vertical distribution of the piece plotted artifacts in greater detail, a shape analysis was performed to assess the "spatial morphology" of the distribution of lithic materials across the vertical profile at the site. In other words, lithic items that break apart from their parent material in buried natural contexts should radiate apart from the nucleus slowly over time as opposed to dropping immediately to the base of the parent body. By contrast, lithic deposits resulting from tool manufacture should result in deposits that are concentrated on a common surface with the parent material (core) as gravity precludes such detachments from being suspended in air around the circumference of the nucleus until burial. Therefore, unless being

disturbed by alternative post depositional processes, detachments resulting from lithic production episodes should be elliptical in shape when viewed in profile. Figure 11–17 illustrates cluster shape types used in this study with associated attributes emphasized.

For this analysis, lithic clusters from each assemblage (Holocene, Clovis, Pleistocene Sands, Pleistocene Terrace) were examined by shape. The greatest horizontal distance between two points within a given cluster was compared against the greatest vertical distance between two points within the cluster. A shape index was formulated by dividing the greatest vertical distance by horizontal distance and then dividing the result by 100. The mean index value for each assemblage was subsequently compared. Higher values indicate clusters that are progressively circular in morphology, whereas values closer to 0 indicate cluster morphologies that are more elliptical in shape. Table 11–6 shows the results of the cluster shape analysis by depositional unit. The mean cluster shape index value increases with depth. In other words, lithic clusters become progressively circular with depth. Lithic clusters identified from the Holocene and Clovis deposits have a mean shape index value of 18.03, lower than either the Pleistocene Sands (19.24) or Pleistocene Terrace (24.80) deposits. However, based on visual observation of these values, it appears that clusters from the Holocene and Lower Pleistocene Sands deposits are closer in morphology than they are to the clusters identified from the Pleistocene Terrace.To evaluate these results further, a linear regression was conducted comparing the cluster shape index value by depth for each deposit (Figure 11–18). Based on the R^2 values, the variation in cluster morphology cannot be explained by the variation in depth at a statistically significant level. Moreover, the results of a one way analysis of variance (ANOVA) to test for differences between the three mean cluster index values for each assemblage shows that each sample is

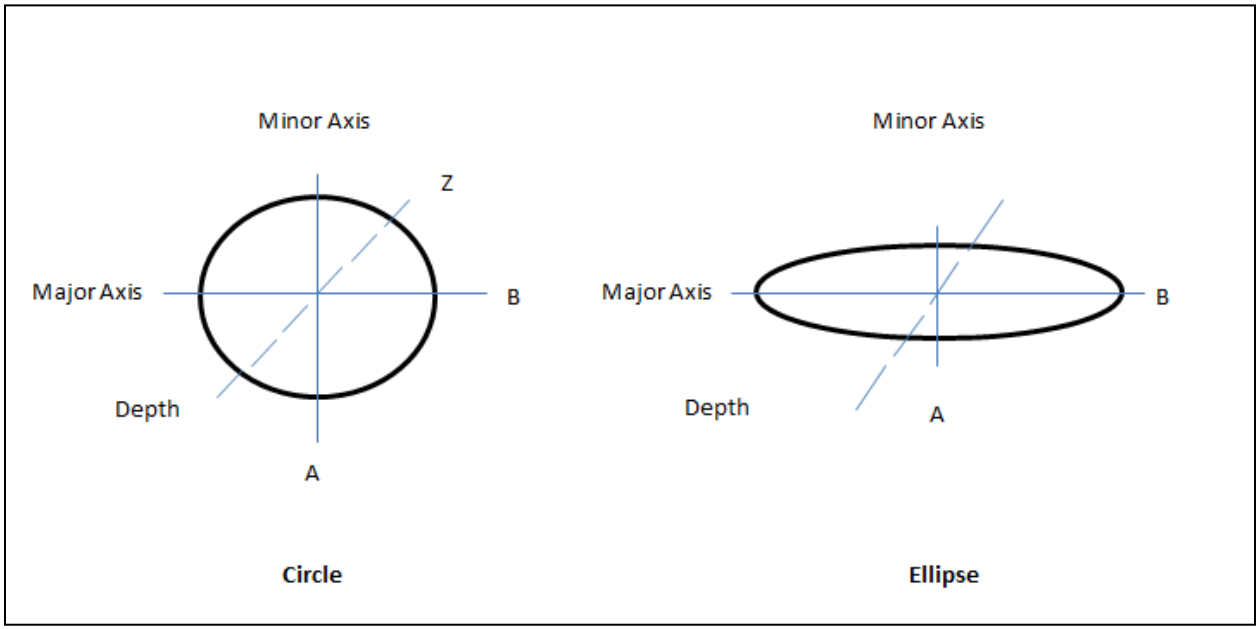


Figure 11–17

Cluster shape types used in this study to differentiate possible cultural from natural formation processes. The formula Max A(cm) or B(cm)/Z(100) is used as a shape index to quantify cluster shape morphology.

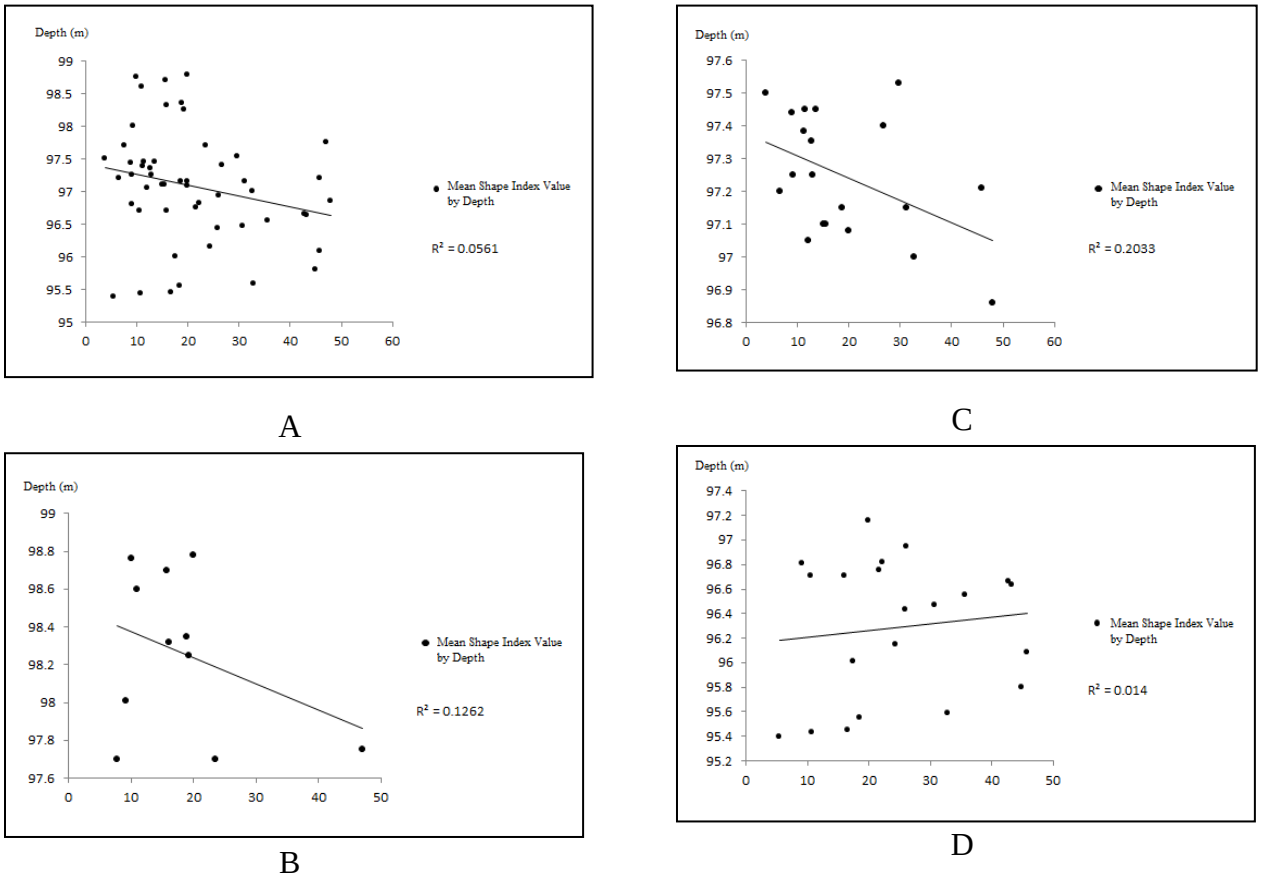


Figure 11–18.

Results of shape index analysis regressed against vertical depth. (A = cumulative sample; B = Holocene; C = Pleistocene Sands; D = Pleistocene Terrace). Given the R^2 values, the models do not explain a statistically significant amount of the variation between depth and shape value.

Table 11–5
Mean flake weight from the1/4and 1/8 inch size grade Pleistocene Sands (97.50–97.10m) for 24 1m x 1m quads.

Northing	Easting	Quad	Mean Flake wt. 1/8 inch (g)	Mean Flake wt. 1/2th inch (g)
242	130	SE	26.34	16.86
242	130	NE	23.775	16.15
242	130	SW	25.26	17.22
242	130	NW	24.475	18.2
242	138	SW	3.12	2.9
242	138	NW	5.85	9.13
242	138	SE	6.22	14.83
242	138	NE	5.76	8.94
242	140	NE	10.06	10.26
242	140	SE	10.57	18.81
242	140	SW	14.5	6.35
242	140	NW	17.72	14.69
242	142	SE	4.28	17.83
242	142	SW	8.72	19.83
242	142	NW	2.48	4.86
242	142	NE	7.26	26.52
246	138	SW	7.925	24.77
246	138	SE	4.08	17.29
246	140	SW	4.83	8.7
246	140	SE	6.41	7.86
246	140	NW	4.21	17.2
246	140	NE	5.26	8.9
248	140	SE	3.31	31
248	140	SW	2.32	9.25

Table 11–6

Cluster morphology and shape index values of lithic clusters identified by strata at the Topper Site (38AL23).

Cluster	Strat	Extent Northing		Extent Easting		Extent Depth		Volume	S Index	Art
F 51	Holocene	242.75–243.42	67cm	134.40–135.10	70cm	19–30cmbs	11cm	27,012.4608	15.7	
FS112	Holocene	243.18–243.96	78cm	145.41–145.98	57cm	98.30–98.25m	15cm	34918.8023	19.23	56
Cluster	Holocene	242.57–242.91	34cm	145.57–145.93	36cm	97.74–97.70m	8cm	2638.9378	23.52	
Cluster	Holocene	246.75–246.87	12cm	138.05–138.30	25cm	98.35–98.32m	4cm	628.3185	16	3
Cluster	Holocene	244.08–244.90	82cm	149.68–149.91	33cm	30–39cmbs	9cm	12,751.7245	10.97	41
F 62	Holocene	244.13–244.50	36 cm	148.44–19.10	34cm	116–133cmbs	17cm	10,910.1753	47.15	45
F 52	Holocene	244.94–245.16	22cm	135.41–135.78	37cm	53–59cmbs	7cm	2,983.4658	18.91	30
F 85	Holocene	244.90–245.68	22cm	137.05–137.59	54cm	98.01–98.06m	5cm	3,110.1767	9.25	22
Cluster	Holocene	245–245.86	41cm	143.35–144.00	65cm	97.75–97.70m	5cm	6,976.9536	7.69	13
F 92	Holocene	247.32–247.42	10cm	142.39–142.46	7cm	98.72–98.76m	1cn	36.6519	10	7
Cluster	Holocene	248.35–248.63	28cm	142.10–142.50	40cm	98.70–98.78m	8cm	4,691.4450	20	8
F 61	PS	244.05–244.23	18cm	134.60–134.80	20cm	167–169cmbs	3cm	565.4866	15	16
Cluster	Holocene	244.65–245.60	95cm	146.45–146.95	50cm	136.–140cmbs	3.5cm	8704.8296	3.68	9
Cluster	PS	245.34–244.72	62cm	146.60–147.20	60cm	160–167.5	7.5cm	14,608.4058	12.09	11
F 68	PS	245.68–245.94	26cm	147.69–147.77	8.5cm	190–198cmbs	8cm	925.7226	32.69	5
F 77	PS	240.50–240.63	13.cm	132.59–132.83	24cm	97.32–97.21m	11cm	1,866.1060	45.83	60
F 82	PS	240.12–240.37	25cm	134.69–135.87	18cm	96.98–96.86m	12cm	2,827.4333	48	
F 87	PS	243.29–243.87	58cm	139.15–139.89	62cm	97.44–97.49m	5.5cm	10,355.7365	8.87	
Cluster	PS	244.33–244.60	27cm	140.35–140.60	25cm	97.45–97.53m	8cm	2,827.4333	29.62	20
F 88	PS	244.27–245.30	103cm	142.54–143.18	64cm	97.50–97.385m	11Cm	39,692.9759	11.16	68
F 90	PS	243.35–242.97	62cm	140.90–141.21	31cm	97.28–97.365m	8cm	8,050.8547	12.90	10
Cluster	PS	245.42–244.00	58cm	143.00–143.87	87cm	97.24–97.355m	11cm	29,062.8736	12.64	24
F 64	PS	245.76–245.83	7cm	133.70–133.85	15cm	183–185cmbs	3cm	164.9336	20	4
F 63	PS	245.35–245.36	1cm	133.30–133.43	13cm	184–185cmbs	2cm	13.613	15.38	4
Cluster	PS	246–246.26	26cm	138–138.12	12cm	97.45–97.48m	3cm	490.0884	11.53	
F 65	PS	242.48–242.02	46cm	129.25–130.01	76cm	179–184cmbs	5cm	9,152.5065	6.5	30
F 59	PS	242.09–242.54	45cm	135.62–135.98	36cm	164–178cmbs	14cm	11,875.2202	31.1	19
F 66	PS	242.72–242.92	20cm	135.18–135.50	32cm	178–184cmbs	6cm	2,010.6192	18.7	14

Table 11– 6 continued
Cluster morphology and shape index values of lithic clusters identified by strata at the Topper Site (38AL23).

Cluster	Strat	Extent Northing		Extent Easting		Extent Depth		Volume	S Index	Art
Cluster	PS	244.52–245.50	98cm	133.10–133.70	60cm	176–185cmbs	9cm	27,708.84	9.1	6
F105	PS	248.06–248.58	52cm	141.59–141.99	40cm	129–136cmbs	7cm	7623.5981	13.46	12
Cluster	PS	247.90–248	10cm	141.60–141.75	15cm	97.44–97.40m	4cm	314.1592	26.66	4
Cluster	PT	242.05–242.46	41cm	142.35–142.67	32cm	96.25–96.15m	10cm	6,869.615	24.39	78
Cluster	PT	244.54–244.68	14cm	138.21–131.29	8cm	96.60–96.55m	5cm	293.2153	35.7	9
Cluster	PT	244.30–244.40	10cm	138.02–138.15	13cm	96.51–96.47m	4cm	272.2713	30.76	12
Cluster	PT	246.30–146.90	60cm	140.40–140.70	30cm	97.155–97.275	12cm	11309.733	20	10
Cluster	PT	242.54–242.93	39cm	138–138.61	61cm	95.45–95.55m	10cm		16.66	41
Cluster	PT	248.05–248. 5	45cm	140.35–140.60	25cm	96.90–96.82m	10cm		22.22	
Cluster	PT	246.45–246.68	23cm	140.76–140.98	22cm	96.94–96.98m	6cm	2119.5278	26.086	8
Cluster	PT	246.58–246.91	33cm	142.43–142.98	55cm	96.843–96.803	5cm	4751.6588	9.09	25
Cluster	PT	248.62–248.52	10.0cm	140.17–140.32	15cn	96.693–96.628	6.5	475.1658	43.33	7
Cluster	PT	246.77–246.98	21cm	139.67–139.90	23cm	96.75–96.80m	5cm	1264.4910	21.73	6
Cluster	PT	242.30–242.35	5cm	141.66–141.85	19cm	96.71–96.73m	2cm		10.52	6
Cluster	PT	242.80–242.92	12cm	140.62–140.72	10cm	96.14–96.085m	5.5cm	345.5751	45.8	4
Cluster	PT	242.08–242.35	27cm	141.71–141.97	26cm	95.60–95.55	5cm	1,837.831	18.51	14
Cluster	PT	242.70–243.05	35cm	140.40–140.70	30cm	95.705–95.59m	11cm	6,322.455	32.85	4
Cluster	PT	244.15–244.29	14cm	139.93–139.99	6cm	96.6–96.66m	6cm	263.8937	42.85	4
Cluster	PT	243.80–243.95	15cm	141.40–141.68	28cm	95.40–95.43m	3cm	659.7344	10.71	10
Cluster	PT	240.56–240.71	15cm	140.30–140.95	65cm	95.355–95.39m	3.5cm	1,786.780	5.38	12
Cluster	PT	246.25–246.50	25cm	138.65–138.91	26cm	96.71–96.76m	4cm	1361.3568	16	8
F 117	PT	248.15–248.30	15cm	140.25–140.53	28cm	96.43–96.50m	7cm	1539.3804	25.92	5
Cluster	PT	243.20–243.40	20cm	142.65–142.85	20cm	95.80–95.89m	9cm	1,884.955	45	18
Cluster	PT	243.40–243.70	30cm	140–140.40	40cm	96.01–96.08m	7cm	4,398.229	17.5	15

Table 11–7

Descriptive statistics for the results of an ANOVA to compare means of shape index for different stratigraphic deposits at the Topper Site (38AL23). Given the p value of .219 there is no statistical difference in the means between the three samples.

Shape Index	Mean Value	Sum	Variance
Holocene	19.24	198.42	119.2087
Pleistocene Sands	18.03	384.91	155.7931
Pleistocene Terrace	24.8	521.006	152.1237

F–stat = 1.566251; *p value* =0.219101

completely random (p = 0.2191) (Table 11–7). Therefore there is no statistically significant relationship between cluster shape and depth from the samples examined.

Vertical Analysis: Artifact Orientation

Artifact orientation refers to the direction (strike) and inclination (dip) of an artifact as recorded when uncovered. Orientation can inform about potential postdepositional disturbances such as erosion, sheet wash, or bioturbation that may have altered the original context of an archaeological deposit. As mentioned above, artifact orientation data are lacking prior to the 2002 field season and most data available are from the Pleistocene Terrace and Pleistocene Sands. First the distribution of artifacts from the Pleistocene Sands and Pleistocene Terrace deposits were examined for the presence or absence of patterning in artifact strike. For this analysis, artifact orientation was measured relative to grid north. The distributions were subsequently examined for either a random or non–random distribution. From the primary 2002–2012 5x9 block excavation, data on artifact strike were obtained from a total of 1,182 artifacts (67 from the Pleistocene Sands and 1,115 from the Pleistocene Terrace (Appendix 38). Figures 11–19 and 11–20 present the distribution of artifacts by strike in the form of rose diagrams for the Pleistocene Sands and Terrace deposits. From these units, most artifacts failed to show any clear patterning, although a high percentage are oriented parallel to the slope of the landform and are oriented to the west at 0 degrees. However, the distribution for each assemblage can be separated into two distinct clusters.

From the Pleistocene Sands deposits, a cluster of 25 artifacts representing 37% of the assemblage have strikes between 25 and 75 degrees. To examine the distribution in greater detail, and to determine if the orientation of these artifacts is statistically different from expected, the orientations were divided into categories at 10° increments, and compared the distribution of

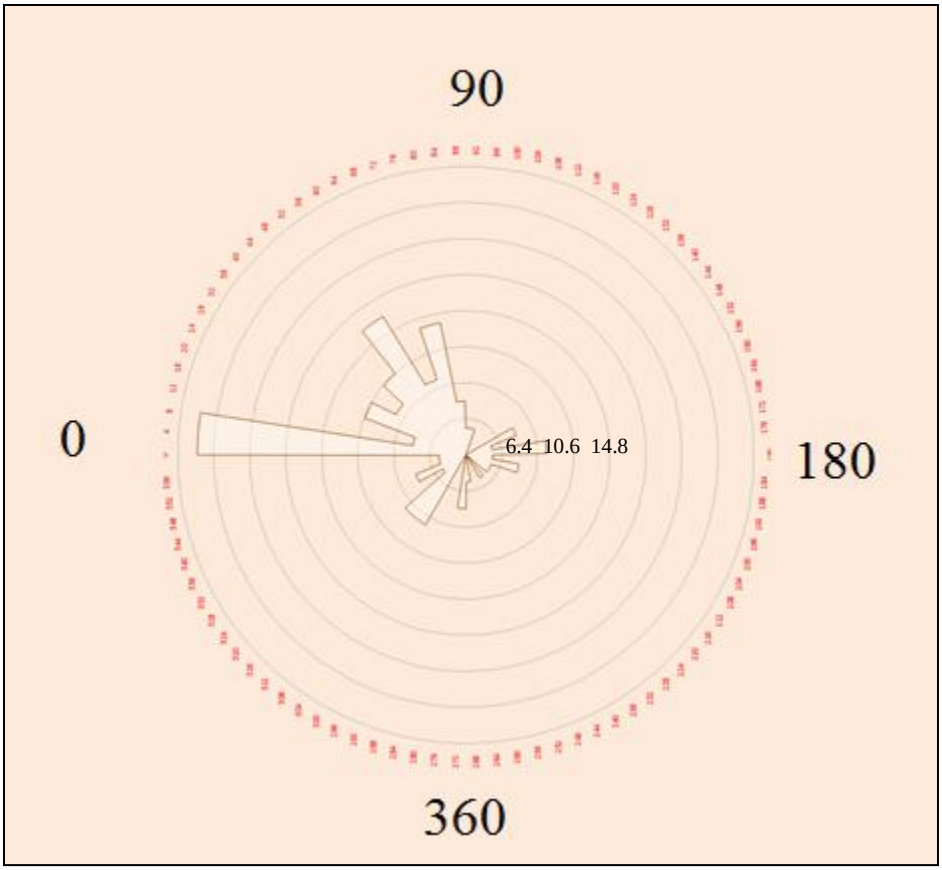


Figure 11–19
Rose Diagram showing orientation of mapped artifacts from the Pleistocene Sands (n=67)

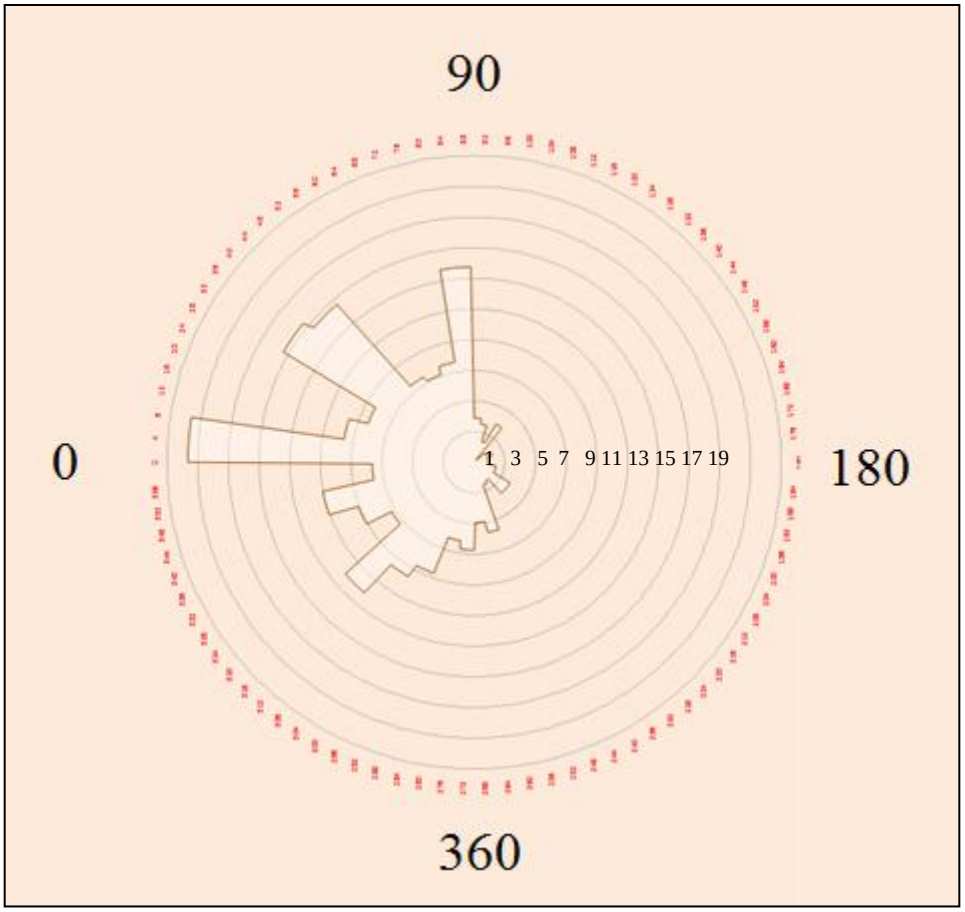


Figure 11–20
Rose Diagram showing orientation of mapped artifacts from the Pleistocene Terrace (n = 1,115).

observed artifact strike measurements to a theoretical distribution using a Pearson's Chi-Square test. For the theoretical distribution, it was assumed that artifacts would be randomly distributed. Following Miller (2010:41–47) an even distribution was used, since a random discard pattern would provide an equal chance that an artifact would fall into any of the angle categories. In an examination of artifact orientation on the Hillside at Topper, Miller conducted a similar test and found that artifacts conform to a non-random pattern owing to their position on the erosional zone of the hillslope (Miller 2010). Based on the analysis of the Pleistocene Sands, the observed and expected values were not significantly different (X^2= 0.62166; *df*=2; p = 0.978303).

A second cluster of artifacts from the Pleistocene Sands (n=10 or 14.9%) were found to conform to the cardinal direction of the arbitrary grid at 0 degrees. This represents the highest percentage of artifacts for any 10 degree interval from the stratigraphic deposit. Bertran and Texier (1995:527) hypothesize that this pattern results from a subconscious tendency by people to imitate a grid when recording artifacts on a plan-view map. Miller has found the same patterns for the Clovis deposits on the Hillside at Topper and concludes that such findings "complicate the ability to statistically show that a sample is distributed randomly because there is an inherent bias towards the cardinal directions of the grid" (Miller 2007:39).

Two distinct clusters were identified from the Pleistocene Terrace based on artifact strike (Figure 11.20). The largest cluster is centered on grid coordinates that associate with the cardinal direction of the arbitrary grid at 0 degrees. The high percentage of artifacts (n= 103; 9.237%) that correspond with this orientation are considered the result of human bias in the recording process. The second cluster of artifacts ranges from 35–95 degrees and consists of 334 lithic items or 30% of the assemblage from the Pleistocene Terrace deposits. The orientation of these artifacts is similar to that of the cluster identified from the Pleistocene Sands. To examine the distribution in

greater detail, the orientations were divided into categories at 10° increments, and compared the distribution of observed artifact strike measurements to a theoretical distribution using a Pearson's Chi-Square test. Based on the analysis of artifact strike for items from the Pleistocene Terrace, the observed and the theoretical distributions were significantly different (X^2= 22.23; df=2; p = 0.000461). Moreover, based on the rose diagram in Figure 11–19, artifacts from the Pleistocene Terrace conform to an angle (between 0 and 75 degrees) that is aligned with the slope of the adjacent hillside at 24 degrees. Based upon this orientation, these artifacts could represent winnowed deposits where postdepositional processes have re-oriented artifacts to a common direction.

Like strike, artifact declination, sometimes referred to as dip, can also inform about post depositional processes that have disturbed archaeological deposits. Declination refers to the angle between the horizontal, or the tilt of the formation. Artifacts that are recovered at high inclinations have likely been disturbed from original contexts by downward or upward movement through the vertical profile of an archaeological deposit. Artifacts with high inclinations are often found in cracks in the sediment matrix and are an indication of disturbance. In contrast, unaltered assemblages should exhibit dips that have low angles of inclination. To evaluate whether postdepositional processes had affected the deposits at Topper, the mean inclination (dip) was examined for each stratigraphic deposit at the site. Because much of the Clovis deposits were excavated at a time prior to the systematic recording of artifact dip angles, these deposits were excluded from the analysis, and only items from the Pleistocene Sands and Pleistocene Terrace were examined. Appendix 38 provides data on strike and dip for artifacts from the study sample. Tables 11–8 and 11–9 show the mean dip for lithic items recorded from

Table 11–8

Mean Inclination (dip) angle for artifacts recovered from the Pleistocene Sands and Pleistocene Terrace at the Topper Site (38AL23).

Depositional Unit	Artifacts (N)	Mean Dip (°)	Results of t–test
Pleistocene Sands	171	8.87	t–value = 4.97277; p = < 0.00001
Pleistocene Terrace	1504	18.36	

Table 11–9

Mean Inclination (dip) angle for artifacts recovered from individual 2m x 2m units from the Pleistocene Sands and Pleistocene Terrace at the Topper Site (38AL23).

Depositional Unit	Unit	Artifacts (N)	Mean Dip (°)
Pleistocene Sands	N246 E138	31	8.16
	N246 E140	41	6.87
	N246 E142	37	19.13
	N248 E140	62	4.54
Pleistocene Terrace	N242 E138	76	18.57
	N242 E140	137	13.67
	N242 E142	75	18.26
	N244 E138	4	12.25
	N246 E138	229	20.51
	N246 E140	716	19.64
	N248 E140	265	13.34

the Pleistocene Sands (n=171) and Pleistocene Terrace (n=1504) deposits. Based on the results, artifacts from the Pleistocene Terrace have a higher mean inclination angle (18.36°) than artifacts from the Pleistocene Sands (8.87°). The likelihood that artifacts were disturbed by bioturbation is actually greater for items recovered from the Pleistocene Terrace than it is for items recovered from the Pleistocene Sands. The results of a t-test show that these means are statistically different (t-value = 4.97277; P = < 0.00001) (Table 11–8). These results are interesting given that the sediment matrix is more compact for the Pleistocene Terrace than it is for the Pleistocene Sands. One possible explanation is that the Pleistocene Terrace is more susceptible to the formation of cracks by way of wetting and drying and argilliturbation, processes that can lead to some artifact displacement over time. However, very few cracks were observed within the Pleistocene Terrace over the course of excavation, although they could have formed at some point in the past evidence of their presence has now been obscured. Moreover, bioturbation can also lead to the translocation of artifacts through the vertical profile at the site. Figure A25–8A shows a charred taproot that extends through the Pleistocene Sands and into the top of the Pleistocene Terrace. The presence of these roots in the deposits at Topper indicates increased potential for vertical movement and that flakes or other lithic items could have been disturbed from original context by natural processes at the site.

To evaluate the results in greater detail, the mean artifact inclination angles were examined for individual units within each of the two stratigraphic deposits. The results of this analysis are presented in Table 11–9. A comparison of the mean inclination angles for each stratigraphic unit shows that artifacts from the Pleistocene Sands in units N246 E138, N246 E140, and N248 E140 have inclination angles that are lower than corresponding units from the Pleistocene Terrace.

It was also found that there was considerable variation in the artifact inclination angles when all units from a given deposit were compared. The results of a One Way Analysis of Variance test (ANOVA) comparing individual 2m x 2m units from the Pleistocene Sands and Terrace deposits show a statistical difference in the mean inclination angle of artifacts recovered from each unit (Tables 11–10 and 11–11). Based on the low p values, it is unlikely that the observed differences for each unit are due to random chance and the hypothesis that all populations have identical means is rejected. The results also show that for the Pleistocene Sands, the highest artifact inclination angles (19.13^{o}) occur in units (N246 E142) closest to the hillside slope rather than in units to the west. This pattern does not hold true when inclination angles were examined from the Pleistocene Terrace units. For the Pleistocene Terrace units, there is no trend in artifact inclination with regard to the slope of the landform. These findings suggest that artifacts from the Pleistocene Terrace were more susceptible to displacement by bioturbation or cracks in the sediment matrix than were artifacts from the Pleistocene Sands. Based on inclination angle, artifacts from the Pleistocene Sands were potentially influenced to a greater degree by slopewash from the adjacent hillside than artifacts from the Terrace. However, it is important to note that multiple agencies can produce similar patterning in the data and the configuration of the extant artifact distribution at Topper may not have been subjected to a single depositional process at a given time.

Chapter Summary

All lithic materials from the Topper pre Clovis and Clovis study sample were examined to assess their spatial location relative to other artifacts within the spatial grid at the site. The spatial analyses were conducted to determine if non-random horizontal or vertical patterns exist within the Topper Clovis and pre Clovis assemblages, and to aid in establishing the processes

Table 11–10

Summary statistics for a One Way Analysis of Variance test (ANOVA) to determine if there is a statistical difference in the mean inclination angle of artifacts recovered from 2m x 2m units from the Pleistocene Sands. Based on the p value , it is unlikely that the observed differences are due to random sampling and the hypothesis that all populations have identical means is rejected.

	Samples			
	N248 E140	**N246 E142**	**N246 E140**	**N246 E138**
N	62	37	41	31
EX	282	708	282	245
Mean	4.54	19.13	6.87	7.90
EX^2	9924	36884	10176	12425
Variance	141.66	648.23	205.90	349.62
Std. Dev	11.90	25.46	14.34	18.69
Std. Err	1.51	4.18	2.24	3.35

Df= 3; F = 5.76 ; p = 0.000899

Table 11–11

Summary statistics for a One Way Analysis of Variance test (ANOVA) to determine if there is a statistical difference in the mean inclination angle of artifacts recovered from 2m x 2m units from the Pleistocene Terrace. Based on the low p value, it is unlikely that the observed differences are due to random sampling and the hypothesis that all populations have identical means is rejected.

		Samples			
	N248 E140	**N246 E140**	**N246 E138**	**N242 E140**	**N242 E138**
N	265	716	229	137	76
EX	3536	14063	4697	1874	1412
Mean	13.3434	19.6411	20.5109	13.6788	18.5789
EX^2	162340	570349	199555	103200	63250
Variance	436.2036	411.3801	452.6983	570.33	493.55
Std. Dev	20.8855	10.2825	21.2767	23.88	22.2161
Std. Err	1.283	.758	1.406	2.04	1.406

Df= 4; F = 6.61 ; p = <.0001

responsible for their location of deposition. It was suggested that non–random patterns within the assemblage should exist if: 1) the distribution of lithic artifacts is a byproduct of human manufacture, and 2), site integrity has been preserved. By contrast, if the Topper assemblage is a byproduct of taphonomic disturbance or represents the displacement of flakes from the Clovis contexts above, then the spatial distribution of the assemblage would be expected to consist of a random pattern throughout the horizontal and vertical profile. Based on the nearest neighbor analysis, there is significant non-random clustering for the Clovis and Pleistocene Sands lithic assemblages. Moreover, when the samples were examined by tool type, all artifact classes from the Clovis and Pleistocene Sands deposits with the exception of the Clovis production tools were found to cluster. As such, there is non–random patterning in the distribution of mapped artifacts from the Clovis and pre Clovis assemblages at Topper. However, when the assemblage from the Pleistocene Terrace was examined, the results revealed that the distribution of mapped items was random and therefore did not follow the same pattern observed for the Pleistocene Sands and Clovis deposits. The results of the cluster shape analysis corroborate these findings, and show that the Clovis and Pleistocene Sands assemblages exhibit cluster morphologies that are elliptical as opposed to circular, and therefore are more likely the byproduct of cultural rather than natural processes. By contrast, the Lower Pleistocene Terrace exhibits assemblages that are more circular in morphology, and are less likely to be cultural. One alternative explanation for this pattern concerns the make-up of the sediment matrix. The Pleistocene Sands likely facilitate greater movement of materials within the sediment due to its loose consistency, and it is possible that displaced lithics in sandy deposits could have been reoriented into cluster morphologies that are elliptical in form. By contrast, clay is more compact than sand and could serve to hold naturally detached items in close proximity for longer periods.

A k-means cluster analysis was used to identify spatial patterning within the assemblage. Based on the k-means analysis, a nine cluster solution was optimal for the Clovis assemblage and a five cluster solution was optimal for the Pleistocene Sands assemblage. Based on the results of the observed versus expected distributions, there are significant differences in the relative frequencies of tool types by cluster for the Clovis and Pleistocene Sands deposits at Topper and based on probability, these differences are not due to random chance. The technological tool and debitage composition for each assemblage is non-randomly distributed throughout the vertical profile at the site.

Next, the relationship between large and small artifacts from the Pleistocene Sands of the primary block excavations was examined as a means to establish if there was any horizontal spatial patterning in the distribution of small artifacts across the block. Accordingly, a distribution of flakes that is well sorted by size and weight with regard to the horizontal position of a common surface is indicative of disturbance by fluvial transport. The results of the analysis found that there is no trend in slope for the horizontal distribution of flakes by size grade (1/2 and 1/8inch). Based on these findings, post depositional processes were not responsible for the widespread disturbance of large contiguous areas of the Clovis and Lower Pleistocene Sands deposits at the site. An examination of artifact strike found that most artifacts from the Pleistocene Sands and Pleistocene Terrace are oriented in relation with the slope of the landform and are oriented to the west at 0 degrees. Based on these findings, the assemblage could represent winnowed deposits where postdepositional processes have re-oriented artifacts to a common angle after original deposition. An examination of artifact declination found that artifacts from the Lower Pleistocene terrace were more susceptible to displacement, bioturbation,

or down-drift potentially due to cracks in the sediment matrix than were the artifacts from the Clovis or Pleistocene Sands.

CHAPTER XII

Discussion: Pre Clovis at Topper?

Pre Clovis sites in North America have been identified based on combined evidence from toolkit composition, stratigraphic context, dating, paleoenvironmental data, or skeletal analysis (Dillehay 1997,1999; Gilbert et al. 2008; Stanford et al. 2014; Waters et al. 2011). Such studies have challenged the traditional paradigm of Clovis as the first culture complex in the Western Hemisphere. The spatial distribution of potential pre Clovis sites on the landscape, if genuine, implies that humans occupied the eastern margin of North America prior to cal yr B.P. Although material culture *diagnostic* exclusively to pre Clovis is absent in North America prior to cal yr B.P., evidence from a number of potential sites in North America indicates that cultural manifestations distinct from Clovis could have been in place prior to Clovis. With recent discoveries of potential pre Clovis sites in the southeastern U.S. and subsequent technological analyses of associated artifact bearing assemblages, the scope of what we do know of these early inhabitants is beginning to broaden.

Although some scholars have been critical of the notion of a legitimate pre Clovis presence in North America based on present data, they acknowledge that early occupations could exist in contexts that have been obscured by the character of the assemblages themselves. Is it possible to recognize a lithic assemblage as cultural if it cannot be distinguished from the attributes that are consistently found on naturally worked cobbles? Fiedel (2013:346–347) suggests that the handful of sites that do offer the best potential for comprising a valid pre Clovis assemblage (.g. Meadowcroft, Pennsylvania., Miles Point, Maryland., Cactus Hill, Virginia.) are those that do not contain assemblages that are expedient, but rather are most similar to an Upper Paleolithic tool industry, comprised of blades and bifaces (Fiedel 2013). If lithic analysts

eliminate from possibility lithic categories that falls outside of a narrow range of reductive technologies (or what we believe an assemblage should look like), then they run the risk of missing potential evidence of material culture.

If pre Clovis peoples were incorporating multiple, distinct, or alternative lithic reductive technologies, is it possible to differentiate the tools and byproducts thereof from those that form by natural processes? If pre Clovis assemblages are "hidden in plain sight", is it possible to identify them as such, and, if so, how would we go about it? It is the contention of this research that by broadening the search criteria to include the attributes of multiple reductive technologies, not just blade or biface manufacture, it is possible to obtain a comprehensive and more informative account of the technological organization and early prehistoric occupation (or lack thereof) of Eastern North America.

This dissertation has examined possible evidence for pre Clovis lithic technology at the Topper Site in Allendale County, South Carolina. Previous analyses of the site contents have identified the presence of conchoidal flakes from deposits that underlie a stratigraphically intact Clovis assemblage (King 2012). The these flakes, it was postulated, could result from down-drift from the overlying sediments by vertical displacement, be a product of natural fracture events by weathering, have been subjected to fluvial processes, or could reflect a legitimate pre Clovis occupation. In addition to these artifacts, items initially classified as bend break flakes have also been reported from the early deposits (Goodyear 2005). The goals of this study were to determine the origin of the lithic materials identified as conchoidal flakes from the early deposits at the Topper Site, and to test the role of human agency in the manufacture of materials preliminarily identified as bend break flakes. To address these questions a broad-based examination of the lithic attributes of a large sample of items from Topper was conducted.

Following Dincauze (1984), the claim for pre Clovis at Topper was subjected to rigorous standards through a framework of deduction that included demonstration of dating, geological and paleoenvironmental contexts, and artifact status. The site's contents were evaluated with regard to the five criteria that Dixon (1999) suggests must be met to assess any claim of pre Clovis legitimacy. The results of this study offer a number of empirical findings regarding the legitimacy of the pre Clovis occupation at the site.

Are there artifacts from the pre Clovis deposits at Topper that are clearly the product of human manufacture?

Based on prior studies, artifacts of human origin in the form of conchoidal flakes have been identified at Topper (King 2012). Two hypotheses were developed to account for the presence of this flake assemblage. These flakes could represent pre Clovis evidence of flake tool production at the site. However, the potential also exists that these flakes were introduced into the pre Clovis deposit from above by bioturbation, translocation, or have formed by natural collisions through colluvial or fluvial processes. The present study demonstrates that there are flakes, broken flakes, flake fragments, and debris from the pre Clovis deposits at Topper; although the proportion of flakes to debris from these deposits is much lower than was found from the Clovis levels. Given the presence of artifacts that meet the minimum criteria for human agency below the Clovis deposits at Topper, the hypothesis that people were exploiting the site for chipped stone reduction is not rejected. A high proportion of flakes from the Clovis and Holocene deposits have attributes characteristic of biface thinning flakes; that is they are thin and curved, retain broad shallow prior detachment scars, are feathered at the lateral margins, and have multifaceted striking platforms. By contrast, flakes from flake or cobble core production are less curvilinear, and have a higher proportion of single faceted platforms. Such flakes are more

common from the Lower Pleistocene Sands and Upper Pleistocene Terrace pre Clovis deposits at Topper.

Based on the cortical and size grade analysis, a small portion of flakes (predominantly small biface thinning flakes) from the Clovis deposits have been displaced by bioturbation or displacement into the underlying Upper Pleistocene Sands. However, most of these flakes are absent from the Lower Pleistocene Sands. Given their morphology and technological attributes, most flakes from the Lower Pleistocene Sands and Pleistocene Terrace reflect cobble core and flake tool production and maintenance. Moreover, given the stratigraphic separation between the Clovis and Lower Pleistocene Sands artifact-bearing deposits, it is unlikely that the deeper assemblage has been subjected to significant bioturbation or artifact displacement. Therefore, the results of this study support the hypothesis that there is a pre Clovis component at Topper as indicated by the stratigraphically discrete assemblage of flakes and flake tools situated at the base of the Pleistocene Sands and at the contact with the Pleistocene Terrace surface. This assemblage is the product of flake tool production.

In addition to the conchoidal flakes, items preliminarily classified as bend breaks were also recovered from the pre Clovis assemblage. To evaluate whether the bend breaks were the product of human versus natural agency at the site, a lithic analysis was conducted focusing on debitage attribute analysis and flake formation. Sullivan and Rozen's interpretation free model was employed to characterize the nature of the lithic assemblage. Bend breaks from the Lower Pleistocene Sands and Upper Pleistocene Terrace do exhibit technological attributes consistent with human lithic reductive technologies: that is, having at minimum compression rings and a detachment face. A high percentage of these items also exhibit lips along the break angle and have modification scores (e.g. Andrefsky 2013) consistent with human alteration. These items

are likely byproducts of bipolar production. However, unmodified bend breaks are more common than examples that are retouched or that exhibit microwear. As such, although bend break tools are present from the Lower Pleistocene Sands and Upper Pleistocene Terrace, the flake tool assemblage from these deposits provides the best evidence for a legitimate pre Clovis assemblage.

Do the results indicate that there is similarity between the Clovis and pre Clovis assemblages?

Yes and no. If peoples were not present at Topper prior to the Clovis occupation at the site, then there should be no similarity in assemblage composition between the two deposits *and* the debitage attributes found on materials from the site's lower deposits (Pleistocene Sands and Pleistocene Terrace) should consist *exclusively* of amorphous debris that resulted from natural weathering processes. The results of this study provide indisputable evidence that the Clovis and pre Clovis assemblages are composed of different frequencies of debitage categories and are therefore dissimilar. Whereas the Clovis assemblage at Topper is dominated by flakes, broken flakes, and flake fragments, the pre Clovis assemblage consists primarily of debris, amorphous debris, and cortical pebbles, although conchoidal flakes are present in some quantity (predominantly from the Upper Pleistocene Sands) as well. Therefore, the hypothesis that Clovis and pre Clovis shared the same lithic manufacture strategies is rejected because there is not similarity in the composition debitage categories for both assemblages. The occurrence of conchoidal flakes from pre Clovis deposits is attributed to either flake core production or as the result of down-drift from the Clovis and post Clovis deposits into the Upper Pleistocene Sands. Based on these findings, the pre Clovis levels do not consist exclusively of amorphous debris, and therefore the materials classified as debris that contain a detachment face and compression

rings are likely the lithic byproduct(s) of tool production as opposed to natural processes. The occurrence of cortical pebbles from the Clovis deposits is interpreted as a combination of the byproduct of early stage biface manufacture and the product of artifact reorientation and weathering by sheetwash from the hillside slope. Likewise, the occurrence of cortical pebbles from the pre Clovis deposits is interpreted as a combination of the byproduct bend break production and the product of artifact reorientation and weathering by sheetwash from the hillside slope.

Flakes and flake debris associated with conchoidal fracture occur in post Clovis Holocene, Clovis, and pre Clovis contexts at Topper. The distribution and technological characteristics of this debitage throughout the stratigraphic profile is quite similar. The debitage attributes found on conchoidal flakes from the Clovis (Biface) and pre Clovis assemblages (Core and Flake tool) are consistent with known lithic reductive technologies. There is dissimilarity in the technological attributes of the flake debris from the Clovis and Lower Pleistocene Sands deposits, indicating that distinct strategies of tool manufacture were being carried out during each occupation. These results differ when considered relative to other pre Clovis sites in eastern North America where early occupants were manufacturing bifaces.

Do the results indicate evidence for bipolar production at Topper?

Yes. Using Cotterell and Kamminga's model of flake formation, the lithic items that have attributes consistent with wedging, bending, and compression flaking tend to occur in greater abundances from the Lower Pleistocene Sands and Upper Pleistocene Terrace. These are the items Goodyear has referred to as bend breaks, and are most frequently classified as debris in accordance with the Interpretation Free Model. The largest bend breaks, and to those that most frequently exhibit modification, derive from the Lower Pleistocene Sands as opposed to the

Pleistocene Terrace and are spatially associated with cobble clusters, anvils, split quartz pebbles, and cobble core flakes resting at the base of the Pleistocene Sands and on the Pleistocene Terrace surface. The high percentage of cortical pebbles and tertiary bend breaks from this deposit is potential evidence of decortication in the tool manufacture process. Although items resembling bend breaks do occur from the base of the Pleistocene Terrace, it is plausible that these items in this stratum could have formed either by human agency or by natural weathering. As such, the term equifact (e.g. West 1983; see Lubinski 2014) may best be applicable to describe these items; that is that more than one single process may result in a given byproduct, and therefore the ability to distinguish between a number of potential causal agencies for an archaeological pattern is blurred (see Lyman 2004).

Is there evidence for differentiation in toolkit composition between the Clovis and pre Clovis assemblages?

Yes. An examination of the technological tool types recovered from Topper show that bifaces are nearly exclusively recovered from the Archaic and Clovis deposits and are absent from the pre Clovis deposits. Biface thinning flakes are largely absent below the Upper Pleistocene Sands. Flake tools, cores, and production tools occur in all stratigraphic deposits, (although at different proportions) whereas bend breaks are nearly exclusive to the pre Clovis deposits. An examination of tool form composition by stratigraphic unit found that the Clovis deposits are dominated by biface and core tools. The Lower Pleistocene Sands assemblage is composed largely of core and flake tools, and the Upper Pleistocene Terrace is composed primarily of bend break and flake tools. Based on these findings, combined with the presence of high quantities of biface thinning flakes from the Clovis deposits and smaller cobble core flakes

from the Pleistocene Sands, it appears that the two assemblages were not produced using the same lithic reductive technologies, and there is dissimilarity in the frequency and types of tools recovered from each stratigraphic unit at the site. Given these results, the hypothesis that one ore more tool types are present from the pre Clovis deposits at Topper is accepted. However, the hypothesis that the same or similar reductive technologies were carried out for both Clovis and pre Clovis deposits is rejected.The distribution and the technological characteristics of bend breaks from pre Clovis deposits are dissimilar to Clovis, being separated stratigraphically and technologically from the overlying deposits.

Can the natural weathering of Allendale Coastal Plain chert produce morphological and technological attributes that resemble debitage formed by cultural processes, and were such processes responsible for the occurrence of bend breaks and other lithic items that might be mistaken for flakes?

Yes and no. An experimental program was developed to test if natural processes could have been responsible for the production of lithic items that resemble cultural flakes and bend breaks at Topper. This analysis was based on the proposition that artifacts produced by humans should exhibit specific attributes that are distinguishable from the attributes that can form by experimental weathering simulations. The results of this study demonstrate conclusively that lithic detachments from Allendale Coastal Plain chert can form from multiple weathering conditions. Based on the experimental weathering simulations, Allendale Coastal Plain chert is susceptible to fracture events owing to variation and changes in the temperature and moisture content of the clay alluvial terrace deposits. Specifically, lithic cobbles from the Pleistocene Terrace at Topper can be subject to the combined effects of cyclic fluctuations in the water table and temperature, and are most prone to undergo alteration and fracture due to these weathering

processes. Specifically, immersion in water and subsequent cooling or heating lead to mechanical instability within the cobbles, and repeated cycles of this process can result in detachment.

Natural lithic fracture is most likely to occur along specific planes or cracks along the exterior of chert surfaces that denote the transition line between the submerged and exposed area of the cobble. In some instances, detached items can resemble the morphological characteristic of unmodified bend breaks and flakes, although detachments formed in this way are most similar to the items classified as amorphous debris in this study. As such, the weathering simulations did produce lithic detachments that fit the *morphological* description of conchoidal flakes and bend breaks. However, because the resulting detachments did not have attributes consisting of either compression rings, bulbs of force, or striking platforms on flakes (technological attributes), or compression rings or lips on bend breaks, these items should not be mistaken for the byproducts of biface, or bipolar (wedging, or compression) technologies. In other words, detachments resulting from natural weathering processes often exhibit morphological similarity to cultural debitage, but lack the technological attributes of a chipped stone reductive technology.

Although the findings in this study demonstrate that weathering processes can lead to the fracture and detachment of lithic items at Topper, the results demonstrate that the greatest evidence for fracture by weathering occurs from the lower Pleistocene Terrace. These findings are interesting given the overall pattern of differential weathering observed on cobble exterior surfaces throughout the stratigraphic profile at Topper. Artifacts from the post Clovis Holocene deposits exhibit minimal cortical weathering, whereas items from the Clovis and pre Clovis Lower Pleistocene Sands exhibit increasingly weathered surfaces with depth. These findings would seem to imply that the rate or extent of weathering can be used to denote the amount of

time in the ground. However, research also suggests that objects exposed to the elements on ground surfaces for prolonged periods will undergo more pronounced weathering than objects buried in soils (West 2010). It is therefore possible that the weathered nature of the lithic assemblage from the Lower Pleistocene Sands of unit 2b resulted from the combined influences of time in the ground as well as a prolonged period of exposure prior to burial.

Unlike the descilicified nature of the materials above, cobbles from the Pleistocene Terrace appear to exhibit differential weathering. Some items have weathered exterior surfaces and others do not. The Pleistocene Terrace maintains greater moisture content and as such, many items that are associated within these sediments have typically not undergone descilicification. Some items present little evidence of weathered surfaces whereas others appear entirely degraded. There are a number of possible scenarios that could account for these observations. For example, according to Waters et al. (2009:1303), pedogenic processes have altered the upper portion of the Pleistocene Terrace (Unit 1b) creating a weak Bt, which was subsequently truncated by erosion. Goodyear has noted that the Pleistocene Terrace surface is scoured, possibly owing to erosional processes of the river. It is possible that such processes have reworked or exposed a portion of the materials within the Pleistocene Terrace matrix. Accordingly, items that have not undergone descilicification could have been reworked into the terrace, and the added moisture content has led to their preservation. The same erosional processes could have exposed other items from the Pleistocene Terrace to the elements for a period of time thus leading to their descilicified nature. An alternative to this hypothesis posits that the moisture of the Pleistocene Terrace led to the preservation of some chert, and that the material which has become descilicified has been vertically displaced from the overlying deposits at some point. Or it is possible that what we perceive as differential weathering in the

Lower Pleistocene Terrace is in fact the byproduct of the weathering process itself. That is, mechanical weathering has led to the fracture of lithics with already weathered surfaces, thus exposing the interior of higher quality. These interior surfaces might have the appearance of debitage formed by cultural processes, yet will lack evidence of impact markers.

In addition to these findings, an evaluation of the detached items from Topper using the cluster shape analysis demonstrates that clusters from the Lower Pleistocene Terrace exhibit a higher degree of vertical displacement than items from the overlying deposits. The natural items from the lower deposits are distinguished technologically from intentional bend breaks based on the attributes found on bend breaks from replicated studies (e.g. Jennings 2011) and the attributes found on modified bend breaks at Topper. Bend breaks formed by way of natural processes are most often cortical, lack compression rings or other impact markers indicating force application, and exhibit minimal retouch scars (less than 2), and have two or fewer break angles.

Do the detachments resulting from the experimental weathering simulation compare favorably to or differ from bend breaks recovered from a known natural (control) assemblage? How does the control assemblage compare to the archaeological assemblage at Topper?

The results of the comparative analysis demonstrate that bend breaks from an off-site control assemblage are similar in morphology to items formed during an experimental weathering procedure. In addition, the bend breaks from the archaeological assemblage at Topper are also morphologically similar to items recovered from a control sample that is based on the observed attributes determined to be natural in origin. As such, it is entirely possible that natural processes could have created the Topper bend break assemblage.

Conversely, the results also show that bend breaks from the Topper Pleistocene Sands and Upper Terrace assemblages exhibit technological attributes (e.g. compression rings, lips, and modification) consistent with human agency. Based on the attribute scoring analysis, these technological attributes are absent on detachments from the control and experimental assemblages. An examination of both assemblages for the presence of differentially weathered removal scars found significantly higher proportions of such scars on the items from the control sample, with differentially weathered scars generally absent on bend breaks from Topper. This evidence precludes the notion that two or more detachments on lithics from the Topper sample were removed at multiple or distinct periods in a given artifact's history. Where artifacts do have two or more detachments, evidence suggests the removals were struck consecutively if not within a short time of one another. When the attribute scoring analysis is considered, the Topper bend breaks generally lack cortex (86.1%), have more than two removal scars (55.2%), and exhibit modification retouch (23.9) with greater frequency than either the control or experimental assemblages. Given these results, the Topper and control assemblages may have *formed* under analogous conditions, but only the Topper assemblage contains items that appear to have been subjected to "technological" processes of human agency.

Do the flakes from the pre Clovis assemblage at Topper exhibit attributes that could have formed as the result of other types of natural processes apart from weathering?

Yes, research has shown that processes such as fluvial transport or contact occurring as the result of colluvial processes can produce breakage patterns and attributes on lithic bodies that include removal scars, compression rings, bulbs of force and even striking platforms that are indistinguishable from the attributes of human lithic manufacture. Experimental studies have

found that flakes complete with apparent striking platforms and bulbs of force have been produced on detachments formed from dropping obsidian cobbles from a predetermined height onto a lithic matrix below (Rutherford and Andrefsky 2013). Flakes from the pre Clovis deposits at Topper exhibit one or more of these attributes and bend breaks exhibit compression rings that could form by collisions with other lithic bodies.

Does that mean that they did? To answer this question requires a consideration of context. The Clovis debitage was recovered in association with material culture that has been shown to be diagnostic to a known period, established through technological analysis of fluted technology and radiocarbon dating. No such material culture has been reliably established for pre Clovis assemblages. However, in such instances it is essential to consider additional variables that can be employed to help differentiate between natural and cultural detachment mechanisms. For example, Andrefsky (2013) has shown that detachment scars on lithic items that occur three or more in number, are uniform, patterned in character and that occur on two to five (out of 8) segments of the object are more likely to be the product of cultural rather than natural processes. Moreover, depositional setting, lithic particle size, and orientation, among others, are also informative attributes than can be used to evaluate questionable assemblages. As such, the incorporation of multiple attributes in addition to information with regard to context is pertinent when forming interpretations about the legitimacy of pre Clovis assemblages.

Is there evidence that other natural processes, apart from the fracture of brittle solids by weathering, have led to the formation of the Topper pre Clovis flake or bend break assemblage?

Lithic items in sediments whose depositional history includes fluvial and colluvial processes are prone to battering and abrasion that *can* result in the formation of lithic

detachments. Items that have undergone such processes are expected to have removal scar patterns that are non-parallel, multidirectional or that occur at random angles, have rounded or abraded edges, and have removal scars that are differentially weathered. Moreover, such items should still retain some, if not a relatively high percentage of exterior cortex, and if subjected to high-energy fluvial activity, should be situated in a matrix of similar size particle clasts due to size sorting and occur in very high quantities (or at least higher than would be expected to occur from lithic reductive technologies). It is also possible for fluvial and colluvial activity to produce lithic detachments that retain some observable attributes such as compression rings, bulbs of force, and even plain striking platforms that are typically considered attributes of human agency. However, when such items do form, it is essential to consider these attributes in addition to all other attributes of the object exterior, interior, and aspects of depositional history to provide the best informed interpretation regarding the object's formation. A depositional setting with enough energy and clasts of large enough size to remove two or more flakes from a cobble would also be expected to exhibit fluvial or colluvial battering that did not result in the removal of flakes, and produce some rounding or abrasion resulting from the exposure to such conditions.

At Topper, the depositional unit with the greatest evidence for high energy fluvial deposition is the Upper Pleistocene Sands. This unit (top of Unit 2b) was prone to episodes of flooding and stream deposition indicated by increased levels of complete quartz pebbles presumably deposited by the Savannah River. Interestingly, this is also the unit with the greatest evidence for downward drift or bioturbation from the overlying deposits, and a lower percentage of piece plotted artifacts than the Lower Pleistocene Sands. The low percentage of material culture observed from the Upper Pleistocene Sands is an indication that either the site was not occupied with the same intensity as prior and subsequent periods, or episodes of flooding and

deposition have transported, removed, or disturbed a portion of an extant assemblage from this deposit. In contrast, flakes and bend breaks from the Lower Pleistocene Sands (lower Unit 2b) and the Upper Pleistocene Terrace (Unit 1b) do not frequently exhibit battering, rounded removal scars and margins, or abraded surfaces. Based on the condition of these items, it is less likely that they have been significantly altered by fluvial processes.

The lithic assemblage from the Upper Pleistocene Terrace is found in clay and sand that were deposited by low-energy, alluvial deposition and overbank flooding. The occurrence of lithic items of both large and small sizes, often resting on common surfaces within the matrix, and that have not been size sorted, is further indication that low-energy deposition has not significantly altered the spatial distribution of the Upper Pleistocene Terrace component of Unit 1b. Size sorting would have been expected had the items been subjected to higher energy fluvial processes. The lack of stained river stained cortex on flakes and bend breaks below the Clovis deposits is further evidence that the Pleistocene Terrace deposits very likely have not been exposed to high-energy fluvial processes.

It is possible that cracks may have formed within the Pleistocene Terrace during prior periods of aridity. However, the lack of biface production debris and absence of items that exhibit river–stained cortex within the upper portion of this unit strongly suggest that processes leading to artifact displacement (e.g. bioturbation, winnowing, down-drift) are not responsible for significant disturbance of the lithic assemblage from the Upper Pleistocene Terrace. Given this evidence, the most probable interpretation is that the pre Clovis assemblage at Topper either formed by cultural processes (e.g., artifact clusters in association with debris, flake tools, and bend breaks, and anvils from the Lower Pleistocene Sands and Upper Pleistocene Terrace), or in

some cases possibly by natural weathering as in the deposits from the base of the Pleistocene Terrace.

Does evidence from the microwear and modification analysis support the conclusion that the Topper bend break assemblage is natural in origin?

The trace microwear analysis supports a cultural origin for the pre Clovis Topper assemblage. For at least one attribute, residue, the results are inconclusive. Analyses show that artifacts from all stratigraphic deposits at Topper exhibit microwear or post-detachment modification. An examination of the distribution and size of modified items shows that examples from the Clovis, Lower Pleistocene Sands, and Upper Pleistocene Terrace exhibit higher percentages of attributes typically associated with cultural modification. The Index of modification analysis found a difference in the types of artifacts that exhibit modification for each stratum. Whereas flakes and broken flakes makeup the greatest percentage of modified tools from the Clovis deposits, modified items from the Pleistocene Sands are predominantly flake tools, bend breaks, flake fragments, and debris. Modified artifacts from the Pleistocene terrace are most predominantly flakes and bend breaks. Although there is an increase in the proportion of modified artifacts in the Pleistocene Terrace when compared with the Pleistocene Sands, the largest and best items suitable for use are from this unit derive from the Upper Terrace given the higher index of modification scores.

An examination of 50 artifacts at Topper for trace microwear from the pre Clovis deposits revealed micro-chipping, polish, and striations on a significant number of these artifacts. Based on these results, the hypothesis that microwear on lithic items from Topper resulted from intentional human use is not rejected. Evidence of variation in the percentage and type of microwear by strata indicates that some deposits at Topper hold greater potential evidence of

cultural activity than other deposits. The presence of micro-chipping and possibly microwear polishes on bend breaks from the Lower Pleistocene Sands and Upper Pleistocene Terrace is most probable to be the result of working materials that are medium hard, to medium soft in form. Materials that can often produce these patterns include fresh wood, bone or possibly hide.

By contrast, items from the lower deposits of the Pleistocene Terrace are more consistent with an origin formed by natural processes, and support the results of the experimental simulation study that bend breaks from the deepest deposits at the site are likely the product of natural weathering. The items from these deposits that do exhibit potential retouch scars or microchipping, when present, have scars that are typically few in number and are non-patterned. Polishes and potential residue were not observed on specimens from these deposits with the same consistency as those that were found on items from the Upper Pleistocene Terrace. There is also greater variation in lithic clast size for items recovered from the Lower Pleistocene Terrace, strengthening the possibility that lithic objects could have been struck or detached by colluvial bombardment or sediment consolidation and therefore resulting in potential attributes that resemble microchipping. Based on the occurrence of modification and microwear patterns on bend breaks, the intentional production of bend break fractures for tool use has only been inferred. The presence of compression rings, lips, and modification on bend breaks are the most parsimonious criteria for distinguishing intentionally produced bend breaks from unintentional fracture resulting from mechanical weathering processes. Moreover, it should be of note that natural processes can produce microwear that can be difficult to differentiate from cultural processes and future experimental studies are recommended to more fully interpret the results.

Is there evidence that the pre Clovis materials are in deposits within clear stratigraphic context?

Four distinct analyses were conducted to evaluate the stratigraphic integrity of the pre Clovis deposits at Topper: cortical, mass and size grade, spatial, and refit analysis. The results of the cortical analysis show that cortical materials occur in stratigraphically discrete contexts below the Clovis horizon at Topper, and that such materials are most abundant from three locales onsite: the Clovis and post Clovis Holocene deposits, the base of the Pleistocene Sands and the base of the Pleistocene Terrace excavation. Because the first two of these locales correlate with high frequencies of 1/8 inch flake debris, the associations are considered to reflect two discrete cultural occupations. The high percentage of debris and partially to fully decorticated chert cores from the Lower Pleistocene Sands recovered in association with high percentages of cortex is considered to reflect evidence of lithic manufacture associated with bipolar or flake/core production.

River stained cortex can serve as an indicator of the variation in raw material selection practices conducted at the site. The relative absence of river–stained cortex from the Pleistocene deposits at Topper is significant and is an indication that 1) river stained chert was either not widely accessible prior to the Clovis occupation, 2) that people were changing raw material exploitation practices through time, or 3) that the deposits are relatively intact with little evidence of bioturbation.

These findings also inform on the possible origin of the conchoidal flakes from the Pleistocene Sands. If there is little evidence for the bioturbation of river–stained chert through the stratigraphic profile, then it follows that the distribution of conchoidal flakes from the Lower Pleistocene Sands had also not been subjected to bioturbation, and therefore were either

deposited by flake /core or flake tool manufacture, or were introduced by fluvial input from the river. The location at which river stained cortex disappears from the stratigraphic profile serves as an indicator of the point in time at which the Savannah River transitioned from a braided to a meander system and began to down–cut through the alluvial Terrace, exposing chert to the transformation processes of the river. As such, river stained cortex can serve as a proxy for the extent of down-drift that has occurred below the Clovis deposits. The occurrence of non-weathered thermally altered flakes from the Pleistocene Sands also implies that the absence of river-stained cortex from these deposits cannot be explained as the result of weathering processes. Thus river stained cortex can be used as a proxy for the extent of down-drift that has occurred between the Clovis and Upper Pleistocene Sands.

The results of the mass and size grade analysis show that natural processes are likely responsible for the formation or alteration of the lithic contents of the Upper Pleistocene Sands by fluvial activity. However, the analysis also found that these processes had minimal effect on other areas of the stratigraphic profile, most notably the Clovis and Lower Pleistocene Sand deposits. The size grade and mass analyses for these deposits show that there is no continual decrease in the size of artifacts, debitage, or screened material throughout the stratigraphic profile and demonstrate that the pre Clovis assemblages are not the product of down-drift. The Clovis and Lower Pleistocene Sands have not been greatly affected by post-depositional site formation processes, and the deposits are intact.

One exception to this interpretation is advanced from the results of the artifact orientation (strike) analysis. A majority of the lithic items from the Pleistocene Sands are oriented towards the west, or downslope from the hillside, implying that processes such as sheetwash or erosion

could have led to their reorientation or even displacement. Alternatively, the high percentage of artifacts with strikes of 0 degrees could also be the result of human bias in the recording process.

The mass and size grade analysis of lithic materials from the Pleistocene Terrace found that quartz and cortical materials generally increase in size throughout the profile whereas flakes, debris, and amorphous debris decrease in size. These findings could favor sediment consolidation as the mechanism responsible for the production of the extant lithic assemblage at the Pleistocene Terrace base, as a high percentage of these items were classified as amorphous debris, lack compression rings, striking platforms, and bulbs of force. Load application of sediment overburden acting on an assemblage of relatively large cortical and quartz pebbles can cause brittle solids of medium to large sizes within this matrix to fracture, (thus causing a reduction in void space), and therefore reducing in size the items that could be mistaken for lithic debitage (Eren et al. 2011, Jennings 2011). According to Andrews (2006), consolidation due to natural overburden can create artifact distributions that are not horizontally size sorted, which the Lower Pleistocene Terrace deposits do appear to be. In addition to these findings, Wildeson (1982) suggested that deposits with higher moisture content may increase the likelihood of sediment consolidation on buried artifacts. The Lower Pleistocene Terrace deposits are not only deeper, but are also prone to greater levels of saturation than all overlying deposits at Topper and therefore would also have had a greater probability of undergoing sediment consolidation at some point in the past.

Although average flake weights are generally low throughout the Pleistocene Terrace, the occurrence of three zones of increased flake size in the deposits provide evidence against the proposition that this flake assemblage represents the downward migration of items throughout the complete stratigraphic profile. The vertical integrity of the mapped deposits from the

Pleistocene Terrace appears intact. Only the Upper and possibly the Middle Pleistocene Terrace contain artifacts with attributes that are most consistent with lithic manufacture. Such artifacts include modified bend breaks, cores, cobble clusters, and flake tools. Increased amounts of piece-plotted split quartz pebbles from the Upper Pleistocene Terrace are considered evidence of production tools, used as small anvils for the production of bend breaks. Although a relatively high percentage of bend breaks from this deposit (Upper Terrace) exhibit technological attributes, only those with evidence of microwear or modification are considered to have been used as tools. By contrast, the Lower Pleistocene Terrace is dominated by small bend breaks, and natural pebbles. Combined with the results of the experimental study, there is a greater probability that the deeper Pleistocene Terrace deposits were formed by natural processes (weathering or sediment consolidation).

The spatial analysis confirms the results of the cortical and mass and size grade analysis. A nearest neighbor analysis shows that there is statistically significant non-random clustering of lithic materials from the Clovis and Pleistocene Sands. Profile maps of the distribution of mapped artifacts show an apparent distinction between the Clovis and Lower Pleistocene Sands and that these assemblages are primarily distributed with regard to common surfaces. These findings indicate that 1) the two deposits are separated in time, and 2) there is little indication for downward drift of artifacts into the lower assemblage from above.

The cluster shape analysis found that the Clovis and Lower Pleistocene Sands have cluster morphologies that are elliptical as opposed to circular in form. There is little evidence that natural processes have led to the fracture of these items in such a way that would have resulted in the vertical displacement of lithic clusters and the extant patterns are likely cultural in origin.

Items from the Pleistocene Sands that have been classified as pre Clovis artifacts are not forming as the result of the breakdown or degradation of chert over time by mechanical weathering. Evidence for horizontal clustering in the distribution of artifacts from the Pleistocene Terrace is absent. However, because of the massive quantity of mapped artifacts relative to the small horizontal area examined, these results should be considered preliminary. Future excavation to widen the footprint of the Pleistocene Terrace might aid in determining whether or not the observed spatial patterns are in fact representative of a random distribution.

The results of the k–means analyses show that there are significant differences in the relative frequencies of tool types by cluster for the Clovis and Lower Pleistocene Sands deposits, and based on probability, these differences are not due to chance. The Clovis deposits are dominated by biface, flake tools, and core tools whereas the Lower Pleistocene Sands are dominated by bend breaks, cores, flake tools, and cobble clusters. Not only is there a difference in toolkit composition between the two assemblages, but there was also found to be variation in the composition of tool types for each individual cluster within a given assemblage. Many of the features identified as lithic clusters at the base of the Pleistocene Sands could be individual activity areas where distinct tool production tasks were carried out by different individuals within the group. By contrast, these deposits could also reflect the continual use of the site over multiple return trips with slightly different tool production activities occurring with each trip. Even so, based on these results it is possible to identify and differentiate areas of the site where certain tool types were produced based on the distribution of artifact types within each lithic cluster.

Additional spatial analyses were carried out to evaluate whether or not the horizontal and vertical distribution of artifacts for each stratigraphic deposit had been subjected to

postdepositional disturbance. According to the chloropleth maps there is no trend in the horizontal distribution of artifacts by size grade. These findings support the conclusion that post depositional processes were not actively responsible for the widespread disturbance of large contiguous areas of the Clovis and Lower Pleistocene Sands. The chert cobble and artifact clusters that are distributed across the surface of the Pleistocene Terrace are patchy in size across the horizontal slope of the landform and imply that fluvial processes have not resulted in significant size sorting of the lithic deposits from the landform. Moreover, the examination the lithic items recovered from these deposits found no evidence of rounding, indicating that they have not been subjected to prolonged periods of fluvial activity. This finding suggests that the deposits from the Lower Pleistocene Sands were likely buried rapidly before the processes that lead to abrasion or rounding could have taken hold.

When the vertical association of lithic materials was considered, the highest density of quartz occurs from the Upper Pleistocene Sands, and is associated with flakes of small size grades. The deposition of quartz in these deposits could reflect a period when the pre Clovis deposits at the site were buried by fluvial sedimentation. This process could have also resulted in the removal from the Upper Pleistocene Sands of flakes from a preexisting archaeological component at Topper, the introduction of flakes to the site from a portion of an offsite archaeological component, or the creation of flakes by the collision of chert cobbles in the fluvial system. The larger and more abundant quartz pebbles from this deposit (Upper Pleistocene Sands) compared with the over and underlying deposits indicate dynamic processes associated with a braided river system and high-energy flows. According to Butzer (1982), such systems are not favorable for the preservation of archaeological components. According to Waters (1988), the systemic context of many sites situated along the banks of braided rivers is often destroyed

and subsequently transposed into a secondary context. If in secondary contexts, flakes from the Upper Pleistocene Sands could have originated from older sediments exposed on surface sites or terraces adjacent to the river bed or reflect bioturbated materials from the Clovis deposits above. In contrast to the results that characterize the Upper Pleistocene Sands, a much higher proportion of flakes and tools of larger size grades derive from the Lower Pleistocene Sands and imply that postdepositional processes were not causing a decrease in flake and bend break size through the complete stratigraphic profile at the site. These findings rule out the possibility that numerous small flakes have migrated downward through the stratigraphic profile from the Clovis deposits, leading to the formation of a layered deposit at the base of the Pleistocene Sands. The patterns of lithic distribution from the Lower Pleistocene Sands at Topper seem to best fit with the byproducts of bipolar tool production and conchoidal flakes resulting from flake/core tool production.

Are paleoenvironmental studies consistent with ages assigned to the site?

The paleoenvironmental history of the Topper Site was reconstructed based on two independent studies. Smallwood examined four sediment samples from the Holocene and Clovis deposits on the Topper Hillside and, based on the limited data, found evidence of a pollen sequence that is in accord with the reconstructed geochronology at the site (Smallwood n.d.). Oak dominates the upland contexts at Topper during the Clovis period with the subsequent Holocene dominated by pine, hickory, and other deciduous species. Given better preservation and higher pollen counts, Watts (1980) documented a similar sequence for this period at White Pond, S.C., to the north.

A second paleoenvironmental analysis examined the history of unit 1a from the base of the Pleistocene Terrace at Topper. Based on the dates obtained from the 2011 OSL samples,

these sediments likely predate 65,000 cal yr B.P. The results of the study demonstrate pollen preservation from the analysis of two slides from the sediment core. Higher percentages of temperate, moist thriving pollen were observed from the older, deeper sample, whereas higher percentages of boreal species were identified from the younger sample. The sequence corresponds with the transition from the Eemian Interglacial (120,000 cal yr B.P.) to a period of cooler climate between 120,000 and 65,000 cal yr B.P. Moreover, AMS radiocarbon dating of *Abies* and *Carya* taxa from sediments taken from a location near where the top of the core was extracted returned dates of 54,700 and 55,500 ^{14}C yr B.P. which provide a minimum age of the plant materials (Waters et al. 2009). Although the results of pollen analysis could reflect a Late Quaternary transition in vegetation at Topper from warm, tolerant taxa, to species that thrive in cooler environments, it is important to note that the sample sizes examined were much too small to make this assertion, and further analyses are necessary to more fully interpret the pollen record at the site. Furthermore, no pollen analysis has reconstructed the paleoenvironmental history of the sediments that contain the pre Clovis assemblage from Unit 1b, radiocarbon dating of humic acids from these deposit have returned dates in excess of 20,000 cal yr B.P. (Waters et al. 2009). According to Waters, macrobotanical remains such as charcoal and wood are rare at Topper and therefore organic botanical materials most often occur as either lignified plant remains or as humic acids within flood basin sediments and paleosols (Waters et al. 2009). Given the paleoenvironmental analyses that have been conducted thus far at Topper, all results are consistent with the ages assigned to the site.

Are there reliable, concordant, and stratigraphically consistent absolute dates from the deposit?

Yes and no. There are discrepancies on the dates obtained from some deposits at Topper, specifically the Pleistocene Sands. Since 1998 chronological control of the geological record at Topper has been conducted through a combination of single and multiple aliquot OSL and radiocarbon dating techniques. Water's (2011) detailed assessment of 13 radiocarbon and 18 luminescence dates obtained from the Holocene and Pleistocene Terrace demonstrate a stratigraphically consistent record of the geological history at the site. The minimum ages from unit 1a from the base of the Pleistocene Terrace range from 44,300 B.P. (+/– 1700) to 51,700 B.P. based on combined C14, single, and multiple aliquot OSL dating techniques. More recent dating of this deposit using only single aliquot OSL methods have resulted in an older maximum age of the deposit extending the age of Unit 1a to 70.7 B.P.

Dates from Unit 1b from the top of the Pleistocene Terrace range from 19,280 +/– 140 B.P. based on the Waters et al. (2009) study to 59,400 B.P. (Goodyear personal communication 2014, Figure A5–4). Initial dating of the Pleistocene Sands using single and multiple aliquot techniques resulted in an age that ranges from a 14,000 B.P. +/– 1,200 B.P. to a maximum of 14,800 B.P. +/– 1,200 B.P. (Waters et al. 2009) for the deposit. More recent dating of the deposits places an age of 34,000 B.P. for the Upper Pleistocene Sands to 62,000 B.P. at the contact between the Lower Pleistocene Sands and the Pleistocene Terrace surface (Goodyear personal communication 2014). An OSL date of 53,000 B.P. was obtained that chronologically separates the Upper and Lower Pleistocene Sands. The sediments from which these dates were acquired correspond with the distribution of chert cobble clusters on the Pleistocene Terrace surface. Based on the two separate studies, the age of the Pleistocene Sands diverge markedly.

If the results of the more recent OSL dates are correct, the age of the Pleistocene Terrace alluvium significantly predates the onset of colluvial deposition from the hillside slope. Barring postdepositional disturbance, the pre Clovis assemblage from the Lower Pleistocene Sands and Upper Pleistocene Terrace at Topper fall within Marine Isotope Stage 3, described as a period during the last glacial cycle between 60 and 27ka that experienced a number of sudden climate warming pulses known as Dansgaard-Oeschger events. Therefore, these deposits appear to reflect a pre-Last Glacial Maximum (LGM) human occupation in the southeastern U.S. The lack of bifaces and biface production debris from these pre Clovis deposits imply that the Late Pleistocene Clovis and pre Clovis assemblages are separated in age and have not been subject to down-drift. The absence of bifaces from the older deposits at the site also precludes the notion that the bend breaks were formed from snapped biface fragments, or as a result of trampling.

An evaluation of the OSL dates obtained from the 2012 sediment samples shows that the ages obtained for the Upper Pleistocene Terrace (59,400 cal yr B.P.) and Lower Pleistocene Sands (62,000 cal yr B.P.) overlap. It is also possible that the discrepancy between the two samples could simply reflect statistical overlap. One possible explanation for this discrepancy posits that the Pleistocene alluvium was deposited relatively rapidly. The Lower Pleistocene Sands and the underlying Pleistocene Terrace each represent different floodplain regimes of the Savannah River. It is possible that a rapid burial of the exposed Pleistocene Terrace surface by fluvial sedimentation from the river could have led to some mixing, with sediments of slightly different ages being redeposited in the watershed. The small temporal age bracket that distinguishes the two stratigraphic formations could explain the similarity in toolkit composition for the Upper Pleistocene Terrace and the Lower Pleistocene Sands, where modified bend breaks, flake tools and cores are common in both deposits. Because bend breaks occur in both

deposits, and because all dating efforts prior to 2011 resulted in a substantial date range that differentiated the two assemblages (15,000 cal yr B.P. to 50,000 cal yr B.P.), critics of the legitimacy of bend breaks as a cultural phenomenon have questioned how a single lithic technology could last for 30,000 years or more while undergoing little morphological or technological change. If the new dates accurately define the age of the pre Clovis deposits at Topper, and if the lithic technology of the assemblage has been accurately interpreted, then a model favoring rapid deposition and burial of what would become the Pleistocene terrace surface could adequately explain the presence of bend break tools throughout the Upper Pleistocene Terrace and Lower Pleistocene Sands without requiring a significant amount of intervening time (e.g. 2,600 years) between the deposition of each assemblage. Future investigation is warranted to confirm the age of the Pleistocene Sands.

Is it possible to place the pre Clovis toolkit at Topper into broader behavioral context?

Given the differences in lithic technology between the Clovis and pre Clovis deposits at Topper, the assemblages from the Pleistocene Sands and Upper Pleistocene Terrace might best be viewed as unrelated to Clovis, and should not be considered as part of a settlement subsistence system based primarily around the hunting of megafauna. Rather, the pre Clovis utilized flake tool and to a greater extent, bend break assemblage at Topper might better be described as an expedient rather than formal reductive technology, where tools could be readily and quickly produced on an as needed basis. Expedient technologies are those that do not typically adhere to a pre-determined design criterion or that have stylistic guidelines. The abundance of raw material at the quarry, combined with the likely relative ease with which bend breaks could be formed (assuming natural boulders and cobbles had already been broken into) enable a toolkit to be fashioned at low cost in terms of the energy required to produce it.

Moreover, the proximity to the river as a potential resource for subsistence acquisition could have enabled visits to the quarry for raw material acquisition and tool production to be also be embedded in the task of searching for other resources of necessity.

The discovery of large quantities of utilized and modified bend breaks at Topper and recovered in close proximity to the quarry implies that these tools were also likely used as part of a generalized forager adaptation for seasonal onsite task-related activities associated with a riverine subsistence strategy. The area would have supplied a variety of plant, aquatic and raw material resources essential for survival. The results of the microwear analysis suggest that bend break tools were possibly used in the working of medium to hard materials such as bone, wood, or hide which could have subsequently served in the production of tools incorporated into the riverine adaptation. Moreover, the relatively high artifact diversity found onsite consisting of scrapers, utilized flakes, bend breaks, choppers, and core tools implies that the site was integral to multiple as opposed to a relatively narrow range of tasks and could reflect repeated if not seasonal use.

The prospect of chipped stone tools in contexts that predate the Last Glacial Maximum in North America is intriguing. If the lithic assemblages from the pre Clovis contexts at Topper are the product of human agency, what do these results mean in terms of human behavior and the organization of lithic technology in the region and compared with other regions during this period? Although classic bifaces were not a part of the pre Clovis toolkit at Topper, the bend break assemblage at the site is unique and unlike any known pre Clovis lithic assemblage from the eastern U.S., with the possible exception of the Debra L. Friedkin Site.

Unlike Topper, bifaces have been recovered from contexts that underlie Clovis deposits at other early sites such as Meadowcroft Rockshelter, Pennsylvania, and Cactus Hill, Virginia.

At the Debra L. Friedkin Site in Texas, the Buttermilk Creek complex has yielded 15,528 stone artifacts below the Clovis deposits consisting of at least 12 bifaces, 23 modified tools, and three radial breaks among the macro-artifact category. In addition to these items, Wiederhold and Pevny (2014:113) note that a compelling number of artifacts from the pre Clovis assemblage at Debra L. Friedkin are bend breaks, although the authors do not cite what percentage of the assemblage this artifact category reflects. The presence of unfluted bifaces, blade production and core reduction from deposits underlying Clovis at the site has been used in support of the interpretation that Clovis technologies could have evolved from the Buttermilk Creek Complex. However, at Friedkin and many other eastern Pre Clovis sites, the stratigraphic separation between the Clovis and presumably older components is minor in comparison with Topper, leading some critics to question whether the older bifaces observed in pre Clovis contexts are actually the byproduct of vertical displacement or trampling, whether artifacts have drifted downward through the sedimentary deposits, and to what extent the presumably older assemblages significantly differ from Clovis assemblages at all (Morrow et al. 2012). Given these findings, some have argued that the best evidence for legitimate sites of pre Clovis age should lack close associations of cultural components or even evidence of overlying cultural deposits at all (Fiedel 2013). The absence of diagnostic material culture from pre Clovis deposits at Topper, yet still stratigraphically separated from known cultural horizons by a significant amount of comparatively sterile deposits is suggestive of the human use of the site for stone tool production, albeit incorporating technologies distinct from Clovis and post Clovis populations.

CHAPTER XIII

CONCLUSION

This study was designed to examine the presumed pre Clovis assemblage at the Topper Site and to explore potential ways by which it could have formed. Do the lithic deposits that have been recovered below the post Clovis Holocene and Clovis deposits at Topper have attributes that are consistent with human agency and if so are they in stratigraphically discrete, unaltered contexts? This study also has sought to determine if the attributes found on items produced under natural conditions are similar to or different from the attributes common of lithic reductive technologies, and if so, is it possible to distinguish between the two?

Based on the combined lithic analyses, the source of the pre Clovis deposits at Topper has been reconstructed. Evidence from this study supports King's (2011) findings and demonstrates a human origin for the pre Clovis conchoidal flake assemblage at the site. However, this assemblage likely resulted from flake core and flake tool manufacture as opposed to biface manufacture and furthermore does not reflect bioturbation as an agent responsible for deposition. The assemblage is at minimum 14,000 BP and possibly much older.

The bend break assemblage from the Lower Pleistocene Sands and Upper Pleistocene Terrace at Topper are also considered products of human agency based on the presence of specific technological attributes (compression rings, lips), retouch modification, and lack of differentially weathered scars. By contrast, the analysis could not confirm that items classified as bend breaks from the Lower Pleistocene Terrace were also part of the same lithic reductive technology. The comparatively small size of these items, low Index of Modification values, and microwear patterns consistent with natural processes imply that humans were most likely not responsible for their formation. Given these findings, at the very least, the Topper bend break

assemblage from the Lower Pleistocene Sands reflects the expedient use of broken chert debris (as opposed to intentional manufacture) by pre Clovis peoples that occupied the site at a time between the period that alluvium was being deposited and prior to the onset of significant colluvial slopewash deposition from the adjacent hillside.

The results of this study have theoretical implications on the timing of human settlement in the Southeast U.S. Three important analytical variables direct the acceptance or refutation of pre Clovis assemblages: 1) Are the presumed artifacts cultural and is the context good; that is, are they in stratigraphically intact deposits below diagnostic Clovis material culture? 2) Is there evidence to support the accuracy of the dating and geochronology? 3) Is our current theory postulating the timing and origins of human settlement of North America correct, traditionally assumed to date not much earlier than 13,500 cal yr B.P? Given these variables, any two conditions can be correct, but logic dictates that they all three cannot be. If we accept that people were not in the region earlier than Clovis, then either issues with the cultural affinity of the lithic assemblage itself or the dating of the site are incorrect. By contrast, if we accept the possibility that people could have occupied or settled the region earlier than Clovis, then issues with dating or artifact legitimacy do not necessarily dictate our interpretations of a site as pre Clovis. If the lithic technology and geochronology at Topper have been interpreted correctly, then it follows that people were occupying the region much earlier than current well accepted colonization models suggest. Lithic assemblages that are composed of items that are not associated with an Upper Paleolithic (biface or blade) technology should not be readily discredited as natural without either considering alternative reductive technologies that could have been implemented in their production or developing experimental programs to verify other means by which they could have formed.

What do the results of this study mean in terms of the pre Clovis lithic technology at the Topper Site? Given what little is known about pre Clovis life-ways, tying these conclusions into inferences about pre Clovis period social systems is speculative, but some hypothetical scenarios may be suggested. The results of this study have important implications for understanding pre Clovis lithic technology and technological organization. If the geochronology and lithic analyses are correct, then prehistoric peoples at Topper had access to and made extensive use of the exposed chert outcrop at Topper by a date that precedes the onset of the Last Glacial Maximum. Due to their long use-life, bifaces are often considered to convey significant social information regarding prehistoric life-ways. The presence of thin bifaces and debitage related to late-stage core and biface reduction from pre Clovis aged sediments at Meadowcroft Rockshelter, Pensylvania., and at Cactus Hill, Virginia., has been used to infer a curated lithic technology at presumably late pre Clovis sites in the eastern U.S and some scholars have used these findings to advocate pre Clovis technological affinities with subsequent Clovis occupations of the Eastern Atlantic slope. Because fluted bifaces are most commonly associated with the hunting of large game, does their absence from the pre Clovis deposits at Topper indicate that such game were not being actively hunted by the site occupants prior to 20,000 cal yr B.P., or do these findings simply mean that bifaces were produced at Topper, but were being carried offsite for use elsewhere? The results of this study show that while some conchoidal flakes are present from the pre Clovis deposits, there is an absence of broken bifaces and biface thinning flakes, indicating that such tools were likely not being produced there at the time. However, future research may prove otherwise. Based on this evidence, the early occupants at Topper likely did not focus on the same resource procurement activities as the Clovis inhabitants.

Informal lithic technologies can also lead to important information regarding the social and technological conditions that surround lithic production and use. Based on the results of this study, informal chipped lithic technologies, namely flake tools and bend breaks, dominated the pre Clovis lithic assemblage at Topper. The bend break technology at Topper reflects an expedient toolkit geared toward the acquisition and processing of local resources. Based on toolkit composition and proximity to riverine resources, it is likely that the river served as the primary source of subsistence for pre Clovis inhabitants at the site. Given the abundance of tool-stone at Topper, less time and energy would have been required to produce expedient tools such as bend breaks for the acquisition and processing of locally available resources. Moreover, the proposed function of bend breaks as tools for cutting, scraping, engraving or grooving organic media such as bone, antler, or wood is supported by the microwear analysis. As such one could conclude that bend breaks were multifunctional, and given their extraordinary range of possible uses relative to the ease with which they could be produced onsite, were at the very least a practical component of the toolkit, if not a suitable aid in the means of resource procurement.

Avenues for future research

This dissertation provides a detailed description of the lithic technology of the pre Clovis assemblage at the Topper Site. While the results of this study offer important evidence regarding the nature of the lithic assemblage at the site, there are a number of areas where future research may provide additional insight about pre Clovis life-ways in the region and at Topper. Existing colonization models should be evaluated, adjusted, or modified based on the results of empirical test implications and logical coherency. If people were in the southeastern U.S. prior to the onset of the LGM, Topper is likely not the only locale where people stopped and other sites with similar chipped stone tool assemblages should exist. Future archaeological research should

explore the possibility of other regional sites that might corroborate or invalidate the results at Topper. Leigh (2008) suggested that archaeologists should target Pleistocene landscapes such as terraces adjacent to former braided river channels as they are the locations most likely to retain well-preserved pre Clovis sites.

It could benefit future lithic research endeavors to expand the lithic attribute criteria required for the verification of cultural artifacts. If the attributes that are considered diagnostic of human lithic manufacture are limited to the byproducts of a narrow range of reductive technologies (conchoidal flakes resulting from biface manufacture), then the potential exists that the lithic items produced by alternative chipped stone technologies could be misclassified as natural. In other words, if bifaces and their byproducts operate as the minimum lithic criteria needed to be considered a cultural assemblage in North America, then by what objective means would the lithic analysis ever recognize the byproducts of alternative lithic reductive technologies? With regard to lithic attributes, some reductive technologies do not always result in the formation of flakes with striking platforms and bulbs of force. For example, bipolar technologies can result in lithic attributes that might mimic the morphology of natural fractures, yet still maintain specific technological attributes that can be distinguished from natural processes. Compression rings indicative of force application are but one such attribute whereas lips along the break angles of radial and bend break flakes are another. Therefore, by expanding the range of possible attribute criteria to include at minimum compression rings indicative of force application, acknowledging the potential morphological attributes consistent with natural processes, as well as the sedimentological context the assemblage was recovered in, it is possible to evaluate archaeological contexts for the presence of a much broader realm of possible lithic technologies.

The detailed scale of analysis enables informed interpretations about the authenticity of the Topper lithic assemblage, although the data may benefit from comparative analysis with other regional pre Clovis assemblages. Is Topper truly unique in North America, or are there other sites whose assemblage contents might share similarity with Topper? The search for new sites and assemblages of which the dates and lithic technology might compare with the results at Topper might help resolve such issues. The reexamination of previously excavated assemblages for potential evidence of pre Clovis material culture might also be beneficial.

At the site level, a better understanding of the spatial relationship of artifact types from the Upper Pleistocene Terrace at Topper would aid in the interpretation of the use of this area of the site. Enlarging the footprint of this area through additional excavation would allow for better horizontal resolution of the archaeological assemblage. Moreover, such fieldwork might allow for the identification of possible activity areas, which may subsequently be compared with those identified from the overlying Pleistocene Sands and Clovis components. A microwear analysis of a much larger sample of the tool assemblage and with the aid of high-power microscopic equipment will allow more informative explanations regarding the past use or uses of the lithic artifacts. Specifically, studies aimed at verifying the presence or absence and type of residue on lithic tools can be applied to understand tool function, the material being worked, or if the patterns are the result of natural formation processes. The incorporation of experimental use-wear studies may also clarify such issues. Moreover, the recovery and testing of artifacts from pre Clovis contexts for blood protein residue, if present, could shed light on subsistence practices and would aid in the interpretations of the use of specific artifact types. Additional geoarchaeological investigations at Topper would be beneficial to eliminate possible disturbance processes. Such research might offer better insight about the role of fluvial processes on the

Upper Pleistocene Sands and the presence and degree to which bioturbation may or may not have led to vertical displacement of artifacts between the Clovis and Upper Pleistocene Sands.

The discrepancies found in the two dating studies of the Pleistocene Sands need to be resolved. The biggest concern with the Topper geochronology based on the new OSL dates is that the ages obtained for the Pleistocene Sands differ significantly from the dates obtained by the Waters et al. (2009) study. Although present research implies that the deposits are pre Clovis in age, one study suggests a significantly younger date range, whereas more recent dating places the unit's formation closer in age with the underlying Pleistocene Terrace. Therefore future research should examine additional samples from these units to verify the true age of the deposits. Another useful inquiry would be the effects of longer-term and broader based experimental weathering processes on chert materials, and the development of additional experimental analyses in general. Additional analyses incorporating replication are essential. Such studies would provide a better understanding of the role of the environment in the formation of lithic assemblages, which in turn may aid in the development of more informed interpretations about pre Clovis material culture. More importantly such avenues of research can move us beyond our preconception of pre Clovis peoples as only biface or blade producers and toward a much broader understanding of the reductive technologies practiced by early hunter-gatherer societies in North America.

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APPENDIX

APPENDIX 1

CULTURE HISTORY

Research has identified evidence of cultural activity at the Topper Site that spans at least 13,500 years of human history in the region. This appendix offers a Culture history for the Coastal Plain of the Middle Savannah River Valley and provides a framework for interpreting the cultural sequence at the site. I begin with a discussion of the Paleoindian and Archaic periods, and conclude with an overview of the Woodland and Mississippian periods. A summary is provided that describes the major cultural trends, settlement subsistence strategies, and types of artifacts that are considered diagnostic of each period. The goal of the overview is to provide a setting in which settlement subsistence and tool-stone procurement activities at Topper could have occurred. Moreover, lithic materials from Paleoindian and all later periods in prehistory occur in the upper 1.5m of deposits at Topper, and due to cultural or natural transformation processes, the potential exists that these items may be the source of the materials identified in the Pre-Clovis deposits at the site. Therefore an understanding of the material culture that comprises these deposits is essential to any interpretation of a possible pre Clovis occupation at the site. Examples of artifacts from potential pre Clovis sites in the Eastern U.S. are presented in Figure A1–1. Sassaman et al.1990 have reviewed the archaeological evidence for prehistoric occupation of the Savannah River Valley near Topper. At the broadest scale, culture chronology for the region may be divided into four primary periods; Paleoindian, Archaic, Woodland and Mississippian. The following chronology forms the basis from which the Culture history at Topper is defined. A complete chronology is provided in Figures A1-2-and A1-3 as a reference for the specific age of cultural groups discussed in the text and their temporal designations.

Paleoindian Period

Paleoindians in North America have traditionally been portrayed as highly mobile big game hunters who, after migrating from Northeast Asia sometime after the Last Glacial

Maximum (LGM) 21,000 cal yr BP, followed and specialized in the procurement of Pleistocene megafauna as they migrated across the North American continent. Known as Clovis, based on the nearby town in New Mexico where diagnostic projectile points were recovered in associated contexts with extinct megafauna, these Late Pleistocene Paleoindian hunters have long been considered by many to be the oldest well-documented culture complex to inhabit North America.

The first widespread human occupation of the Southeast occurred approximately 13,500 cal yr BP when Clovis sites and assemblages, characterized by distinctive fluted projectile point technologies appeared rather abruptly. Clovis and other early cultures to inhabit North America at the terminal Pleistocene have traditionally been referred to as Paleoindian. This term was originally coined by Frank H. H. Roberts in 1940 as a way to define the first cultures to inhabit North America (Anderson and Sassaman 2012:36). Paleoindian cultures were defined as those that predate 13,500 cal yr BP and refer to settlement subsistence strategies that place emphasis on high mobility, the specialization in the procurement of large game, and that do not yet rely on agriculture or horticulture. Until the late 20th century, Clovis peoples were assumed to have entered the continent no earlier than 14,000 cal B.P. based on the discovery and subsequent dating of Pleistocene age mammals found in direct association with diagnostic fluted projectile points. “Traditional perspectives” for the initial occupation of the southeast U.S. have peoples entering the region from the north and west, predominantly along the major river drainages that flow into the area (Anderson and Sassaman 2012:36). However the recent discovery of sites containing potential human artifacts in contexts that predate Clovis across the Southeastern U.S. have extended the accepted timing for which peoples are assumed to have initially entered the region. Today, it is widely accepted that the first peoples to occupy the Southeastern U.S. likely

arrived at some point just after the last glacial maximum (21,000 cal yr BP) (Anderson and Sassaman 2012:36).

Regardless of how or when they arrived, the intentional rapid movement of colonizing populations into new areas of continental North America during the Late Pleistocene has been attributed to a combination of factors including the widespread availability of favorable resource patches in virgin environments, the ease of procuring naïve prey, and the lack of competition from preexisting human populations (Caldwell 1958; Griffin 1952; Wormington 1957). More recent research based on new archaeological data has indicated that Paleoindians in Eastern North America likely practiced what has been described as an opportunistic subsistence strategy that focused on the exploitation of a diverse range of biotic resources including small mammals, fish, and plant resources in addition to large mammals (Meltzer and Smith 1986; Meltzer 1988; Anderson 1990, 2013; Dincauze 1993; Ferring 2001; Haynes and Huckell 2007; Hollenbach 2007; Meltzer 1988, 1993; Speth et al. 2013; Walker and Driskell 2007). Such a diet supports a generalist subsistence strategy. While the reliance on large game to support subsistence needs is probable, evidence of such exploitation in the Southeast is sparse owing to poor preservation in many areas.

Paleoindian research in the Southeast often centers on the development and testing of models that attempt to account for some aspect of technological organization, population movement or settlement subsistence strategies relative to the distribution of material resources across the landscape (Anderson 1990; Anderson and Sassaman 1996; Daniel 1996 Anderson and Hanson 1988; Gardner 1977; Goodyear 1989; Kelly and Todd 1988; Miller and Smallwood 2009). Models developed to account for the distribution of Paleoindian sites often consider variables such as distance water, tool-stone, plants, physiography, or some combination of the

above (Anderson 1990, 2013; Daniel 2001; Miller and Smallwood 2009; Hollenbach 2007). These models form the basis of how scholars interpret the archaeological record in the region.

One of the earliest settlement models was developed by William Gardner. Based upon excavation at prehistoric quarry sites in Northern Virginia, Gardner developed the Flint Run Lithic Determinism model which proposes that Paleoindian settlement was seasonally tethered to resources such as quarries. The constraints brought about by the reliance on raw material sources for the production of tools is seen as a causal mechanism for reduced mobility (Anderson and Sassaman 1996:23; Gardner1974, 1977, 1983). According to the model, Paleoindians set up base camps near fixed predictable resource rich places on the landscape such as quarries where they could return to as needed for tool stone acquisition during hunting excursions or forays. Such familiar points on the landscape may also have been useful as areas of aggregation where groups could have come together for the exchange of goods. Gardner's model stresses a low degree of population mobility, as opposed to high movement of populations across vast areas of the landscape (Daniel and Wisenbaker 1987). The model is found to work best where lithic resources are limited, such as the South Atlantic Coastal Plain, but in physiographic regions of abundant lithic materials, there would be little need to justify a return to the same source.

During the 1970's Albert C. Goodyear (1979, 1989) developed a settlement model that places emphasis on the quality of raw material for the manufacture of stone tools. Known as the "Cryptocrystalline Hypothesis" Goodyear suggested that the placement of high quality cryptocrystalline chert sources distributed across the landscape played a significant role in population settlement subsistence patterns. The location of raw material is stable, and therefore, predictable; the occurrence and availability of food is not (Goodyear1989). Before people could manufacture stone tools, they needed to know where on the landscape to obtain the suitable and

necessary raw materials for their production. Because it was not always possible to attract the large game to sources of raw material, an adaptive strategy was in need that would allow for sufficient production and transport of necessary resources, and at least cost, to support daily subsistence needs. Although Goodyear supported Gardner's claim that raw material access played a critical role in determining the settlement patterns of Paleoindians, he contended that higher residential mobility was probable, and that lithic raw material procurement was an "embedded" practice in the settlement subsistence strategies of these peoples. In the absence of being bound to a specific chert source, Paleoindians, according to Goodyear, would require a reliable means of conserving and transporting tool-stone across the landscape to areas of need. One way to accomplish this is through the selection of materials of high quality for the production of a curated tool technology (Anderson and Sassaman 1996:26; Goodyear 1989). Biface technologies fit this concept well as they are portable, efficient and versatile tool types that would have allowed Paleoindians to adapt to a variety of environments as they moved rapidly across the landscape (Kelly and Todd 1988).

Anderson and Hanson (1988) have argued that in the South Atlantic Coastal Plain, hunter-gatherers may have organized their settlement subsistence systems along major river drainages that were oriented to and from the coast. These drainages would have supported resource rich environments that could have been readily exploited in support of dietary needs. Daniel (1998) and later Miller and Smallwood (2009) have evaluated this model in detail. Miller and Smallwood have found that areas where major rivers and physiographic boundaries intersect are good predictors of Clovis biface density, and where knappable chert was likely present (Miller and Smallwood 2009). The authors argue these areas would have also served as suitable locales for seasonal aggregations of multiple Paleoindian bands (Miller and Smallwood 2009).

Anderson (1990) has proposed that during the colonization process, Paleoindian groups settled ecologically rich areas of the landscape such as river valleys in order to familiarize themselves with the landscape for a brief period prior to expanding their population size and radiating into adjacent areas (Anderson 1990). These ecologically rich places are referred to as staging areas (Anderson 1990), and are identified on the landscape where dense concentrations of fluted points tend to occur. The Tennessee and Savannah River valleys are considered to be prime examples of staging areas. Conventional colonization models have initial Paleoindians populations filling into staging areas in the Midwest, and eventually spreading technological adaptations to the south and east (Anderson 1990). This implies directionality in the settlement process (Smallwood 2012). Based on the distribution of known Clovis points and raw material sources in the Eastern U.S, a number of other locales fit the description of Anderson's "staging area" model. These areas include the gulf coast of Florida and Texas, and the Delmarva Pensinsula and Nottoway River Valley of Virginia. Moreover, increasing evidence of archaeological sites relating to the Paleoindian period in the Savannah River Valley is indication that this region may also have served as one of Anderson's "staging areas" (Anderson 1990). The hypothesized directionality of initial colonization implies that these areas would have been settled later than regions to the west. However, a numner of Clovis sites from these regions also have earlier components that are reported to date earlier than 14,000 cal yr BP (Anderson 2005; Goodyear 2005; McAvoy and McAvoy 1997; Lowery et al. 2010). These discoveries challenge the proposition that Clovis developed outside Eastern North America, and are evidence for a Late Glacial Maximum occupation of the region. In the Savannah River Valley, the Paleoindian period can be broken into three distinct sub periods referred to as Early, Middle and Late; with Early Paleoindian comprising the pre Clovis culture (Anderson and Sassaman 2012, Anderson et

al. 2015). Each sub period is characterized based largely on changes in lithic technological organization possibly resulting from fluctuations in climate. In the sections that follow, I provide a brief overview of each of these sub peiods.

Early Paleoindian (>13,500 cal yr BP)

Archaeological evidence for human occupations of the Southeast prior to 13,500 cal yr B.P. is relatively sparse, with only a handful of sites identified to date. (Webb 2006; Dunbar 2006; Goodyear 2005; Lowery 2002; McAvoy and McAvoy 1997; Waters et al. 2011) (Figure 2-2). Most sites reported as pre Clovis in the Southeast fall within the Early Paleoindian period, and typically consist of lithic assemblages containing materials that are informal in nature, and are not diagnostic to any known culture complex thus making temporal designation difficult when items are recovered in questionable contexts. Because of the general scarcity of material culture attributed to pre-Clovis peoples, population densities are assumed to have been low during this time. Based on the relatively small sample size of site and assemblage data available for comparative analyses, archaeologists have "little idea how pre Clovis groups were organized" with regard to settlement subsistence strategies and the organization of lithic technology in the Southeast (Anderson and Sassaman 2012:45). However, a number of archaeological sites in Eastern North America demonstrate evidence of pre Clovis occupation At Page Ladson, a submerged Paleoindian site located adjacent to the Aucilla River in North Florida, a mastodon tusk with reported cut marks has been found in association with small flakes and cobble like fragments. At the Cactus Hill Site in Virginia, Clovis artifacts consisting of bifaces and blades have been recovered from sandy deposits that overlay an older assemblage consisting of blades and triangular bifaces referred to as Miller points (McAvoy and McAvoy 1997). These points are morphologically similar to examples that have been identified from the pre Clovis contexts at the

Meadowcroft Rockshelter Site in Pennsylvania. The older component at Cactus Hill may date between 16-18k cal BP (McAvoy and McAvoy 1997).

A number of potential pre Clovis sites have been reported from the Delmarva Peninsula, and include Miles Point, Paw Paw Cove, Crane Point and Oyster Cove; and Cinmar (Lowery et al. 2010). At The Miles Point Site in Maryland, Lowery et al. (2010) have reported the discovery of buried prehistoric materials along a shoreline associated with pre Clovis features (Lowery et al 2010). Subsurface investigations at the site revealed a small projectile point, blade like flakes, polyhedral blade and bipolar cores, and utilized pebbles from eroded shoreline deposits that date between 27,940+/-1,635 BP to 29,485+/-1,720 BP using the multiple aliquot OSL technique (Lowery et al. 2010:3-7).The morphological similarity between points found at Cactus Hill and those recovered from sites on the Delmarva Peninsula (Miles Point, Paw Paw Cove, Crane Point, and Oyster Cove) are considered by some to indicate a possible pre Clovis lithic complex for this region At the Cinmar site, situated on the outer continental shelf of southern Virginia, a large bifacially flaked rhyolite knife dredged from 70m beneath the water surface by a scallop trawler. The point was recovered along with the remains of a mastodon skull, tusk section, and teeth fragments (Lowery 2014:75; Stanford and Bradley 2012). The point is described as laurel leaf in form and resembles types characteristic of the Solutrean culture of Europe. Subsequent dating of the mastodon skeletal materials returned an age of 22,760 ± 90 ^{14}C yr BP which is "consistent with the LGM sea level data that suggests the animal perished on the outer continental shelf when sea levels were much lower during the initial phases of the LGM (Lowery 2014:82). Examination of the XRF spectra of the biface demonstrates that it is similar to the spectra found in rhyolite outcrops near White Mountain Pennsylvania (Lowery 2014). A search of private and museum collections revealed an additional eight bifaces that are morphologically similar to the

specimen recovered at Cinmar. Along with the small triangular bifaces (Miller points) found at presumed pre Clovis deposits at Cactus Hill, Virginia and at Meadowcroft Rockshelter, the large bifaces recovered along the Mid Atlantic coast may reflect a second point form diagnostic to the Early Paleoindian sub period. Figure A1-1 presents a sample of Early Paleoindian biface forms recovered from the Middle Atlantic. As of the 2012 field season, bifaces are absent from pre Clovis Pleistocene Terrace deposits at Topper, although a very rudimentary "crude" biface was recovered from the Upper Pleistocene Sands. Near Franklin, Tennessee, an assemblage consisting of ten stone tools and 24 flakes was recovered in direct association with the remains of mastodon and other well preserved Pleistocene age fauna (Deter-Wolf et el. 2011:147). Known as the Coats Hines Site the results of radiocarbon dating of materials from the top of the artifact bearing deposits in 2010 produced a date of 12,050 ± 60 ^{14}C yr BP making Coates Hines one of the oldest human occupation sites in the Mid-South. Coates Hines is interesting in that the site lacks evidence of any overlying cultural deposits above the presumed pre Clovis level. As such, this discovery nullifies any questions regarding bioturbation from Holocene cultural contexts.

Perhaps the most precisely dated pre-Clovis site in North America, the Debra L. Friedkin Site (DLF) in Texas has revealed a flake and biface assemblage that dates between 15,000-16,000 cal yr BP (Waters et al. 2011). This assemblage lies approximately 2cm beneath Clovis deposits, and is situated adjacent to a small tributary. Excavations at DLF have revealed close to 16,800 artifacts from an archaeological deposit named the Buttermilk Creek Complex (Waters et al., 2011a; Wiederhold and Pevny:2014). Apart from the biface and flake assemblage, a possible artifact assemblage consisting of bend break and "radial obtuse angle tools" were identified from pre Clovis contexts (Crabtree 1977; Wiederhold and Pevny 2014). According to Weiderhold and Pevny (2014), of the nearly 16,800 lithic items recovered from the DLF complex, a "compelling

number of bend-break and radially fractured fakes were identified from the assemblage. A technological examination of a sample of the bend and radial break artifacts from DLF and subsequent comparison with experimentally produced specimens found that the two assemblages are comparable (Jennings 2011). Moreover, based on the experimental study, there are substantial differences between the attributes found on flakes broken during biface production, flakes that were experimentally trampled, and flakes that were intentionally produced (Jennings 2011). A microscopic examination of a sample of bend breaks from site showed that the margins formed by the "snap fractures exhibit polish and striations" that were likely produced by "particles of the tool and the worked material" (Weiderhold and Pevny 2014:113-114). These findings imply that bend breaks from the assemblage at DLF were not only fractured deliberately, but were also used (Weiderhold and Pevny).

To date, Topper and DLF the only two North American sites where bend break flakes have been reported from pre Clovis contexts. Although the results at DLF indicate that these artifacts were intentionally produced for use as tools, similar analyses must be undertaken on the items recovered at Topper to validate or disprove whether they too are a product of human agency. As such, the current study provides a comparison of the Topper pre Clovis lithic assemblage with other possible pre Clovis assemblages from the continent. Excluding Topper, and the presence of flakes well below the Clovis deposits at the Ricker's bottom site, evidence for pre Clovis occupation of the Savannah River Valley has not been demonstrated (Anderson). Due in part to the infrequent occurrence of legitimate pre Clovis sites, questionable artifact assemblages, and dissimilar toolkit composition, few models of Early Paleoindian settlement subsistence adaptations have been advanced. Anderson (2013) has proposed that early coastal colonizing populations could have accessed major river drainages to the Eastern U.S. via the

Colorado River from the Baja Peninsula. Upon reaching the Gulf of Mexico, populations could have followed the coast north and into Eastern North America (Anderson 2013). Coastal landscapes are one form of 'least cost pathway" for population movement. If groups were utilizing such ecotones for resource procurement, why move to the interior if essential resources could be acquired in already familiar landscapes? Recent discoveries of Clovis and potentially earlier bifaces (Lowery 2012; Stanford 2014) from coastal and submerged landscapes have provided important evidence regarding Early Paleoindian subsistence adaptations. Research efforts are beginning to focus on now submerged landscapes for evidence of Late Pleistocene Sites. If we know the rate of sea level rise, then it is possible to predict the timing at which some areas of former landscapes could have been occupied. Figure A1-5 presents a map showing the extent of sea level rise along the Eastern U.S. for select time periods. In the Eastern U.S., an examination of Clovis point data from the Southern Atlantic Coastal Plain by the author has found that the highest densities of Clovis points in coastal areas occur where major rivers intersect broad coastal zones as opposed to narrow coastlines, and that river drainages associated with adjacent outcrops of high quality tool stone have the greatest densities of fluted points. The results of this project (Sain 2013) are presented in Table A1-1, and Figures A1–4 through A1–10. More importantly, the results of this study could have implications regarding the settlement subsistence strategies practiced by potential pre Clovis populations inhabiting the region, including Topper, and allow for the development of hypothetical models of pre Clovis settlement subsistence. Approximately 14,000 B.P. marine transgression associated with MWP1A resulted in the submergence of areas of the Atlantic continental shelf. If pre Clovis groups occupied coastal regions during this period, then the expectation favors eventual inland migration as a result of marine transgression, and the rapid breaching low lying areas. Relocation to inland

regions would have initially focused on the major river drainages adjacent to broad coastal zones. Rivers with relatively low discharge rates and gently sloping gradients would have initially been favored. The Savannah River is one such drainage that fits this model. The discovery of high quality raw material sources along inland drainages via pre Clovis excursions would have facilitated greater mobility to and from the coast.

A number of these locales may have initially been utilized by Pre Clovis groups for the manufacture of a mixed riverine /coastal toolkit. If the Topper Site does in fact contain evidence of chipped stone tools from the deposits that underlie Clovis, then the nature of the assemblage could inform about settlement subsistence practices. The proposed expedient microlithic flake tools recovered from the pre Clovis deposits at Topper could have been suitable scraping or filleting tools whereas bend break/burin and radial break artifacts could have been procured or manufactured to groove, incise, or shape wood or bone. Once settled into inland locales, Paleoindian groups would have adjusted their toolkits accordingly, in response to changes in resource abundance and distribution. By 13,300 cal yr B.P., sites would have been situated primarily at the intersection of major drainages and high quality raw material sources. Increased sea level rise during MWP1B would have left submerged the Clovis era shoreline resulting in additional population retreat from coastal areas. After this time, coastal resources would have played a less significant role in the settlement subsistence systems of prehistoric peoples occupying the Atlantic slope, lasting until the Early Archaic. The early lithic assemblages documented at sites such as Topper, Cactus Hill and Miles Point may have served as very early staging areas where populations aggregated and from which people later radiated out over the surrounding area forming regional macro bands (e.g. Anderson Hanson 1988).

Middle Paleoindian (13,250 - 12,850 cal yr B.P.)

The Middle Paleoindian Period represents s a time of rapid population growth throughout North America, but is most visibly apparent in the Eastern Woodlands where high numbers of readily identifiable fluted Clovis projectile points appear suddenly on the landscape (Anderson and Sassaman 2012:40). When not recovered from deeply buried stratified sites, Clovis points occur as isolated finds over the landscape. Anderson and colleagues have complied point data from individual state recording projects, documenting nearly 3,500 Clovis points east of the Mississippi and south of Virginia (Anderson et al. 2012:48). Interesting patterns are found when Middle Paleoindian point distributions are plotted relative to physiographic boundaries. In the Mid Atlantic, Lowery et al. have used fluted projectile point estimates for the Delmarva Peninsula and from published reports from the Carolinas to suggest that greater point densities are found along broad coastal zones than are recovered where coastal zones are narrow (Lowery et al. 2012). Accordingly, the wide, gently sloping coastal settings of the Delmarva would have promoted increased marine productivity during the late glacial period, thus explaining the greater occurrence of fluted points from this region. In the Southeast U.S., Middle Paleoindian point densities are typically highest in the upland interior and Piedmont as opposed to the Coastal Plain (see O'Donoughue 2007; Smallwood et al. 2015). By the Late Paleoindian period, there is a shift to the west in the distribution of post Clovis point varieties compared to Clovis forms possibly indicating a population reorganization as climate changed with the onset of the Younger Dryas cold interval (12,850 cal yr BP) (Miller and Gingerich 2013; Anderson et al. 2013; Smallwood 2015). This shift is evident when one examines the distribution of Middle and Late Paleoindian points across the region (Figure A1-7, A1-8). Smallwood (2015 has made similar findings from the analysis of fluted point distributions from Georgia.

The Middle Paleoindian period in the Savannah River Valley begins with the first widespread appearance of the Clovis culture throughout the area and is marked by the occurrence of lanceolate fluted projectile points, biface preforms, and blades recovered from stratified buried contexts and as surface finds. Clovis points are the earliest form of diagnostic artifact in the region and are identified based on the presence of a flute created by the removal of a channel flake removed from the base of the point. Although the recovery of Clovis points from surface contexts is a frequent occurrence throughout the Savannah River Valley, the number of documented subsurface, stratified Clovis sites in the immediate area is rare. Sites where Clovis artifacts have been recovered in buried contexts in the middle Coastal Plain include Topper (38AL23), and Big Pine Tree (38AL145) in Allendale County, and from the rim of Flamingo Bay (38AK 468), a Carolina bay on the U.S. Department of Energy's Savannah River Site in Aiken County (Goodyear 2005; Goodyear and Steffy 2003; Miller 2007, 2010; Moore 2012; Smallwood 2010, 2011; Smallwood et al. 2013). A single Clovis point was recovered from the Rucker's Bottom Site in the Piedmont. Complete, finished Clovis points are rare at these sites. Smallwood (2010, 20012) has found that biface preforms recovered from the Topper Site are variable in size due to constraints in raw material package sizes, and that "Clovis populations had to adjust production strategies to suit resource conditions" (Smallwood 2010:2424). In addition to the biface preforms and points, prismatic blades have also been identified from the Clovis contexts at these sites, and provide evidence that hunter gatherers of the period were practicing other activities apart from only hunting (Steffy and Goodyear 2006; Sain 2010a, 2010b; Sain 2011; Sain and Goodyear 2012). The relative absence of modified blades at Topper compared with the abundance of blanks could imply that groups were producing these artifacts at the quarry only to be used away from the immediate vicinity (Sain 2012). However, Weidman has

found evidence that blade technology is more frequent at site 38AL228 (a nearby quarry related lithic manufacture site) than at Topper (Weidman 2013). These findings imply that "high quality chert nodules or prepared blade cores were being selectively imported into the site for blade manufacture" (Weidman 2013:1).

Late Paleoindian (12,850 - 11,700 cal yr B.P.)

The Late Paleoindian period is marked by increasing variability in the distribution of projectile point types across Southeast. The Late Paleoindian period begins with the appearance of Cumberland and Redstone points, which are thought to date to the Younger Dryas (YD) period sometime after 12,900 cal yr BP. These point varieties are fully fluted and might reflect adaptive behaviors relating to changes in faunal distributions with the onset of cooler climate. Over time, a number fluted point varieties have been identified at Paleoindian sites throughout the Southeast, as well as the discovery of bone and ivory tools in Florida. The great variability in Paleoindian point forms in the Southeastern region has been used by some (Anderson and Gillam 2000; Anderson and Faught 1998; Mason 1962) to suggest that the Clovis technology (13,200-12,900 cal yr BP) may have arisen in the southeast and Mid-south, and subsequently spread out into adjacent regions over time. After the onset of the YD (ca. 12,850 cal BP), there appears to be a shift in the distributional range of post Clovis point varieties to interior locales (Miller and Gingerich 2013, Anderson et al. 2013; Smallwood et al. 2015). Furthermore, some have argued that this period witnessed a population decline owing to the elevated ratio (4:1) of Clovis points to Late Paleoindian varieties such as Redstone (Goodyear 2006; Anderson et al. 2010, 2011). If the environment was less productive during the YD than in was in the preceding millennia, then logic follows that Paleoindian populations may have come together in central locales in an effort to pool resources in times of necessity. During the terminal YD, the occurrence of waisted and

un-fluted Suwanee and Simpson points increase in abundance across much of Florida and southern Georgia as do a variety of Clovis variants (Anderson et al.1996:11; Anderson et al. 2010; Smallwood et al. 2015). Moreover, increases in the abundance and distribution of other point forms such as Quad and Beaver Lake found in the Mid-South have frequently been used to suggest an increase in population as climate was once again becoming more moderate by the terminal Pleistocene.

The later part of the YD, is characterized by the appearance and widespread distribution of Dalton points across the region. The emergence of the Dalton Culture is considered by some to reflect a population reorganization in response to changing settlement subsistence practices (Morse 1971, 1973; Sassaman 2010:39). Dalton points vary significantly in morphology across the Southeast. The discovery of large examples that display high workmanship associated with a prehistoric cemetery at the Sloan site in Northeast Arkansas is a an early example of ceremonialism and increased social complexity (Walthall and Koldehoff 1998). In the Savannah River Valley, Dalton points differ from earlier fluted predecessors in that they are smaller, relatively thin, and often exhibit pronounced resharpening that is attributed to changes in the types of game that are being hunted (Goodyear 1974; Morse 1973). These findings further attests to the implication that changes in climate and thus resource distribution may have influenced to some extent changes in lithic technology (Anderson 1990, 2013; Morse 1971, 1973, 1974; Goodyear 2006; Meeks and Anderson 2012). The end of the YD marked the close of the Paleoindian period, and is characterized by amelioration in climate leading to major shifts in vegetation communities throughout the Southeast at the onset of the Holocene. Such changes may have contributed to extinction of the large mammals that thrived during the Pleistocene, with some reports suggesting the loss of as many as 35 genera (Grayson 1991:195)

Archaic Period (11,700 – 3,200 Cal B.P)

In 1932 William A. Ritchie (1932) coined the term Archaic to reflect cultures who subsist primarily by way of hunting and gathering, and that lack agriculture, horticulture, and the development of ceramics (Anderson and Sassaman 2012). In defining the Archaic culture Ritchie explained that stone tool assemblages were being recovered in contexts that were preceramic and that predated the Woodland period(Ritchie 1932a 1932b; Emerson and McElrath 2001:25). However, in the following decades this view of the Archaic largely changed as archaeological evidence began to show that certain characteristics of the social complexity of Archaic groups that had been attributed to later periods actually had their origins much earlier. Unlike Paleoindians, Archaic peoples subsisted to a greater extent on smaller game of the Eastern woodlands after the extinction of Late Pleistocene mega-fauna. The initial Archaic can be distinguished from earlier Paleoindian cultures based on a change in lithic technology away from the production of large lanceolate projectile points, and to an emphasis on smaller corner and side notched varieties. Although evidence suggests that Early Archaic groups were less mobile than the Paleoindian peoples before them, early to mid-20th century research favored a forager mode of resource procurement whereby groups primarily practiced residential mobility. Overtime, Archaic peoples tend to exhibit increased organizational complexity (Anderson and Sassaman 1996).

Unlike Richie, not all archaeologists were initially willing to accept the term ‘Archaic’. James B. Griffin (1946) suggested the term was too broad to account for all cultures that represent this period across all regions, and therefore proposed that archaeologists refrain from using the term (Griffin 1946:42; Willey and Phillips 1958). Griffin (1946:42-43) even declined to incorporate the term Archaic into use as he considered the Lamoka type assemblages

"represented a culture that was too primitive and much too late" to be defined as Archaic (Emerson and McElrath 2001:25). Griffin (1952, 1967) ultimately accepted the term Archaic and developed a two-fold sequence, (Early and Late), to account for differences in Archaic material culture over time. Although ceramics and agriculture were absent from both sub periods, the Late Archaic, according to Griffin, was distinguished from the former by the addition of ground stone and steatite vessels as well as the introduction of objects manufactured from bone and shell bone and shell into the technological repertoire of the prehistoric inhabitants (Griffin 1952:355). Furthermore people became organized into small bands of approximately 20-30 people that practiced seasonal mobility systems consisting of well structured groups that moved in distinct territories in search of food resources" (Ward and Davis 1999:8). Whereas status might be achieved, social complexity was lacking. Since the 1950's Griffin's model has been refined as new data has become come available through archaeological surveys and excavations. Since this time, archaeologists have now come to recognize a third period (Middle Archaic) that distinguishes various aspects of social complexity throughout the Southeast. Anderson and Sassaman (Anderson and Sassaman 2012:71) have suggested that the transition from one cultural period to another during the Archaic is thought to coincide with "broad climate trends of the post glacial" and subsequent changes in resource structure across the lower Southeast.

The following section provides a brief summary for each cultural sub-period of the Archaic in the Savannah River Valley. A description is given for the primary technological, social and cultural trends that are considered diagnostic to each sub period. At Topper lithic materials from probable Early, Middle, and Late Archaic sequence have been identified from the excavated deposits at the site, and therefore an overview of each sub-period is essential to place the material culture into spatial temporal context. Moreover, An understanding of the types of

chipped stone tools and debitage produced by Archaic peoples can serve as a means of comparison with the tools and lithic byproducts recovered from deposits of unknown origin an may well help establish whether or not post depositional processes have been active at Topper in the past.

Early Archaic (11,700 - 8900 cal yr B.P)

The Early Archaic period in the Savannah River Valley culture sequence coincides with a "cool but stabilized" climate interval that separates the Younger Dryas and the much warmer Mid Holocene (Anderson 2001; Anderson and Sassaman 2004; McElrath et al. 2001). Changes in lithic technology during the early Archaic coincide with an increase in global temperature at the onset of the Holocene, and an increase in the distribution of oak and hickory hardwood forests throughout the Lower Southeast (Anderson and Sassaman 2012). The Early Archaic period is defined based on radiocarbon dates, but more substantially on the notable series of deeply buried, stratified "river bank sites formed largely by A number of technological trends occur during the Early Archaic. There is a change as well as increased diversity in projectile point morphology that is considered to reflect adaptations taken in response to regional environmental changes throughout the Southeast. Diagnostic projectile point forms that characterize the Early Archaic include the side-notched, corner-notched, and bifurcate projectile points (Chapman 1975, 1985; Coe 1964; Michie 1966). The first Archaic points appear 11,800 cal yr BP as side notched forms and spread rapidly across the Southeast. The earliest diagnostic forms in the Savannah River Valley are side notched varieties such as the Taylor point (10,000-9000 ^{14}C yr BP) and are thought to have replaced the Dalton points of the Late Paleoindian period. Coe (1964) recognized three Dalton varieties; the Hardaway-Dalton, Hardaway Side Notched, and Hardaway Blade points based on examples recovered from excavations at the

Hardaway site in North Carolina. Coe hypothesized that each type represents a sequential variant occurring over a fairly prolonged period preceding the onset of the Early Archaic (Coe 1964). Hardaway Dalton (10,500-9800 ^{14}C yr BP) and Hardaway side notched points distinguishes between the Late Paleoindian and Early Archaic periods.

Taylor points and Dalton points are found extensively throughout the Savannah River Valley although they do not always occur in stratified contexts at the same site. Dalton points have been found in high quantities at the Big Pine Tree (n=24) and Charles Sites along the Savannah River but are largely absent at Topper (n=1) (Goodyear et al. 2007). In contrast, Topper exhibits a well-defined Taylor occupation represented by no fewer than seven points recovered from a 10-15cm deposit on the floodplain terrace at the site. These patterns suggest that hunter gatherers of the region may not have always been accessing the same quarry sites with the same intensity through time. However, many of the points that date to the Early Archaic exhibit extensive reworking suggesting they were used as "multipurpose hunting/butchering tools" (Anderson and Sassaman 2012:57). Other side notched point varieties of the Southeast include Taylor, Kessell, Bolen, and Big Sandy related point types (Ellis 1991). After side notched points, and by 10,800 cal yr BP, corner notched varieties such as Palmer and Kirk increase in abundance throughout the region. Kirk points were originally denied by Coe (1964:56-83) based on his work at the Hardaway Site in North Carolina. Points produced during later parts of this sequence are occasionally serrated.

Following the side notched horizon, bifurcate points (10,000 to 8700 cal yr B.P.) occur in limited numbers throughout the area, and include types such as MacCorkle, St. Albans, LeCroy, and Kanawha (Broyles 1966, 1971; Chapman1985; Justice 1987:91–96, Anderson,1991) The earliest bifurcate forms will occasionally exhibit corner notching whereas later corner notched

varieties exhibiting serration. (Ellis 1991). Moreover, later bifurcate points sometimes have stemmed bases that provide a continuous sequence into the Middle Archaic (Chapman and Keel 1979:53-54 Ellis 1991:57). These findings support the notion that morphological changes in point types occurred gradually through time (Ellis 1991:57). Data from subsurface archaeological excavations and surveys show that Early Archaic peoples likely relied to a greater extent on localized sources of tool-stone than during earlier periods (Anderson and Sassaman 2012:72). In general, there is an increase in the abundance of Early Archaic sites in the southeast, and these findings support the conclusion that populations sizes were increasing as group territories were contracting (Anderson 1990:198–201, 1996b:160–163; Dunbar and Webb 1996:352; Walthall 1998). Settlement subsistence models suggest that Early Archaic groups in the southeast organized themselves within mobile bands that were geared toward the exploitation of specific physiographic environments such as drainage basins (Anderson and Hanson 1988 or raw material sources (Daniel 2001). Anderson and Hanson's (1988) "band-macroband" model of Early Archaic settlement in the Savannah River Valley also supports the idea that bands were loosely affiliated with larger networks or "macrobands" that would aggregate on seasonal cycles for information exchange (Anderson and Sassaman 2012:72; Anderson 1996a:39–45; Anderson and Hanson 1988). At the local level, band sized groups in the Savannah River Valley incorporated mobility strategies that emphasized seasonal movement within the river basins based on the placement and availability of subsistence and raw material resources (Anderson and Hanson 1988). According to Sassaman, Hanson, and Charles (1989), estimates place annual foraging rounds in the Savannah River Valley at no greater than 350 linear kilometers. Anderson and Hanson (1988) suggest further that Early Archaic subsistence rounds in the Savannah River Valley included a mixed mode of collecting during the winter and change to an alternative

foraging system for the remainder of the year. Early Archaic subsistence practices were primarily marked by an increase in generalist foraging strategies, although a reduction in foraging range in response to postglacial climate change.

Middle Archaic (8900–5800 cal yr BP)

The Middle Archaic, dating from 8,900 cal yr BP-5,800 cal yr BP corresponds with the onset of the Hypsithermal, a climate interval consisting of increased temperatures and lower precipitation across the globe. This period is association with a shift from mesic oak forests retreating to the north as pine stands invaded the Coastal Plain uplands (Anderson and Sassaman 2012:73; Delcourt and Delcourt 1985; Watts et al. 1996). The increase in temperature and aridity during the period may have increased the favorability of riverine areas over those situated in the uplands (Anderson and Sassaman 2012:73; Brown 1985:219–221). A number of dramatic cultural adaptations have been dated to the Middle Archaic. In the Southeast, the period is marked by increasing social and technological complexity evidenced by the first occurrences of monumentality and long distance social interaction (Sassaman and Anderson 2004; 2012; Smith 1986). Most notably the period is identified by the introduction of stemmed projectile points, bifaces, and an increase in the abundance of ground stone artifacts recovered from lithic assemblages. These findings imply an increased reliance on seeds and nuts. Anderson and Sassaman (2012:74) recognize five additional cultural characteristics of the Middle Archaic including increased use of freshwater shellfish, construction of earthen mounds, establishment of long distance trade networks, lithic innovations such as the use of bannerstones, and evidence of violence and warfare. Most importantly, these changes reflect increased social complexity and the beginnings of a regional trend toward sedentism.

The Middle Archaic is recognized by a sequence of diagnostic projectile points initially defined by Joffre Coe from excavations at stratified sites in North Carolina. (Sassaman and Anderson 2012; Coe 1964). In the Savannah River Valley the Middle Archaic is recognized archaeologically by a transition in projectile point morphology to points that have stemmed bases. Kirk Stemmed (8000-7800 ^{14}C yr BP), square-stemmed Stanly 7800-7500 ^{14}C yr BP), Morrow Mountain (7500-6000 ^{14}C yr BP), and Guilford 6000-5000 ^{14}C yr BP) are point varieties that have been identified in the immediate area (Blanton and Sassaman 1989; Chapman 1985; Coe 1964). At Topper and at other quarry sites throughout the Savannah River Valley Middle Archaic and Late Archaic assemblages are sometimes mixed, but can be distinguished based on extent of weathering in the form of cortication found on the exterior surfaces of the points. The relationship between cortication and the age an artifact has been in the ground was first noted by A.R. Kelly (1938). Kelly observed that the degree of "decomposition" a given piece of chert had undergone was directly related to the antiquity of the specimen in question (Kelly 1938:4-8). Accordingly, chert specimens of less than 1,000 years of age typically do not exhibit evidence of weathering in the form o exterior cortication. There is some evidence for variation in the distribution of Middle Archaic points by landform. For example Blanton and Sassaman (1989:58) have found higher numbers of Guilford points in the Piedmont, North of the Santee River, with much fewer specimens identified from the Middle Savannah River Valley. Likewise the distribution of lanceolate point types subsumed under the acronym "MALA" also varies by physiography. MALA refers to a Middle to Late Archaic stemmed and notched lanceolate point originally discovered at the Pen Point Site in Barnwell County, South Carolina (Sassaman 1985:1-17). The distribution of MALA points is centered on the Middle Savannah River Valley in and near Allendale County, and is rare from the Piedmont River valleys to the north. MALA

points have since been renamed and are commonly referred to today as Allendale points. These discoveries have been used to support the proposition that "separate but contemporaneous peoples occupied South Carolina" during the Middle Archaic; one population centered on the Coastal Plain and another occupying the Piedmont (Sassaman and Anderson 1995:29).

Late Archaic (5,800-3,200 cal yr BP)

The Late Archaic (ca. 5800-3200 cal B.P.) is distinguished from the Middle Archaic period based on a transition from warm, dry climate characteristic of the Hypsithermal to near modern conditions by 5,800 cal yr BP. Amelioration in climate likely led to widespread abundance of favorable resources across the Southeast which may have led to increased population growth throughout the region (Anderson and Sassaman 2012:74). Culturally, the Late Archaic in Eastern North America is characterized by increased organizational and technological complexity. Developments that distinguish the Late Archaic from the Early Archaic include the introduction of plant domestication, and *increases* in long distance trade of prestige goods, construction of monumental architecture, complex burial practices, warfare and sedentism when compared with earlier periods. (Anderson and Sassaman 2012; Claassen 1996; Griffin 1967; Kidder 2006, 2010; Russo 2010; Sassaman 2010a). Technological adaptations of the Late Archaic Southeast include innovations in stone tool production and the widespread adoption of pottery in the Savannah River Valley. Projectile point technologies during the Late Archaic placed an emphasis on the production of hafted bifaces with characteristic "broad blades and large robust stems" (Anderson and Sassaman 2012:75). The Savannah River Stemmed point (Coe 1964:pp 35) is one such example, and is found in relatively high abundances in the Savannah River Valley and western Allendale County, S.C. Technological innovations such as the production of soapstone vessels (thought to post date 4200 cal yr B.P.) played a significant

role in cultural systems of the Late Archaic as these items were important exchange items that facilitated the movement of resource goods throughout the region (Anderson and Sassaman 2012:75-76). Such innovations combined with favorable climate enabled a number of trends in mobility and settlement during the Late Archaic including increased sedentism, (with the possible exception of upland areas where groups may have relied to a greater extent on higher seasonal rates of mobility), the incorporation of more permanent settlements, and intensified patterns of land use (Anderson and Sassaman 2012).

The cultural developments of the Late Archaic suggest an increased reliance on riverine resources as evidence for shellfish exploitation is seen at a number of sites throughout the region. The construction of shell mounds 'along the rivers of' the Coastal Plain is has been described as early evidence of monumental architecture and perhaps increased sedentism (Russo 1996, 2004, 2010). While some technological innovations occur earlier in regions outside the Southeast, the development of pottery occurred earlier in the South Atlantic area and represents "some of the earliest" pottery in North America (Sassaman and Anderson 1995:29). These discoveries have prompted researchers to divide the Late Archaic further into two sub periods; the preceramic and ceramic periods (Sassaman 1993, 2010b, 2010b). The pre-ceramic (5000-4500 $_{14}$C yr BP) is primarily identified based on the presence of Savannah River Stemmed bifaces combined with a lack of pottery (Coe 1964). The subsequent ceramic Late Archaic was initially distinguished based on three ceramic phases; the Stallings I phase (4,500-4,000 $_{14}$C yr BP), the Stallings II phase (4,000-3,400 $_{14}$C yr BP), and the Stallings III phase (3,400-3,000 $_{14}$C yr BP) (Sassaman and Anderson 1990:184-185; Stoltman 1974 More recent research has classified the Late Archaic ceramic as belonging to the Early (4,600-4,450 cal BP) and Classic (4,200-3,800 cal BP) Stallings phases based primarily on variations in mobility and settlement subsistence decisions

(Sassaman 2010:175-176). Accordingly, the early period is dominated by greater seasonal mobility and a lack of permanent settlements, whereas later periods are characterized by the establishment of circular villages with permanent structures (Sassaman 2010:176).

Woodland Period (3200–1000 cal B.P)

Early Woodland Period (3,200–100 B.C.)

The Woodland period begins approximately 3,200 cal yr BP and was traditionally distinguished from the preceding Archaic period by the widespread adoption of pottery, sedentism, and food production (Anderson and Sassaman 2012:70). However, by its end, the Woodland period witnessed the "emergence of compact, hierarchically organized societies"" (Anderson and Sassaman 2012:114). Today, the onset of the Woodland period is more ambiguous, and has been described by Anderson and Sassaman as a period of diminished archaeological resolution as many of the characteristics that were previously used to define the period are now known to have had their origins in the Archaic (Anderson and Sassaman (2012:115). Culturally, the Early Woodland has come to be recognized as a period of large scale abandonment whereby groups practiced increased mobility and dispersed from centralized locations. Archaeological evidence supports a reduction in long distance exchange perhaps related to a significant population collapse (Anderson 2010; Kidder 2010:24; Sassaman 2010b:231). Apart from the breakdown of extensive trade networks many shell middens that served as social interaction centers were also abandoned during the initial Woodland period (Sassaman et al. 1990:13; Sassaman 2010b:230-231) More importantly, the period has been identified with a time of cultural differentiation and regionalism as people in different "sub regions of the Southeast adopted alternative land use practices at this time" (Anderson and Sassaman 2012:115). Increases in the remains of terrestrial fauna at Early Woodland sites in the

Southeast combined with changes in lithic technology imply a transition away from delayed return systems and more in line with those focused on immediate subsistence returns. Moreover, the irregular use of sites is another indication of increased mobility during the Early Woodland in the Southeast U.S. Many of these changes are hypothesized to have been brought about by fluctuations in climate, the collapse of social networks, or some combination of both (Anderson and Sassaman 2012:115; Anderson 2001; Fiedel 2001; Gunn 1997; Kidder 2006, 2010; Marquardt 2010; Russo 1996; Sassaman 2010a; Thomas 2010; Thompson 2010). Kidder proposes that large scale climate fluctuations facilitated a cooling trend during the Early Woodland that may have brought about wetter conditions and subsequently increases in the potential for flooding events (Kidder 2006:215). Such conditions may have facilitated the abandonment of some local areas but likely not entire sub regions (Anderson and Sassaman 2012).

Jefferies (2004) recognizes four primary trends that characterize the Early Woodland period. These trends include 1;widespread adoption of pottery, 2; increased dietary importance of seeds, 3; increased sedentism, and 4; more elaborate mortuary and burial practices. Although pottery is first observed in the archaeological record during the Later Archaic, distinct variations in the morphology and surface treatment of pottery vessels became more pronounced during the Early Woodland (Anderson and Sassaman 2012). Such variations served the basis for distinguishing between different cultural traditions of the region. Caldwell (1958) and later Bense (1994:114–19) recognized Woodland traditions across multiple regions including the Gulf Coastal Plain, interior Mid-south, Southern Appalachians, and the Middle Atlantic coastal Plain. During the Woodland Period mound construction became intensified with structures serving as primary interments for the dead. Mound construction was present throughout the Lower

Mississippi Valley and also associated with the Adena culture of the Ohio River Valley to the north where mounds formed as the result of "accretional deposits resulting from repeated mortuary events" (Anderson and Sassaman 2012:117, Clay 1998). Although horticultural practices were developed as early as the Late Archaic, the practice of gardening became of greater emphasis to prehistoric groups of the southeast during the Early Woodland (Smith 1987, 1992, 2006). Moreover, increased use of nut mast such as hickory and acorn exploitation indicate additional use of plant resources during the Early Woodland (Anderson and Sassaman 2012: 121). In the Savannah River Valley the Early Woodland is distinguished from the Late Archaic period based on the combined appearance of small notched and stemmed bifaces in addition to Refuge pottery (Sassaman et al. 1990, DePratter 1976). Refuge pottery, as a complex, was first defined by Waring (1968) based on materials recovered from the Refuge site on the South Carolina coast. Four types of surface treatments were identified within the Refuge ceramic sequence and include: Refuge Punctate, Refuge Incised, Refuge Simple Stamped, and Refuge Dentate Stamped. These surface decorations form the basis of the ceramic chronology of the Savannah River Valley with the earlier phase "Refuge I" (3000-2800 $_{14}$C yr BP) consisting of the Punctate and Dentate Stamped varieties, and "Refuge II" (2800-2600 $_{14}$C yr BP) comprising the plain and simple stamped types (Sassaman and Anderson 1990:190-192). Refuge pottery has been identified from the upper 20cm of sediment at the Topper Site and likely indicates an Early Woodland presence at the site.

Middle Woodland Period (100 B.C.–A.D. 500)

The Middle Woodland period is characterized as a time of increasing social and technological complexity throughout the southeastern U.S. The period is marked by an increase in elaborate surface treatment of ceramic vessels, and an increased role of horticulture in

subsistence. Cantley and Joseph (1991) describe a number of cultigens that appear during the Middle Woodland period in the southeast including marsh elder and maygrass. Maize and squash may have been added to the diet during this period as well (Cantley and Joseph 1991), although Gremillion(2002) has found little evidence for the dependence on maize at this time. According to Anderson and Sassaman (2012:126) although undomesticated plants were supplemented with products from the Eastern Agricultural Complex, widespread agriculture was not a predominant practice throughout the Southeast until after AD 900. Anderson and Sassaman (2012) suggest that the "defining feature of the Middle Woodland is the spread of mortuary mound ceremonialism rooted in the Hopewell tradition of the Ohio River Valley" (Anderson and Sassaman 2012:122; Bense 1994:162; Chapman and Keel 1979; Smith 1986). Known as the Hopewell Interaction Sphere, a number of manifestations of the Hopewell tradition spread south, including the occurrence of conical and occasional platform mounds and the long distance exchange of goods. The largest of these manifestations was the Pinson mound complex in western Tennessee (Anderson and Sassaman 2012:122).

In the Savannah River Valley, technological changes in ceramics and lithic assemblages continue to be the primary method that archaeologists use for distinguishing among different local Middle Woodland traditions (Anderson and Sassaman 2012). The Middle Woodland in the Savannah River Valley is marked by the appearance of Deptford ceramics and the addition of small triangular projectile points (Sassaman and Anderson 1990). Deptford ceramics may be divided into two sub-phases; Deptford I (2600-2000 14 C yr BP) consisting of plain, check stamped, and simple stamped forms, and Deptford II (2000-1500 14 C yr BP) which includes surface treatments that are cord marked, complicated stamped, and punctate (Sassaman and Anderson 1990:192-193) . Middle Woodland lithic assemblages from the Savannah River Valley

lack evidence of the stemmed bifaces characteristic of the Early Woodland period. In their place, diagnostic triangular points such as Badin and Yadkin types become more common and widespread throughout the region.

Late Woodland Period (A.D. 500–1000)

The Late Woodland period was once characterized as an enigmatic transitional time where specific aspects of social organization (e.g. long distance exchange networks) that were prominent throughout the Early and Middle Woodland begin to break down. Archaeologically, the Late Woodland period marks a decline in the importance of the Hopewellian mound centers of the Midwest, and along with demographic shifts in population, leads to more localized spheres of interaction by A.D. 500. According to Anderson and Sassaman (2012:126) the Late Woodland was characterized by an emphasis on interregional connections and population shifts that may have partly resulted from climate change during the Late Holocene. The emergence of ceremonial mound complexes along the Gulf coast, and Lower Mississippi River Valley is testament to such an apparent demographic shift in population during this time. While settlement patterns across the region varied to some extent according to environmental setting or socioeconomic organization, in general there was a temporal transition from an emphasis on the exploitation of small tributaries and their associated upland environments, to one of more permanent settlements on the floodplains associated with large rivers and associated basins. In the vicinity of the Topper Site in the Savannah River Valley the Late Woodland is separated into two sub-periods (Early and Late) based on differences in ceramic typology (Sassaman and Anderson 1990:202-206). The early period (1500-1200 $_{14}$C yr BP) is associated with the introduction of sand-tempered plain, cord-marked, and fabric-impressed pottery and the absence of Deptford wares (Sassaman and Anderson 1990:202). Pottery diagnostic to the later sub period

(1200-900 $_{14}$C yr BP) include sand-tempered fine cross cordmarked (Sassaman and Anderson 1990:203.). Diagnostic lithics of the Late Woodland period are primarily triangular hafted bifaces often called Hamilton points. These types were manufactured until historic times and are only diagnostic when recovered in context.

Mississippian Period (1000 A.D.-1600 A.D.)

The Mississippian period in the Southeast U.S. represents a time of increased social complexity consisting of chiefdom level societies that extends from ca. A.D. 1000 to European contact in the sixteenth century (Anderson and Sassaman 2012:151). Traditionally, the Mississippian period was defined based upon distinct material culture and architecture including localized evidence of shell tempered pottery in addition to the construction of platform mounds. In recent decades Mississippian, as a culture complex, has come to be defined more so as a temporal period rather than strictly based on specific aspects of material culture. According to Anderson and Sassaman (2012) and others, Mississippian sites typically have evidence of one or more of the following characteristics: wall trench houses ; flat-topped pyramidal mounds; a subsistence adaptation heavily reliant on maize agriculture; and a social organization consisting of hereditary inequality (Alt and Pauketat 2011; Anderson 1994; Dye 2012; Griffin 1967; Knight 1986; Pauketat 2007; Smith 1986; Steponaitis 1986:387–388). The Mississippian period is most notably identified with the large mound complex and associated chiefdom at Cahokia in the Mississippi River Valley and the associated settlements that were dispersed across the American Bottom. Chiefdom societies incorporate a hierarchical settlement pattern including platform mounds at the center with smaller villages and hamlets dispersed peripheral to the mound complexes. Mississippian societies were present in the Savannah River Valley by 1000-1100 cal BP. While no mound sites have been identified in the immediate vicinity of the Topper Site, the possibility exists that they could have been present in the area at some point during the past but

have been destroyed by erosion or modern activities, or were too low and small to be observed The Lawton Mound, a Mississippian Platform mound center on the banks of a slough of the Savannah River in Allendale county South Carolina is the closest identified mound to Topper. The site includes two platform mounds approximately 3m in height and Due to its small size only on approximately three acres of property, the site has been described as having contained "at best at a small resident population" (Stephenson 2010:12). Because the distribution of possible settlements associated with the Lawton Site is presently unknown, the potential recovery of Mississippian material culture from Topper could provide more information about how Mississippian people in the region distributed themselves on the landscape. King (2000) suggests that Mississippian mound sites have been recorded to the north of the Savannah River Site, and apart from Lawton "another two are known to the south of the facility that were abandoned by ca. 1450" (King 2000:12). Anderson (et al. 1995:273) identify no fewer than two Mississippian platform mound centers north of Topper in the Savannah River Valley (Tate, and Beaverdam Creek) and note the uncertain construction of at least three additional mound centers (Hollywood, Mason's Plantation and Rembert).

Based on research in the region, three Mississippian sub periods have been defined based on ceramic typology. The Early (A.D. 900-1200), Middle (A.D. 1200-1350), and Late (A.D. 1350-1540) Mississippian. Ceramic types diagnostic to the Early Mississippian or Lawton phase, include Savannah series Complicated Stamped, Burnished Plain, Fine Cord Marked, and Check Stamped types. The Middle Mississippian or Hollywood phase consists of Savannah Check Stamped, Mississippian Plain, Burnished Plain, Savannah Complicated Stamped, Irene Complicated Stamped, and Sleepy Hollow Complicated Stamped (Anderson 1994:370; DePratter 1979; King 2000, 2003; Sassaman et al. 1990). Late Mississippian sites are rare or are largely

absent in the middle Savannah River Valley and may reflect a period of abandonment of the region (Anderson 1994). Evidence suggests that the region was not occupied at the time Hernando DeSoto entered the area in 1540 A.D. Lithic technology in the Savannah River Valley during the Mississippian period is represented by small, triangular projectile points. Moreover, research suggests that the projectile points from this period may be differentiated from their Woodland predecessors by specific variations in basal morphology through time (Anderson et al. 1982; Blanton et al. 1986:107-110; Sassaman and Anderson 1990:167). For the purpose of this study, the culture history of the region provided herein can serve as a template to compare with the results of archaeological investigations at Topper.

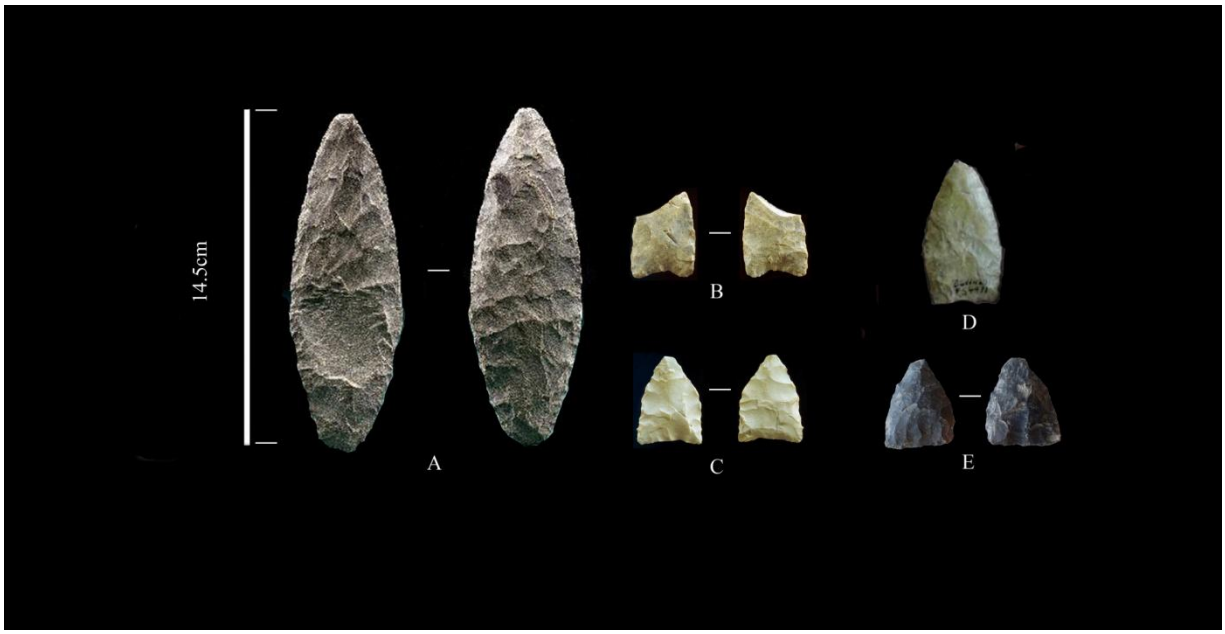


Figure A1-1
Early Paleoindian Bifaces and projectile points (A-D). A; Cinmar bifacial point from offshore Virginia, B; broken point from pre Clovis contexts at the Cactus Hill Site, Virginia, C; complete point from pre Clovis contexts at the Cactus Hill Site, Virginia, D; pre Clovis point from Meadowcroft Rockshelter, Pennsylvania, E; biface preform from mixed/disturbed contexts at the Big Pine Tree Site, Allendale County, SC.

Period	Sub-Period	Date Range Cal yr BP	Hafted Biface Technology	Ceramic Types
Mississippian	Late	550-350	Small Triangular, Small Stemmed	
	Middle	750-550		Hollywood phase (Savannah, Mississippian, Irene), Sleepy Hollow
	Early	1,000-750		Savannah series (I-III)
Woodland	Late	1,500-1,000	Small Triangular	Wilmington, Cape Fear, Santee, Savannah I, Woodstock
	Middle	2,200-1,500	Yadkin, Badin, Triangular	Deptford I, Deptford II, Swift Creek
	Early	3,200-2,200	Woodland Stemmed, Woodland Notched	Refuge I, Refuge II
Archaic	Late	5,800-3,200	Savannah River Stemmed	Stallings I, Stallings II / Thom's Creek
			MALA, Briar Creek (Transitional)	
	Middle	8,900-5,800	Stanley, Morrow Mountain, Kirk Stemmed, Guilford	
	Early	11,700-8,900	Hardaway-Dalton, Taylor, Kirk, Palmer, MacCorkle, LeCroy, St. Albans, Kanawha	
Paleoindian	Late	12,850-11,700	Dalton, Suwannee, Quad, Cumberland	
	Middle	13,250-12,850	Clovis	
	Early	> 13,500		

Figure A1-2
Culture Chronology for the Middle Savannah River Valley. Adapted from Anderson 1994:159 and Sassaman et al.1990. While no diagnostic points are present in the Savannah River Valley that predate 12,500 cal B.P, two types do occur in the Mid Atlantic

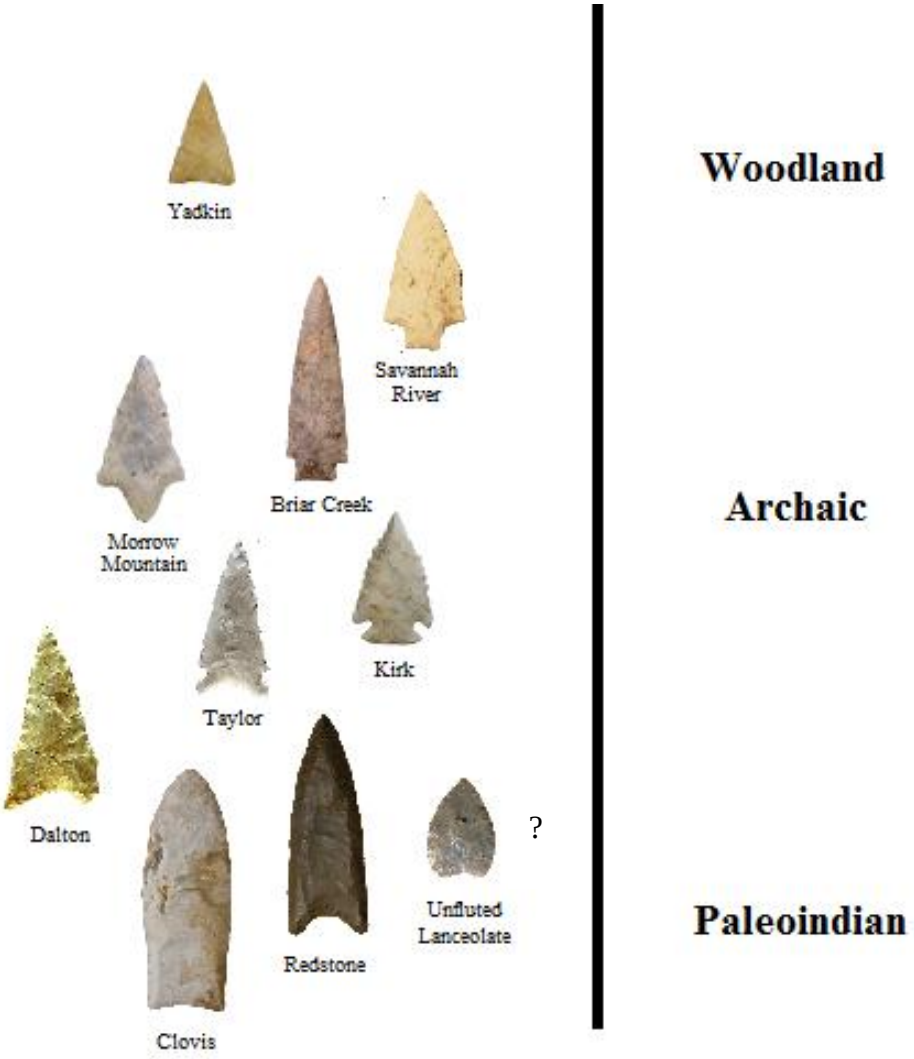


Figure A1-3
Projectile point chronology for Middle Savannah River Valley. (Artifact images courtesy of Albert C. Goodyear). (Sassaman et al. 1990).

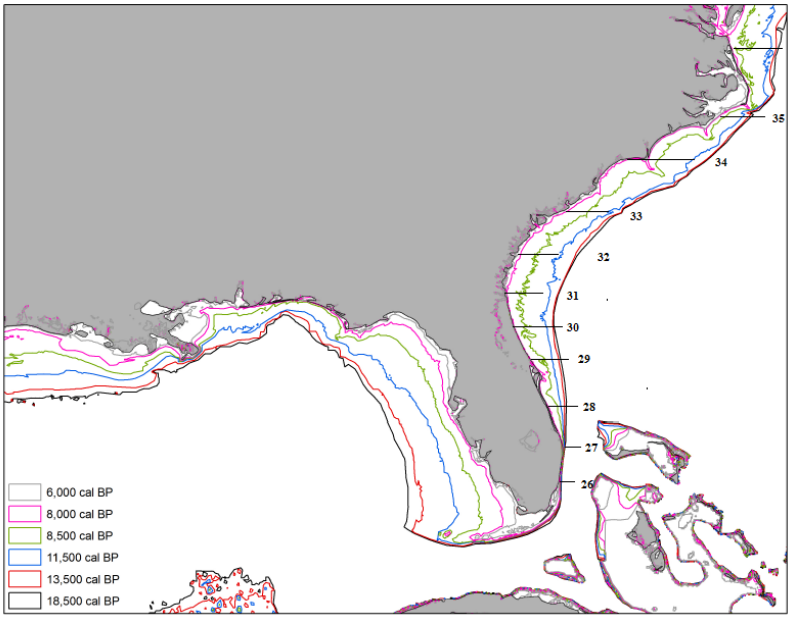


Figure A1-4a
Extent of sea level rise off the Southeast U.S. Coast for last 18,000 years with transects for measures of the slope of the continental shelf by latitude.

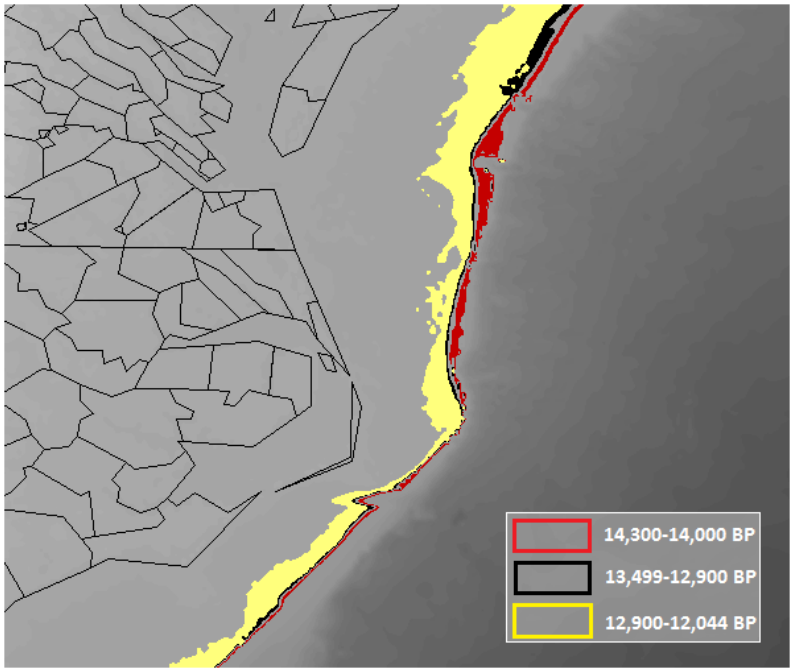


Figure A1-4b
Extent of sea level rise for select time periods off the Virginia and North Carolina coast using data from Balsillie and Donoghue (2004). The Virginia and Delmarva Coast exhibit broad coastal zones with gentle slopes. High densities of Clovis points have been recovered from river drainages that empty in proximity to such areas. The North Carolina coast exhibits a narrow Coastal Zone. (Image adapted from Lowery et al. 2012 using data from Basillie and Donoghue 2004).

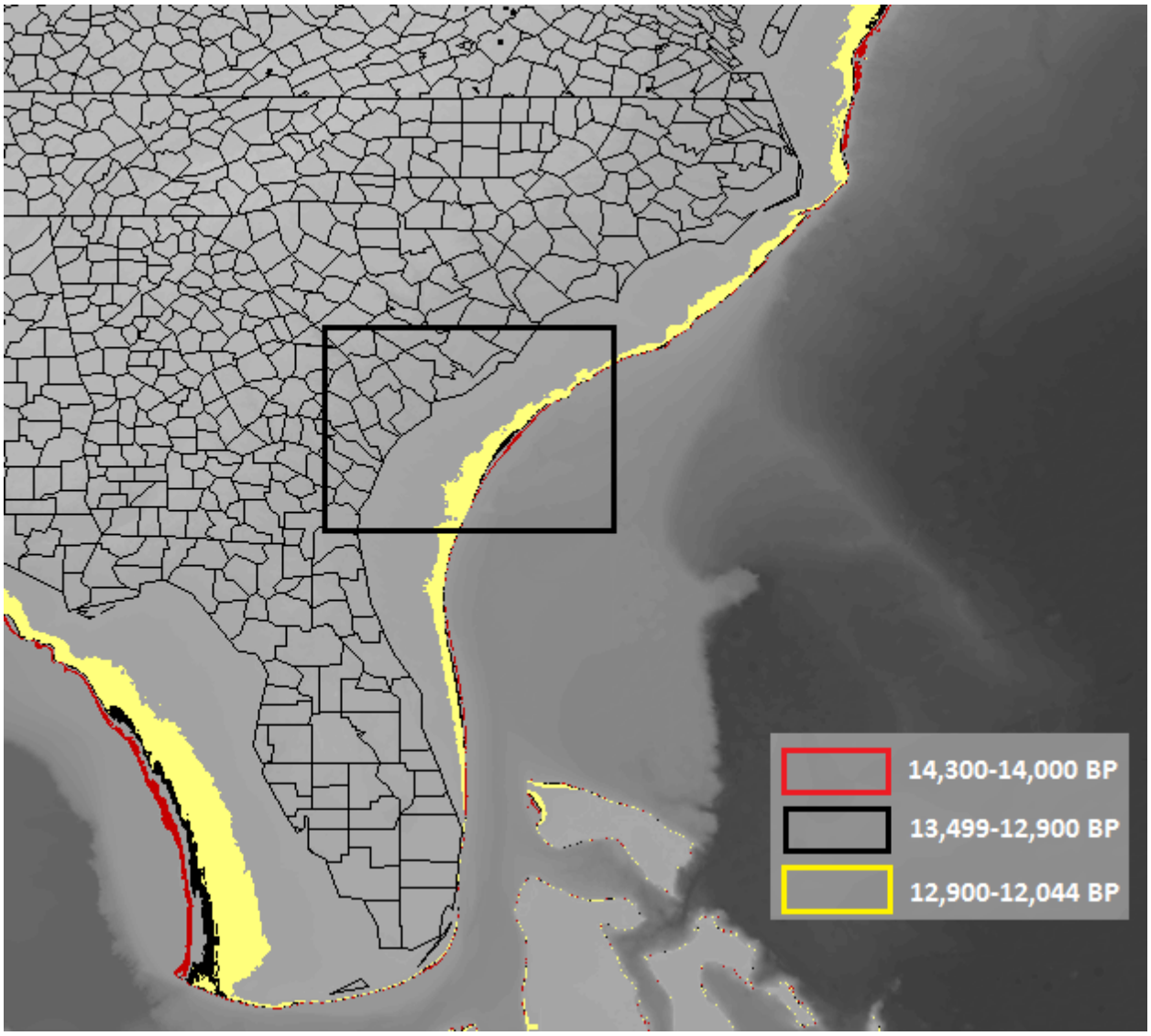


Figure A1-5

Map of the Southeast coast showing extend of sea level rise for select time periods. Area highlighted reflects broad coastal zones.

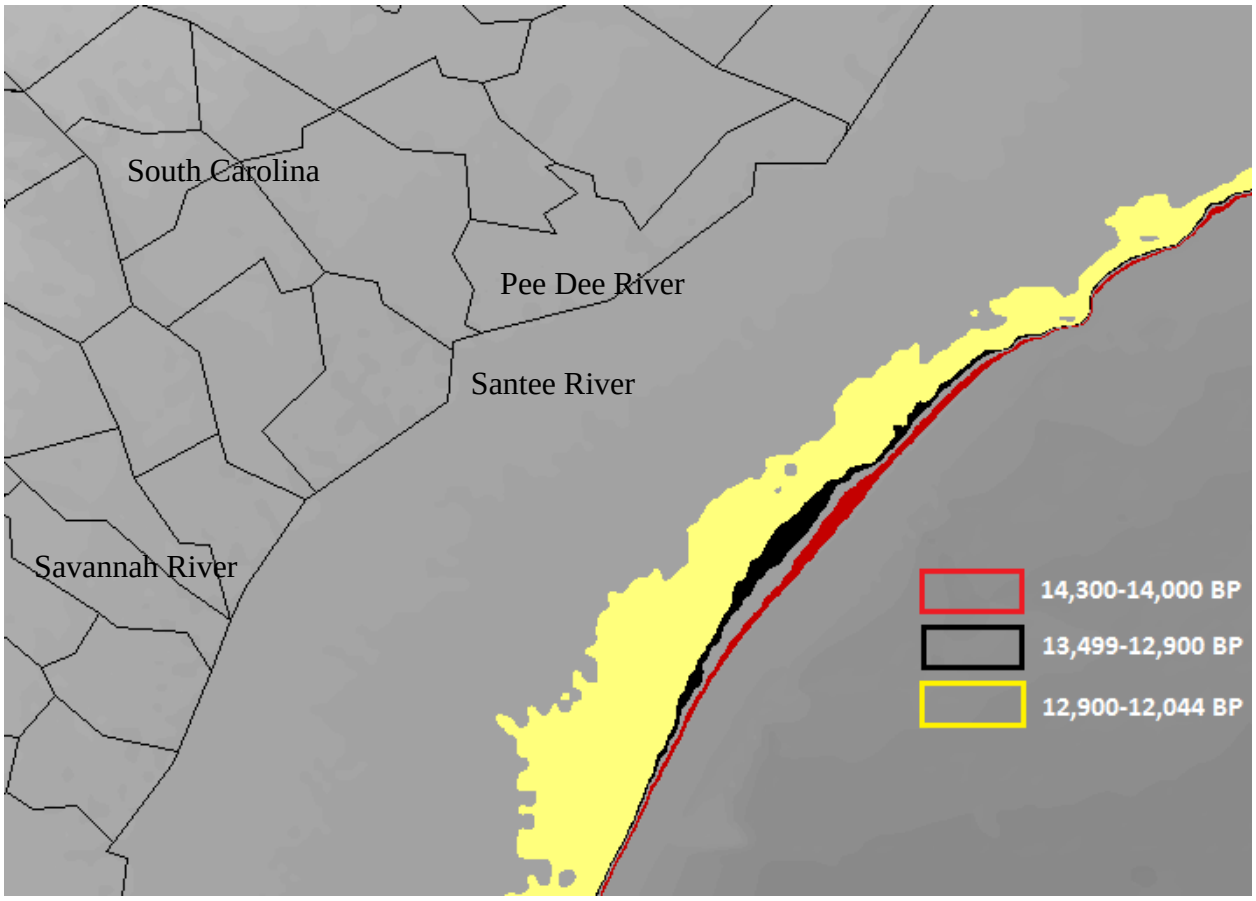


Figure A1-6
Enlarged map showing extent of sea level rise off the coast of South Carolina for select time periods. Shorline at MWP1Aillustrated in red. Clovis shorline illustrated in black. Shorline at MWP1B illustrated in yellow. Sea level rise had a much greater affect on the total area of the continental shelf submerged during MWP1B and the Younger Dryas (Yellow) than it did during previous intervals, (Clovis; Black, and MWP1A; Red). The area submerged at each interval is a direct result of the gradient of the continental shelf. A greater extent of the continental shelf edge was breached during MWP1A in locations where the shelf is less steep and in regions where broad costal zones intersect major rivers.

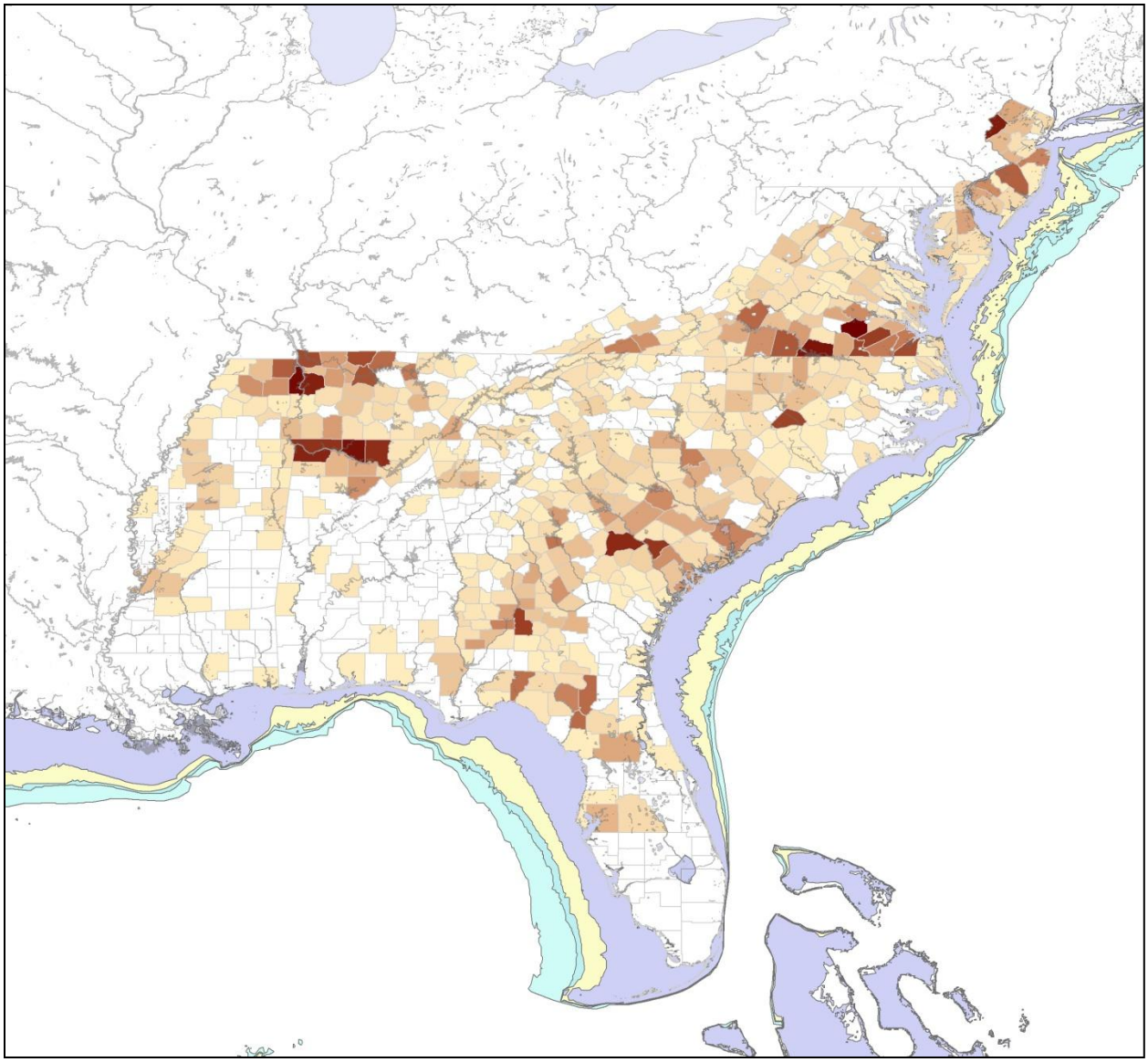


Figure A1-7
County level Distribution of Clovis points for the Southeast U.S with paleo shoreline at specific intervals. Darker shades indicate increased point densities. Data obtained from PIDBA. Map courtesy of Thaddeus Bissett. Sea level estimates reconstructed from Basillie and Donoghue 2004.

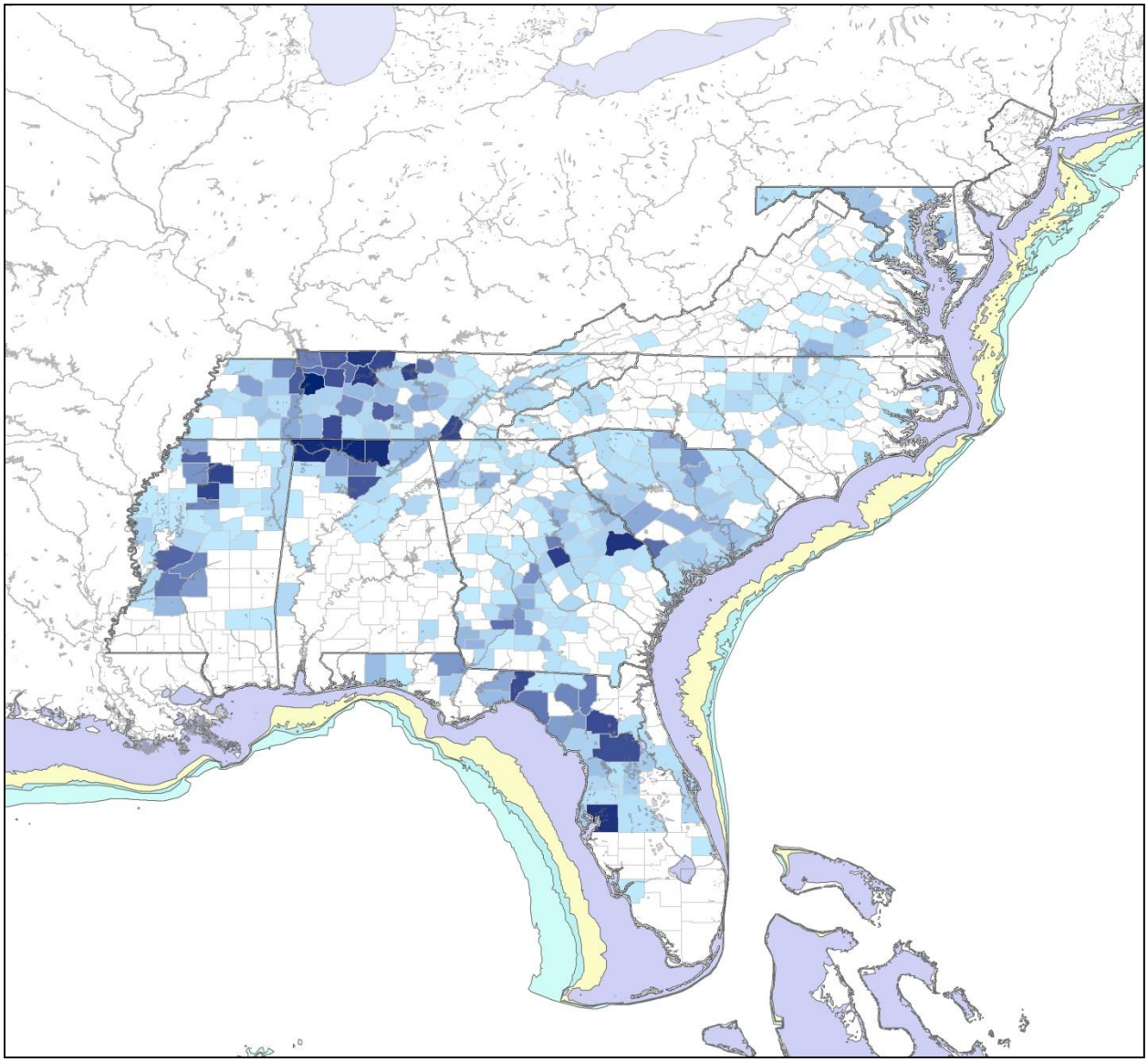


Figure A1-8
Distribution of Post Clovis points for the Southeast U.S with paleo shoreline at specific intervals. Darker shades indicate increased point densities. Broad coastal zones are those where contours are widest. Data obtained from PIDBA. High densities of points occur where major rivers intersect and empty onto broad coastal zones. Data not available for New Jersey. Map courtesy of Thaddeus Bissett. Sea level estimates reconstructed from Basillie and Donoghue 2004.

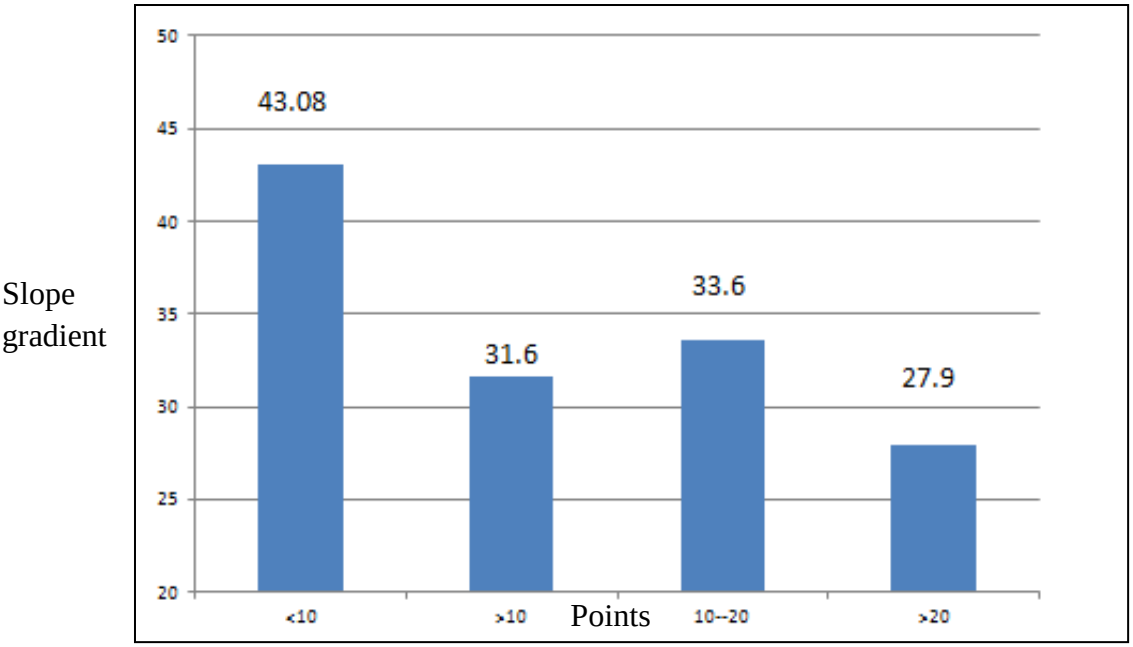


Figure A1–9
Mean difference in slope for the continental shelf at the -55m isobath by point density per River drainage. Drainages with greater than 20 fluted points empty into broad coastal zones.

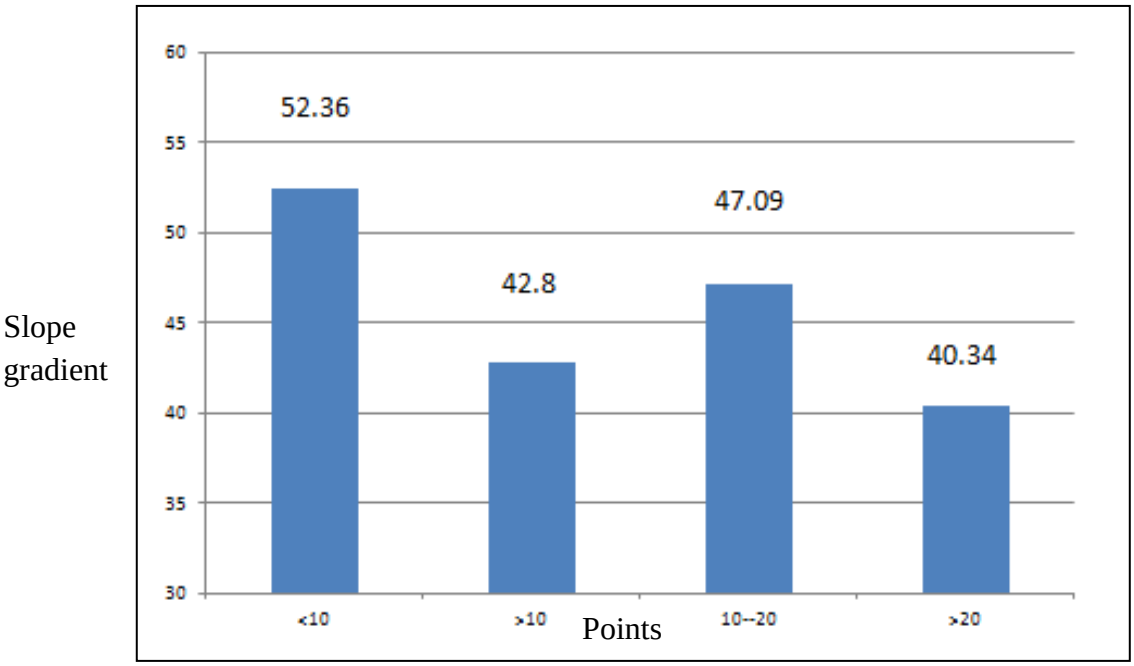


Figure A1–10
Mean difference in slope (m) for the continental shelf at the -71m isobath by point density/River drainage. The slope of the continental shelf was measured along 36 transects from the modern shoreline to the -71 isobath to examine how shorelines were changing during the Late Pleistocene and to evaluate patterns in the distribution of projectile points by slope. Results show that drainages with more than 20 fluted points empty into broad coastal zones.

Table A1–1.
The slope of the Atlantic Coast from the -55, isobath by latitude for 36 transects from South to North. Clovis points by river drainage. Higher densities of points correspond with low gradient slopes.

River	Latitude	Difference in slope (m)	Points
X	26	56.524	0
X	26.5	58.3528	0
X	27	62.9248	0
X	27.5	60.7912	0
X	28	60.4864	0
X	28.5	54.6952	0
X	29	42.5032	0
X	29.5	32.14	0
X	30	26.3428	1
St. Johns	30.5	27.8728	2
St. Mary's	30.75	27.2632	4
Satilla	31	26.3488	1
Altamaha	31.5	28.7872	1
Ogeechee	31.75	26.9584	6
Savannah	32	29.3968	145
X	32.5	37.9312	0
Santee	32.75	32.7496	40
Pee Dee	33	34.8832	14
Cape Fear	33.5	35.4928	3
X	34	26.9584	0
Neusse	34.5	44.072	16
Tar	35	51.912	12
Alligator	35.5	53.7808	0
Roanoake	36	51.0376	2
Chowan\Nottoway	36.25	30.3112	276
James	37	45.2464	10
York	37.25	25.7392	28
Rappahannock	37.5	25.7392	13
Pokomoke	38	34.8832	10
Pautuxant	38.25	21.472	19
Nantecoke	38.25	21.472	14
Choptank	38.5	21.472	37
Chester	39	22.996	10
X	39.5	22.0816	0
X	40	30.9208	0
X	40.5	49.5146	0

Difference in slope (m) = to-55m isobath.

APPENDIX 2

CHERT VARIETIES AND CONDITIONS FOUND AT TOPPER AND THE RESULTS OF AN UNDERWATER CHERT BOULDER SURVEY

In 2010 a survey was carried out to document potential sources of chert from the base of a chute channel of the Savannah River adjacent to the Topper Site. Individual chert specimens were recovered, weighed, measured, and examined for visual and material characteristics. The following table and images present the results of this survey. All chert specimens were recovered by the Underwater Archaeology Division of the South Carolina Institute of Archaeology and Anthropology and Jesse Halligan of Texas A&M University. Images provided by Jesse Tune. An objective of the survey was to evaluate whether or not chert cobbles from the river bed were suitable for tool manufacture. The results demonstrate that some chert cobbles from the study retain interiors that are of high quality and thus could have suitable for chipped stone tool production. Cobbles were predominantly nodular in form with an average weight of 11.82kg. Cobble lengths ranged in size from 11.7cm to 42cm. Cobble widths ranged from 13cm to 41cm, and thicknesses ranged from 9.5 to 25cm.



A



B



C



D



F.



E

Figure A2-1
Allendale chert cobbles from Topper Site and adjacent River. A; Nodular Broken cobbles, B; Terrestrial cobble with flaws, C; Terrestrial cobble, D; River chert cobble, E; Broken river chert cobble, F; Tabular river chert. The terrestrial chert is lighter in color and has a chalky white exterior cortex compared with the dark smooth exterior surface of the river cobbles.

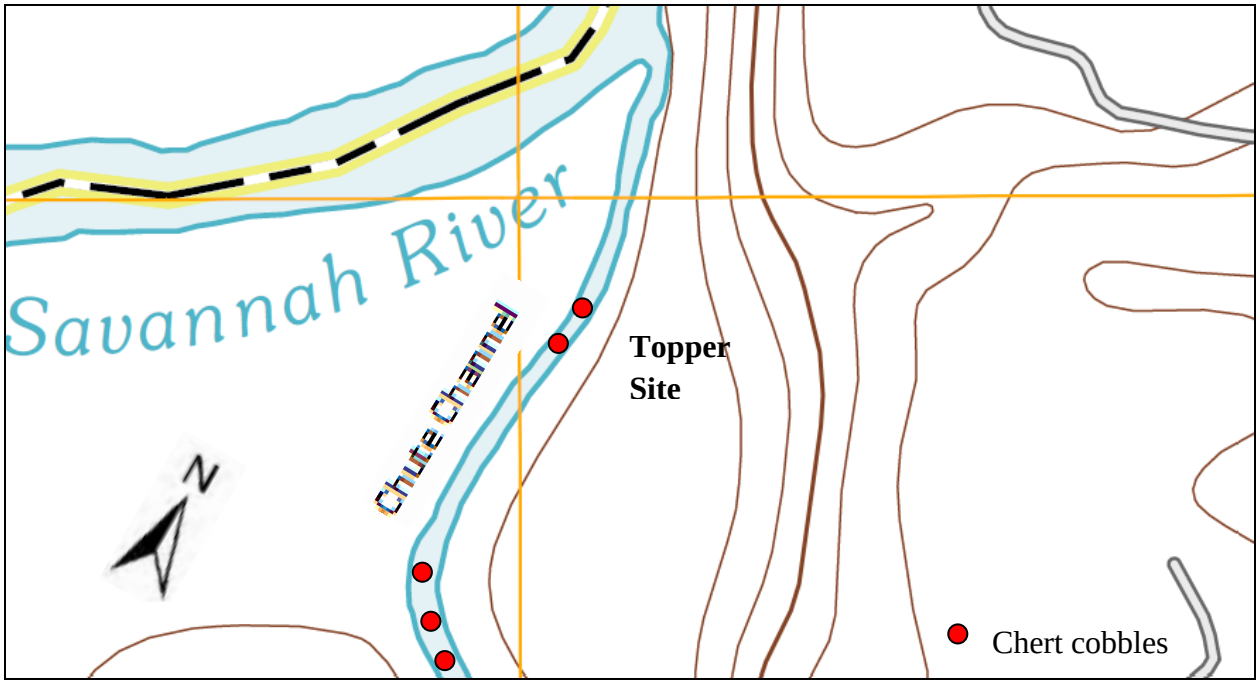


Figure A2-2
Map of the Topper Site relative a chute channel of the Savannah River. Chert boulders are present within the river base of the channel and were likely exploited by Clovis and subsequent Holocene prehistoric occupants at the site.

Table A2-1
Metric attributes of chert cobbles recovered from the Savannah River

	Weight (kg)	Length (cm)	Width (cm)	Thickness (cm)	Flaking	Condition
OB1	8.8	29	20	25	yes	Poorly Silicified
OB2	11.7	11.7	33	16	no	Silicified Chert
OB3	15.1	42	41	14	No	Cortical
OB4	24	41	33	18	Yes	Silicified
OB5	13.9	30	25	23	yes	Poorly Silicified
OB6	18.2	33	24	24	Yes	Poorly Silicified
OB7	14.8	29	20	22	Yes	Tool Grade
OB8	19.7	39	30	21	Yes	Poorly Silicified
OB9	14.8	36	22	20	Yes	Poorly Silicified
OB10	4.95	26	19	14	Yes	Poorly Silicified
OB11	8	26	20	17	Yes	Tool Grade
OB12	9.4	27	23	19	yes	Silicified
OB13	6.5	20	19	16	Yes	Silicified
OB14	5.3	21	14	19	Yes	Silicified
OB15	2.2	17	13	9.5	yes	Silicified



OB1



OB3



OB2



OB4

Figure A2-3
Chert cobble samples recovered from the Savannah River chute channel.



OB5



OB9



OB6



OB10



OB7



OB11



OB8



OB12

Figure A2-4
Chert cobble samples recovered from the Savannah River chute channel.



OB13



OB14



OB15

Figure A2-5
Chert cobble samples recovered from the Savannah River chute channel.



Figure A2-6
Chert cobble sample 11 (above) showing interior of cobble after subjected to flake detachment (below).



Figure A2-7
Chert cobble sample I. This example displays evidence of river staining indicated by the dark brown hue. Cobble recovered from chute channel of Savannah River adjacent to the Topper Site (38AL23).

APPENDIX 3

TOPPER SITE GEOMORPHOLOGY

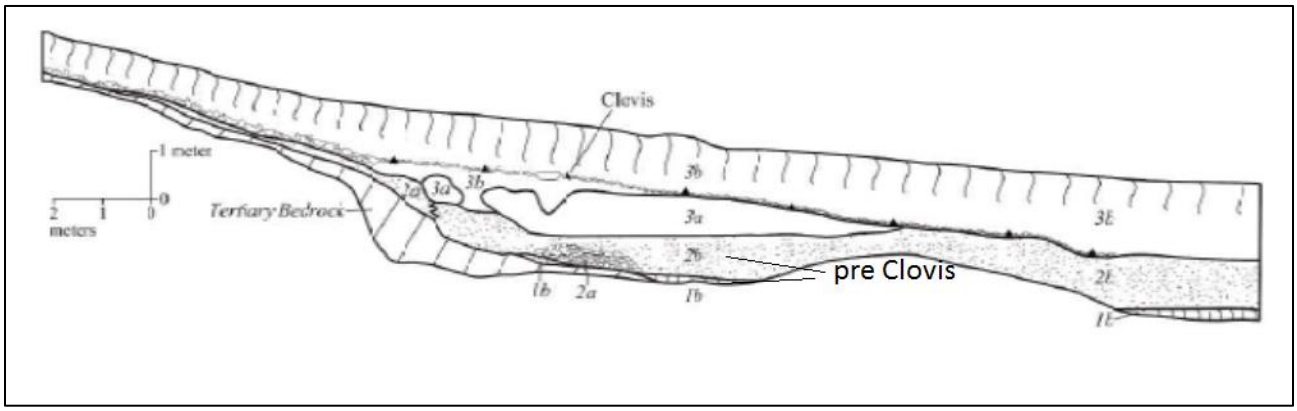


Figure A3-1
Generalized profile of the Topper Site Stratigraphy (Adapted from Waters et al. 2009).

TableA3-1
Description and condition of depositional units at the Topper Site (Adapted from Waters et al. 2009).

Unit	Description	Condition	Deposition	Type	Unit
3b	Silty Sand	Pedogenically Altered	Colluvial	Bw, A,AP	Holocene
3a	Silty Sand	Soil Development/Pedogenisis	Colluvial		U. Pleistocene Sands
2c	Sandy Silty Clay	Pedogenic Discontinuous Masses	Overbank		U. Pleistocene Sands
2b	Sand lenticular lenses	Braided fluvial system	Fluvial		U. Pleistocene Sands
2a	Sand Gravel	Colluvial	Colluvial		L. Pleistocene Sands
1b	Silty Clay Sand	Pedogenic and Erosion	Overbank	Bt	Pleistocene Terrace
1a	Sand	Fining Up Sequence	Channel bar		Pleistocene Terrace
		Tertiary Bedrock			

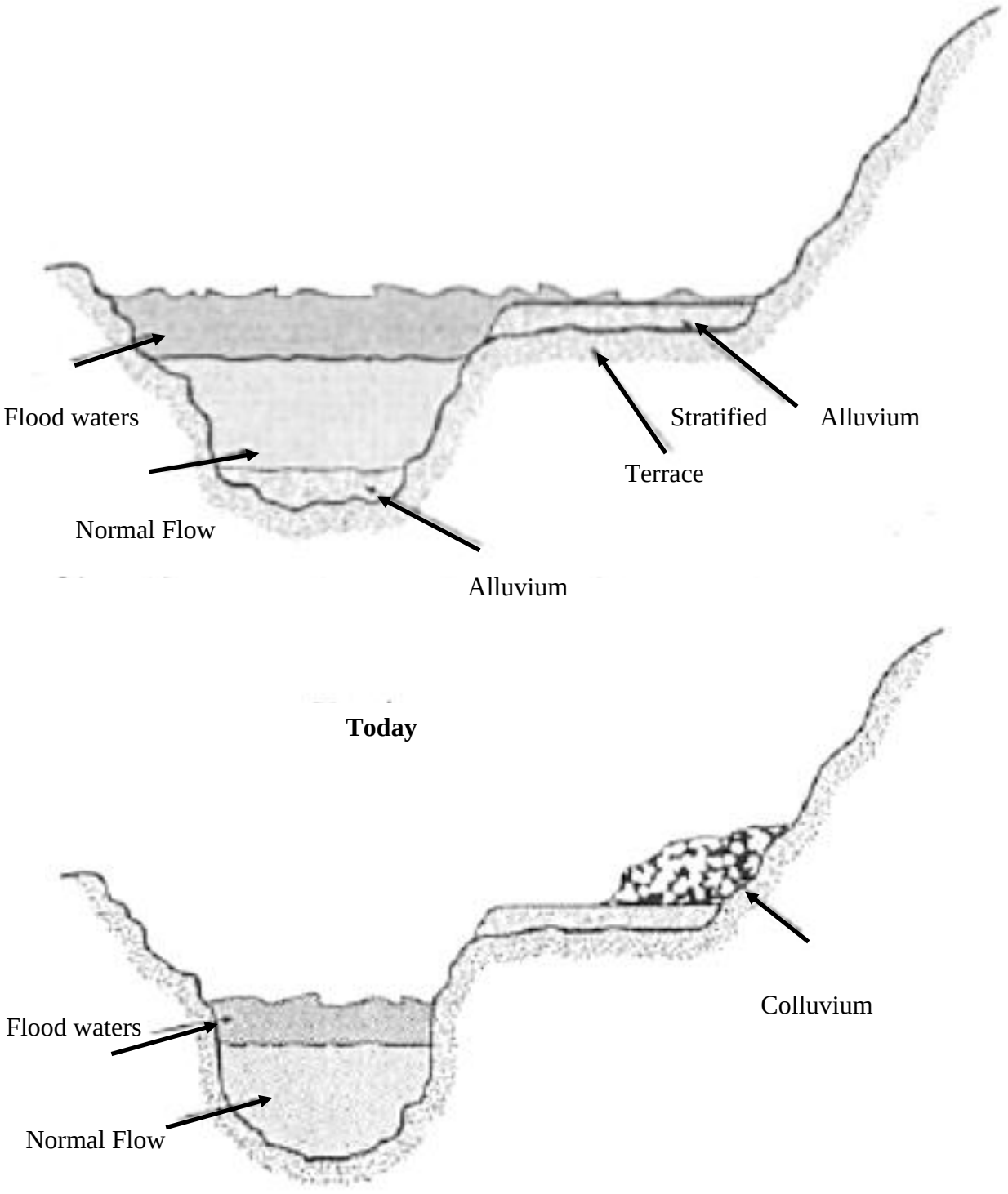


Figure A3-2
Generalized Geomorphological and Stratigraphic History of the
Topper Site (Adapted from Foreman 2003).

APPENDIX 4

RESULTS OF SEDIMENT PARTICLE SIZE ANALYSIS FROM THE HOLOCENE AND PLEISTOCENE TERRACE AT THE TOPPER SITE (38AL23)

In 2010 Harris and colleagues conducted a high resolution particle size and microscopic analysis of 140 sediment samples recovered from the Holocene and Pleistocene Terrace at the Topper Site. The goal of this study was to provide a better understanding of the sedimentological context of the Quaternary deposits at the site and in addition to sediment transport and site formation processes (Harris et al. 2010:1). The sediment samples were analyzed to evaluate sediment texture and grain composition. According to Harris et al, (2010) samples were processed in the lab using a CILAS1180L laser particle size analyzer and were subsequently analyzed for statistical parameters. Results are presented in Figures A4-2, A4-3. The results of the analysis show that the deeper deposits, at the base of the profile (95.4m) exhibit sediments that are slightly courser than higher in the profile, have a higher kurtosis, and lower standard deviation (Harris et al. 2010:1). Kurtosis, (peakedness) of a grain-size distribution compares sorting in the central portion of the population with that in the tails. Skewness is the degree of symmetry or asymmetry of the grain-size distribution, which is a function of the mean, median, mode, and kurtosis. As the mean sediment grain size becomes finer, there is a corollary increase in the standard deviation (Figure A4-4). This pattern corresponds with a "fining upwards" sequence through the Pleistocene terrace. According to Harris et al. (2010), the accumulation of more medium sands throughout the lower unit indicates that the influence of the river was at a greater distance during deposition of the Terrace than it was during later periods. These attributes are also indication of increased accumulation of mud via pedogenic processes (Harris et al. 2010:1). There is a discontinuity between the lower floodplain alluvium and overlying colluvial deposits that begins at 97.20M and extends to 98.00M, the base of the Clovis deposits. Erratic spikes indicate repetitively finer and coarser deposits throughout this unit (97.20-98.0m), and were identified in the field as "graded beds"

Harris et al. 2010:1. This area is interpreted as a series of high energy deposits and is consistent with the movement of a braided river system in closer vicinity with the site (Harris et al. 2010).



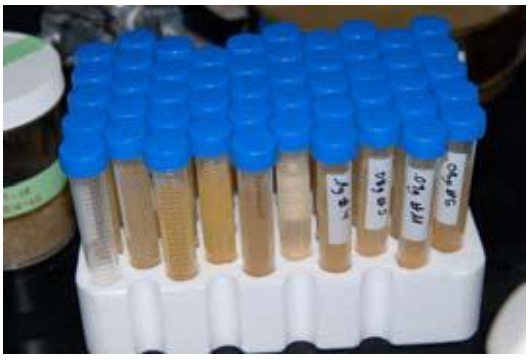








Figure A4-1
Particle size analysis of the Topper sediments. Top; profile, Left center and left bottom; sample preparation, Right center; CILAS 1180 laser particle size analyzer. Right bottom; Contact of Terrace and Sands. (Images courtesy of Kristina Poston and Scott Harris).

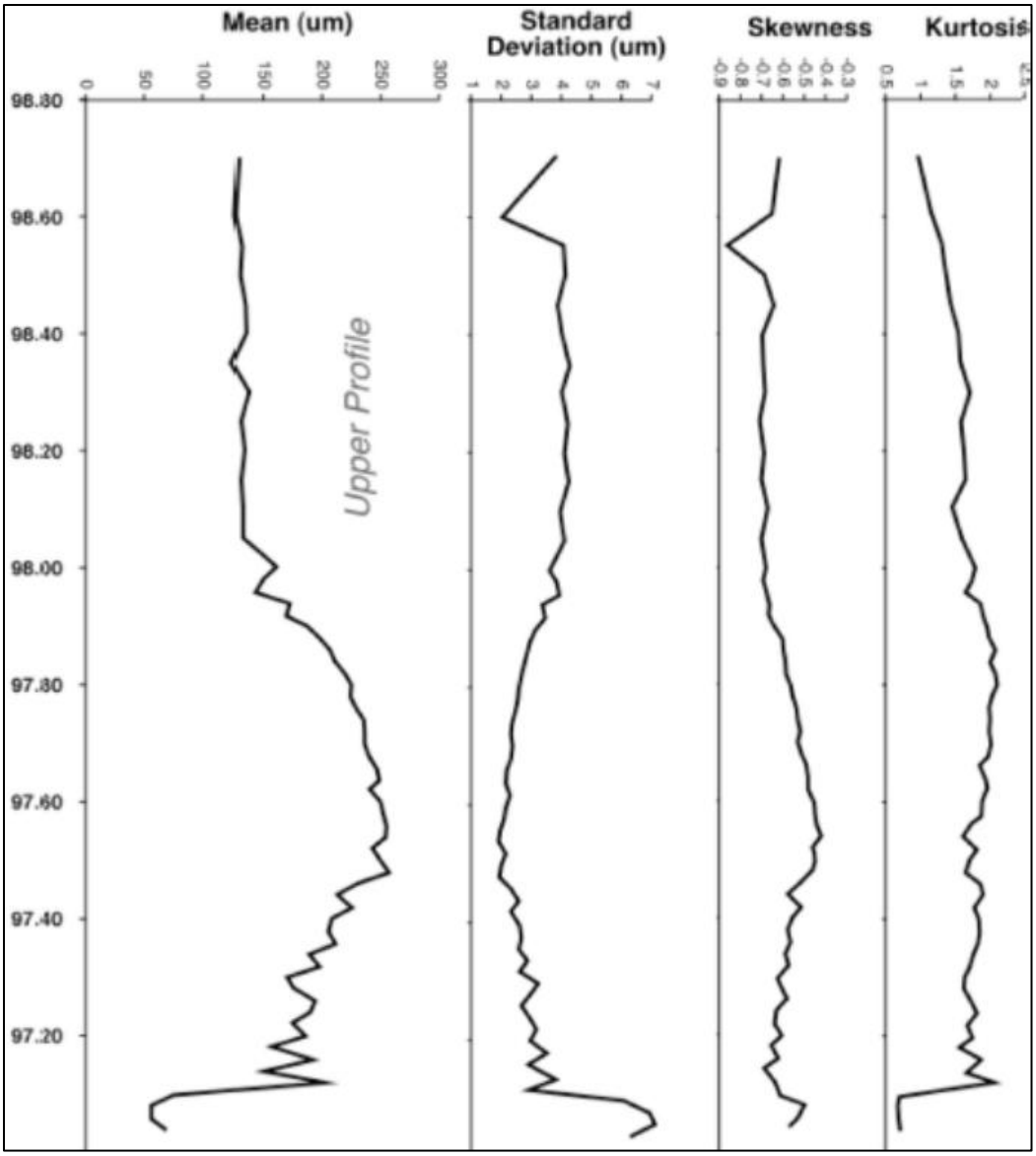


Figure A4-2
Stratigraphic profile of Holocene and Pleistocene Sands showing distribution of mean sediment particle sizes. (Adapted from Harris et al 2010).

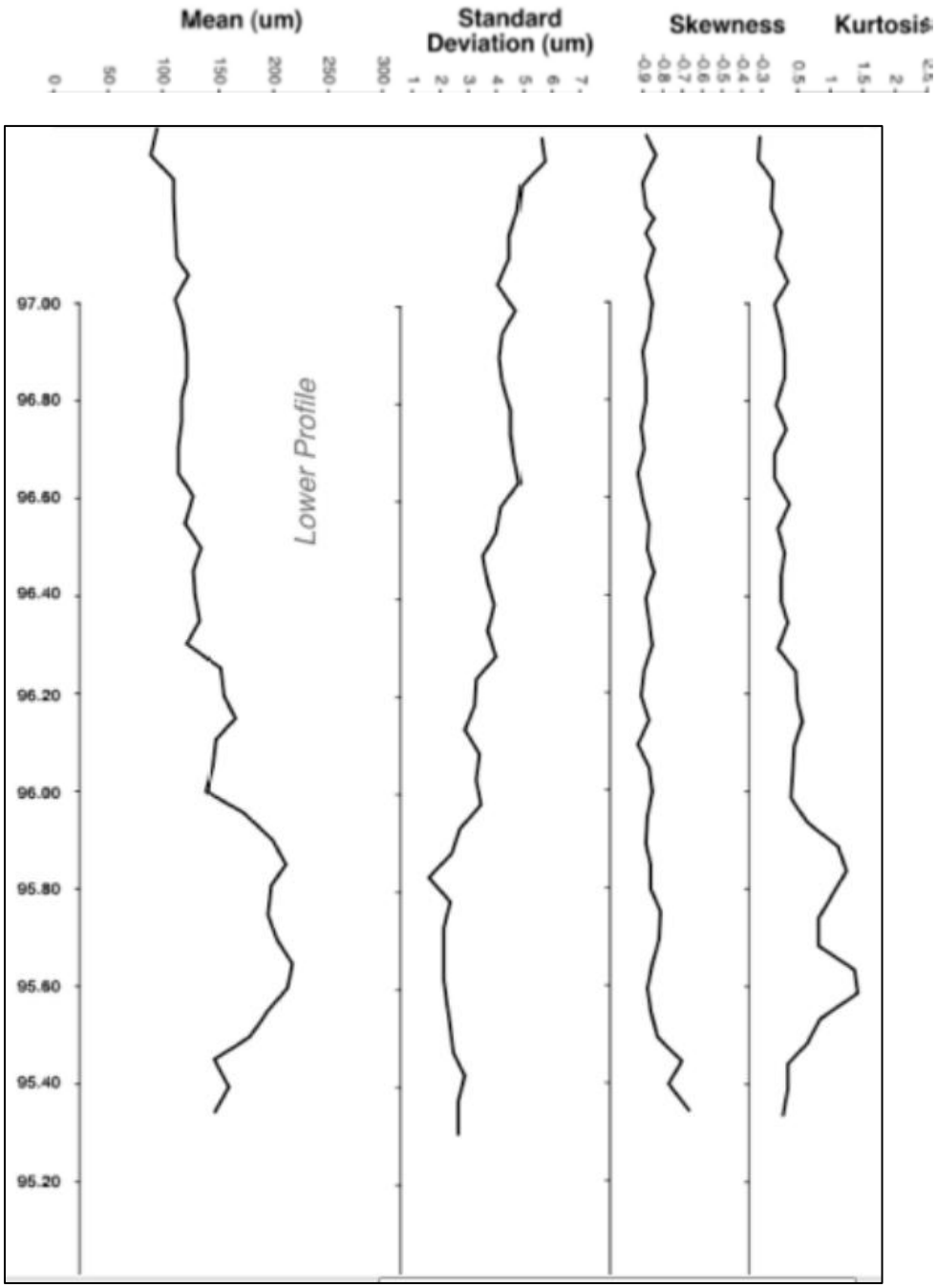


Figure A4-3
Stratigraphic profile of Pleistocene Terrace showing distribution of mean sediment particle sizes. (Adapted from Harris et al 2010).

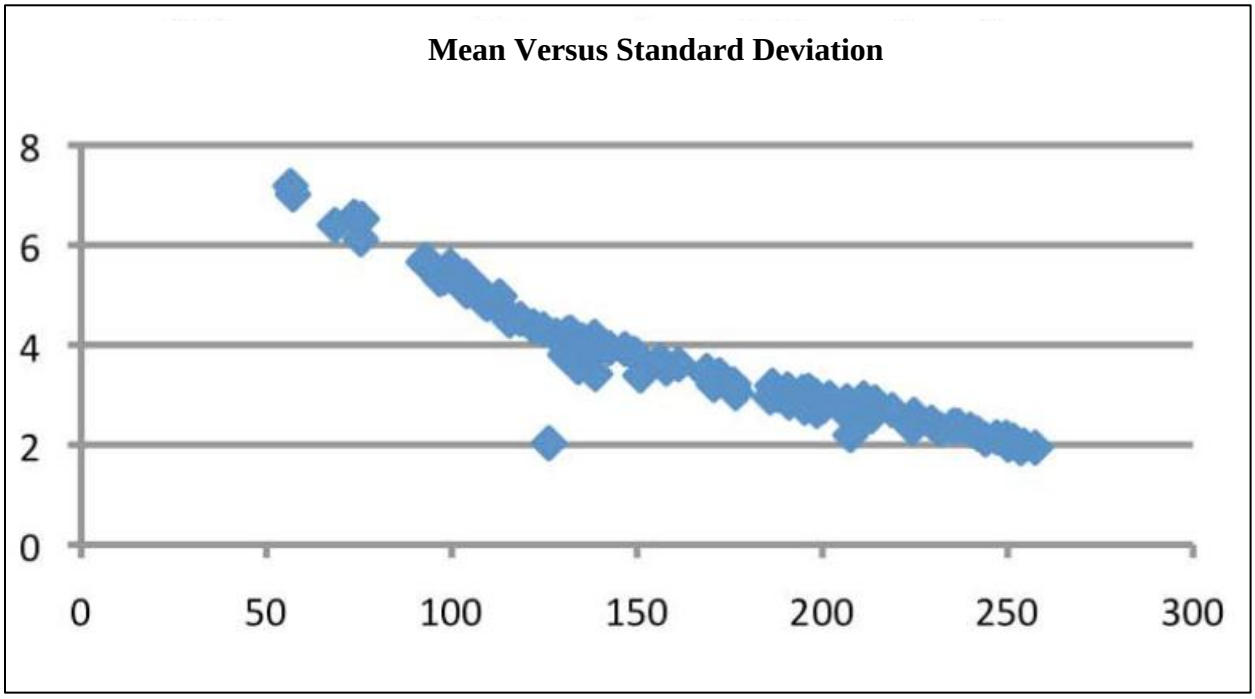


Figure A4-4
Results of particle size grade analysis at the Topper Site. As the mean sediment grain size becomes finer (indicated by the x-axis), there is a corollary increase in the standard deviation (y-axis). Figure produced by Harris et al (2010).



Figure A4-5
Stratigraphy of Alluvial Terrace at Topper Site. Line represents contact of Pleistocene Terrace. (Photo by Kristina Poston).



Figure A4-6
Stratigraphic profile at the Topper Site showing Holocene and Pleistocene Sands deposition. Middle Archaic assemblage visible at 98.45m. Pleistocene gravel lens visible between 97.65m and 97.48m. Contact of Pleistocene Terrace at 97.13m. Profile is East wall of N247 E136.



Figure A4-7
Close up of Stratigraphic profile at the Topper Site showing Holocene and Pleistocene Sands deposition. Middle Archaic assemblage visible at 98.44M. Pleistocene gravel lens visible between 97.65m and 97.48m associated with Upper Pleistocene Sands. Contact of Pleistocene Terrace at 97.13m. Profile is East wall of N247 E136.

APPENDIX 5

TOPPER GEOCHRONOLOGY AND DATING

Appendix 5 presents results of the geochronological investigations conducted at the Topper Site. Tables A5–1 to A5–3 present the radiocarbon and Optically Stimulated Luminescence (OSL) dates calculated from analyses conducted by Waters et al (2009) and run on the Topper Site sediments. Table A5–4 offers the provenience locations for the 2011 Sediment samples selected for OSL dating. Figures A5-1 and A5-2 are photos of the geoscience team conducting geoarchaeological investigations at the Topper Site. Figure A5-3 is a map showing the provenience of sediment samples selected in 2011 from the Pleistocene Sands and Terrace for OSL dating. The sediment samples extracted from these locations are presented in Figures A5–4 to A5–6. Finally, Figures A5–7 and A5–8 present the sediment sample locations for the Holocene and Pleistocene Sands 2011 4m x4m block excavation on the Alluvial Terrace at the Topper Site (38AL23).

Table A5-1
AMS radiocarbon measurements from the Topper Site (Adapted from Waters et al. 2009).

Strat. Horizon	14Cyr BP	AMS Lab#	Material Dated	Comments	Depth Below Datum	Depth Below Surface
Unit 3b	2170+/- 40	CAMS66100	Charcoal	Rejected	98.15	1.25
Unit 2c	6670+/-70	CAMS58430	Humic Acid	Contamination	97.70	.7
Unit 1b	8270+/- 60	CAMS58431	Humic Acid	Contamination	96.25	1.75
Unit 1b	20860+/-90	CAMS58432	Humic Acid	Contamination	95.75	1.5
Unit 1b	19280+/-140	CAMS59593	Humic Acid	Contamination	94.25	1
Unit 1a	44300+/-1700	CAMS77496	Humic Acid	Min. age	94.55	4.2
Unit 1a	45800+/-1000	CAMS78601	Humic Acid	Min. age	94.55	4.2
Unit 1a	48700+/-1500	CAMS78602	Humic Acid	Min. age	94.55	4.2
Unit 1a	49900+/-1300	CAMS80534	Humic Acid	Min. age	94.55	4.2
Unit 1a	>54700	CAMS79022	Carya	Min. age Plant	93.60	4.95
Unit 1a	>55500	CAMS79023	Abies	Min. age Plant	93.60	4.95
Unit 1a	>50300	UCAMS11682	Red wood	Min. age F91	95.54	3.45
Unit 1a	>51700	UCAMS11683	Red wood	Min. age F91	95.54	3.45

Table A5-2
Results of OSL measurements from the Topper Site (38AL23) (Adapted from Waters et al.2009).

Strat. Horizon	Field ID	Lab Number	Depth Below Datum	Depth Below Surface	Age
2/Alluvium	TP99-03	UIC695	-	-	<37.2
2/Alluvium	TP99-03	UIC695	-	-	-
3b/Colluvium	TS0-01	UIC763	98.21	1.19	13.2 +-1.3
3b/Colluvium	TS0-02	UIC835	98.4	1	7.6+-0.9
3b/Colluvium	TS0-02	UIC835b	98.4	1	7.6+-0.9
3b/Colluvium	TS0-04	UIC836	98.68	.72	8.0+-.8
3b/Colluvium	TS0-03	UIC782	98.51	.89	7.3+-.8
2b/Alluvium	TS0-05	UIC764	98	1.4	14.8+-1.5
2b/Alluvium	TS0-06	UIC837	97.73	1.67	14.0+-1.2
2b/Alluvium	TS0-07	UIC781	97.45	1.95	-
Modern Soil	TS0-010	UIC762	99.4	0	<.4
3b/Colluvium	TL-54	UIC1115	98.13	.7	11.0+.8
3b/Colluvium	TL-53	UIC1114	98.03	.8	13.0+-.9
3b/Colluvium	TL-52	UIC1113	97.93	.9	<19.6
3b/Colluvium	TL-51	UIC1112	97.81	1	<23.7
2b/Alluvium	TL-50	UIC1111	97.68	1.15	<26
3b/Colluvium	TS03-01	UIC1229	-	-	4.3+-.3
3b/Colluvium	TS03-02	UIC1228	-	-	8+-.5

Table A5-3
Results of OSL measurements from the Topper Site (38AL23) (Adapted from Waters et al.2009)

Lab Number	SARaDe (Gy)	MARbDe (Gy)	MAAD-IRcDe (Gy)	Sar age (ka)	Mar age (ha)
UIC695		Saturated	49.40 Â± 2.06		uncalculatable
UIC695		Saturated			uncalculatable
UIC763	20.34 Â± 1.74	18.96 Â± 0.09	24.18 Â± 0.04	13.4± 1.6	13.2+-/1.1
UIC835	8.39 Â± 0.47	12.43 Â± 0.11	18.97 Â± 0.07	4.7± .6	7.2+/-.;7
UIC835b			18.42 Â± 0.44		
UIC836	8.01 Â± 0.46	14.21 Â± 0.03	18.75 Â± 0.06	4.5± .6	8.2+/-.6
UIC782	10.07 Â± 0.39	11.08 Â± 0.19		10.1± .08	7.5+/-.8
UIC764	31.30 Â± 2.27		30.93 Â± 0.09	14.2± 1.5	
UIC837	11.56 Â± 0.47	18.77 Â± 0.19	27.05 Â± 0.07	8.1± 0.9	13.3+/-1.1
UIC781	Saturated	Saturated	Saturated	uncalculatable	uncalculable
UIC762	0.84 Â± 0.10			.42± .1	
UIC1115		8.49 Â± 0.06	11.16 Â± 0.04		11.0+/-.7
UIC1114	6.34 Â± 0.30	9.08 Â± 0.11	11.80 Â± 0.06	9± .7	13.0+/-.9
UIC1113	10.92 Â± 0.62		13.55 Â± 0.06	22.5± 2.1	
UIC1112	12.37 Â± 0.56	19.42 Â± 0.10	17.20 Â± 0.07		34+/-2.3
UIC1111		23.34 Â± 0.66	21.83 Â± 0.15		37.6+/-2.6
UIC1229		3.95 Â± 0.03			4.3+/-.3
UIC1228	6.60 Â± 0.26	5.90 Â± 0.06		8.5± .6	7.6+/-.5

Table A5-4
Provenience location for 2011 Sediment samples selected for OSL dating and associated dates.

Sample		Northing	Easting	Depth	Unit	Date	Strata
1	2” PVC	243.20	143	95.40	N242 E142	70.7BP	Pleistocene Terrace
2	2” PVC	249	141.33	96.80	N248 E140	59.4BP	Pleistocene Terrace
3	2” PVC	242.5	145.00	97.30	N242 E144	34.0BP	Pleistocene Sands
4	2” PVC	248.7	140	97.30	N248 E140	53.8BP	Pleistocene Sands
5	2” PVC	246.29	138.05	97.006	N246 E138	62.0BP	Pleistocene Sands
6	1” copper tube	263.5	146	98.30	N263 E144	-	Holocene Terrace
7	1” copper tube	263.5	146	98.25	N263 E144	-	Holocene Terrace
8	1” copper tube	263.5	146	98.20	N263 E144	-	Holocene Terrace
9	1” copper tube	263.5	146	98.15	N263 E144	-	Holocene Terrace
10	1” copper tube	263.5	146	98.10	N263 E144	17.5BP	Holocene Terrace
11	1” copper tube	263.5	146	98.05	N263 E144	19.3BP	Holocene Terrace
12	1” copper tube	263.5	146	97.95	N263 E144	29.8BP	Holocene Terrace

Table A5-5

1998-2002 OSL dates from the Alluvial Terrace at the Topper Site (38AL23)

Sample	Technique	Unit	Stratigraphy	Age	Bracket	Reference
1	OSL aliquot	3b	Colluvium	13.5 CALYBP	1000	Foreman 2002
2	OSL aliquot	2b	Alluvium	15.2 CALYBP	1,500	Foreman 2002



Figure A5-1
Photo showing geoscience team at the Topper Site. From left: Dr. John Foss, Dr. Michael Waters, Dr. Steve Foreman, and Dr. Al Goodyear. (Photo courtesy of Daryl Miller).



Figure A5-2
Dr. John Foss taking sediment profiles from Backhoe trench at the Topper Site (38AL23).

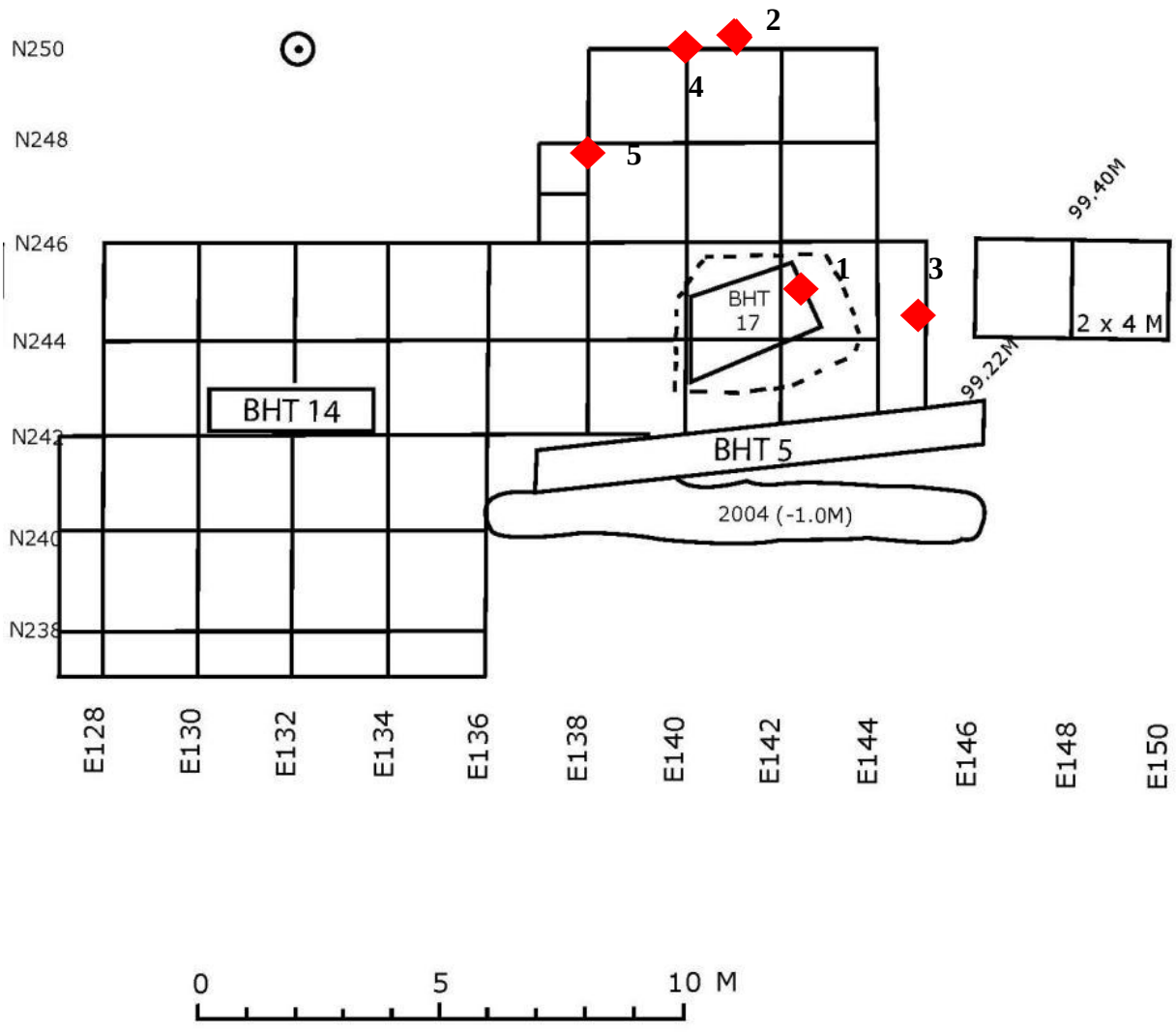
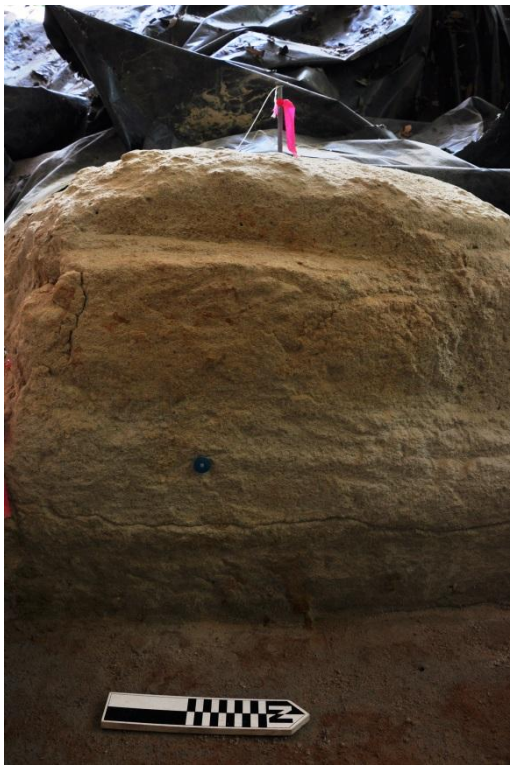


Figure.A5-3
Map showing provenience of sediment samples selected in 2011 from the Pleistocene Sands and Terrace for OSL dating. Numbers 1 and 2 are from Pleistocene Terrace, whereas numbers 3-5 were taken from Pleistocene Sands. Numbers correspond with samples in Table A4-4







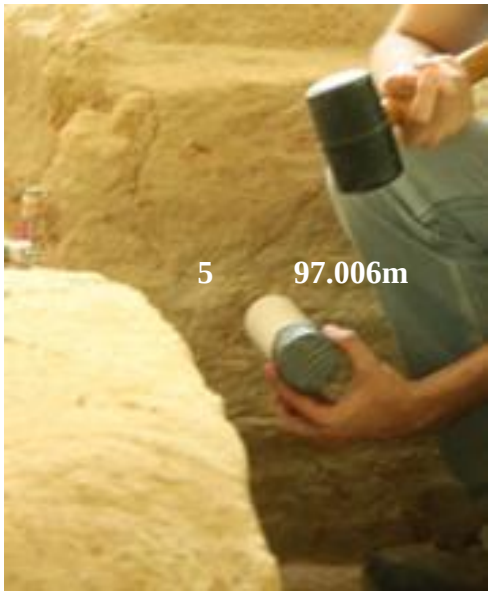


Figure A5-4
Process of extracting sediment sample 5 from Pedogenic Feature in N246.29 E138.05, west profile wall, 97.006M After core is extracted it is wrapped and bagged. Excess sediment is also bagged and sent along with core as bulk material to assist with OSL dating.

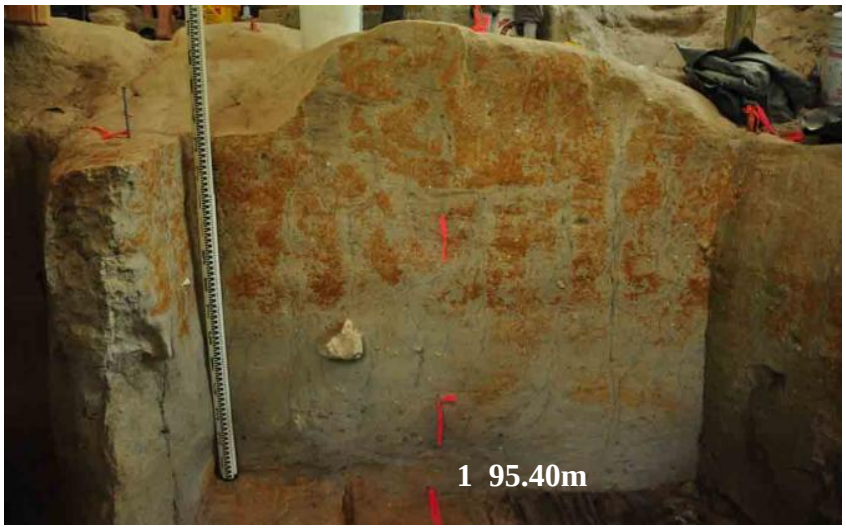




Figure A5-5
Location of sediment sample 1, Pleistocene Terrace N243.20 143.00, 95.40m (at top);
Location of sediment sample 4, Pleistocene Terrace N28.7 140.00, 97.30m (at bottom).

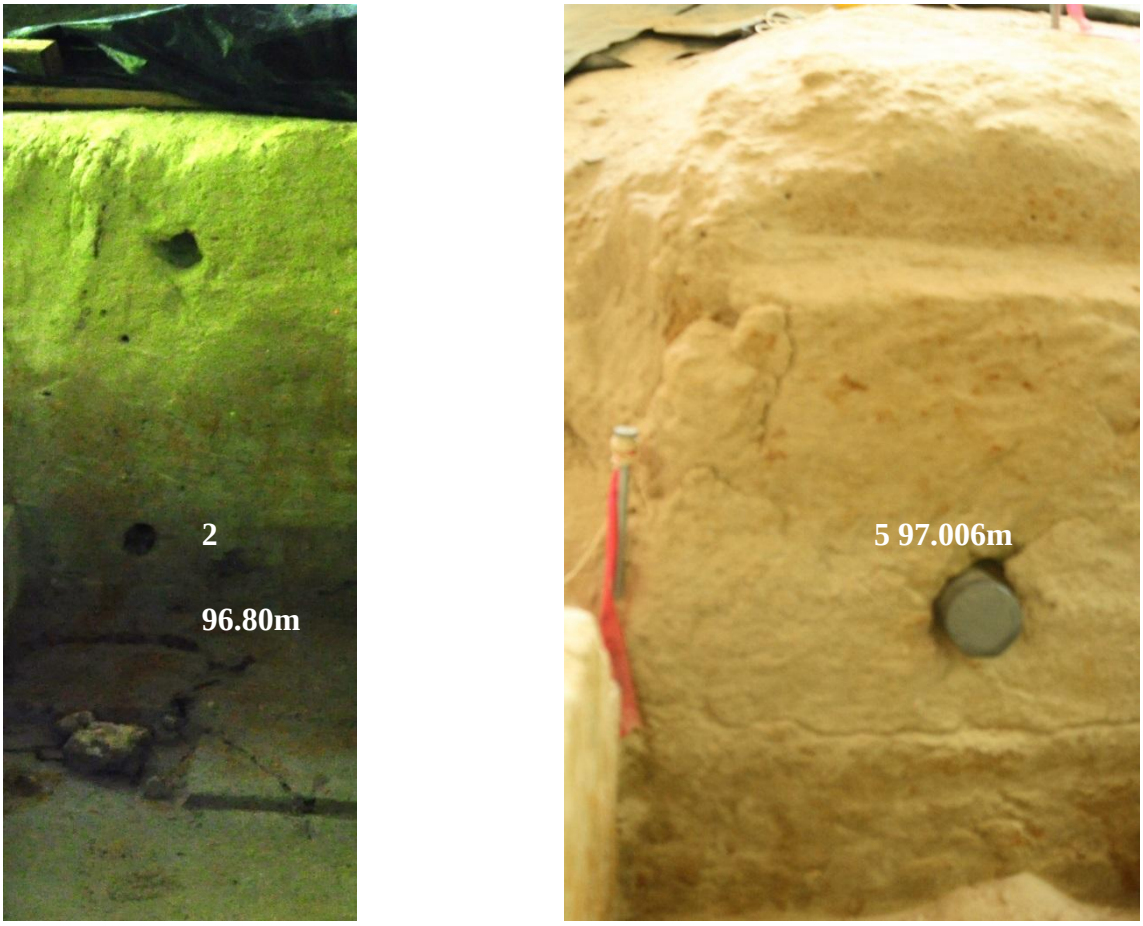


Figure A5-6
Locations of Pleistocene Sands and Terrace sediment samples taken for OSL dating. At left; Pleistocene Terrace sample 2 from N249 E141.33 96.80m . At right; Pleistocene Sands sediment sample 5 N246.29 E138.05, west profile wall, 97.006m.



Figure A5-7
Sediment samples from Holocene (n=12) and Pleistocene Sands (n=2): 2010 4m x 4m block excavation. Location of sediment samples selected for OSL dating. Seven samples from Holocene deposits were submitted for analysis. Grey 1' copper tubes represent in situ prior to extraction. Flagging tape lists elevation along the profile wall.

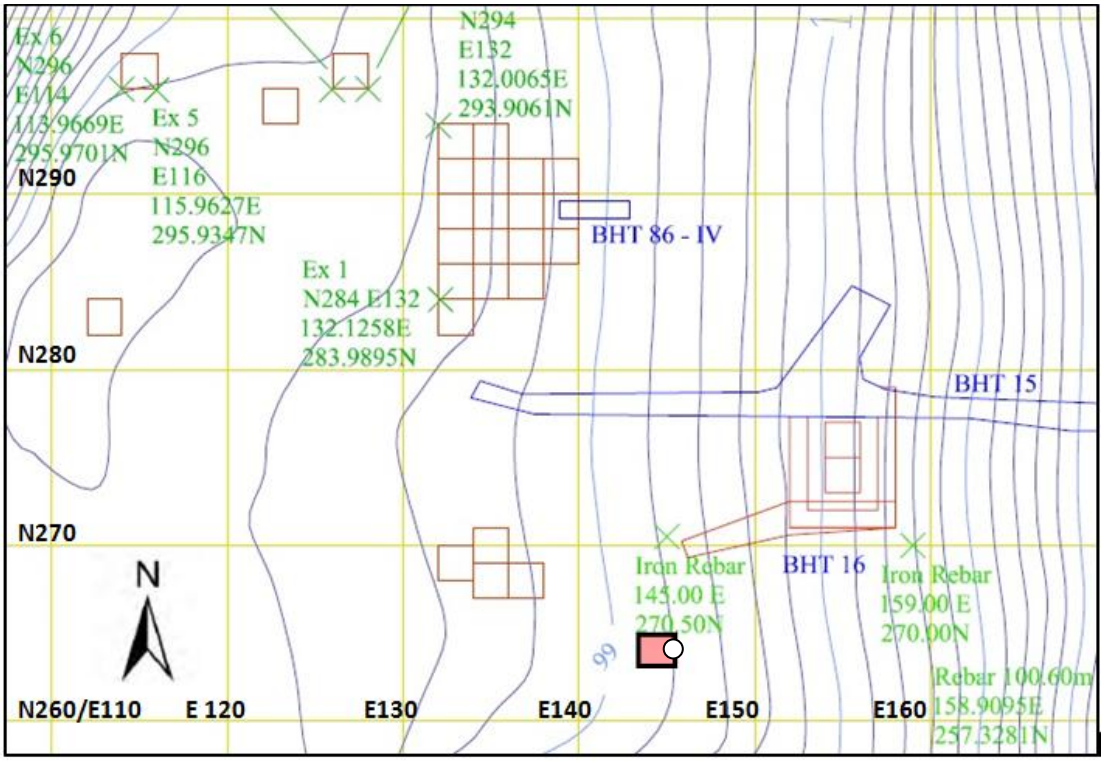


Figure A5-8
Site map showing location from where Holocene and Pleistocene Sands OSL sediment samples were extracted. Image of samples in Figure A6-6. (Extraction location noted as white dot).

APPENDIX 6

HISTORY OF POLLEN RESEARCH IN THE SOUTHEAST U.S.

Appendix 6 presents a history of pollen research in the Southeast U.S. This section includes the results of paleoenvironmental reconstructions for selected sites throughout the region based on the acquisition and examination of sediment cores. Maps detailing these reconstructions are presented in Figures A6-1-3.

As early as the 1890's, researchers such as C.W. Weber noticed the potential of fossil pollen analysis as a means of examining the succession of vegetation through time (Erdtman 1924). However, the analysis of pollen sequences stems from the research of a Swedish geologist, Lenart Von Post, who in the early twentieth century developed a method for quantifying pollen assemblages from stratigraphic contexts. Von Post (1946) presented the geographical array of pollen spectra as percentages of the sum of the pollen grains counted for a given slide, with pollen spectra plotted against their stratigraphic position through the sediment profile. Such depictions allowed researchers to make spatio-temporal comparisons regarding the distribution(s) of pollen from individual taxa, and revolutionized research geared toward paleovegetation reconstructions.

Pollen research in the Southeast U.S. dates to the late 1920's. In one of the earliest studies, Lewis and Cocke examined the pollen sequence of sediments recovered from the Dismal Swamp peat bog of Virginia (Lewis and Cocke 1929). They were able to identify the depths at which specific arboreal taxa such as pine, oak, and hickory made their greatest state of development with little open grasslands occurring during this period (Lewis and Cocke 1929). However, at the time it was not possible to provide more precise age brackets for pollen sequences because researchers could only order the distribution of specific taxa in relation to each other by percent. With the development of radiometric dating techniques during the mid-twentieth century, (Arnold and Libby 1949), alongside cross-dating techniques taken from

dendrochronology, it was possible to date pollen sequences with some degree of accuracy. Researchers were able to demonstrate the effects of late glacial climate change on vegetation across different regions.

During the 1970's, researchers devoted to pollen analysis in the Southeast (Delcourt and Delcourt 1977, 1979; Watts 1970; Watts and Struiver1980) sought to develop models that could explain specific climactic forcing mechanisms responsible for changes in the structure and distribution of paleovegetation. Among the notable discoveries was the variation found in the distribution of plant taxa as climate became more unstable during transitions between glacial and interglacial periods (Delcourt and Delcourt 1977; Watts and Struiver 1980). A general trend became evident, with plant species such as spruce, conifers, and birch dominant during full glacial (stadial) period and more temperate forests situated to the south as a result of cold climate (e.g. Delcourt and Delcourt 1984, 1993; Watts and Struiver 1980). As climate became variable, yet warmer during the late glacial interval (13,000—10,000 cal yr BP), hardwoods such as oak, hickory, and herbaceous species increased in abundance, initially dispersing from southern latitudes, and then trending in a northerly direction as climate became less harsh.

In a seminal study geared toward reconstructing Late Pleistocene paleoenvironments, Delcourt and Delcourt (1982) hypothesized that shifts in dominant air mass boundaries were responsible for variation(s) in continental pollen sequences, and that these sequences could be used to map changes in vegetation by latitude through time (Figure A6-1). Delcourt and Delcourt (1984) developed vegetation maps for Eastern North America for select intervals of time throughout the Late Pleistocene. These maps were based on pollen studies conducted throughout the Eastern Woodlands of North America. Accordingly, the maps in Figure A6-1 present the potential distribution of vegetation types throughout the region for intervals at 28,000 cal yr BP,

18,000 cal yr BP, and 13,000 cal yr BP, and 8,000 cal yr B.P. Based on this research, major vegetation types since Late Glacial Maximum were classified according to three latitudinal boundaries (Delcourt and Delcourt 1984). The first boundary is north of the 39th parallel. During cool periods such as the Full Glacial and Younger Dryas, Northern latitudes were dominated by boreal, coniferous taxa such as spruce (*Picea*) and fir (*Abies*). With the onset of more moderate temperatures during the early Holocene, birch (*Betula*), elm (*Ulmus*), oak, maple, hickory (*Carya*) and other deciduous forests increased in distribution.

Between latitudes 33º and 39º N, boreal forests including Jack Pine and spruce were the dominant species whereas oak represented only a minor component throughout this region. Due to the dry, arid climate characteristic of the Full Glacial, forests in these latitudes are likely to have been dispersed over the landscape, only occupying regions where moisture was abundant enough for tree survival and growth. Closed canopy forests were rare.

The boreal forests of the full glacial were replaced by mixed deciduous forests during the LGIT (Delcourt and Delcourt 1985; Delcourt and Delcourt 1987). Across this interval, vegetation was unstable, as increases in mean annual temperature, summer insolation, and the length of the growing season aided the expansion of hardwoods dominated by oak, hickory, and birch, but also consisting of walnut (*Juglans*), elm (*Ulmus*), willow (*Salix nigra*), American beech (*Fagus grandifolia*), and sugar maple (*Acer saccharum*) (Delcourt and Delcourt 1982). This mixed conifer-deciduous regime was widespread throughout Eastern North America, and began to retreat north after 12,500 cal yr BP. By 9,000cal yr BP. Warm temperate species, including sweet gum (*Liquidambar stryraciflua*), chestnut (*Castanea dentate*), and red maple, replaced the coniferous forests by 9000 cal yr BP (Delcourt and Delcourt 1982).

During the Late Pleistocene, vegetation south of 33º maintained a state of dynamic equilibrium, with little change in stability through time. Oak and hickory were dominant during the full glacial interval, as warmer, temperate conditions allowed for the expansion of deciduous forests throughout much of the southeast (Delcourt and Delcourt 1985). However, the arid climate and variable soils in some areas led to the formation of vegetation communities consisting of park like savannahs and scrublands; environments that would have been suitable for large numbers of grazing mammals to thrive in (Graham and Mead 1987). By the Hypsithermal, the homogeneous hardwood canopies were finally replaced when warmer and wetter climate led to an increase in species of southern pine (Delcourt et al. 1983; Delcourt and Delcourt 1985). More recent studies by Williams (et al. 2004) have found that individual plant taxa experienced unique "shifts" in the range and abundance throughout the Late Pleistocene. Most plants were found to retreat northward although others experienced east-west shifts in distribution (i.e. *Picea and Pinus*). Rate of change maps produced by Williams et al (2004:312-317) illustrate these shifts and are presented in Figure A6-2.

The latitudinal model developed by Delcourt and Delcourt contributed greatly to North American paleoenvironmental research. The model suggested a significant correlation between the distribution of individual plant species and the geographic position(s) of major climate gradients (Delcourt and Delcourt 1982). However, while the model worked well for predicting climate and paleovegetational changes at the regional level, it proved problematic for distinguishing similar changes at local scales. Based on evidence from palynological studies in the southeast U.S., the paleoenvironmental record is substantially variable at the local level (Watts 1980; Delcourt and Delcourt 1977, 1983). As such, more recent paleoenvironmental

research has been conducted with a goal to provide in depth site reconstructions that will provide a better understanding of the variable nature of paleoenvironmental change in the Southeast U.S.

Paleoenvironmental Research in the Southeast U.S.

Numerous studies have provided detailed paleoenvironmental reconstructions of the Southeast U.S (Delcourt and Delcourt 1977, 1983, 1988, 1991; LaMoreaux et al. 2009; Jackson and Whitehead 1993; Watts 1970, Watts 1980, Watts et al. 1992, Watts and Hansen 1994; Whitehead 1981; Williams 2003; Grimm et al. 2006; Shuman et al. 2002. Many studies examine the fossil pollen record of the region and results of these analyses typically indicate shifting patterns in the structure of vegetation, in some cases abruptly over the course of the last 20,000 years owing to oscillations in climate. Moreover, paleoclimatologists have found evidence for fluctuations in climate that significantly predate 20,000 years, going back to at least 2.6 million years. These fluctuations in climate are often classified as stages based on oxygen isotope calculations obtained from sediment cores, and are referred to as Marine Isotope Stages (MIS) that document alternating warm and cold periods on our planet. The most recent Marine Isotope Stage is MIS 1 which began with the onset of the Holocene and reflects a warmer climate stage. MIS stage 2, which began approximately 24,000 years before the present, covers the Last Glacial Maximum and reflects a period of cooler global climate. Table A6–1 presents a list of MIS stages and associated age ranges for each.

There remains little consensus on how climate and vegetation has varied at the local level in the Southeast U.S. throughout the past 20,000 year (LaMoreaux et al. 2009). While many studies report a southern retreat of deciduous taxa during the Younger Dryas interval, followed by a subsequent expansion during the Terminal glacial/Holocene transition (e.g. Delcourt and Delcourt 1985; Delcourt and Delcourt 1987), the distribution and range of specific taxa have

been found to vary by site throughout the Late Pleistocene for the lower Southeast (Watts et al. 1992; Watts 1980; Watts 1970; Delcourt and Delcourt 1977; Delcourt and Delcourt 1983). In the section that follows, I provide a detailed description of the Late Pleistocene paleovegetation for the Southeast, noting specific vegetation patterns local to each site.

The majority of pollen sites in the lower Southeast provide vegetation sequences that extend at least to the last Glacial Maximum (LGM) 21,000 cal yr BP, and reveal a number of interesting patterns. At Lake Tulane, in South Central Florida, Watts and Hanson have identified an alternating pattern of pine and oak-scrub forest during the full glacial prior to 21,000 cal yr BP (Watts and Hanson 1993). Accordingly peaks in pine are considered to correlate with periods of increased precipitation during periods of ice advance. In contrast, during periods of ice retreat, an oak scrub and grassland is thought to have taken hold as the region became increasingly arid due to cooler surface waters caused by "melt water from retreating ice sheets" (Watts and Hanson 1993). Grimm et al. 2006 report spikes in pine prior to the LGM (Grimm et al. 2006) and again by 15,000 cal yr BP. Grass pollen decreases in abundance from 15-10,000 cal yr BP (Grimm et al. 2006). At the terminal Pleistocene/Holocene boundary pine is found to decrease in abundance whereas an increase in the distribution of oak was observed. By 10,000 cal yr BP vegetation for the localized area is primarily oak dominated whereas the mid to later Holocene was dominated by an increase in pine (Grimm et al. 2006). During the Younger Dryas interval 12,900 cal yr BP pollen data indicate prominent spikes in pine pollen, suggesting increased moisture availability and warmer temperatures during this period. Pollen records from North Florida including Camel Lake (Watts et al. 1992), Lake Tulane (Grimm et al. 2006), and Sheelar Lake (Watts and Hansen 1994), provide similar pollen distributions for this period. However, Willard (et al. 2007) documents a pollen record from Tampa Bay, Fl. That consists of oak

dominated pollen in association with specific herbs indicating "cooler, drier conditions during the Younger Dryas" (Meeks and Anderson 2012:112).

LaMoreaux et al. (2009) have provided a detailed examination of the pollen history at Sandy Run Creek Georgia in south central Georgia. Results for the LGM show a dominance of pine combined with high percentages of grass pollen indicating a mix of forested and prairie like conditions. During the Younger Dryas cool moist conditions are interpreted based on the "increased occurrence of mesic tress and an increase in riparian populations of alder" (Meeks and Anderson 2012:112). During the Terminal Pleistocene, there was a decrease in pine as oak increases and represents a greater percentage of the pollen sum (LaMoreaux et al.2009). The relative high percentage of grass pollen (15%) is indication that the region remained largely open across the LGM to Holocene transition.

Jackson and Whitehead (1993) provide a description of the paleoenvironment of northeast Georgia from the results of a pollen analysis of a sediment core taken from the Nodoroc Site, a wetland peat deposit in the Piedmont region of the state. Just prior to the LGM, the region was dominated by pine and oak, with hickory, spruce and fir present in significant amounts (Jackson and Whitehead 1993). Also present are high herb and shrub pollen assemblages, suggesting the site represented a local wetland in a forested landscape (Jackson and Whitehead 1993). The presence of fir and spruce in significant amounts at Nodoroc contradicts findings from contemporaneous Coastal Plain and Piedmont sites to the east and south where the percentage of such taxa are much lower.

At Rockyhoc Bay, North Carolina, Whitehead (1981) has provided a detailed description of the paleovegetation encompassing the period from 30,000 cal yr BP to the present. Just prior to the LGM dominant pollen types were found to include oak, alder, sedge, grass, birch, and

horn-beam. Pine generally represented less than 20 percent of the total pollen sum for this period. From 21,000 to 10,000 cal yr BP pine increases to as much as 76 percent of the pollen sum, with spruce and fir among other coniferous taxa present. Oak and hazel were found in low abundances while pollen from other temperate taxa was largely absent (Whitehead 1981). These vegetation types correspond well with modern regions of boreal forest in Canada (Whitehead 1981). During the Younger Dryas elevated percentages of hemlock, beech, and white pine suggest cooler, moist conditions. From 10,000 to 5000 cal yr BP the vegetation was dominated by oak hemlock, and shallow-water taxa, as well as many hardwood types. A decrease in boreal plants including spruce and fir occurred during the Early Holocene at Rockyhoc Bay (Whitehead 1981). In the southern Appalachian mountains and to the west, coniferous forests of the Late Pleistocene dominated by spruce and pine gave way to deciduous forests consisting of oak, birch, hemlock, beech, *Ostrya*/*Carpinus*, willow, and elm. As these forests transitioned from boreal to mesic in composition they were likely similar to extant northern hardwood forests of the modern Northern U.S. After the onset of the Holocene, these forests gave way to vegetation dominated by oak and chestnut forests, and finally to the modern oak-hickory forests evident throughout the region today.

At Anderson Pond, located along the Eastern highland rim of the Cumberland Plateau of Eastern Tennessee, Delcourt (1979) has provided a detailed description of the paleoenvironment of the region dating from 25,000 cal yr BP to the present. Prior to the LGM, vegetation predominantly consisted of coniferous taxa including northern pine, spruce, and fir. In addition to coniferous species, deciduous taxa such as oak, ash, hickory, birch, and walnut were also present (Delcourt 1979). From 19,000 to 18,000 cal yr BP pine remained in abundance, though a decline in spruce and fir is noted. By 18 000 cal yr BP pine increases to as much as 87 percent of

the pollen sum, while spruce and fir occur in minute amounts (Delcourt 1979). From 16,300 to 12,500 cal yr BP, pine declines in abundance while an increase in spruce and oak is noted. Ballard et al. 2012 report a transition to a more mesic deciduous forest by 16,879 cal yr BP. Beech and sugar maple increase in dominance by the latter part of this period. From 12,500 to 8000 cal yr BP, a mixed mesophytic forest was in place at Anderson pond, followed by a high influx of oak, ash, hickory and alder during the mid-Holocene (Delcourt 1979).

At Cranberry Glades, West Virginia, Watts (1979) has documented a pollen sequence that demonstrates a progression of vegetation change similar to that found at Anderson Pond. Accordingly, after the LGM forests transitioned from spruce pine and fir dominated forests to those consisting of more mesic species after 14,000 cal yr BP (Watts 1979). By 11,600 cal yr BP a change to a more xeric deciduous forest is documented based on the recovery of oak chestnut and hickory pollen (Watts 1979).The dates for the coniferous to mesic deciduous transition are widely similar throughout the Appalachians. At Browns Pond, Virginia a date of 11,700 cal yr BP. has been provided for the transition from mesic to deciduous forests (Kneller and Peteet 1993) and at Hack Pond Virginia this change has been reported at 10,700BP (Craig 1969). Likewise, at Jackson Pond Kentucky Wilkins et al. (1991) reports a spruce-fir forest in place from 24,500 to 12,900 cal yr BP. This was followed by a transition from coniferous to deciduous forests about 12,700 cal yr BP. (Boehm 2012) and a subsequent change to mesic deciduous taxa by 11,600 cal yr BP. Mesic taxa were replaced by oak-hickory-chestnut forest from approximately 8000 to 4500 cal yr BP. (Wilkins et al.1991). To the south, Watts (1970) has placed the transition from coniferous to deciduous taxa at some point prior to 14,500 cal yr BP. based on the examination of pollen sequences from Bob Black and Quicksand Ponds, Georgia.

Fossil-pollen sites in the interior and western regions of the Southeastern United States are few in number (Anderson and Meeks 2012:113). However, pollen records from recorded sites suggest there was some variation compared with other sites throughout the Southeast. A sediment core extracted from Goshen Springs, on the Gulf Coast of South Central Alabama between Louisiana and Georgia, provides a pollen history of the area that extends from the Late Pleistocene full glacial to the present (Delcourt and Delcourt 1980). Prior to the LGM (or 26,000 cal yr BP) vegetation was dominated by an oak-sweetgum-hickory forest that represents a southward shift in the vegetation boundary between southern pine and oak-hickory forests (Delcourt and Delcourt 1980). This vegetation pattern persisted throughout the full and late glacial, consisting of a broad array of deciduous and broadleaf taxa that include elm, beech, birch, ironwood, willow, and ash. During the Holocene, as climate conditions became more moderate, Goshen Springs and the surrounding region saw the development of an upland pine forests along with bottomland swamps and marshes near the coasts (Delcourt 1980). Goshen Springs and other sites from the local area differ from sites to the North and East in that vegetation patterns remained largely stable throughout the extent of the full glacial. Reports of pollen records from Cahaba Pond in Northeast Alabama indicate a rise in pine at the terminus of the Younger Dryas implying that the climate was warmer and wetter than in regions to the East (Delcourt 1983).

On the Inner Coastal Plain Watts has provided a detailed description of the paleovegetation for the past 20,000 years based on the analysis of pollen from a sediment core obtained from White Pond, South Carolina, a site located in the uplands of Central South Carolina (Watts 1980). The pollen record from White Pond contains a continuous pollen record spanning from 20,000 through 8500 cal yr BP. During the last glacial maximum (LGM) boreal

forests were the dominant vegetation type from approximately 23,500 to 14,500 cal yr BP. (Watts 1980). Pine comprised as much as 90% of the upland pollen at the site across this period. However, a significant percentage of herbaceous pollen (grasses, sagebrush, and smartweed) also appears in the pollen profile from White Pond at this time, the extent to which would not be possible to form under a closed canopy forest (Watts 1980).

By 15,000 cal yr BP. an increase in the abundance of oak and hickory suggest that deciduous taxa were beginning to invade as climate was becoming more moderate. Accordingly mesic deciduous forest vegetation dominated the pollen spectra between approximately14,500 and 10,600 cal yr BP. (Watts 1980) demonstrating a marked decline in northern pine species across mid-latitudes of the Southeast (Delcourt et al. 1983; Delcourt and Delcourt 1985; Leigh 2006). Between 13,000 and 9500 cal yr BP, hickory, beech, and ironwood increase in abundance, while birch, elm, sugar maple, black walnut and hemlock are exclusive to this period (Watts 1980). The site transitioned to a swamp forest after 10,600 cal yr BP. (Watts 1980).

Based on the results of pollen and lithostratigraphic analysis of sediment cores spanning the past 30,000 years from sites across the Southeast U.S., a number of interesting patterns emerge (Table A6-1) Prior to the LGM, Coastal Plain sites are dominated by oak, scrub oak, and high occurrences of deciduous taxa. An exception is at Lake Tulane Florida where pine and ambrosia dominate throughout the period. Contemporaneous upland sites such as White Pond, South Carolina and Anderson Pond, Tennessee are characterized by high distributions of coniferous taxa such as spruce, fir and pine. An exception is the Nodoroc Site in Georgia where high abundances of deciduous, coniferous, and herbaceous taxa were found to occur.

During the Last Glacial maximum (LGM) and Last Glacial Interglacial transition (LGIT), most Coastal Plain sites witness a change to pine dominated forests in the north, while southern

sites such as Goshen Springs, Alabama remain in stable equilibrium, dominated by hickory, sweetgum and oak. The increase in coniferous taxa in the North may reflect cooler temperatures associated with the maximum extent of glacial ice advance. By the terminal Pleistocene nearly all sites exhibit a decrease in pine and an increase in deciduous taxa. While these results demonstrate a pattern of similarity in the distribution of vegetation across the Southeast U.S. during the Late Pleistocene, there are exceptions. For example, sites in the southern Mid-South such as Goshen Springs, Alabama consist largely of deciduous taxa throughout the duration of the full glacial while coniferous taxa dominate regions further to the south in Florida during over the course of the same period.

In addition to palynological data, research by Russell et al. (2009) have found that physical and biological evidence supports the potential existence of a "thermal enclave" located between the Southern Appalachian Mountains and the Atlantic coast during the LGM (Russell et al. 2009:1). Accordingly, the Southern Atlantic Slope would have supported a "mosaic" of forests, with an "ecological gradient" trending toward the north, with forests replacing prairies at the 35th parallel. At this boundary, the boreal forests extending from the north were replaced by prairies, and fauna consisting of "browsing proboscideans that had subsisted largely on boreal taxa were replaced by grazing proboscideans" that favored grasslands (Russell et al. 2009;1).

Incorporating recent biological, palynological, faunal and climate data, Russell et al. propose that the Southeast U.S during this period consisted of relatively warm moist climate in a region bounded by cooler drier climate to the north and west. Relatively warm waters generated by the gulf stream were "deflected" to the central Atlantic resulting in increased biodiversity than in "other unglaciated regions of North America" (Russell et al;2009:1). Abundant pollen analyses support the notion that climate south of the maximum extent of glacial advance was

relatively moderate and consisted of relatively warm winters and cooler summers in comparison with prior conditions (Jackson et al. 2000).

The changing paleoenvironmental conditions of the Late Pleistocene, combined with associated changes in biotic resource distributions, would have greatly impacted human populations occupying regions of what is today the Southeast U.S. Increases in the distribution of deciduous plant taxa across the lower Southeast U.S during the terminal Pleistocene could have led to the exploitation of these species by humans to serve as an added dietary supplement, or for use as fuel. The buried deposits at the Topper Site present another opportunity to test for fossil pollen preservation at a stratified Clovis quarry-related site in the Southeast U.S.

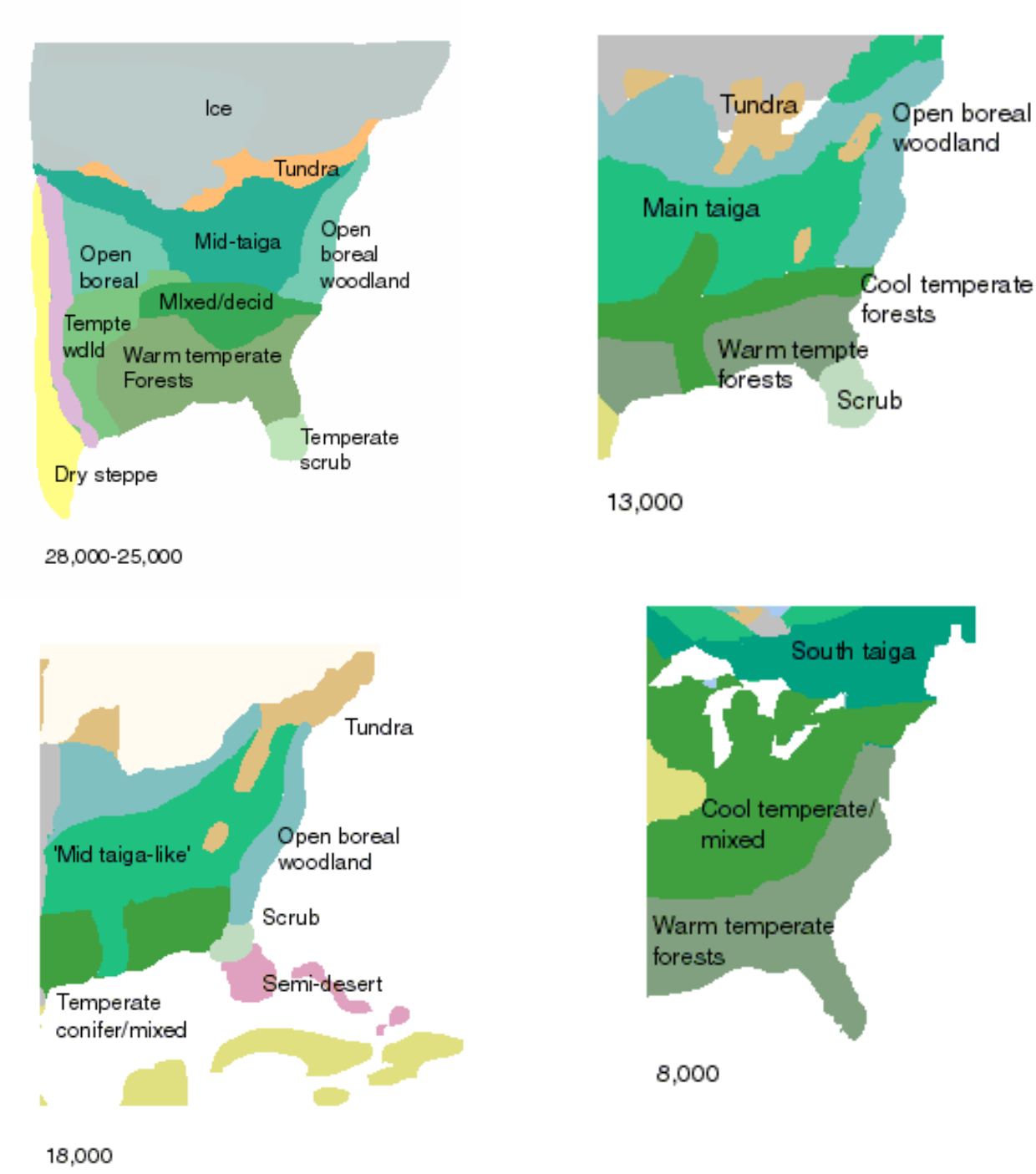


Figure A6-1
Generalized Paleovegetation reconstruction for selected time intervals: A; 28,000-25,000 cal yr BP, B; 18,000 cal yr BP, C; 13,000 cal yr BP, D; 8,000 cal yr BP. (Images adapted from Delcourt and Delcourt 1984.

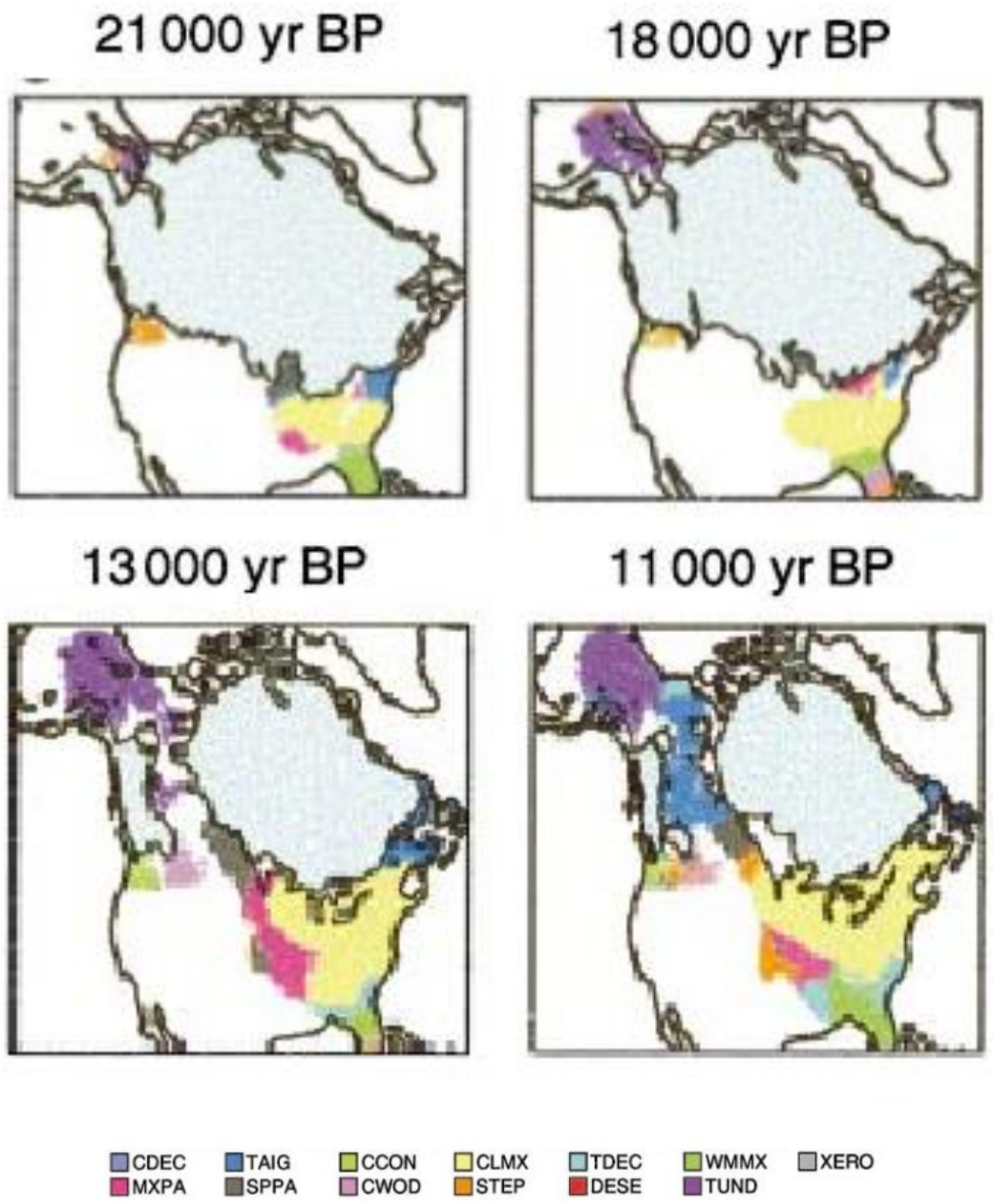


Figure A6-2
Paleovegetation reconstruction for Eastern North America since the Last Glaciation by Williams et al. 2004).Key: CCON=cool conifer forest, CDEC = cool deciduous forest, CLMX = cool mixed forest, CWOD = conifer woodland, DESE = desert, MXPA = mixed parkland, SPPA = spruce parkland, STEP = steppe, TAIG = taiga, TDEC = temperate deciduous forest, TUND = tundra, WMMX = warm mixed forest, XERO = xerophytic scrub

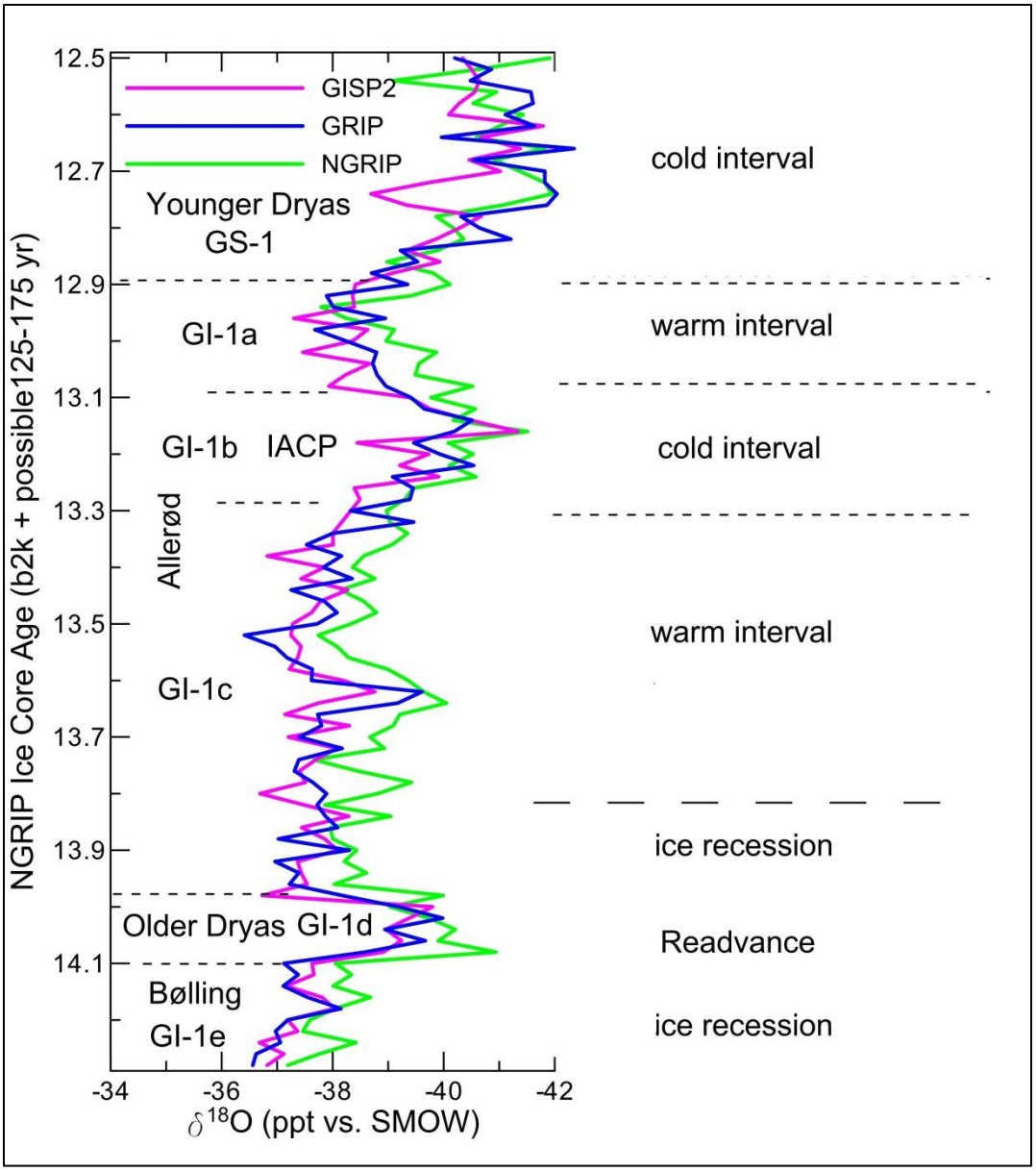


Figure A6-3
Reconstruction of Late Pleistocene Climate from oxygen isotope ratios from NGRIP Ice core.
(Adapted from Ridge and Toll 1999).



Figure A6-4
Selected southeastern (U.S.) sites where sediment cores have been extracted for paleoenvironmental reconstruction.

Site	>20ka	15—20ka	10—15ka	<10ka
White Pond, SC	Jack Pine, Spruce, Artemesia	Pine	Oak, Hickory	Oak, Hickory, Beech, Birch, Elm, Walnut, Ironwood, Hemlock
Anderson Pond, TN	Pine Spruce, Fir	Oak, Pine	Oak, Hickory, Birch, Walnut	Mixed mesophytic
Goshen Springs, AL	Oak, Sweetgum, Hickory	Oak, Sweetgum, Hickory	Oak, Sweetgum, Hickory, Elm, Beech, Birch, Ironwood, Willow, Ash	Pine, bottomland swamps
Rockyhock Bay, NC	Oak, Alder, Sedge, Birch, Horn-beam, Hazel, Grass	Pine, Fir, Spruce	Pine	Oak, Hemlock, shallow water taxa
Sandy Run Creek GA	Pine	Pine, Grass	Alder, Oak, Grass	Tupelo, Oak
Nodoroc Site, GA	Oak, Spruce, Fir, Hickory, Herb, Shrub, (Wetland)			
Lake Tulane FL	Pine, grass, Ambrosia	Oak, Pine late	Oak	Oak, Pine late

Figure A6-5
Vegetation taxa for selected Southeastern Sites.

Sources: Delcourt 1979; Delcourt and Delcourt 1980; Jackson and Whitehead 1993; LaMoreaux et al. 2009; Watts 1980; Watts and Hanson 1993; Whitehead 1981.



Figure A6-6
Image of Savannah River with modern vegetation near the Topper Site (38AL23).

Table A6–1
Table of Marine Isotope Stages

MIS Stage	**Start Date (Cal yr. B.P.)**	**Cooler or Warmer**
MIS 1	11,600	warmer
MIS 2	24,000	cooler
MIS 3	60,000	warmer
MIS 4	74,000	cooler
MIS 5	130,000	warmer
MIS 5a	85,000	warmer
MIS 5b	93,000	cooler
MIS 5c	106,000	warmer
MIS 5d	115,000	cooler
MIS 5e	130,000	warmer
MIS 6	190,000	cooler
MIS 7	244,000	warmer
MIS 8	301,000	cooler
MIS 9	334,000	warmer
MIS 10	364,000	cooler
MIS 11	427,000	warmer
MIS 12	474,000	cooler
MIS 13	528,000	warmer
MIS 14	568,000	cooler
MIS 15	621,000	cooler
MIS 16	659,000	cooler
MIS 17	712,000	warmer
MIS 18	760,000	cooler
MIS 19	787,000	warmer
MIS 20	810,000	cooler
MIS 21	865,000	warmer
MIS 22	1,030,000	cooler

APPENDIX 7

RESULTS OF POLLEN ANALYSIS AT THE TOPPER SITE (38AL23)

In 2012 a pollen analysis was conducted to determine the preservation potential for fossil pollen from the Pleistocene terrace at the Topper Site. This analysis involved the examination of a sediment core obtained via a vibra core from the base of the Pleistocene Terrace at Topper. Figures A7-1 and A7I-2 present the location from which this core was extracted along with the process of extraction. The goal of this analysis was to provide a general description of the paleoenvironment of the site and immediate vicinity during the Quaternary. The core was obtained during the March, 2012 spring field excavation with assistance from Dr. Scott Harris, professor of sediment stratigraphy at the College of Charleston, South Carolina, graduate students from the University of Tennessee, and volunteer labor. Prior to extracting the core, test samples of the Pleistocene terrace sediment matrix were obtained via auger tests (Figure A7-3). The subsequent core was extracted using a mechanical vibracore, and was divided into two sections for transport. The core measured 217cm in length, with section 1 measuring 121cm (Figure A7-4). One half of this core was taken to The University of Tennessee for pollen analysis. The second half of the core was sent to be analyzed for paleomagnetism with the goal being to serve as an alternative method for dating the terrace sediments.

The top of the sediment core begins at 4m below ground surface, well within the alluvial terrace, and from the base of the 2012 archaeological unit excavation. The provenience location from which the core was obtained is N243.05 E142.00 at a depth of 95.15m. The core extends 2.17m into sediments described as dark organic rich black gumbo clay. The top 70cm of the core consist of light brown clayey sand. From 70-80cm there is a strong brown clay. Below this strata, from 80-217cm is a dark brown clay. Figure A7-5 presents points of transition within the sediment matrix of the core. It is not known whether the entirety of the core contains sediment

associated with cultural deposits, though lithic materials having morphological attributes consistent with cultural artifacts were recovered from the base of the archaeological excavation and at the contact with the top of the core at 95.15m

The core was brought to the Pollen research lab in the department of Geography at the University of Tennessee for analysis. In the lab, individual sediment samples were initially taken along the vertical profile of the sediment core at two arbitrary intervals. Two specimen slides were prepared and analyzed using a binocular compound microscope under a 40x objective. Each slide was systematically scanned in vertical transects. Slides were labeled numerically (H2CI 91-92, H2CI 114-115) and examined according to their depth within the core. Accordingly, slide 1 is from 91-92 cm, (94.09-94.08m) while slide 2 is from 114-115cm (93.86-93.85m).

The results of the pollen analysis are presented in Figure A7-6 and Table A7-1. From the first slide, (H2CI 91-92) a total of 377 pollen grains were identified consisting of 20 individual pollen types. In addition, charcoal, fungal spores, and indeterminate bladders were also identified. Of the pollen types identified from the sample, Oak *(Quercus)* was the most abundant comprising 32% of the sample. Other types identified include coniferous indeterminate bladders (29%), Pine (*Pinus)* (7%), Spruce (*Picea)* (6%), Grass (5.5%), Sweetgum (*Liquidambar)* (3%) Moss (3.8%), Box Elder *(Acer negundo)* (2%), and Ragweed (*Ambrosia)* (1.1%). Pollen types with less than 1% representation include Daisy (*Asteracaea),* Wormwood *(Artemesia),* Nettle, American Chestnut *(Castanea dentate),* Birch *(Ostrya),* Sage, Larch *(Larix),* Ash *(Fraxinus),* Water Lilly *(Nuphar lutea),* Dogwood *(Cornacae),* and Fir (*Abies.)*

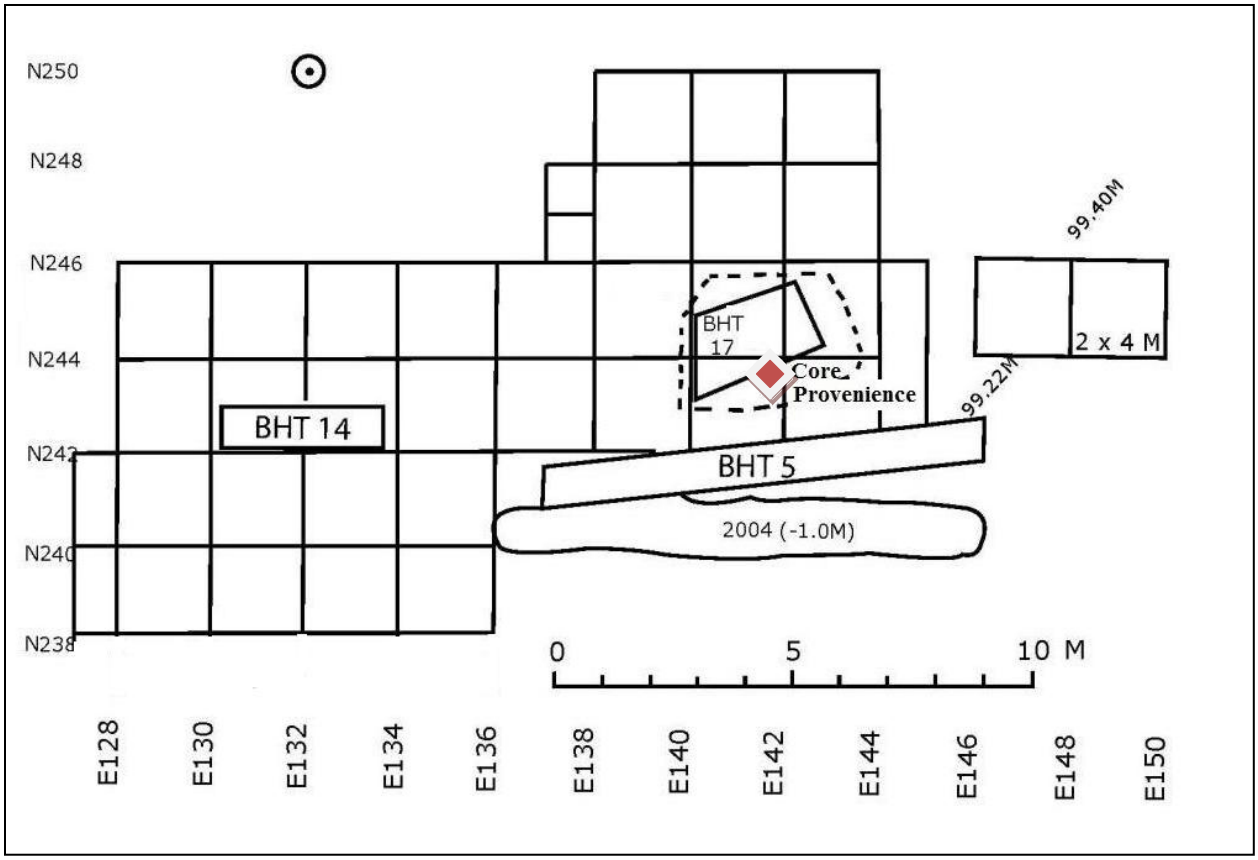
The second, deeper slide contains a total of 20 pollen types in addition to charcoal, fungal spores, and indeterminate bladders. Oak again was the most abundant pollen type representing

32.5% of the sample. Other pollen types identified from this slide include coniferous indeterminate bladders (24.4%), Pine (*Pinus)* (10%), Ragweed *(Ambrosia)* (5.2%), Moss (5.2%), Grass (4%), Red Ash (*Fraxinus pennsylvanica)* (3%), and *Picea* (1.7%). Other pollen types present, though with less than 1% representation include Daisy (*Asteracaea),* Wormwood *(Artemesia),* Box Elder *(Acer negundo), Sage,* Sweetgum (*Liquidambar),* Ironwood (*Carpinus caroliniana),* Aquatic Plants *(Nymphae),* Black Gum *(Nyssa sylvatica),* Water Milfoil *(Myriophyllum alterniflorum),* Ash *(Fraxinus),* and Larch (*Larix).* Fir *(Abies)* was absent from slide two (H2CI 114-115).

A number of interesting patterns emerge from the analysis. Coniferous taxa are found in more abundance from slide H2CI 91-92. This pattern may be interpreted as a cooler, boreal climate for the period of sediment deposition contained within slide H2CI 91-92 due to the higher panacea pollen counts observed from this slide. The presence of a number of aquatic plant taxa from slide H2CI 114-115 (*Carpinus caroliniana, Nymphaea, Nyssa sylvatica, Myriophyllum alterniflorum*) suggest that conditions at Topper during the period these pollen were deposited is consistent with a floodplain environment, or near the border of a stream or swamp, with deep moist soil.

In sum, the results of this analysis suggest a change in vegetation at Topper during the Quaternary from temperate, moisture thriving taxa, to that of species which are boreal in nature and thrive in cooler environments. The results of the analysis could be interpreted as a pattern of general cooling from the period represented between slides H2CI 114-115 and H2CI 91-92. However, based on the low pollen counts in general, combined with the high number of undifferentiated pinaceae bladders observed from the samples, this interpretation is preliminary, and more data is needed to verify or refute these results.

Based on the radiocarbon dates obtained from Waters (et al. 2009) analysis, the sediments contained within the core are at minimum 50,000 cal yr BP. Therefore, taking these prior dates into consideration, the paleovegetational data reconstructed from the sediment core could reflect a paleoenvironmental transition from the Eemian Interglacial (120,000 cal yr BP) to 100,000 cal yr BP. However, this pattern could also reflect a climate transition that occurred approximately 60,000 -55,000 cal yr BP. More precise dating of the terrace sediments using alternative techniques is also necessary in order to establish the exact timing of the changes identified in the reconstructed pollen sequence at Topper.



Appendix 7–1

Provenience location for vibra sediment core sample relative to the site grid at Topper.
Provenience; N243.05 E142.00 at a depth of 95.15m







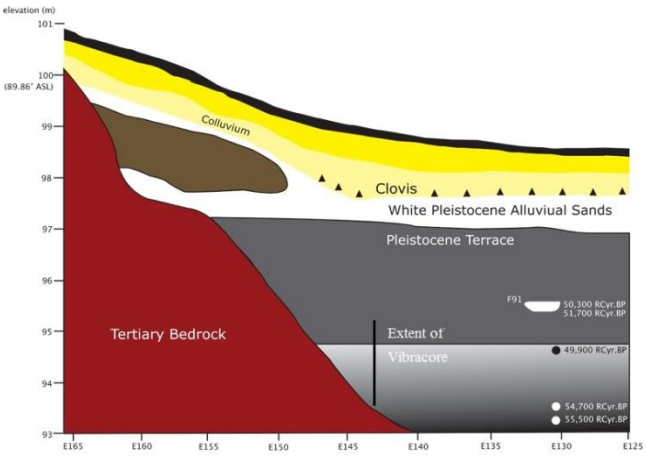


Figure A7–2

Left and Top Right; Vibracore extraction from the Pleistocene Terrace at Topper Site, March 2012. Right Center and Right bottom; Photos showing provenience location of sediment core.



Figure A7–3
Dr. Scott Harris of College of Charleston conducting auger test of base of Pleistocene Terrace excavation in March of 2012

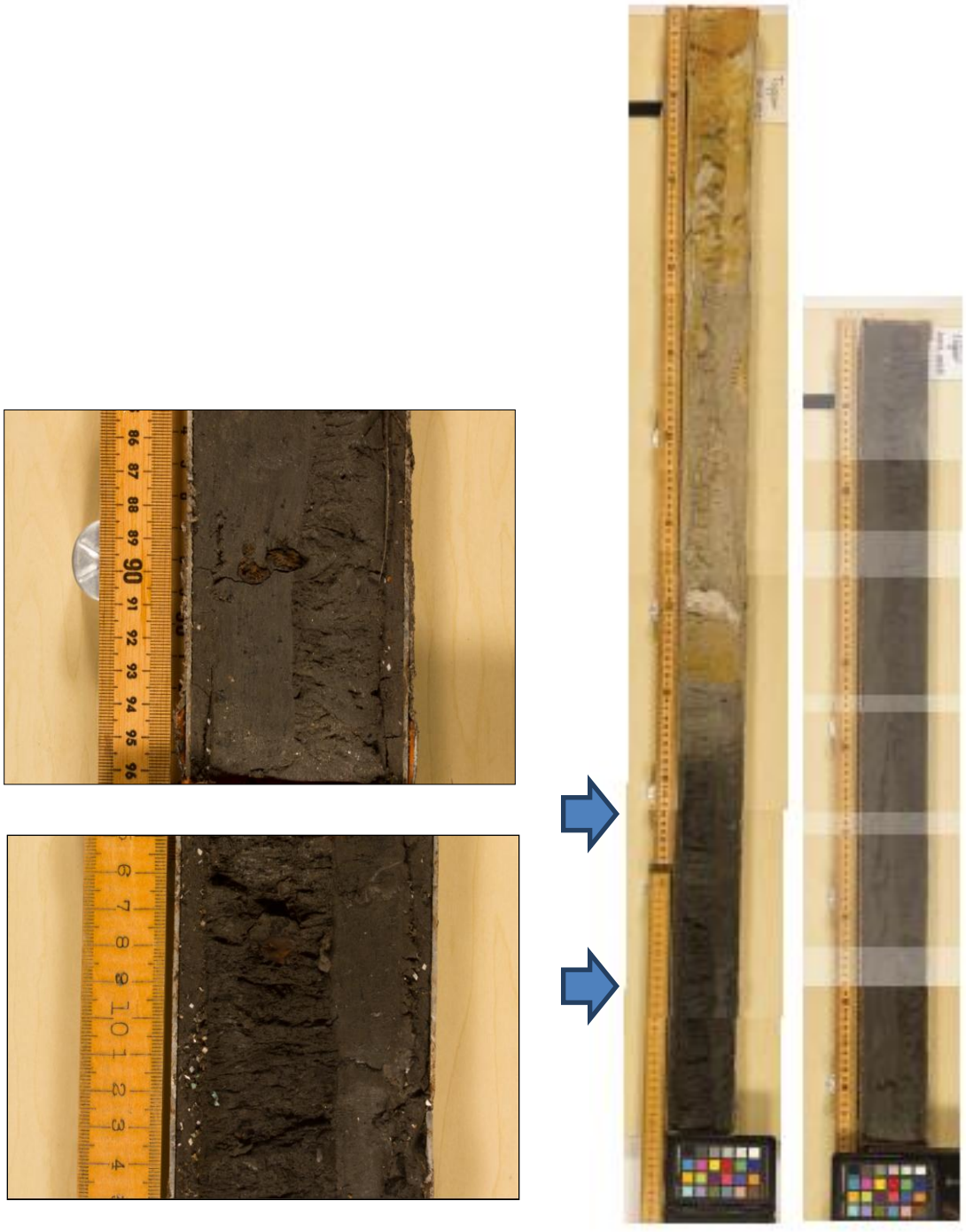
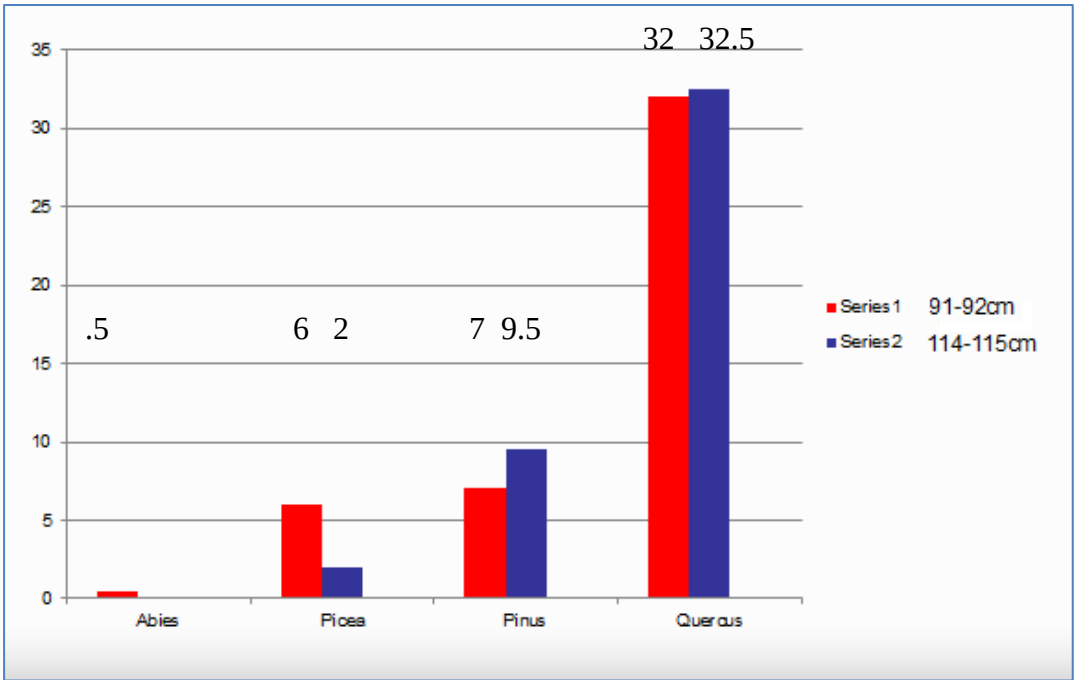


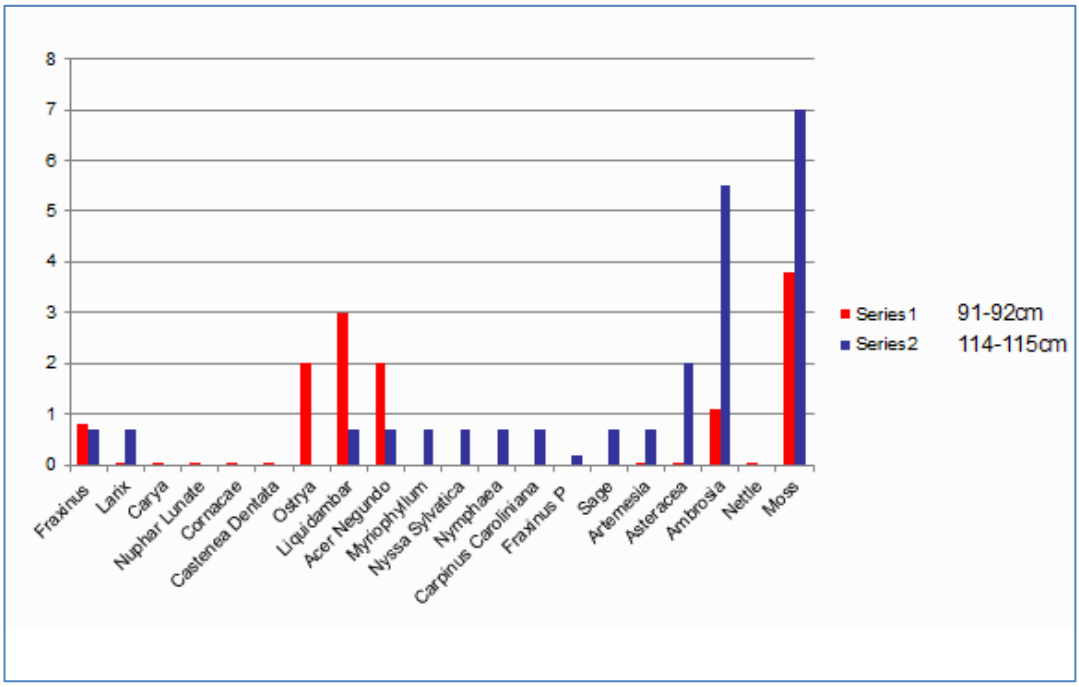
Figure A7–4
Image of sediment core taken from the base of the alluvial Terrace at the Topper Site The top section of core is at center. Macrobotanical remains are visible in photographs at left. Arrows point to where the close up segments came from. Core taken March, 2012.



Figure A7–5
Transitions between different sediment types from 2.17m core extracted from base of Terrace excavation.



A



B

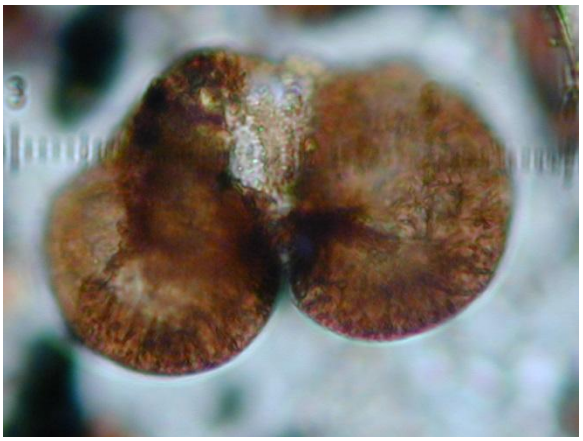
Figure A7–6

Percentage of Pollen counts by type for selected species from the sediment core taken from the base of Pleistocene Terrace at the Topper Site (38AL23), Allendale County, S.C. A; Distribution of Abies, Picea, Pinus, and Quercus, B; Distribution of additional pollen types. Y axis indicates percentage of pollen, x axis indicates species.

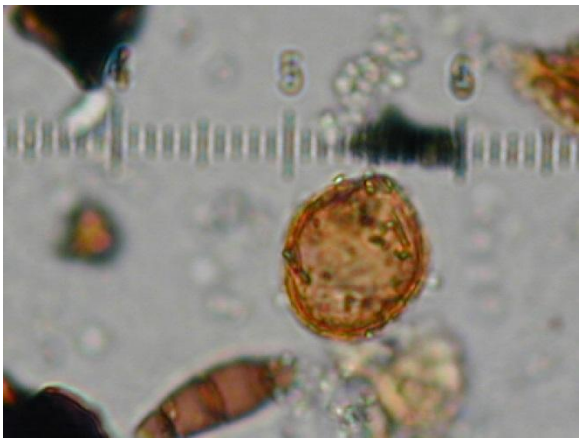
Table A7–1
Pollen counts by type from two slides examined from a sediment core taken from the base of the Pleistocene Terrace excavation at Topper.

Taxa	**Sample HCL 91-92**		**Sample HCL 114-115**	
	Count	Percent	Count	Percent
Picea	22	6	3	2
Pinus	24	7	12	9.5
Abies	2	.5	0	0
Ind. Bladder	99 (n/ 2 =49.5)	29	36 (n /2 =18)	28.5
Larix	1	.2	1	.7
Fraxinus	3	.8	1	.7
Carya	1	.2	-	0
Nuphar lutae	1	.2	-	0
Cornaceae	1	.2	-	0
Quercus	109	32	41	32.5
Castanea	2	.5	0	0
Ostrya	7	2	0	0
Liquidambar	10	3	1	.7
*Charcoal	3	-	12	-
Grass	19	5.5	6	4
**Lycopodium*	19	5.5	13	10.3
*Spores	18	-	4	-
Acer	7	2	1	.7
*Fungal spore	8	-	9	-
Ambrosia	4	1.1	7	5.5
Asteraceae	2	.5	3	2
Artemesia	1	.2	1	.7
Urticaceae	1	.2	0	0
Moss	13	3.8	9	.7
Myriophyllum			1	.7
Nyssa			1	.7
Nymphacae			1	.7
Carpinus			1	.7
Fraxinus			3	2
Sage			1	.7
Total Identified	**377**		**168**	
****TotalPollen**	**280**		**112**	

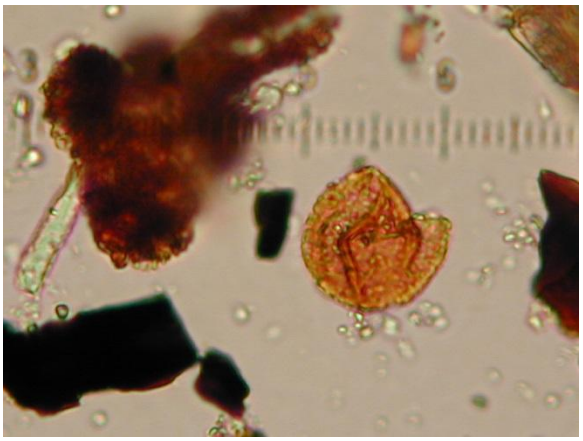
* Not included in Total Pollen Count** Undifferentiated Pinaceae bladders / by 2.



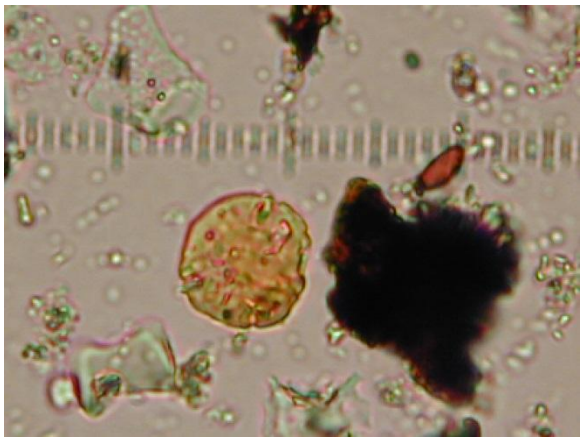
A



B



C



D

Figure A7–7
Pollen Grain Identified from the Topper Hillside (Smallwood n.d.)
A; Pine pollen (10cmbs) from modern sample, B; Hickory pollen grain, Pleistocene Sample, C; Degraded oak pollen grain with torn exine from Pleistocene-age sample, D; Degraded oak (*Quercus*) pollen grain from Pleistocene-age sediment sample. (Images courtesy of Ashley Smallwood).

APPENDIX 8

INITIAL SITE DISCOVERY AND RESULTS OF 1984 CHERT SURVEY AND AUGER TEST ON ACHROMA PROPERTY, FORMERLY THE CLARIANT AND SANDOZ PROPERTY

The presence of prehistoric quarrying activity in Western Allendale County was first documented by James B. Stoltman who conducted a survey of the Red Bluff quarries near Allendale, SC South Carolina as part of a Harvard expedition in 1964 (Goodyear and Charles 1984; Stoltman 1974. Two quarries were identified at Red Bluff, along the margin of Savannah River Swamp and were subsequently nominated to the National Register of Historic Places in 1971 by Thomas E. Hemmings due to their potential for informing about prehistoric life-ways in the region. Until the early 1980's, the Red Bluff quarries, one of which today is known as the Rice quarry (38AL114), were the only known prehistoric quarry locales to produce high quality Flint River formation chert in South Carolina. In the 1970s and early 1980s, these quarries, along with a series of outcrops across the Savannah River in Georgia, were hypothesized to be the primary source of chert artifacts recovered in South Carolina (e.g., Goodyear and Charles 1984; Anderson et al. 1979: 10-12; Goodyear et al. 1979: 199) (Figure A8-1).

In 1973 an archaeological site was recorded by Dr. Don Sutherland on a floodplain terrace and an adjacent bluff overlooking the Savannah River on the property of the Sandoz Corporation, near Martin, SC, in Western Allendale County. This site (38AL23) would eventually come to be known as Topper, although at the time that it was recorded it was not known that the site was quarry-related (Goodyear personal communication 2014). In 1981 a local landowner named David Topper noticed high concentrations of Allendale chert outcroppings on the site, and above the second alluvial terrace along the east bank of the Savannah River. In June of 1981, Topper brought this discovery to the attention of Dr. Albert Goodyear of the South Carolina Institute of Archaeology and Anthropology (SCIAA), who was interested in the outcropping's potential for containing evidence of prehistoric use.

The quarry and associated escarpment, upon being shown to institute staff by David Topper, was designated the site number of 38AL139 (Goodyear and Charles 1984:80). According to Goodyear, the alluvial "terrace immediately adjacent to, and below the quarry had been previously entered into the South Carolina archaeological site file system as 38AL23" by Sutherland (Goodyear 1986:3). Although today, both 38AL23 and 38AL139 are essentially one site occupying two separate landforms, they were given two distinct site numbers. Figure A8-2 presents the dimensions of sites 38AL23 and 38AL139 alongside the distribution of auger test locations from the 1984 work. Because the material culture recovered from these sites "constitute in reality an archaeological whole, the name Topper was used to refer to both AL23 and AL139 collectively" (Goodyear 1986:3). When abundant Clovis artifacts were recovered on the Hillside and Hilltop portion of the Topper Site in 2004, the site number 38AL139 was dropped and the area subsumed under the designation 38AL23. However, because both sites were referred to as separate entities prior to 1998, both site numbers are used in the text of this chapter when discussing the contents of the assemblages recovered from the hilltop (38Al139), and floodplain Terrace (38Al23) during the first three seasons of fieldwork (1984-1986).

In 1983 and 1984, Tommy Charles, with the assistance of Albert C. Goodyear, conducted a survey of all exposed and eroded land surfaces in the western Allendale County, S.C. area, and identified 25 quarry related sites and 13 chert quarries (Goodyear and Charles 1984) Tables A8-1 through A8-20 present the of results of the 1984 Chert Survey and Auger Test on the Sandoz/Clariant/Achroma Property. These quarries typically consisted of exposed Allendale chert outcrops and associated scatters of lithic detachments. An example of one such quarry is presented in Figure A8-3. The results of the quarry survey were published as part of the University of South Carolina Research Manuscript Series (Goodyear and Charles 1984). The

initial survey strategy was opportunistic, and included the search for and collection of lithic materials from fire breaks, creeks, and all exposed eroded surfaces on the Sandoz property (Goodyear and Charles 1984: 8). If determined necessary, subsurface excavations were carried out with the aid of an 8-inch bucket auger, and were conducted in order to establish the depth of stratified lithic cultural materials (Goodyear and Charles 1984:13,80). The size of the auger allowed for the recovery of materials in 15cm levels without contamination from the margins of the hole (Goodyear and Charles 1984:13). Sites were auger tested in 15cm levels with sediments screened using 1/4 inch mesh. The section that follows presents the material culture by type and depth recovered from each quarry site tested from the study area. Appendix 9 presents the quantity and type of artifacts recovered from the 1984 site survey.

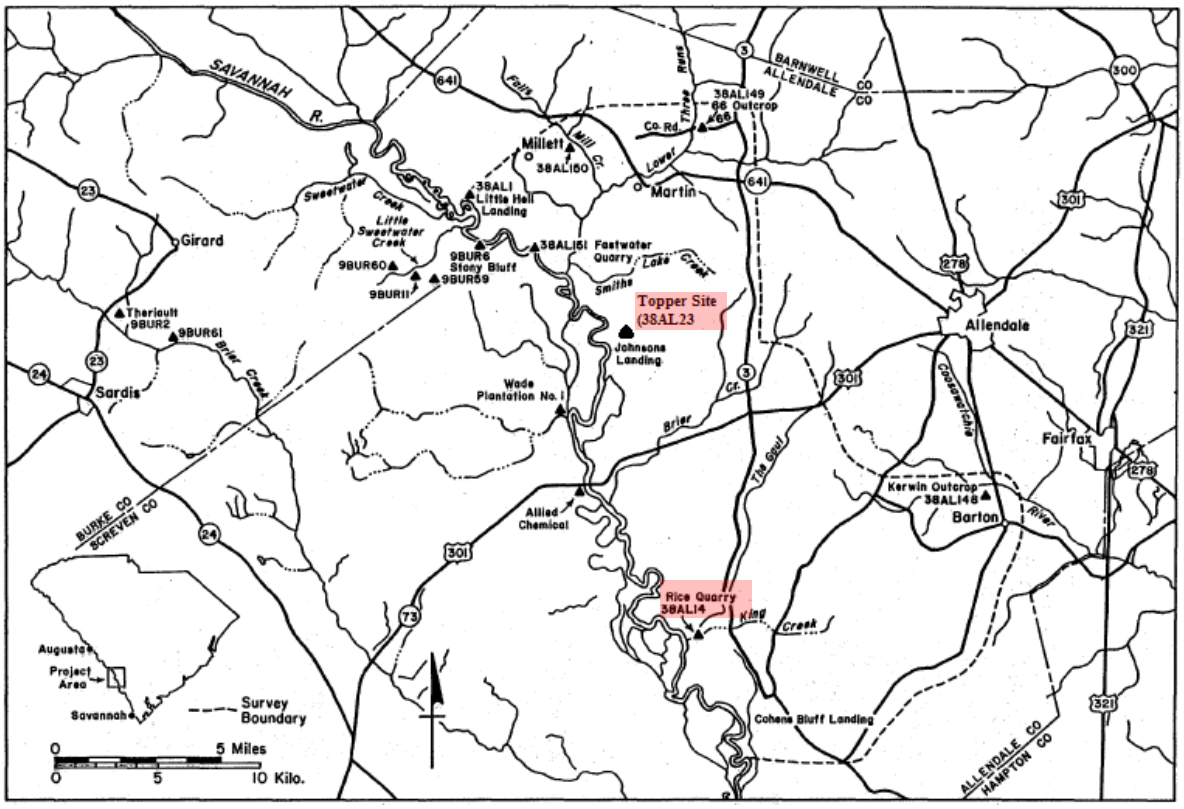


Figure A8-1
Location of Red bluff (Rice Quarry) and Topper Site (38AL23) in Western Allendale County, SC. (Map adapted from Goodyear and Charles 1984).

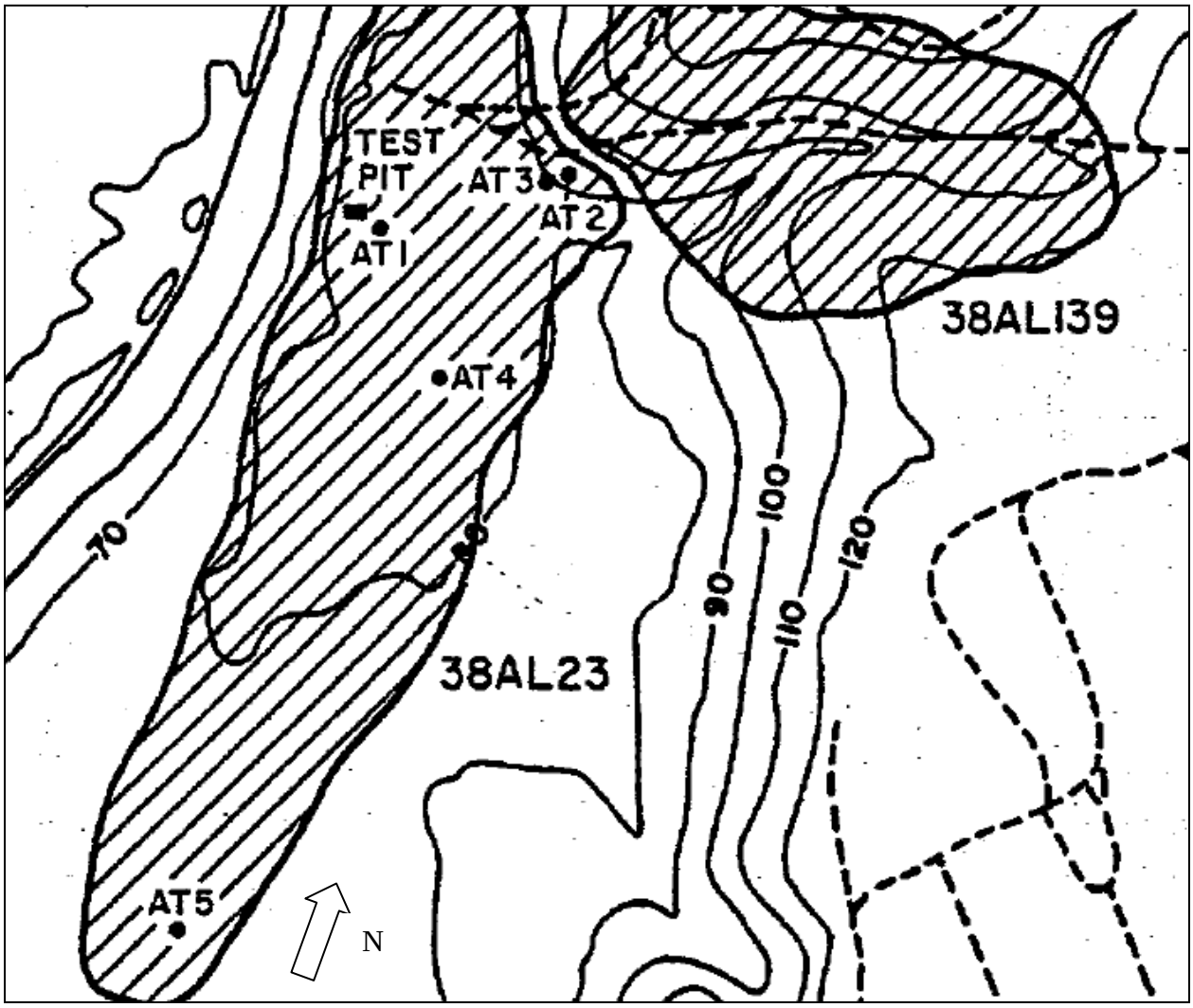


Figure A8-2
Map of Topper Site as depicted through first three field seasons showing locations of Auger Tests (AT) and Test Pit 1 conducted in 1984 at the Topper Site.



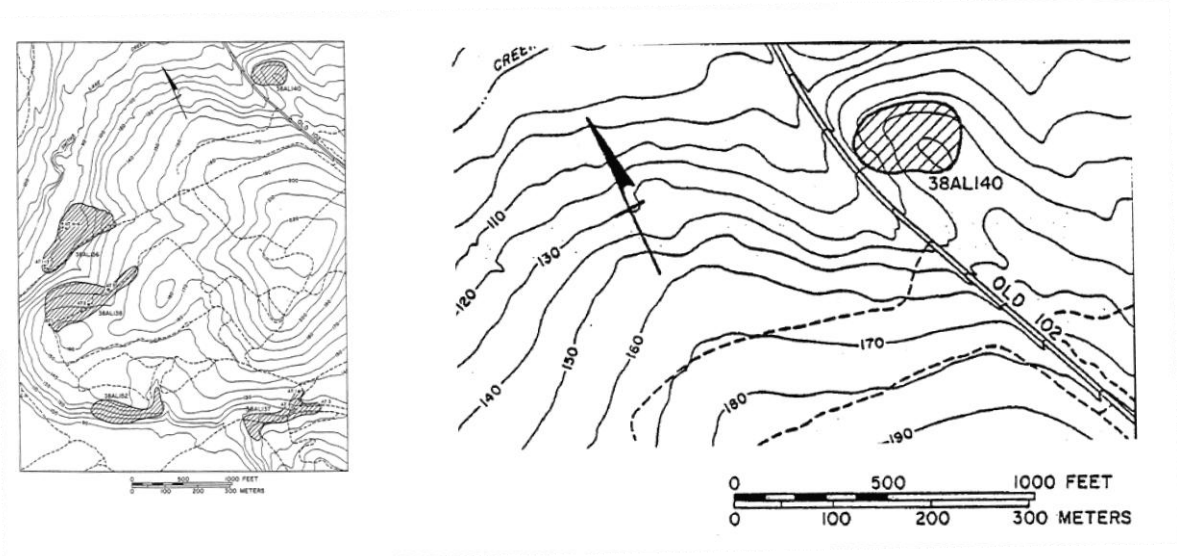


Figure A8-3,4

Quarry Site 38AL140, a chert outcrop and quarry area, on the property of the former Sandoz plant, now Achroma in western Allendale County, SC. July 1984. The location of 38AL140 relative to Topper is presented in Figure 3-3.

Table A8-1

Results of 1984 Chert Survey for site 38AL136. Materials recovered from Auger test 1. (Adapted from Goodyear and Charles 1984). Artifact types by depth (cm).

Depth (cm)	0-15	15-30	30-45	45-60	60-75	75-90	90-105	105-120	120-135
38AL136									
FCR									
Chunk			1	4					
Decort				1	1				
Second.			1	2	7				
Tert.		1	1						
Bif. Flk.		3	14	54	15				
Ut. Flk.									
Ret. Flk.									
Uniface									
Core									
Cobble									
Biface									
Preform									
Blank									
Pottery									
Quartz									
Flakes		4	17	61	23				
Sum wt.(g)		11.9	7.1	57.3	.94				
Av. Wt. (g)		3	.42	.94	1.06				

Table A8-2

Results of 1984 Chert Survey for site 38AL136. Materials recovered from Auger test 2. (Adapted from Goodyear and Charles 1984). Artifact types by depth (cm).

Depth (cm)	**0-15**	**15-30**	**30-45**	**45-60**	**60-75**	**75-90**	**90-105**	**105-120**	**120-135**
38AL136									
FCR									
Chunk			1						
Decort									
Second.									
Tert.									
Bif. Flk.	1	4	1	6					
Ut. Flk.									
Ret. Flk.									
Uniface									
Core									
Cobble									
Biface									
Preform									
Blank									
Pottery									
Quartz				1					
Flakes	1	4	2	7					
Sum wt.(g)	.3	.9	.2	4					
Av. Wt. (g)	.3	.22	.1	.57					

Table A8-3

Results of 1984 Chert Survey for site 38AL136. Materials recovered from Auger test 3. (Adapted from Goodyear and Charles 1984). Artifact types by depth (cm).

Depth (cm)	**0-15**	**15-30**	**30-45**	**45-60**	**60-75**	**75-90**	**90-105**	**105-120**	**120-135**
38AL136									
FCR									
Chunk			6	1					
Decort			10	4					
Second.									
Tert.									
Bif. Flk.	5	11	65	36					
Ut. Flk.									
Ret. Flk.									
Uniface									
Core									
Cobble									
Biface									
Preform									
Blank									
Pottery									
Quartz				1					
Flakes	5	11	79	40					
Sum wt.(g)	2.8	4.2	193.5	13.2					
Av. Wt. (g)	.56	.38	2.45	.33					

Table A8-4

Results of 1984 Chert Survey for site 38AL136. Materials recovered from Auger test 5. (Adapted from Goodyear and Charles 1984). Artifact types by depth (cm).

Depth (cm)	**0-15**	**15-30**	**30-45**	**45-60**	**60-75**	**75-90**	**90-105**	**105-120**	**120-135**
38AL136									
FCR									
Chunk			3	4	3				
Decort				1					
Second.				2	2				
Tert.			5	29	51	6			
Bif. Flk.									
Ut. Flk.					1				
Ret. Flk.									
Uniface									
Core						1			
Cobble									
Biface									
Preform									
Blank					1	1			
Pottery									
Quartz			1		6				
Flakes			17	45	78	8			
Sum wt.(g)			27.1	162	172.6	5.6			
Av. Wt. (g)			1.59	3.6	2.21	0.70			

Table A8-5

Results of 1984 Chert Survey for site 38AL136. Materials recovered from Auger test 6. (Adapted from Goodyear and Charles 1984). Artifact types by depth (cm).

Depth (cm)	**0-15**	**15-30**	**30-45**	**45-60**	**60-75**	**75-90**	**90-105**	**105-120**	**120-135**
38AL136									
FCR									
Chunk						5	3	3	
Decort									1
Second.						3	5	2	1
Tert.						9	15	19	2
Bif. Flk.						52	75	29	21
Ut. Flk.						2			
Ret. Flk.									
Uniface									
Core									
Cobble									
Biface									
Preform							1		1
Blank									
Pottery									
Quartz						1	2		
Flakes						71	98	53	25
Sum wt.(g)						52.4	135.8	104	28.7
Av. Wt. (g)						0.74	1.38	1.96	1.15

Table A8-6

Results of 1984 Chert Survey for site 38AL136. Materials recovered from Auger test 7. (Adapted from Goodyear and Charles 1984). Artifact types by depth (cm).

Depth (cm)	**0-15**	**15-30**	**30-45**	**45-60**	**60-75**	**75-90**	**90-105**	**105-120**	**120-135**
38AL136									
FCR									
Chunk			2		1	3			
Decort				1	2	1			
Second.			2	1	3	2			
Tert.			8	11	6	9			
Bif. Flk.			23	48	70	48			
Ut. Flk.									
Ret. Flk.									
Uniface									
Core									
Cobble									
Biface									
Preform									
Blank									
Pottery					1				
Quartz					1	2			
Flakes			35	61	82	63			
Sum wt.(g)			37	94	83	125.3			
Av. Wt. (g)			1.06	1.54	1.01	1.99			

Table A8-7

Results of 1984 Chert Survey for site 38AL138. Materials recovered from Auger test 1. (Adapted from Goodyear and Charles 1984). Artifact types by depth (cm).

Depth (cm)	**0-15**	**15-30**	**30-45**	**45-60**	**60-75**	**75-90**	**90-105**	**105-120**	**120-135**
38AL138									
FCR									
Chunk	1	3	6	4					
Decort									
Second.		1		2	2				
Tert.			3	12	4				
Bif. Flk.	3	5	9	27	26	5			
Ut. Flk.									
Ret. Flk.									
Uniface									
Core									
Cobble									
Biface									
Preform									
Blank									
Pottery									
Quartz				2	28	49	56		
Flakes	4	9	18	45	32	5			
Sum wt.(g)	3.9	37.4	19.6	32.4	17.5	2.5			
Av. Wt. (g)	.97	4.15	1.09	0.72	0.55	0.5			

Table A8-8

Results of 1984 Chert Survey for site 38AL138. Materials recovered from Auger test 2. (Adapted from Goodyear and Charles 1984). Artifact types by depth (cm).

Depth (cm)	**0-15**	**15-30**	**30-45**	**45-60**	**60-75**	**75-90**	**90-105**	**105-120**	**120-135**
38AL138									
FCR									
Chunk	2	3	14	6		2			
Decort					1				
Second.				17		2			
Tert.	8	18	94	44	11	3	4		
Bif. Flk.	4	22	69	33	15	3	4		
Ut. Flk.									
Ret. Flk.									
Uniface									
Core			1	2					
Cobble									
Biface									
Preform									
Blank									
Pottery									
Quartz			1						
Flakes	14	43	177	100	28	10	8		
Sum wt.(g)	64.7	114.4	237	313.8	20.8	8	7		
Av. Wt. (g)	4.62	2.66	1.34	3.14	.74	.8	.87		

Table A8-9

Results of 1984 Chert Survey for site 38AL138. Materials recovered from Auger test 3. (Adapted from Goodyear and Charles 1984). Artifact types by depth (cm).

Depth (cm)	**0-15**	**15-30**	**30-45**	**45-60**	**60-75**	**75-90**	**90-105**	**105-120**	**120-135**
38AL138									
FCR									
Chunk		21	45	16	2				
Decort		3	3	2					
Second.		11	10	6					
Tert.		55	88	22	13	3			
Bif. Flk.		67	50	21					
Ut. Flk.									
Ret. Flk.									
Uniface									
Core									
Cobble									
Biface									
Preform									
Blank									
Pottery									
Quartz				3	2				
Flakes	157	196	67	15	3				
Sum wt.(g)	207.3	266	64.2	19.7	2.7				
Av. Wt. (g)	1.32	1.36	0.96	1.31	0.90				

Table A8-10
Results of 1984 Chert Survey for site 38AL135. Materials recovered from Auger test 1. (Adapted from Goodyear and Charles 1984).
Artifact types by depth (cm).

Depth (cm)	0-15	15-30	30-45	45-60	60-75	75-90	90-105	105-120	120-135
38AL135									
FCR									
Chunk									
Decort						1			
Second.									
Tert.						1			
Bif. Flk.							9	1	
Ut. Flk.									
Ret. Flk.									
Uniface									
Core									
Cobble									
Biface									
Preform									
Blank									
Pottery			3		3				
Quartz									
Flakes							2	9	1
Sum wt.(g)							4.1	1.5	.1
Av. Wt. (g)							2.05	.15	.1

Table A8-11

Results of 1984 Chert Survey for site 38AL137. Materials recovered from Auger test 1. (Adapted from Goodyear and Charles 1984).

Artifact types by depth (cm).

38AL137	0-15	15-30	30-45	45-60	60-75	75-90	90-105	105-120	120-135
FCR									
Chunk									
Decort			3						
Second.		1							
Tert.			2		2		1		
Bif. Flk.				6	7	2			
Ut. Flk.									
Ret. Flk.									
Uniface									
Core									
Cobble									
Biface									
Preform									
Blank									
Pottery									
Quartz									
Flakes		1	5	6	9	2	1		
Sum wt.(g)		.5	3.7	3.8	4.7	4.1	2.6		
Av. Wt. (g)		.5	0.74	0.63	0.52	2.05	2.6		

Table A8-12
Results of 1984 Chert Survey for site 38AL137. Materials recovered from Auger test 2. (Adapted from Goodyear and Charles 1984).

38AL137	0-15	15-30	30-45	45-60	60-75	75-90	90-105	105-120	120-135
FCR									
Chunk	4								
Decort	1	1							
Second.		3							
Tert.		2							
Bif. Flk.	8	5	1		1				
Ut. Flk.									
Ret. Flk.									
Uniface									
Core									
Cobble									
Biface									
Preform									
Blank									
Pottery									
Quartz	1								
Flakes	13	11	1		1				
Sum wt.(g)	39	74	4.2		1.9				
Av. Wt. (g)	3	6.73	4.2		1.99				

Table A8-13
Results of 1984 Chert Survey for site 38AL137. Materials recovered from Auger test 3. (Adapted from Goodyear and Charles 1984).

38AL137	0-15	15-30	30-45	45-60	60-75	75-90	90-105	105-120	120-135
FCR									
Chunk			5	16	18	2			
Decort				5	4	1			
Second.			1	5	10	4			
Tert.			4	39	61	23			
Bif. Flk.		1	4	26	43	9			
Ut. Flk.									
Ret. Flk.									
Uniface									
Core									
Cobble									
Biface									
Preform									
Blank									
Pottery									
Quartz			1	20	33	6			
Flakes		1	14	91	136	39			
Sum wt.(g)		2	94.6	519	227.6	81.1			
Av. Wt. (g)		2	6.76	5.7	1.67	2.01			

Table A8-14
Results of 1984 Chert Survey for site 38AL161. Materials recovered from Auger test 1. (Adapted from Goodyear and Charles 1984).

38AL161	0-15	15-30	30-45	45-60	60-75	75-90	90-105	105-120	120-135
FCR									
Chunk		1	1						
Decort					1				
Second.			1	3					
Tert.	1	3	1	2					
Bif. Flk.	5	12	40	26	6				
Ut. Flk.									
Ret. Flk.									
Uniface									
Core									
Cobble									
Biface									
Preform									
Blank									
Pottery									
Quartz									
Flakes	6	16	43	31	7				
Sum wt.(g)	4.2	14.4	23.5	15.1	5.6				
Av. Wt. (g)	.7	.9	.55	.49	.78				

Table A8-15
Results of 1984 Chert Survey for site 38AL161. Materials recovered from Auger test 2. (Adapted from Goodyear and Charles 1984).

38AL161	0-15	15-30	30-45	45-60	60-75	75-90	90-105	105-120	120-135
FCR									
Chunk									
Decort									
Second.						1	1		
Tert.				1					
Bif. Flk.			1	4	10	6	3		
Ut. Flk.					1				
Ret. Flk.									
Uniface									
Core									
Cobble									
Biface									
Preform									
Blank									
Pottery									
Quartz									
Flakes			1	5	11	7	4		
Sum wt.(g)			2.9	8	7.7	4.1	10.1		
Av. Wt. (g)			2.9	1.6	0.77	0.58			

Table A8-16
Results of 1984 Chert Survey for site 38AL161. Materials recovered from Auger test 3. (Adapted from Goodyear and Charles 1984).

38AL161	0-15	15-30	30-45	45-60	60-75	75-90	90-105	105-120	120-135
FCR									
Chunk			1						
Decort									
Second.				1					
Tert.				2	1				
Bif. Flk.	1	3	2	3	3				
Ut. Flk.									
Ret. Flk.									
Uniface									
Core									
Cobble									
Biface									
Preform									
Blank									
Pottery	1								
Quartz									
Flakes	1	3	2	6	4				
Sum wt.(g)	.5	2.2	4.7	4.4	5				
Av. Wt. (g)	.5	0.73	2.35	0.73	1.25				

Table A8-17
Results of 1984 Chert Survey for site 38AL143. Materials recovered from Auger test 2. (Adapted from Goodyear and Charles 1984).

38AL143	0-15	15-30	30-45	45-60	60-75	75-90	90-105	105-120	120-135
FCR			31						
Chunk				1					
Decort		1		2					
Second.			8	5					
Tert.		3							
Bif. Flk.									
Ut. Flk.									
Ret. Flk.									
Uniface									
Core				1					
Cobble					1				
Biface	4	38	59	25	5				
Preform									
Blank									
Pottery									
Quartz	1		1	1					
Flakes	4	42	67	34	5				
Sum wt.(g)	.9	43.8	47.6	29.5	31				
Av. Wt. (g)	.22	1.04	.71	.87	6.2				

Table A8-18
Results of 1984 Chert Survey for site 38AL143. Materials recovered from Auger test 3. (Adapted from Goodyear and Charles 1984).

38AL143	0-15	15-30	30-45	45-60	60-75	75-90	90-105	105-120	120-135
FCR									
Chunk		1		4	1				
Decort	1	1	1	5					
Second.	2	2	2	9	2	1			
Tert.			4		1				
Bif. Flk.	34	26	1	136	45	11			
Ut. Flk.									
Ret. Flk.									
Uniface									
Core						1			
Cobble	1								
Biface					1	2			
Preform									
Blank					1				
Pottery									
Quartz						2			
Flakes	36	30	69	155	49	12			
Sum wt.(g)	19.8	34.9	27.2	140.3	35.7	6.2			
Av. Wt. (g)	0.55	1.16	0.39	0.90	0.73	0.52			

Table A8-19
Results of 1984 Chert Survey for site 38AL143. Materials recovered from Auger test 4. (Adapted from Goodyear and Charles 1984).

38AL143	0-15	15-30	30-45	45-60	60-75	75-90	90-105	105-120	120-135
FCR									
Chunk			1						
Decort				1	2	2	2		
Second.				1	3	8			
Tert.			1	1	1	1	1		
Bif. Flk.	4	5	34	92	57	52	21	7	
Ut. Flk.									
Ret. Flk.									
Uniface									
Core									
Cobble									
Biface				1					
Preform									
Blank									
Pottery									
Quartz	1			2	3	1	1		
Flakes	4	5	35	95	63	63	24	7	
Sum wt.(g)	1.9	22	26.1	100.2	43.9	80.2	11.6	7.8	
Av. Wt. (g)	0.47	4.4	0.75	1.05	0.70	1.27	0.48	1.11	

Table A8-20
Results of 1984 Chert Survey for site 38AL143. Materials recovered from Auger test 5. (Adapted from Goodyear and Charles 1984).

38AL143	0-15	15-30	30-45	45-60	60-75	75-90	90-105	105-120	120-135
FCR									
Chunk									
Decort		1			1	5			
Second.		1				3			
Tert.									
Bif. Flk.	1	7		15	26	27	7		
Ut. Flk.									
Ret. Flk.									
Uniface									
Core							1		
Cobble									
Biface									
Preform									
Blank									
Pottery			5						
Quartz		1							
Flakes	1	9		15	29	37	7		
Sum wt.(g)	15	11.6		5.2	18.7	62,5	31.5		
Av. Wt. (g)	15	1.29		0.35	0.64	1.69	4.5		

Table A8-21
Lithic Quarry's and related sites on the property of the Clariant corporation, formerly the Sandoz Corporation, Martin, SC. (Adapted from Goodyear and Charles 1984).

Site Number	Quarry	Lithic Processing	Habitation	Maximum Depth (m)
38Al23		X	X	1.5
38AL135		X	X	1.3
38AL136	X	X		1.35
38AL137	X	X		1.05
38AL138	X	X		1.05
38AL139	X	X		.5
38AL140	X	X		.00
38AL141	X	X	X	1
38AL142	X	X	X	1
38AL143		X	X	1.2
38AL145		X	X	.6
38AL146		X	X	.6
38AL152	X	X		.5
38AL161		X	X	1.05

APPENDIX 9

ARTIFACTS RECOVERED FROM SELECT QUARRY SITES ON THE ACHROMA FORMERLY THE CLARIANT AND SANDOZ PROPERTY, WESTERN ALLENDALE COUNTY, SOUTH CAROLINA (GOODYEAR AND CHARLES 1984)

Table A9-1
Artifacts recovered from Select Quarry Sites on the Archroma formerly the Clariant and Sandoz Property, Western Allendale County, South Carolina.

Site	Catalog Number	Quantity	Description	Unit
38AL218	1-1	11	Flakes	Surface
38AL218	1-2	1	Prismatic Blade	Surface
38AL218	1-3	2	Cores	Surface
38AL218	1-4	1	Side Scraper	Surface
38AL218	1-5	3	Biface Blanks	Surface
38AL218	1-6	1	Biface Fragment	Surface
38AL218	1-7	1	Hafted Endscraper	Surface
38AL123	1-1	56	Flakes	Surface
38AL123	1-2	2		Surface
38AL123	1-3	2	Retouched Flakes	Surface
38AL123	1-4	2	Biface Blanks	Surface
38AL123	1-5	2	Biface Cores	Surface
38AL123	1-6	6	Preform Fragment	Surface
38AL123	1-7	1	End scraper	Surface
38AL123	1-8	2	Sidescrapers	Surface
38AL123	1-9	1	MALA BASE	Surface
38AL123	1-10	1	Uniface Core	Surface
38AL123	1-11	2	Fluted Preform	Surface
38AL123	1-12	1	Endscraper	Surface
38AL123	1-13	1	Blade Core	Surface
38AL123	1-14	1	Endscraper	Surface
38AL123	1-15	2	Utilized Flakes	Surface
38AL123	1-16	1	Triangular Point	Surface
38AL123	1-17	1	Earthernware	Surface
38AL219	1-1	16	Flakes	Surface
38AL219	1-2	3	Utilized Flakes	Surface
38AL219	1-3	1	Briar Creek	Surface
38AL219	1-4	1	Quartz Flakes	Surface
38AL219	1-5	2	Cores	Surface
38AL219	1-6	2	Sidescrapers	Surface
38AL219	1-7	1	Endscrapers	Surface
38AL219	1-8	1	Endscraper	Surface
38AL219	1-9	3	Cores	Surface
38AL219	1-10	17	Biface Blanks	Surface
38AL219	1-11	1	TA Biface Blank	Surface
38AL219	1-12	1	Point fragment	Surface

Table A9-1 continued
Artifacts recovered from Select Quarry Sites on the Archroma formerly the Clariant and Sandoz Property, Western Allendale County, South Carolina.

Site	Catalog Number	Quantity	Description	Unit
38AL219	1-13	1	Utilized Flake	Surface
38AL180	1-1	1	Hammerstone	Surface
38AL180	1-2	1	Biface Blank	Surface
38AL180	1-3	1	Biface Frag	Surface
38AL180	1-4	1	TA point Frag	Surface
38AL180	1-5	3	Debitage Chunks	Surface
38AL136	1-1	2	Sherds	Surface
38AL136	1-2	2	Unifaces	Surface
38AL136	1-3	1	Core Frag	Surface
38AL136	1-4	2	Biface Blanks	Surface
38AL136	1-5	1	Flake	Surface
38AL136	1-6	1	Hammerstone	Surface
38AL136	1-7	1	Core	Surface
38AL153	1-1	1	Stemmed Point	Surface
38AL153	1-2	1	Sidescraper	Surface
38AL153	1-3	1	Biface perform	Surface
38AL153	1-4	2	Core fragments	Surface
38AL153	1-5	1	Biface blank	Surface
38AL153	1-6	6	Utilized Flakes	Surface
38AL153	1-7	23	Flakes	Surface
38AL156	1-1	8	Flakes	Surface
38AL156	1-2	1	Core	Surface
38AL156	1-3	1	Flake	Surface
38AL156	1-4	2	Retouched Flake	Surface
38AL156	1-5	1	Biface Blank	Surface
38AL156	1-6	5	Utilized Flakes	Surface
38AL156	1-7	1	Uniface	Surface
38AL156	1-8	2	Biface Preforms	Surface
38AL156	1-9	2	Perform frags	Surface
38AL156	1-10	1	Stemmed Point	Surface
38AL156	1-11	2	Savannah River pt	Surface
38AL156	1-12	1	Morrow Mountain	Surface
38AL156	1-13	1	Guilford pt	Surface
38AL156	1-14	1	Refuge sherd	Surface
38AL135	1-1	5	Utilized Flakes	Surface
38AL135	1-2	1	Denticulate	Surface
38AL135	1-3	53	Flakes	Surface
38AL135	1-4	1	Endscraper	Surface
38AL135	1-5	2	Cores	Surface
38AL135	1-6	2	Bifaces	Surface

Table A9-1 continued
Artifacts recovered from Select Quarry Sites on the Archroma formerly the Clariant and Sandoz Property, Western Allendale County, South Carolina.

Site	Catalog Number	Quantity	Description	Unit
38AL135	1-7	3	TA Bifaces	Surface
38AL135	1-8	1	FCR	Surface
38AL135	1-9	2	TA Flakes	Surface
38AL135	1-10	1	TA Biface frag	Surface
38AL135	1-11	1	flakes	Surface
38AL122	1-1	2	sherds	Surface
38AL122	1-2	3	sherds	Surface
38AL122	1-3	7	sherds	Surface
38AL122	1-4	17	sherds	Surface
38AL122	1-5	8	sherds	Surface
38AL122	1-6	6	Utilized Flakes	Surface
38AL122	1-7	2	Unifaces	Surface
38AL122	1-8	1	Sidescraper	Surface
38AL122	1-9	3	Sidescrapers	Surface
38AL122	1-10	1	Biface Frag	Surface
38AL122	1-11	1	Endscraper	Surface
38AL122	1-12	25	Flakes	Surface
38AL122	1-13	1	Pebble	Surface
38AL122	1-14	1	Hammerstone	Surface
38AL122	1-15	1	Cortical Cobble	Surface
38AL122	1-16	1	Nutting Stone	Surface

APPENDIX 10

RESULTS OF 1984 SURVEY AND LIST OF THE MATERIALS RECOVERED FROM AUGER TESTS (ATS) 1-5 AT THE TOPPER SITE (38AL23)

In July of 1983 and again in February of 1984 the chert survey led by Goodyear and Charles visited the Topper quarry (38AL139). No subsurface testing was carried out within the quarry at this time, as there was too much rock to "learn profitably about core reduction patterns through time in the midst of the source" (Goodyear and Charles 1984:80). However, the results of a surface survey did identify evidence of prehistoric quarrying activity at the Topper outcrop (38AL139). Figure A10-1 presents scatters of exposed chert from the chert outcrop along the hillside at the Topper Site (38AL139). Samples of chert from this locale were classified by Upchurch as a silicified grain-stone (Upchurch 1984). Initial investigations on the Terrace (38AL23) were carried out at Topper in 1984. An uncontrolled surface collection was conducted from a firebreak and an adjacent field. Prehistoric artifacts were recovered including temporally diagnostic pottery and non-diagnostic hafted bifaces (Figures A10-2-4) (Goodyear and Charles 1984). Ceramics recovered from this area include Deptford Linear Check Stamped, Deptford Check Stamped, Thom's Creek Simple Stamped (dowel impressed) and an unknown sherd of curvilinear complicated stamped (Goodyear and Charles 1984:85). Hafted bifaces recovered from the site included a single triangular arrow point and possible Late Woodland stemmed point (Figure 4-6) (Goodyear and Charles 1984:85). Subsequent investigation included the placement of five auger tests, and a 1x2m test pit, the locations for which are presented in Figure A10-5. A list of the materials recovered from 1984 Auger Tests (ATs) 1-5 at Topper is presented in Tables A10-1-A10-5.

Auger Test (AT) 1 was placed in an area overlooking the secondary channel of the river. This test was conducted to determine if the site contained evidence of deeply buried, stratified cultural deposits. The auger test was excavated to a depth of 1.7m resulting in the recovery of flakes to a depth of 90cm, with only sporadic flakes occurring below this depth. According to

Goodyear and Charles "Given the relatively deep nature of the alluvial deposition and nearly a meter of artifactual deposit" additional subsurface excavation was planned and carried out on February 2, 1985 in the form of a single 1m x2m unit, designated Test Pit 1, located on the floodplain terrace of the Savannah River (Goodyear 1986:3; Goodyear and Charles 1984:83). Excavation of this test pit is presented in Figure A10-5.

Artifacts from the Test Pit 1 recovered from 0-15cmbs include ceramic sherds (Refuge Simple Stamped, and rectilinear complicated stamped), chert flakes, and quartz cobble fragments. A dense ceramic zone was identified from 15-30cmbs including 57 sherds, of which 31 were Refuge Simple Stamped (Goodyear and Charles 1984). Pottery was absent below 30cm. Lithics recovered from these depths include two unidentifiable projectile point fragments, and retouched side and end scrapers. From 30-45cmbs there was a reduction in the number and distribution of artifacts. Lithics recovered included a single thermally altered projectile point fragment (stem). This zone was followed by a dense discrete layer of thermally altered flakes and artifacts from 45-60cmbs. Artifacts of note included five bifacial fragments, one core, and two utilized flakes, a projectile point tip, a side notched point, two scrapers, and two triangular point fragments. The scrapers and point fragments are illustrated in Figure A10-3 (c-f) (Goodyear and Charles 1984). In addition to these artifacts over 1,000 flakes and pieces of debitage were also recovered. Artifacts recovered from 60-80cmbs included a retouched end-scraper, a drill and 701 flakes and flake fragments (Goodyear and Charles 1984). Lithic materials were found to exhibit significant weathering from 70-80cmbs, and were pale white in color. From 80-90cmbs a weathered, stained early stage biface was recovered, and below that from 90-110cmbs flakes were recovered but trend occur in decreasing amounts with depth suggesting that they may have "been worked to these depths from above by bioturbation" (Goodyear and Charles 1984:90).

Auger Tests 2 and 3 were placed adjacent to one another and excavated in a location where the terrace meets the hillside slope. Artifacts recovered from these auger tests included a single ceramic sherd from AT2 (15-30cmbs), a chert end-scraper from AT2 (40-60cmbs), and a biface blank from 30-45cmbs in AT3. In addition to these artifacts, numerous flakes were also recovered. Interestingly, many flakes were recovered at great depth, and there was no indication of diminishing flake quantities with depth (Goodyear and Charles 1984:90-91). For example, from both tests a total of 29 flakes were recovered from 135-175cmbs, significantly deeper than the extent in depth of materials recovered from AT1. The results from these tests indicate that the northeastern end of the site has substantial depth (Goodyear and Charles 1984).

AT 4 was excavated approximately 60m south of ATs 2 and 3, and was conducted in order to gather more information about the "lateral depth of the site (Goodyear and Charles 1984:93). Unlike the prior auger tests, the artifact density was sparse in AT4. Accordingly, the extent of the sites deposits at this location was estimated at 1m in depth. The fifth and final auger test was excavated at the extreme southern end of the site. The top 75cm consisted of mottled clay and was devoid of artifacts leading the investigators to suggest that "cultural occupations on this portion of the terrace were probably light" (Goodyear and Charles 1984:93). Due to the stratigraphic integrity of cultural deposits encountered in ATs1-3, site 38AL23 was found to exhibit high potential for archaeological research and further scientific inquiry.



Figure A10-1
Chert outcrop at the Topper Site Hillside (38AL139). (Photo credit: Al Goodyear).

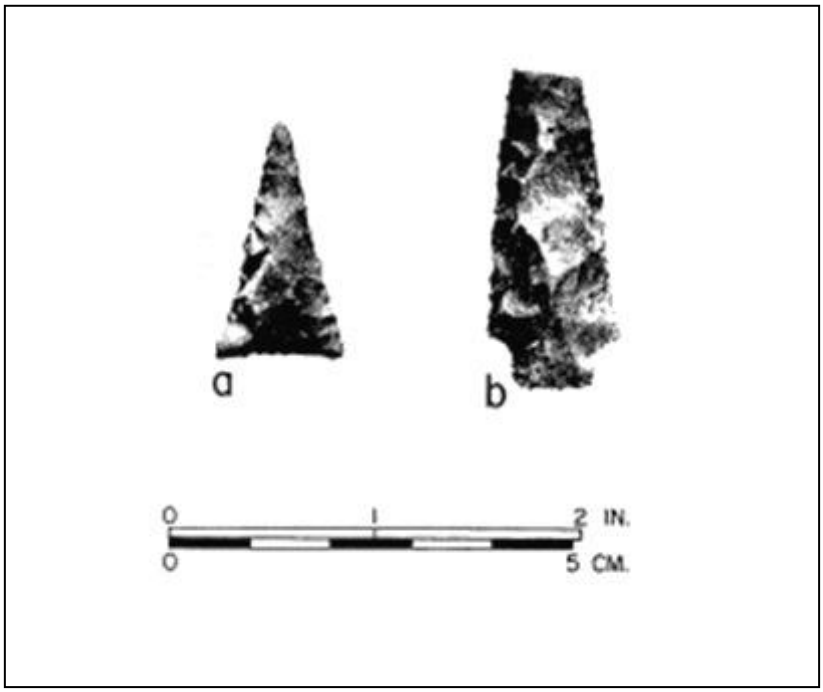


Figure A10-2
Triangular arrow point (a) and possible Late Woodland stemmed point (b) recovered from initial uncontrolled surface collection at 38AL23 1984 (Image adapted from Goodyear and Charles 1984:85).

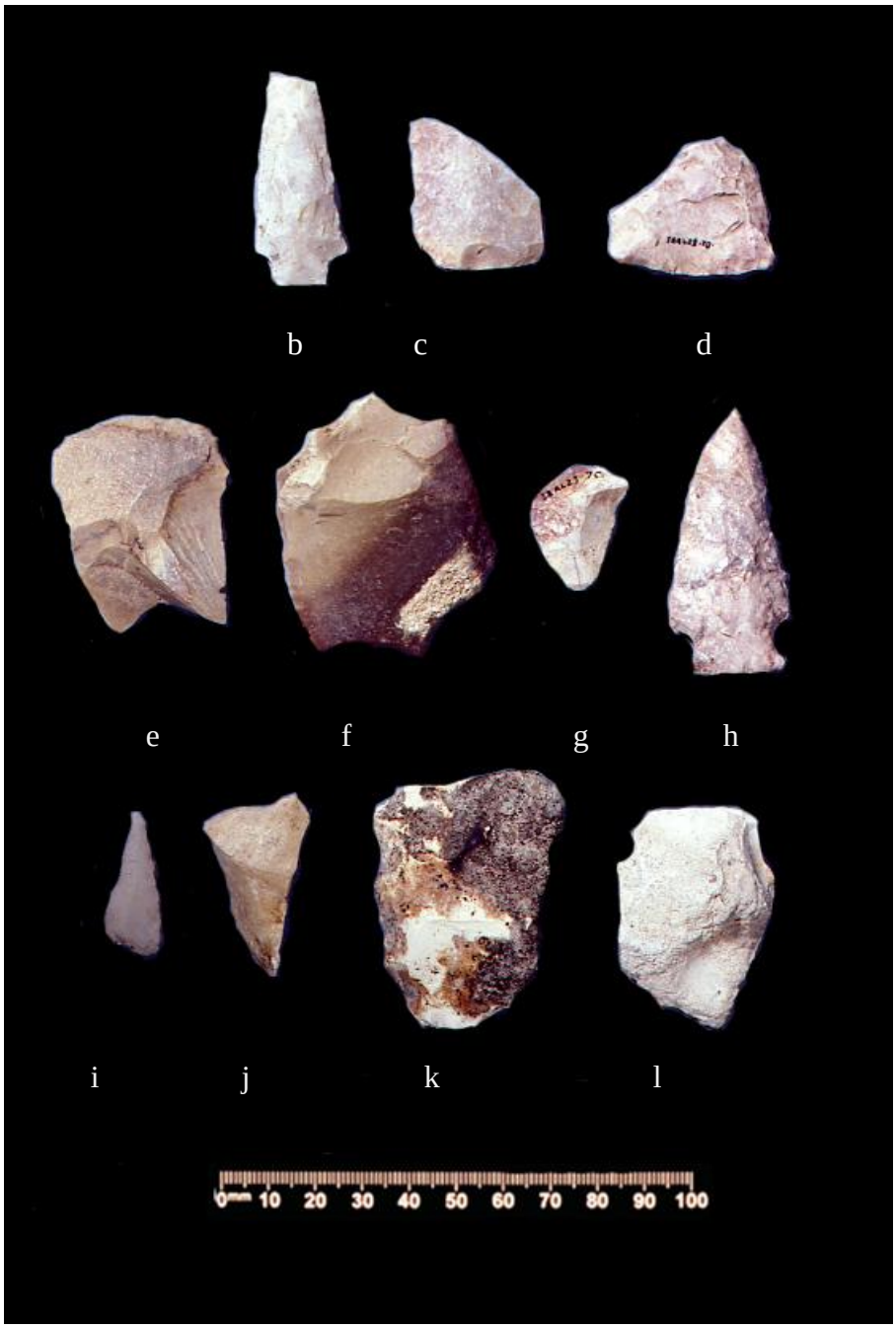


Figure A10-3
Sample of lithic tools recovered from subsurface excavations during the 1984-1985 field seasons at the Topper Site (38AL23). Artifacts include b; Late Woodland stemmed point (surface), c; triangular point preform (15-30cmbs), d; triangular point preform (15-30cmbs), e; endscraper (15-30cmbs), f; sidescraper(15-30cmbs), g; T.A. stemmed point (30-45cmbs), I; drill (60-80cmbs), j; endscraper (60-80cmbs), k; broken biface (90-105cmbs), l; T.A. endscraper (45-60cmbs.

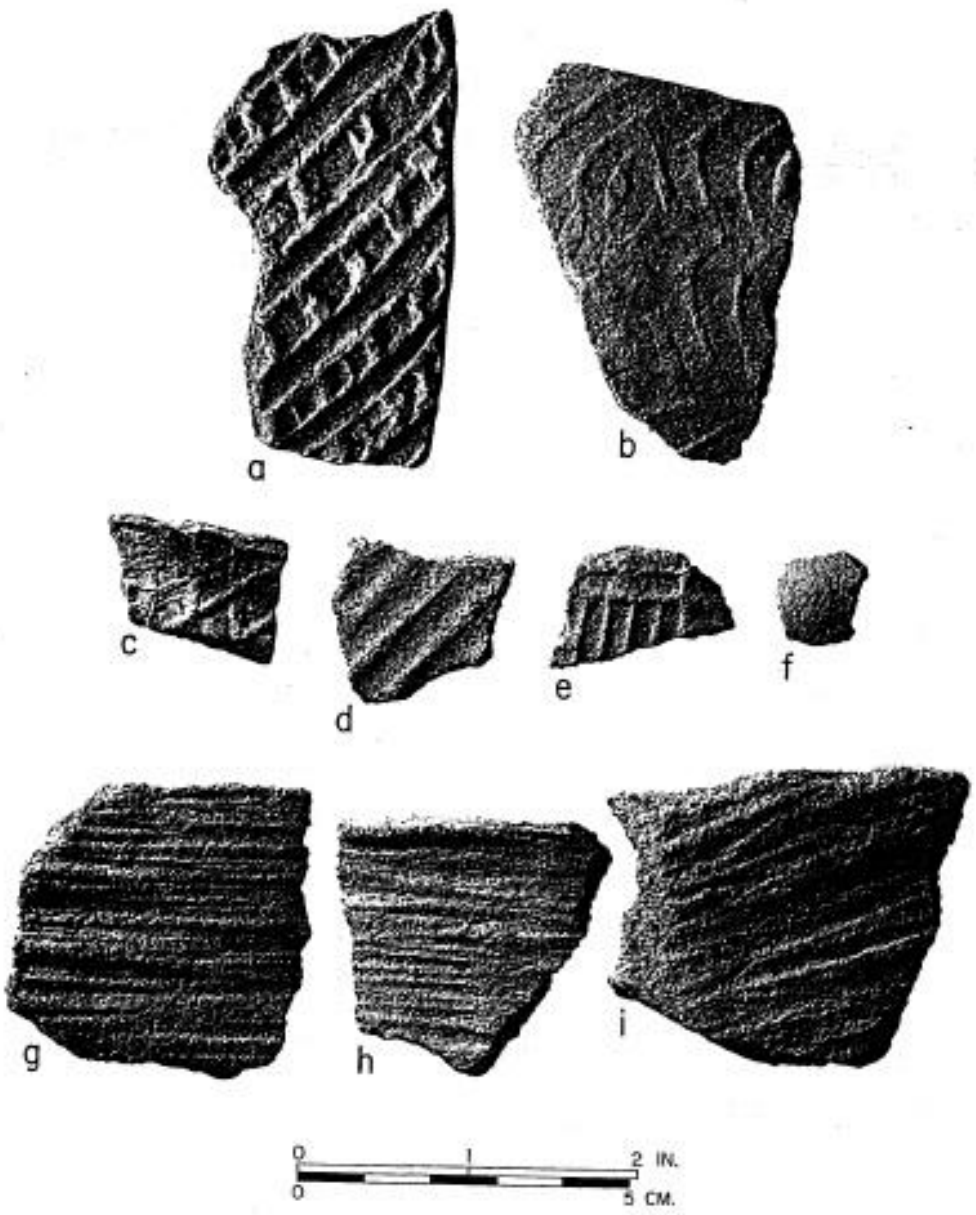


Figure A10-4
Ceramic Prehistoric pottery recovered from surface contexts at Topper. (Image from Goodyear and Charles 1984:84). A; Deptford Linear Check Stamped, B; Curvilinear Complicated Stamped, C; Rectilinear Complicated Stamped, D; Deptford Check Stamped, F; Pipe or Small Bowl Fragment, G; Refuge Simple Stamped, H and I; Refuge Simple Stamped.



Figure A10-5
Excavation of 1985 1x2m Test Pit 1 at Topper Site 38AL23.

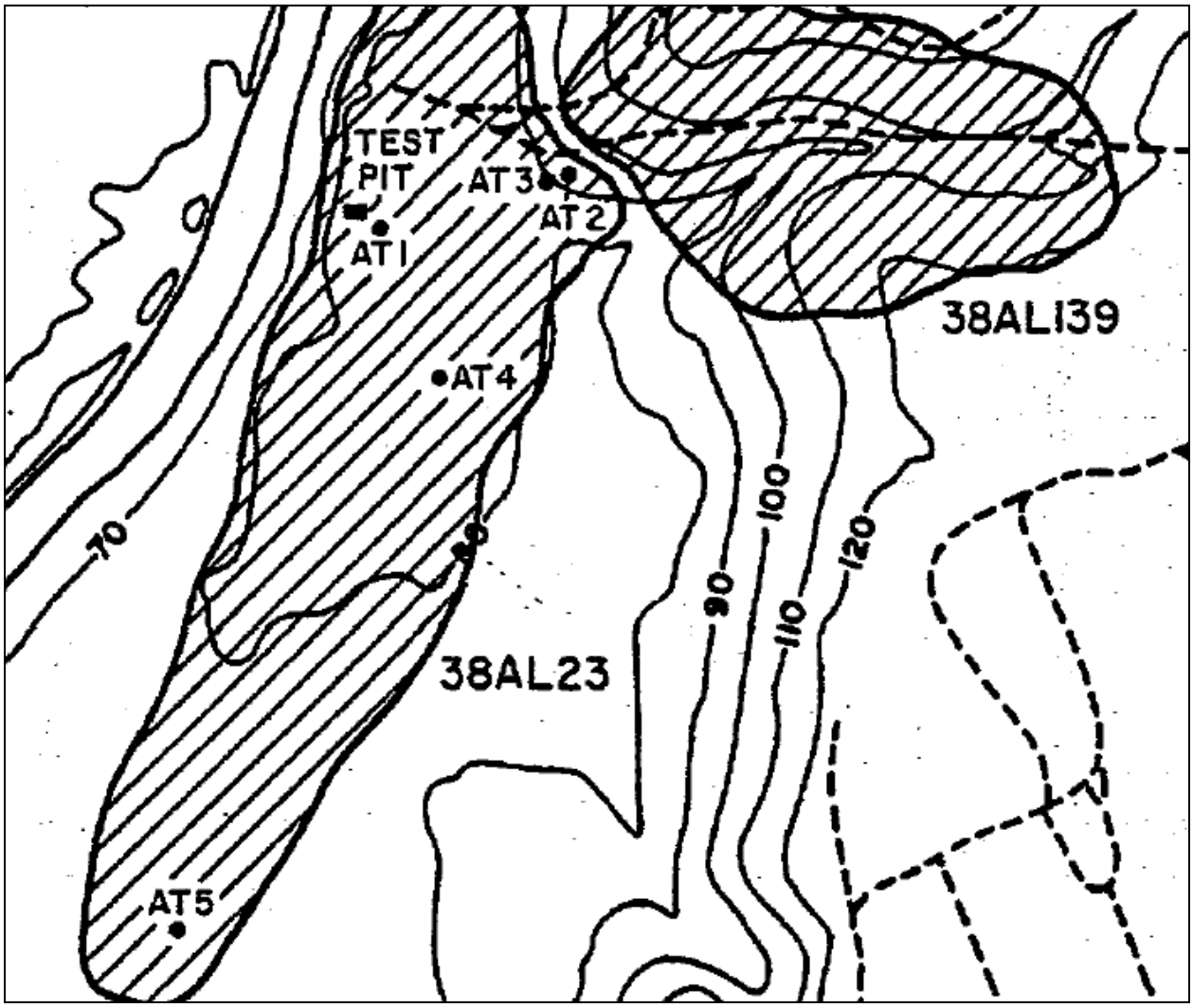


Figure A10-6
Map of Topper Site as depicted through first three field seasons showing locations of Auger Tests (AT) and Test Pit 1 conducted in 1984 at the Topper Site.

Table A10-1
Auger Test 1 at the Topper Site (38AL23)

Depth (cmbs)	FCR	Chunks	Prim.	Sec.	Tert.	Bif. flk	Ut. flk	Unifaces	Core	Cobble Tool	Biface	Qtz. Pebbles	Flakes	Flk Wt. (g)
0-30		2	2			7						1	10	7.9
30-45		2	1		1	35							37	14.6
45-60			3			96							99	70.5
60-75			3	2	1	56							62	35.2
75-95					1	15						2	16	7
95-105					1	4							5	5
105-120						2							2	4
120-135						3							3	1
135-150		3			1	1						1	2	2
150-165		3				1							1	1.9

FCR = Fire Cracked Rock; Prim. = Primary Detachment; Sec. = Secondary Detachment; Tert. = Tertiary; Bif.flk = Biface flake; Ut.flk. = Utilized flake

Table A10-2
Auger Test 2 at the Topper Site (38AL23)

Depth (cmbs)	FCR	Chunks	Prim.	Sec	Tert	Bif. flk	Ut. flk	Unifaces	Core	Cobble Tool	Biface	Qtz. Pebbles	Flakes	Flk Wt. (g)
0-15			9	2	1	2							14	24.5
15-30		3	3		2	10						1	15	9.7
30-45				3		18	1						22	42.5
45-60			14	11	44		1	1					69	78.7
60-75		5	7	15		43			1	1		2	65	54.2
75-90			5	5	1	17						1	28	28.2
90-105				6		7						1	13	10.7
105-115						2						1	2	.5
115-130		3	1				1					2	1	.5
130-145		1		1		4						3	5	1.5
145-160		2		3		1							4	22.7
160-175		2	4			5						1	9	1.1
175-190		4										1		

FCR = Fire Cracked Rock; Prim. = Primary Detachment; Sec. = Secondary Detachment; Tert. = Tertiary; Bif.flk = Biface flake; Ut.flk. = Utilized flake

Table A10-3
Auger Test 3 at the Topper Site (38AL23)

Depth (cmbs)	FCR	Chunks	Prim.	Sec	Tert	Bif. flk	Ut. flk	Unifaces	Core	Cobble Tool	Biface	Qtz. Pebbles	Flakes	Flk Wt. (g)
0-15		2	4			5						2	9	10.4
15-30			1			9							10	2.5
30-45		1	5	5	1	13					1	1	24	9.8
45-60		7	15	8		55						3	78	99.5
60-75		6	24	5	1	46						5	76	68.5
75-90			9	5		18							32	18.8
90-105		2	1	1		7						2	9	3.2
105-120		80	14			10						16	24	6.1
120-135		79	8			2						8	10	2.2
135-150		85	3			2						3	5	1.4
150-165			4			1							5	1

FCR = Fire Cracked Rock; Prim. = Primary Detachment; Sec. = Secondary Detachment; Tert. = Tertiary; Bif.flk = Biface flake; Ut.flk. = Utilized flake

Table A10-4
Auger Test 4 at the Topper Site (38AL23)

Depth (cmbs)	FCR	Chunks	Prim.	Sec	Tert	Bif. flk	Ut. flk	Unifaces	Core	Cobble Tool	Biface	Qtz. Pebbles	Flakes	Flk Wt. (g)
0-15						4							4	.5
15-30		1		1		9						1	10	20.9
30-45			1			10							11	4.8
45-60			6	1	2	4							13	7.5
60-75			1			8							9	15
75-90		1		3	1	7			1			2	11	21
90-105		1		1		1						3	2	.5
105-120														
120-135														

FCR = Fire Cracked Rock; Prim. = Primary Detachment; Sec. = Secondary Detachment; Tert. = Tertiary; Bif.flk = Biface flake; Ut.flk. = Utilized flake

Table A10-5
Auger Test 5 at the Topper Site (38AL23)

Depth (cmbs)	FCR	Chunks	Prim.	Sec	Tert	Bif. flk	Ut. flk	Unifaces	Core	Cobble Tool	Biface	Qtz. Pebbles	Flakes	Flk Wt. (g)
0-15		1	3	4	2	13							22	18.5
15-30				2		14							16	11.7
30-45		1			1		1						2	
45-60														5.4
60-75														
75-90														
90-105														
120														
135														

FCR = Fire Cracked Rock; Prim. = Primary Detachment; Sec. = Secondary Detachment; Tert. = Tertiary; Bif.flk = Biface flake; Ut.flk. = Utilized flake

Table A10-6
Results of 1x2m Test Pit 1 at Topper Site 38AL23.

Depth (cmbs)	Chunks	Prim	Sec	Tert	Bif. flk	Ut. flk	Unifaces	Core	Cobble Tool	Biface	Preform	Pot	Qtz. Peb.	Flakes	Flk Wt. (g)
0-15	11	8	15	11	137			1	3			23	4	171	181.3
15-30	15	23	53	18	535	3	2			2	6	57	17	629	614.1
30-45	17		5	16	200					1			4	221	197.2
45-60	70	7	30	44	922	2		1		1	5		38	1016	2485
60-75	16	16	58	20	603	1	1	1			1		29	701	861.6
75-90	5	5	27	2	240			1			1		19	274	217
90-105	15	1	1		47								12	49	.15.6
105-120	10				3								8	3	.5
120-135															

FCR = Fire Cracked Rock; Prim. = Primary Detachment; Sec. = Secondary Detachment; Tert. = Tertiary; Bif.flk = Biface flake; Ut.flk. = Utilized flake, Pot = Pottery; Qtz Peb. = Quartz Pebbles.

Table A10-7
Provenience list for selected artifacts from Appendix 10.

Figure		Type	Provenience	Year
Figure A10-2	A	Triangular point	Augur Test 1 surface	1985
Figure A10-2	B	Woodland Point	Augur Test 1	1985
Figure A10-4	A	Deptford Linear Check	Augur Test 1	1985
Figure A10-4	B	Curvilinear Stamped sherd	Augur Test 1	1985
Figure A10-4	C	Rectilinear Stamped sherd	Augur Test 1	1985
Figure A10-4	D	Deptford Check Stamped	Augur Test 1	1985
Figure A10-4	F	Pipe Fragment	Augur Test 1	1985
Figure A10-4	G	Refuge Simple Stamped	Augur Test 1	1985
Figure A10-4	H	Refuge Simple Stamped	Augur Test 1	1985
Figure A10-4	I	Refuge Simple Stamped	Augur Test 1	1985

APPENDIX 11

MAPPED AND SCREEN ARTIFACTS FROM 1985 EXCAVATIONS AT THE TOPPER SITE (38AL23)

As a result of the archaeological discoveries from the preliminary investigations at Topper in 1984, further testing at the site was conducted from February 27th to March 9th 1985 and included the placement of seven 2m x 2m meter test units on the terrace. At this time, a grid system was established at the site including a permanent datum and elevation markers (Goodyear 1986). The datum was set at 100m ASL along the N200 E100 gridline. Units excavated in 1985 include N229 E110, N222 E108, N220 E087, N212 E130, N231 E091, N168 E090, and N204 E160.

Excavation commenced in 10cm arbitrary levels with all materials screened in 1/4th inch screen mesh. All diagnostic artifacts were mapped *in situ* and were recovered for further analysis, save for a few that were missed that turned up in the screen. Lithic debitage and flakes were not mapped unless associated with features, were over 2.5cm in diameter, or exhibited evidence for modification. Tables A11-1 to A11–3 present the results of the 1985 excavation. A total of seven 2m x2m test units were excavated at the Topper Site between March 1, and March 9, 1985, resulting in a total of 178 mapped artifacts and 349 artifacts from the screen, and seven features (Table A11-2-3).

Table A11-1 below lists the number of artifacts per unit by morphological type. Of the identified types, most are biface or flake tools, with core and production tools occurring in lower abundances. Table A11-2 presents the number of mapped artifacts by level for the1985 field season, with items from the Paleoindian deposits represented in levels I-J. A total of 17 artifacts were mapped in situ from the Paleoindian deposits with most identified as bifaces or cores. One broken Paleoindian biface preform is illustrated in Figure A11-1. Table A11-3 lists the artifact catalogue for the 1985 field season which also provides provenience data on 68 of the mapped artifacts. This table also presents the mapped and unmapped artifacts recovered from the 1985

field season. In addition to the mapped artifacts from the seven test units excavated in 1985, a number of artifacts were missed and recovered in the screen. These items were larger than 2.5cm but were mistakenly missed during excavation and turned up in the screen. The artifacts include 11 bifaces, 10 cores, 12 flake tools and three hammerstones from the presumed Paleoindian deposits (Table A11-3).



Figure A11-1
Biface recovered from 1985 excavation at the Topper Site unit N188 E090.

Table A11-1
Results of Morphological typology for seven excavated 2x2m units from the 1985 field season.

Provenience	Core Tools	Biface Tools	Flake Tools	Bend Break Tools	Production Tools	Other Mapped	Total
N212 E130	1	2	2	0	0	4	9
N229 E110	6	24	14	0	5	11	60
N204 E160	8	5	0	0	0	4	17
N231 E091	1	4	0	0	0	7	12
N188 E090	0	2	1	0	0	14	17
N222 E108	0	7	6	0	0	14	27
N220 E087	0	3	3	0	0	10	16
Features						20	20
	16	**47**	**26**	**0**	**5**	**84**	**178**

Table A-11-2
Number of mapped artifacts by level for 1985 Field excavation.
Levels I-J represent Paleoindian Levels.

N	E	A	B	C	D	E	F	G	H	I	J	Total
212	**130**	0	1	0	0	1	1	1	3	0	1	8
229	**110**	0	15	19	14	9	7	2	0	0	0	66
204	**160**	0	0	1	2	0	5	3	1	4	2	18
231	**91**	2	2	1	0	2	2	2	1	0	0	12
188	**90**	0	0	1	1	3	2	1	3	8	1	20
222	**108**	0	0	0	10	9	3	16	3	1	0	42
220	**87**	0	2	0	1	2	2	3	2	0	0	12
Total		**2**	**20**	**22**	**28**	**26**	**22**	**28**	**13**	**13**	**4**	**178**

Table A11-3
Mapped and Unmapped Artifacts from 1985 Excavations at the Topper Site (38AL23)

Provenience	Cat. #	Contents	#	Depth	Horizontal prov.	Date
N188 E090	1	Flakes		0-10		3-4-85
N188 E090	2	Worked Chunks		0-10		3-4-85
N188 E090	3	Pebbles		0-10		3-4-85
N188 E090	4	Sherds	19	0-10		3-4-85
N188 E090	1	Flakes		10-20		3-5-85
N188 E090	2	Chunks		10-20		3-5-85
N188 E090	3	Pebbles		10-20		3-5-85
N188 E090	4	Sherds		10-20		3-5-85
N188 E090	5	Shell?		10-20		3-5-85
N188 E090	6	Hammerstone		10-20		3-5-85
N188 E090	7	Core Fragment		10-20		3-5-85
N188 E090	1	Flakes		20-30		3-5-85
N188 E090	2	Pebbles		20-30		3-5-85
N188 E090	3	Pebbles		20-30		3-5-85
N188 E090	4	Sherds		20-30		3-5-85
N188 E090	5	Bone		20-30		3-5-85
N188 E090	6	Point tip		20-30		3-5-85
N188 E090	7	Point tip		20-30		3-5-85
N188 E090	8	Point tip		20-30		3-5-85
N188 E090	9	Point tip		20-30		3-5-85
N188 E090	10	Base of point		20-30		3-5-85
N188 E090	11	Flake		20-30		3-5-85
N188 E090	12	Preform		29	N189.46 E090.08	3-5-85
N188 E090	1	Flakes		30-40		3-6-85
N188 E090	2	Worked Chunks		30-40		3-6-85
N188 E090	3	Natural Chunks		30-40		3-6-85
N188 E090	4	Sherds		30-40		3-6-85
N188 E090	5	Hammerstone		30-40		3-6-85
N188 E090	6	Biface fragment		30-40		3-6-85
N188 E090	7	Uniface		30-40		3-6-85
N188 E090	1	Lithic Flakes		40-50		3-6-85
N188 E090	2	Lithic Chunks				3-6-85
N188 E090	3	Natural Chunks				3-6-85
N188 E090	4	Biface		48	N188.66 E091.88	3-6-85
N188 E090	5	Uniface		49	N188.72E090.32	3-6-85
N188 E090	6	Uniface		50	N189.7E090.12	3-6-85
N188 E090	7	Sherds	3	40-50		3-6-85
N188 E090	1	Lithic Flakes		50-60		3-6-85
N188 E090	2	Natural Pebbles		50-60		3-6-85
N188 E090	3	Sherd		50-60		3-6-85

Table A11-3 continued

Provenience	Cat. #	Contents	#	Depth	Horizontal prov.	Date
N188 E090	4	Stemmed Point		57.5	N188.6 E090.45	3-6-85
N188 E090	5	Preform		50-60		3-6-85
N188 E090	6	Preform		50-60		3-6-85
N188 E090	7	Preform		50-60		3-6-85
N188 E090	8	Biface		57.5	N189.4 E091.3	3-6-85
N188 E090	9	Biface		57.5	N189.4 E091.3	3-6-85
N188 E090	10	Utilized Flake		50-60		3-6-85
N188 E090	11	Utilized Flake		50-60		3-6-85
N188 E090	1	Lithic Flakes		60-70		3-6-85
N188 E090	2	Chunks		60-70		3-6-85
N188 E090	3	Pebbles		60-70		3-6-85
N188 E090	4	Shell Fragment		60-70		3-6-85
N188 E090	5	Biface Base		60-70		3-6-85
N188 E090	6	Biface Base		60-70		3-6-85
N188 E090	7	Biface Base		70	N189.675 E091.77	3-6-85
N188 E090	1	Lithic Flakes		70-80		3-6-85
N188 E090	2	Natural Pebbles		70-80		3-6-85
N188 E090	3	Sherds		70-80		3-6-85
N188 E090	4	End of a Biface		70-80		3-6-85
N188 E090	5	Utilized Flake		70-80		3-6-85
N188 E090	6	Core Fragment		70-80		3-6-85
N188 E090	7	Preform		70-80		3-6-85
N188 E090	8	Tip of Biface		70-80		3-6-85
N188 E090	9	Core		74	N188.88 E090.08	3-6-85
N188 E090	10	Core		74	N189.77 E090.15	3-6-85
N188 E090	11	Core		74	N189.46 E090.58	3-6-85
N188 E090	12	Hammerstone		70-80		3-6-85
N188 E090	1	Lithic Flakes		80-90		3-7-85
N188 E090	2	Lithic Chunks		80-90		3-7-85
N188 E090	3	Lithic Pebbles		80-90		3-7-85
N188 E090	4	Biface		89	N189.2 E090.3	3-7-85
N188 E090	5	Biface Fragment		87	N188.78 E090.58	3-7-85
N188 E090	6	Point		80-90		3-7-85
N188 E090	7	Core		90	N189.08 E090.37	3-7-85
N188 E090	8	Core		88	N188.69 E090.45	3-7-85
N188 E090	9	Core		84	N188.40 E091.64	3-7-85
N188 E090	10	Tip of Preform		87		3-7-85
N188 E090	11	Base of Preform		87		3-7-85
N188 E090	1	Lithic Flakes		90-100		3-7-85
N188 E090	2	Lithic Pebbles		90-100		3-7-85

Table A11-3 continued

Provenience	Cat. #	Contents	#	Depth	Horizontal prov.	Date
N188 E090	3	Retouched Flake		90-100		3-7-85
N188 E090	1	Lithic Flakes		100-110		3-7-85
N188 E090	2	Lithic Pebbles		100-100		3-7-85
N212 E130	1	Woodland Plain		0-10		3-6-85
N212 E130	2	D.Creek Cord		0-10		3-6-85
N212 E130	3	Savannah		0-10		3-6-85
N212 E130	4	Savannah stamp		0-10		3-6-85
N212 E130	5	UID sherd		0-10		3-6-85
N212 E130	1	Woodland Plain		10-20		3-7-85
N212 E130	2	Cord Marked		10-20		3-7-85
N212 E130	3	Deptford		10-20		3-7-85
N212 E130	4	Deptford		10-20		3-7-85
N212 E130	5	Deptford		10-20		3-7-85
N212 E130	6	Decorated		10-20		3-7-85
N212 E130	7	Savannah		10-20		3-7-85
N212 E130	8	Uid		10-20		3-7-85
N212 E130	1	Refuge		20-30		3-7-85
N212 E130	2	Woodland Plain		20-30		3-7-85
N212 E130	3	Deptford		20-30		3-7-85
N212 E130	4	Deptford		20-30		3-7-85
N212 E130	5	Decorated		20-30		3-7-85
N212 E130	6	Sherdlets		20-30		3-7-85
N212 E130	1	Refuge		30-40		3-7-85
N212 E130	2	Deptford		30-40		3-7-85
N212 E130	3	Deptford		30-40		3-7-85
N212 E130	4	Decorated		30-40		3-7-85
N212 E130	5	Sherdlets		30-40		3-7-85
N229 E110	1	Flakes		20-30		3-3-85
N229 E110	2	Chunks		20-30		3-3-85
N229 E110	3	Natural Pieces		20-30		3-3-85
N229 E110	4	Sherds		20-30		3-3-85
N229 E110	5	Feature 2		20-30		3-3-85
N229 E110	6	Biface Preform		20-30		3-3-85
N229 E110	7	Biface Preform		20-30		3-3-85
N229 E110	8	Biface Base 11		20-30		3-3-85
N229 E110	9	Biface 12		20-30		3-3-85
N229 E110	10	Biface 13		20-30		3-3-85
N229 E110	11	Biface 14		20-30		3-3-85
N229 E110	12	Biface 15		20-30		3-3-85
N229 E110	13	Biface 7		20-30		3-3-85

Table A11-3 continued

Provenience	Cat. #	Contents	#	Depth	Horizontal prov.	Date
N229 E110	14	Biface 8		20-30		3-3-85
N229 E110	15	Biface 9		20-30		3-3-85
N229 E110	16	Biface 19		20-30		3-3-85
N229 E110	17	Biface		20-30		3-3-85
N229 E110	18	Biface		20-30		3-3-85
N229 E110	19	Biface		20-30		3-3-85
N229 E110	20	Biface Flake		20-30		3-3-85
N229 E110	21	Biface Fragments	5	20-30		3-3-85
N229 E110	22	Flakes		20-30		3-3-85
N229 E110	23	Hammerstone		20-30		3-3-85
N229 E110	24	Stemmed Point 1		20-30		3-3-85
N229 E110	25	Hammerstone 16		20-30		3-3-85
N229 E110	26	Core 10		20-30		3-3-85
N229 E110	27	Core 2		20-30		3-3-85
N229 E110	28	Core 3		20-30		3-3-85
N229 E110	29	Core 4		20-30		3-3-85
N229 E110	30	Core 6		20-30		3-3-85
N229 E110	31	Biface Core		20-30		3-3-85
N229 E110	1	Flakes		30-40		3-3-85
N229 E110	2	Chunks		30-40		3-3-85
N229 E110	3	Natural Pieces		30-40		3-3-85
N229 E110	4	Sherds		30-40		3-3-85
N229 E110	5	Stemmed point		30-40		3-3-85
N229 E110	6	Biface Preform		30-40		3-3-85
N229 E110	7	Biface Base		30-40		3-3-85
N229 E110	8	Biface Base		30-40		3-3-85
N229 E110	9	Biface Base		30-40		3-3-85
N229 E110	10	Biface Base		30-40		3-3-85
N229 E110	11	Biface Base		30-40		3-3-85
N229 E110	12	Biface Base		30-40		3-3-85
N229 E110	13	Utilized Flake		30-40		3-3-85
N229 E110	14	Biface Flake		30-40		3-3-85
N229 E110	15	Biface flake		30-40		3-3-85
N229 E110	16	Core		30-40		3-3-85
N229 E110	17	Core		30-40		3-3-85
N229 E110	18	Core		30-40		3-3-85
N229 E110	19	Core		30-40		3-3-85
N229 E110	20	Core		30-40		3-3-85
N229 E110	21	Hammerstone		30-40		3-3-85
N229 E110	22	Burned sandstone		30-40		3-3-85
N229 E110	23	Flake		30-40		3-3-85

Table A11-3 continued

Provenience	Cat. #	Contents	#	Depth	Horizontal prov.	Date
N229 E110	1	Flakes		40-50		3-3-85
N229 E110	2	Chunks		40-50		3-3-85
N229 E110	3	Natural Pieces		40-50		3-3-85
N229 E110	4	Sherds		40-50		3-3-85
N229 E110	5	Lithics		48	48	3-3-85
N229 E110	6	End Scraper		40-50		3-3-85
N229 E110	7	Uniface		50	N230 E111.33	3-3-85
N229 E110	8	Uniface		46	N230.91E111.80	3-3-85
N229 E110	9	Uniface		46.6	N230.67 E111.56	3-3-85
N229 E110	10	Uniface		40-50		3-3-85
N229 E110	11	point		40-50		3-3-85
N229 E110	12	Biface		40-50		3-3-85
N229 E110	13	Biface		40-50		3-3-85
N229 E110	14	Biface		40-50		3-3-85
N229 E110	15	Biface		40-50		3-3-85
N229 E110	16	Biface		50	N229.10 E111.44	3-3-85
N229 E110	17	Biface		47	N230.30 E111.67	3-3-85
N229 E110	18	Biface		47.5	N230.90 E111.65	3-3-85
N229 E110	19	Preform		40-50		3-3-85
N229 E110	20	Biface		40-50		3-3-85
N229 E110	21	Biface		40-50		3-3-85
N229 E110	22	Core		40-50		3-3-85
N229 E110	23	Core		40-50		3-3-85
N229 E110	24	Core		40-50		3-3-85
N229 E110	25	Core		40-50		3-3-85
N222 E108	1	Small Flakes		0-10		3-1-85
N222 E108	2	Chunks		0-10		3-1-85
N222 E108	3	Sherds		0-10		3-1-85
N222 E108	4	projectile base		0-10		3-1-85
N222 E108	5	Biface		0-10		3-1-85
N222 E108	6	Flake		0-10		3-1-85
N222 E108	7	Serrated Flake		0-10		3-1-85
N222 E108	8	Large Flakes		0-10		3-1-85
N222 E108	9	Core		0-10		3-1-85
N222 E108	10	Fragment		0-10		3-1-85
N222 E108	11	Glass		0-10		3-1-85
N222 E108	12	Glass		0-10		3-1-85
N222 E108	13	Shell		0-10		3-1-85
N222 E108	1	Flakes		10-20		3-1-85
N222 E108	2	Chunks		10-20		3-1-85
N222 E108	3	Pebbles		10-20		3-1-85

Table A11 – 3 continued

Provenience	Cat. #	Contents	#	Depth	Horizontal prov.	Date
N222 E108	4	Sherds		10-20		3-1-85
N222 E108	9	Uniface		63	N223.02 E109.62	3-2-85
N222 E108	10	Uniface		69	N222.35 E108.04	3-2-85
N222 E108	11	Uniface		60-62		3-2-85
N222 E108	12	Uniface		68	N222.18 E10823	3-2-85
N222 E108	13	Uniface		70	N223.3 E108.54	3-2-85
N222 E108	14	Uniface		70.5	N222.93 E109.75	3-2-85
N222 E108	15	Biface		67	N222.04 E109.20	3-2-85
N222 E108	16	Utilized Flake		66	N222.05 E108.1	3-2-85
N222 E108	17	Utilized Flake		62	N222.85 E109.85	3-2-85
N222 E108	18	Flake		60-70		3-2-85
N222 E108	19	Biface		70	N233.23 E109.04	3-2-85
N222 E108	20	Rock		69	N223 E109.85	3-2-85
N204 E160	1	Flakes		0-10		3-6-85
N204 E160	2	Pottery		0-10		3-6-85
N204 E160	3	Natural Pieces		0-10		3-6-85
N204 E160	4	Biface		0-10		3-6-85
N204 E160	5	Lead Shot		0-10		3-6-85
N204 E160	1	Flakes		10-20		3-6-85
N204 E160	2	Chunks		10-20		3-6-85
N204 E160	3	Natural Pieces		10-20		3-6-85
N204 E160	4	Pottery		10-20		3-6-85
N204 E160	5	Lead Shot		10-20		3-6-85
N204 E160	6	Bone		10-20		3-6-85
N204 E160	1	Flakes		20-30		3-6-85
N204 E160	2	Chunks		20-30		3-6-85
N204 E160	3	Natural Pieces		20-30		3-6-85
N204 E160	4	Pottery		20-30		3-6-85
N204 E160	5	Pottery		20-30		3-6-85
N204 E160	1	Flakes		20-30		3-6-85
N204 E160	2	Natural Pieces		20-30		3-6-85
N204 E160	3	Pottery		20-30	N204.95 E160.45	3-6-85
N204 E160	4	Core		20-30	N204.26 E106.78	3-6-85
N204 E160	5	Pottery		20-30		3-6-85
N204 E160	1	Flakes		40-50		3-6-85
N204 E160	2	Natural Pieces		40-50		3-6-85
N204 E160	1	Flakes		50-60		3-6-85
N204 E160	2	Chunks		50-60		3-6-85
N204 E160	3	Natural Pieces		50-60		3-6-85
N204 E160	4	Biface		59	N204.10 E100.36	3-6-85

Table A11 – 3 continued

Provenience	Cat. #	Contents	#	Depth	Horizontal prov.	Date
N222 E108	1	Flakes		10-20		3-1-85
N222 E108	2	Chunks		10-20		3-1-85
N222 E108	3	Sherds		10-20		3-1-85
N222 E108	1	Flakes				3-1-85
N222 E108	2	Chunks				3-1-85
N222 E108	3	Sherds				3-1-85
N222 E108	4	Sherds				3-1-85
N222 E108	5	Thick Biface		35		3-1-85
N222 E108	6	Projectile point				3-1-85
N222 E108	7	Point Distal		39	N223.70 E108.35	3-1-85
N222 E108	8	Utilized Flake		40-50		3-1-85
N222 E108	9	Uniface		40-50		3-1-85
N222 E108	1	Flakes		40-50		3-2-85
N222 E108	2	Chunks		40-50		3-2-85
N222 E108	3	Biface		48	N233.10 E108.30	3-2-85
N222 E108	4	Biface		47	N222.13 E108.06	3-2-85
N222 E108	5	Biface		50	N223.50 E108.80	3-2-85
N222 E108	6	Utilized Flake		47	N222.80 E108.05	3-2-85
N222 E108	7	Biface Tip		46	N222.60 E108.90	3-2-85
N222 E108	8	Biface		50	N222.65 E10.860	3-2-85
N222 E108	9	Retouched Flake		40-50		3-2-85
N222 E108	10	Utilized Flake		40-50		3-2-85
N222 E108	11	Utilized Flake		40-50		3-2-85
N222 E108	12	Utilized Flake		40-50		3-2-85
N222 E108	13	Utilized Flake		40-50		3-2-85
N222 E108	14	Shell		40-50		3-2-85
N222 E108	1	Flakes		50-60		3-2-85
N222 E108	2	Chunks		50-60		3-2-85
N222 E108	3	Large Chunk		50-60		3-2-85
N222 E108	4	Biface		50-60		3-2-85
N222 E108	5	Sandstone		50-60		3-2-85
N222 E108	1	Flakes		60-70		3-2-85
N222 E108	2	Chunks		60-70		3-2-85
N222 E108	3	Biface		68	N223.96 E108.10	3-2-85
N222 E108	4	Tool		64.5	N222.95 E109.81	3-2-85
N222 E108	5	Tool		70	N223.66 E109.98	3-2-85
N222 E108	6	Core		70	N223 E109.8	3-2-85
N222 E108	7	Preform		67	N223.57 E108.25	3-2-85
N222 E108	8	Uniface		70	N222.1 E108.83	3-2-85

Table A11 – 3 continued

Provenience	Cat. #	Contents	#	Depth	Horizontal prov.	Date
N204 E160	5	Biface		50-60		3-6-85
N204 E160	6	Biface		50-60		3-6-85
N204 E160	7	Core fragment		50-60		3-6-85
N204 E160	8	Core Fragment		54	N204.34 E161.56	3-6-85
N204 E160	9	Core Fragment		55	N205.98 E160.80	3-6-85
N204 E160	10	Biface base		59	N204.37 E160.13	3-6-85
N204 E160	1	Flakes		60-70		3-6-85
N204 E160	2	Natural Pieces		60-70		3-6-85
N204 E160	3	Chert Debris		60-63		3-6-85
N204 E160	4	Core		70	N204.85 E107.45	3-6-85
N204 E160	5	Core		60-70		3-6-85
N204 E160	6	Chunk		60-70		3-6-85
N204 E160	7	Biface		63	N204.23 E160.65	3-6-85
N204 E160	8	Biface		60-70		3-6-85
N204 E160	1	Flakes		70-80		3-7-85
N204 E160	2	Natural Pieces		70-80		3-7-85
N204 E160	3	Chunks		70-80		3-7-85
N204 E160	4	Flake		70-80		3-7-85
N204 E160	5	Utilized Flake		70-80		3-7-85
N204 E160	1	Flakes		70-75		3-7-85
N204 E160	1	Flakes		80-90		3-8-85
N204 E160	2	Chunks		80-90		3-8-85
N204 E160	3	Pieces		80-90		3-8-85
N204 E160	4	Utilized Flake		80-90		3-8-85
N204 E160	5	Core		85	N205.13 E160.49	3-8-85
N204 E160	6	Chunk		87.5	N204.76E107.99	3-8-85
N204 E160	7	Core		91	N204.65 E160.7	3-8-85
N204 E160	8	Biface		85.5	N205.79 E161.86	3-8-85
N204 E160	1	Flakes		90-100		3-8-85
N204 E160	2	Chunks		90-100		3-8-85
N204 E160	3	Natural Pieces		90-100		3-8-85
N204 E160	4	Core		95	N205.38 E161.56	3-8-85
N204 E160	5	Chunk		90-100		3-8-85
N204 E160	6	Chunk		92	N205.24 E161.26	3-8-85
N204 E160	1	Flakes		100-110		3-8-85
N204 E160	2	Natural Pieces		100-110		3-8-85
N231 E091	1	Flakes		90-100		3-9-85
N231 E091	2	Natural Pieces		90-100		3-9-85
N231 E091	1	Lithic Flakes		0-10		3-8-85
N231 E091	2	Pebbles		0-10		3-8-85

Table A11 – 3 continued

Provenience	Cat. #	Contents	#	Depth	Horizontal prov.	Date
N231 E091	3	Pebbles		0-10		3-8-85
N231 E091	4	Sherds		0-10		3-8-85
N231 E091	5	Point		9	N237.47 E92.04	3-8-85
N231 E091	6	Preform		5		3-8-85
N231 E091	7	Core Fragment		10	N231.14 E91.88	3-8-85
N231 E091	8	Point tip		8-10		3-8-85
N231 E091	9	Triangular		0-10		3-8-85
N231 E091	10	Biface		0-10		3-8-85
N231 E091	1	Lithic Flakes		10-20		3-8-85
N231 E091	2	Lithic Chunks		10-20		3-8-85
N231 E091	3	Pebbles		10-20		3-8-85
N231 E091	4	Sherds		10-20		3-8-85
N231 E091	5	Large Chunk		10-20		3-8-85
N231 E091	6	Tool		10-20		3-8-85
N231 E091	7	Sherd		10-20		3-8-85
N231 E091	8	Point		19.5	N231.20 E92.45	3-8-85
N231 E091	9	Biface		10-20		3-8-85
N231 E091	10	Point		10-20		3-8-85
N231 E091	11	Point		14	N232.08 E92.59	3-8-85
N231 E091	1	Lithic Flakes		20-30		3-8-85
N231 E091	2	Chunks		20-30		3-8-85
N231 E091	3	Pebbles		20-30		3-8-85
N231 E091	4	Sherds		20-30		3-8-85
N231 E091	5	Point		21	N231.14 E91.33	3-8-85
N231 E091	6	Tool		20-30		3-8-85
N231 E091	7	Chunks		20-30		3-8-85
N231 E091	8			20-30		3-8-85
N231 E091	9	Point		20-30		3-8-85
N231 E091	1	Lithic Flakes		30-40		3-8-85
N231 E091	2	Lithic Chunks		30-40		3-8-85
N231 E091	3	Pebbles		30-40		3-8-85
N231 E091	4	Sherds		30-40		3-8-85
N231 E091	5	Point		30-40		3-8-85
N231 E091	1	Lithic Flakes		40-50		3-8-85
N231 E091	2	Chunks		40-50		3-8-85
N231 E091	3	Pebbles		40-50		3-8-85
N231 E091	4	Sherds	2	40-50		3-8-85

Table A11 – 3 continued

Provenience	Cat. #	Contents	#	Depth	Horizontal prov.	Date
N231 E091	3	Pebbles		0-10		3-8-85
N231 E091	4	Sherds		0-10		3-8-85
N231 E091	5	Point		9	N237.47 E92.04	3-8-85
N231 E091	6	Preform		5		3-8-85
N231 E091	7	Core Fragment		10	N231.14 E91.88	3-8-85
N231 E091	8	Point tip		8-10		3-8-85
N231 E091	9	Triangular		0-10		3-8-85
N231 E091	10	Biface		0-10		3-8-85
N231 E091	1	Lithic Flakes		10-20		3-8-85
N231 E091	2	Lithic Chunks		10-20		3-8-85
N231 E091	3	Pebbles		10-20		3-8-85
N231 E091	4	Sherds		10-20		3-8-85
N231 E091	5	Large Chunk		10-20		3-8-85
N231 E091	6	Tool		10-20		3-8-85
N231 E091	7	Sherd		10-20		3-8-85
N231 E091	8	Point		19.5	N231.20 E92.45	3-8-85
N231 E091	9	Biface		10-20		3-8-85
N231 E091	10	Point		10-20		3-8-85
N231 E091	11	Point		14	N232.08 E92.59	3-8-85
N231 E091	1	Lithic Flakes		20-30		3-8-85
N231 E091	2	Chunks		20-30		3-8-85
N231 E091	3	Pebbles		20-30		3-8-85
N231 E091	4	Sherds		20-30		3-8-85
N231 E091	5	Point		21	N231.14 E91.33	3-8-85
N231 E091	6	Tool		20-30		3-8-85
N231 E091	7	Chunks		20-30		3-8-85
N231 E091	8			20-30		3-8-85
N231 E091	9	Point		20-30		3-8-85
N231 E091	1	Lithic Flakes		30-40		3-8-85
N231 E091	2	Lithic Chunks		30-40		3-8-85
N231 E091	3	Pebbles		30-40		3-8-85
N231 E091	4	Sherds		30-40		3-8-85
N231 E091	5	Point		30-40		3-8-85
N231 E091	1	Lithic Flakes		40-50		3-8-85
N231 E091	2	Chunks		40-50		3-8-85
N231 E091	3	Pebbles		40-50		3-8-85
N231 E091	4	Sherds	2	40-50		3-8-85

APPENDIX 12

NUMBER AND VERTICAL DISTRIBUTION OF MAPPED ARTIFACTS BY LEVEL FOR THE 1985 FIELD EXCAVATION AND RESULTS OF 1986 EXCAVATION AT THE TOPPER SITE (38AL23)

Appendix 12 shows the vertical distribution of artifacts by major artifact category for the 1985 field season. Based on the surface features on ceramics and flaking patterns on bifaces, the depths ranging from 0–30cmbs were interpreted as Woodland components, 30–70cmbs Archaic components, and 70–100cmbs Paleoindian components. Figures A12–1 to A12–7 present the vertical distribution of artifacts for each of the seven units. Artifacts from presumed Paleoindian deposits were recovered from all but one test unit (N229 E110) which was found to have an Archaic Palmer point approximately 50cmbs. Deposits in this unit were devoid of artifacts below 100cmbs. Other diagnostic artifacts recovered during the 1985 field include a Taylor point in N220 E087 at 56.5cmbs, and a Suwannee point in N231 E091 at 69cmbs. A total of ten bifaces and seven flake tools were mapped from possible Paleoindian deposits in the 1985 excavations this season providing an extensive culture chronology for the site.

Of the seven units excavated in 1985, all but one (N204 E160) unit was found to exhibit adequate stratigraphic integrity based on the vertical distribution of mapped artifacts. The profile map in Figure A12–1 (N231 E91) shows the stratigraphic separation between artifacts of different typologies, characterized by high concentrations of debitage at higher elevations and greater abundances of cores and bifaces in deeper deposits. Similarly, units N222 E108 and N229 E110 also demonstrate well-defined separation between the distributions of artifact types. However, because few artifacts diagnostic to a specific cultural period were identified, it was not possible to establish with certainty the exact time period that each assemblage reflects.

The 1985 excavations at Topper revealed discovered a total of eight features. These are labeled as F1–F8, and reflect the first eight of 121 features that have been identified at Topper through the 2012 field season. Features identified in 1985 include five lithic clusters, a possible

hearth and a Woodland burial urn. All feature fill was screened in 1/8th inch screen mesh. A list of features for the 1985 field season is presented in Table A12–1.

Feature 1 is classified as a thermally altered lithic cluster from level 30–40cmbs in unit N222 E108. One stemmed projectile point and a biface were recovered in association with this feature but the artifact was not mapped. Other than these artifacts, Feature 1 consists of eight rocks which were drawn on the level records, but no additional provenience information was provided.

Feature 2 is described as a possible hearth located in unit N229 E110 beginning at 20cmbs and terminating at 30cmbs. Feature 2 contains approximately twenty Middle to Late Archaic (Allendale) thermally altered flakes that are associated with three bifaces and a hammerstone. The diagnostic artifacts were mapped and recorded. However, the associated flakes were only drawn on the plan-view map.

Feature 3(Figure A12–8) is also a possible hearth and is described as consisting of a cluster of heat treated lithics recovered in proximity with dark, charred sediment. Feature 3 was identified from level C of unit N229 E110 (30–40cmbs). Artifacts recovered from Feature 3 include a stemmed point, six, biface preforms, one bifacial core a hammerstone and four core fragments.

Features 4 and 5 are lithic clusters identified in unit N220 E087. Feature 4 was identified in level F (50–60cmbs) and is described as an amorphous concentration of flakes in the southeastern section of the unit. A single Taylor projectile point was mapped and recovered in situ*in situ* approximately 10cm to the east of the feature. However, the contents of Feature 4 were bagged and collected but were not mapped. As a result, the degree of spatial provenance is limited for this feature. Feature 5 is a cluster of flakes from level G (60–70cmbs) and is situated

in the center of the 2x2m unit. Elevations were provided for the artifacts associated with the feature but Northing and Easting data is absent. A single uniface was recorded within proximity to Feature 5. Feature 6 is a lithic cluster from level H (70–80cmbs) of unit N204 E160 and is situated in the southwest corner of the unit. The cluster ranges in depth from 70–75cmbs. Items from this feature were drawn in plan-view but were not recorded.

Feature 7 (Figure A12–9) is a Woodland period burial urn from unit N212 E130, and has been categorized as a Type I urn after McCann (1947) of the McDowell Phase that dates from 1350 A.D -1450A.D (DePratter and Judge 1986). The feature was removed as a separate entity from the remainder of the unit and screened using 1/4th inch screen mesh. The feature was intrusive into deeper Archaic deposits at the site. The vessel measured 24.5cm in height, 28cm in diameter at the rim, with surface treatment consisting of rectilinear complicated stamp/line block attributes. The vessel interior was smooth and burnished, and the exterior surface was found to display considerable surface sooting. Temper consisted of fine quartz sand. Objects recovered from the contents of the vessel included two isolated ceramic sherds, one projectile point, chert flakes, and bone. The function of the vessel is interpreted as serving in a secondary capacity as a burial urn due in part to the considerable wear found at the vessel base in addition to the exterior surface sooting along the upper portion of the vessel body; possible indirect evidence of cooking (Harmon 1989).

One important result of the 1985 excavation was the discovery of a potential Paleoindian presence at the site based on the recovery of 17 artifacts from levels I-J, the flaking patterns of bifaces recovered from these deposits, and the Suwannee point. Based on the success of the field season, it was determined that future investigations at the site were warranted based on these

discoveries, and that future research should focus on the exposure, identification, and dating of the Paleoindian deposits at the site.

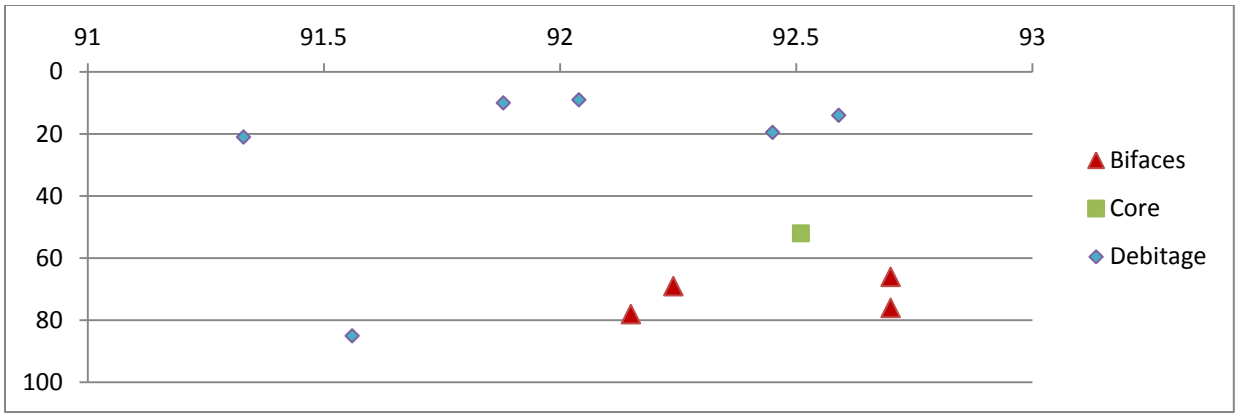


Figure A12–1
Profile Map of Unit N231 E91 showing the distribution of mapped lithic artifacts by level for the 1985 Field Season.

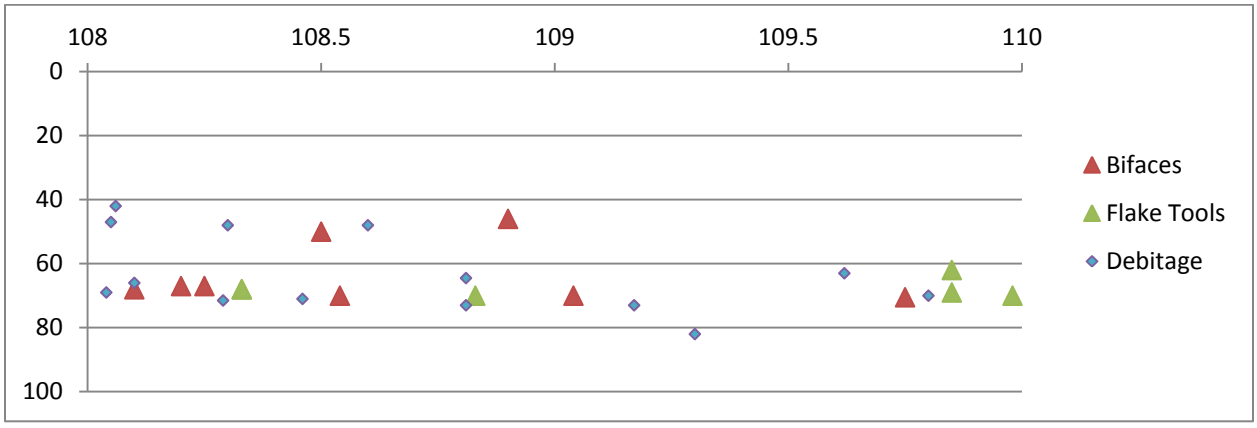


Figure A12–2
Profile Map of Unit N222 E108 showing the distribution of mapped lithic artifacts by level for the 1985 Field Season.

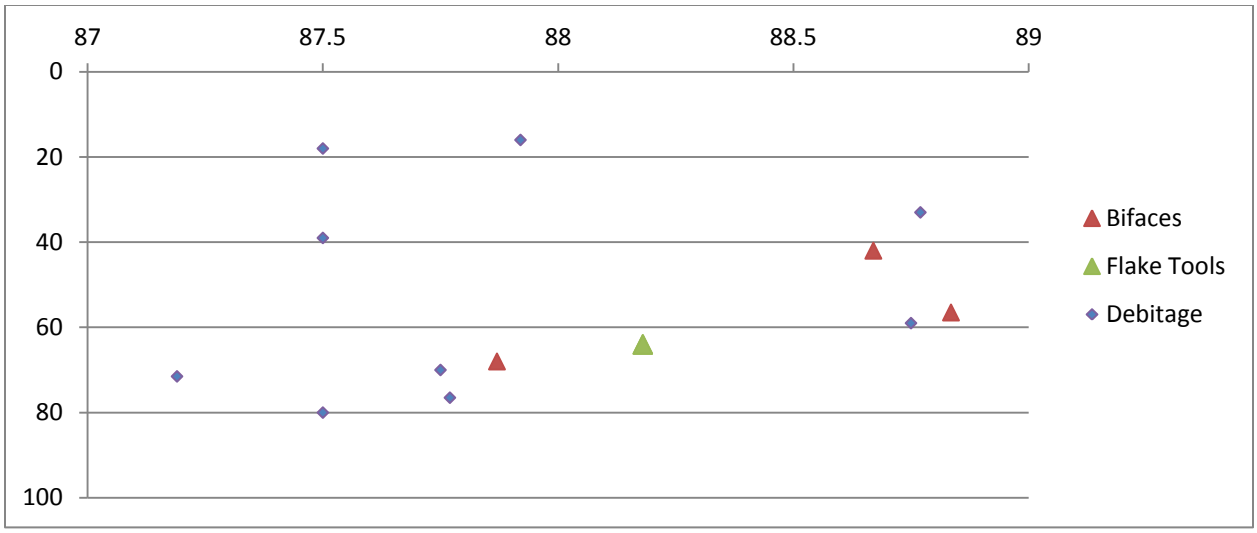


Figure A12–3
Profile Map of Unit N222 E087 showing the distribution of mapped lithic artifacts by level for the 1985 Field Season.

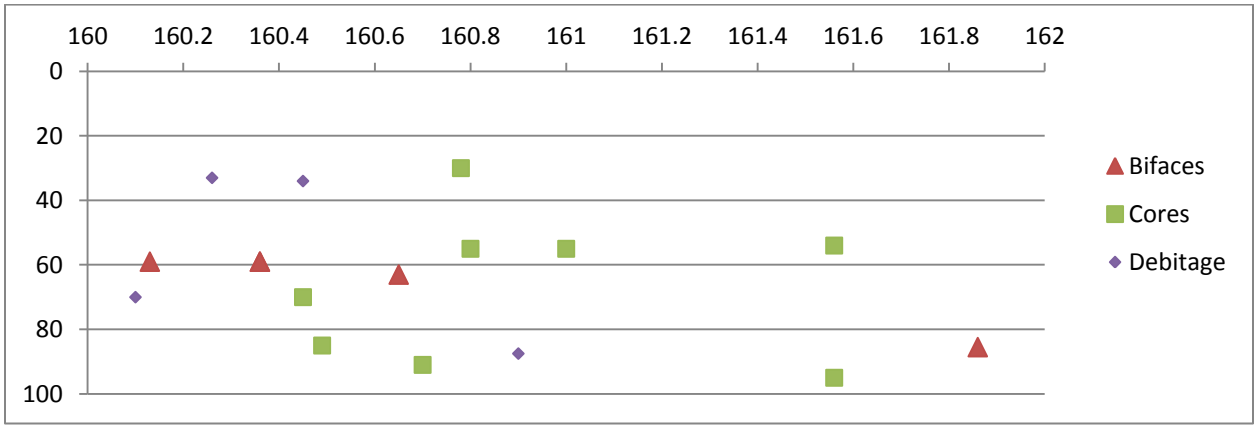


Figure A12–4
Profile Map of Unit N204 E160 showing the distribution of mapped lithic artifacts by level for the 1985 Field Season.

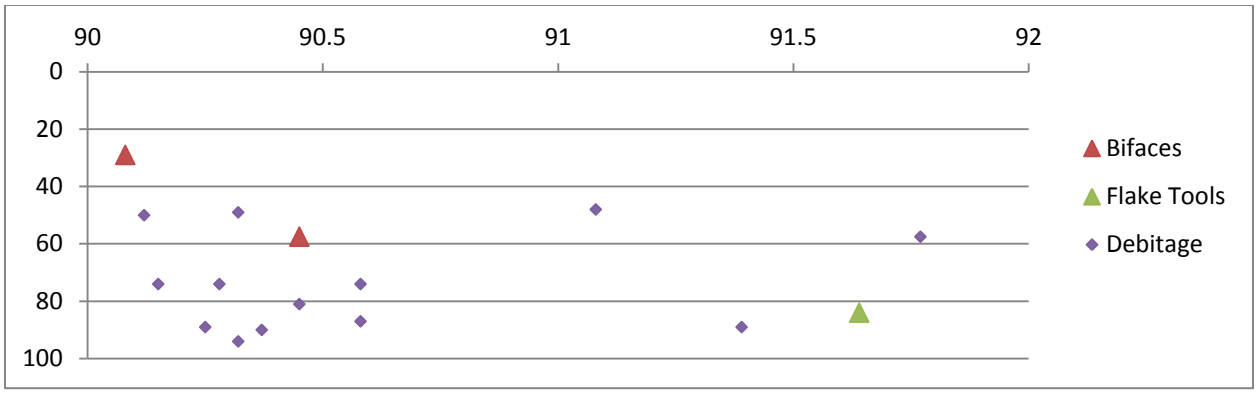


Figure A12–5
Profile Map of Unit N188 E090 showing the distribution of mapped lithic artifacts by level for the 1985 Field Season.

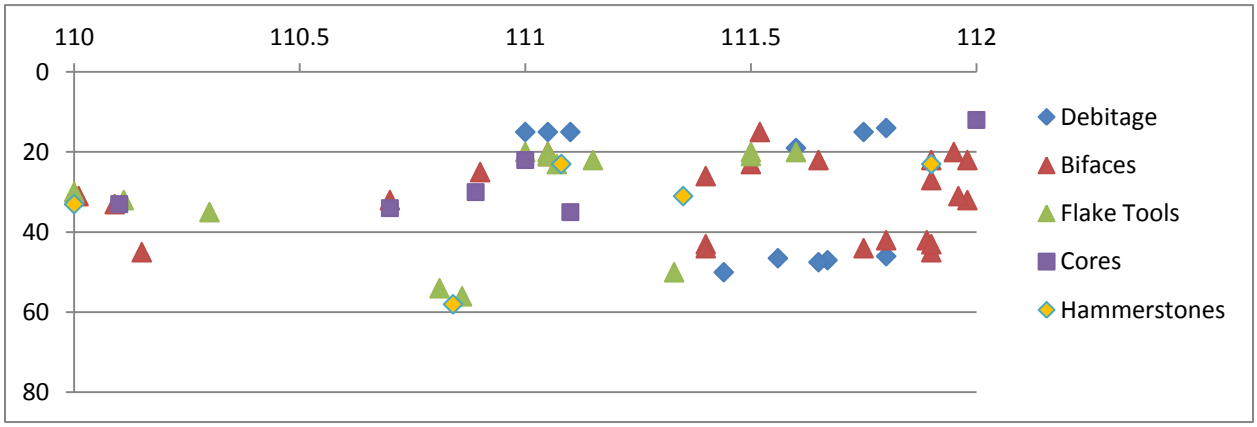


Figure A12–6
Profile Map of Unit N229 E110 showing the distribution of mapped lithic artifacts by level for the 1985 Field Season.

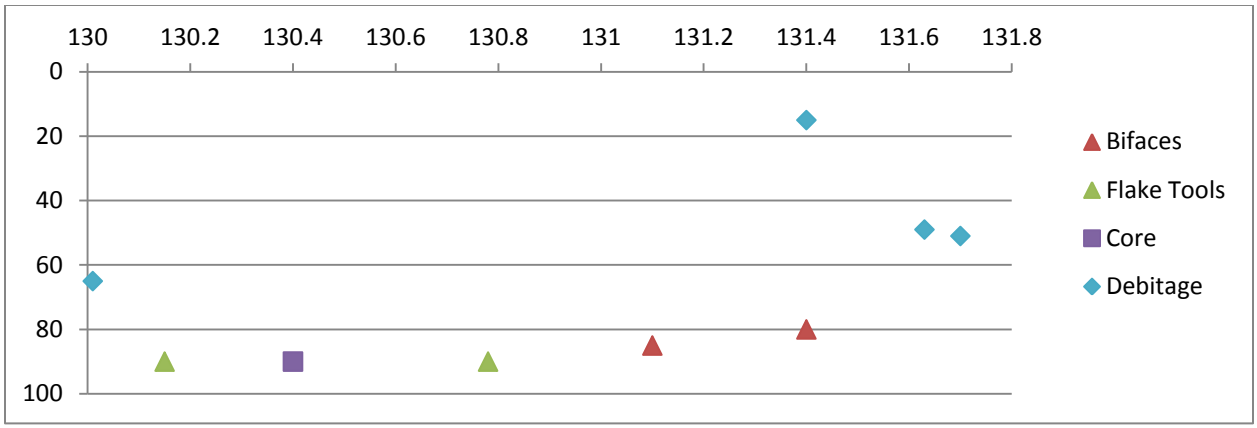


Figure A12–7
Profile Map of Unit N212 E130 showing the distribution of mapped lithic artifacts by level for the 1985 Field Season.



Figure A12–8
Feature 3, a lithic cluster at the Topper Site (38AL23) excavated in 1985, N229 E110 (30–40cmbs). Photo credit: Al Goodyear.



Figure A12–9
Feature 7, a Woodland period burial urn from the Topper Site (38AL23), 1985. Photo credit: Al Goodyear.



Figure A12–10
Field shot of 1985 Excavations at the Topper Site (38AL23).

Table A12–1
List of Features for 1985 Field Season at the Topper Site (38AL23).

No.	N	E		Year	Type	#	Lev.	B.Depth	E. Depth	Culture	Location
1	222	108	NA	1985	Lithic Cluster						Terrace
2	229	110	NA	1985	Hearth						Terrace
3	NA	NA	NA	1985	Possible Hearth			30cmbs	40cmbs		Terrace
4	220	87	NA	1985	Lithic Cluster						Terrace
5	220	87	NA	1985	Lithic Cluster			50cmbs	70cmbs	Archaic	Terrace
6	204	160	NA	1985	Chert Cluster			50cmbs	70cmbs	Archaic	Terrace
7	212	130	NA	1985	Pot with Urn Burial			70cmbs	75cmbs	Archaic	Terrace
8	231	91	NA	1985	Lithic Cluster	18	21	65cmbd	94cmbd	Paleoindian	Terrace

Results of 1986 Excavations at the Topper Site (38AL23)

In 1986, excavation continued at Topper with the aid of funding through a grant provided by the National Geographic Society. An additional 18 1x1 meter units were excavated this season (in two adjacent 3x3m blocks revealing an assortment of lithic materials and debitage spanning nearly 10,000 years of culture history in the area (Figures A12–10). The excavation blocks were labeled numerically as Block I and II, and the nine 1m units within each block were assigned alphabetic labels ranging from A to I (Figure A12–10). The blocks were situated on the floodplain terrace approximately 30m east of the river bank. Block I was placed to the immediate west of Block II. The excavation employed arbitrary levels, with the first level (A) excavated to 10cmbs and all succeeding levels removed in arbitrary 5cm increments (Goodyear 1986). A total of seven levels were excavated and labeled A-G accordingly. All excavations within these blocks were hand troweled to sterile subsoil with all fill dry screened through 1/4th inch screen mesh. A large contiguous area was selected for excavation in order to gather data on intra-site spatial distributions (Goodyear 1986:2).

After the 1986 field season, all materials recovered from the excavation were taken to SCIAA for subsequent lithic and ceramic analysis. A lithic analysis of units A and B (two units) from block 1, levels A-G was conducted as part of a senior honors thesis in 1989 (Carambelas 1989). The goal of this study was to determine onsite lithic reduction patterns through time at the site and to assess quarry behavior with regard to the type of tool stone selected for subsequent reduction. A total of 4,743 lithic items were recovered and analyzed from the two 1x1m units. This analysis resulted in the recovery of eleven formalized tools, and a substantial quantity of lithic debitage (Table A-1). Formalized tools recovered from this excavation include an end scraper, two unifaces, one core, and three projectile points from the plow-zone; one biface and

one uniface from the Woodland deposits; one projectile point from the Late Archaic deposits; and one biface from the Paleoindian deposits (Table A12–2).

While only a single biface was recovered from the Paleoindian deposits, the high abundance of biface thinning flakes from these levels (n = 1,630 or 47.74% of the assemblage) is indication of intensive lithic reduction in this area of the site for the time period. In fact, bifacial thinning flakes were the dominant debitage category consisting of 82% of all debitage types (Carambelas 1989:16). A visual inspection of these materials lead investigators to conclude that this area of the site served as a biface reduction locus, and that later Woodland and Archaic peoples partially reduced biface cores or blanks and transported them to the area of the hill-slope for further reduction (Carambelas 1989:17). The small quantity of Middle (Morrow Mountain) and Early Archaic projectile point performs from these units (N=4) suggests that biface reduction terminated early along the biface reduction continuum.

All debitage and tools from the selected units of the 1986 excavations were examined by condition; presumed raw material type/source area (i.e., upland cortex chert or or river chert) in order to assess material selection behavior. The results of this analysis found that upland cortex accounts for 87–100 percent of the debitage in levels B-G, and 68% of the debitage in level A (plow-zone) (Carambelas 1989) (Table A12–3).Based on the relative frequencies of upland and river cobble chert types among the flakes recovered from the excavation, upland chert was preferentially selected over river chert for tool-stone production. Although a total of 18 units were excavated during the 1986 field season, only the two units of the analyzed lithic materials discussed above have thus far been systematically documented.

In addition to the lithic materials, 3,250 ceramic artifacts were recovered from the 1984–1986 excavations at Topper. In 1985 and 1986 analyses were undertaken to determine the

temporal chronological placement of ceramic types at Topper and their vertical and horizontal distribution in excavated areas of the site (Harmon 1986; Mulcahay 1985). A 1985 analysis of the distribution of ceramics from four test pits (N212 E130, N229 E110, N231 E091, N188 E090) was carried out, with two units (N231 E091, N229 E110) producing high quantities of sherdlettes in the plowzone; indicating that the area had been subjected to plowing/cultivation at some point following the deposition of the pottery (Mulcahay 1985).

A subsequent study in 1986 was conducted, and examined the ceramic assemblage from Blocks I and II and from four 2x2m test pits (N231 E091, N188 E090, N220 E087, N204 E160), two of which had undergone analysis in 1985 (Harmon 1986). This analysis resulted in the identification of 397 pieces of ceramic prehistoric pottery. The results of this analysis are presented in Tables A12–4–A-6 which show the quantity of ceramic sherds by type recovered from each excavation.

Figure A10–4 presents some of the most common examples of ceramic items recovered from surface contexts at Topper. Most ceramic materials were recovered from levels A-C within the units examined in 1985 and 1986 (0–30cmbs), and the results of the study show that most ceramic materials from the units examined consist of Refuge (n=93), Deptford (n=179), and Savannah types series (n=95), and are in a logical stratification. Types occurring with less frequency include Cape Fear (n=20), and clay/grog (n=10). The occurrence of Stallings and Thom's Creek phase ceramics is rare at Topper which is interesting given that such phases are documented at other sites in the lower Savannah River Valley (Anderson 1975; Hanson et al. 1981; Stoltman 1964 and others). The abundance of ceramic items recovered at Topper implies that the site was intensively inhabited during the Woodland and Mississippian periods (see Appendix 1).

Based on the preliminary lithic and ceramic investigations resulting from the 1984–1986 field season, a cultural sequence at Topper was developed (Goodyear 1986:4). This sequence includes a Mississippian occupation from ca. 0–10 centimeters below surface consisting of both ceramic and lithic materials. Ceramics include types from the Savannah Phase; Savannah Fine Cord-marked, Savannah Check Stamped, Savannah Complicated Stamped, and Savannah Burnished (Mulcahey 1985; Harmon n.d.). According to Goodyear, "most of the Savannah Ware appears based on rims and decorations, to be pre 15th century (Goodyear 1986:4). Lithics recovered from the Mississippian component include small triangular projectile points.

A Woodland component was identified from ca. 20–35cmbs within the excavation block, and consists of Deptford Simple Stamped, Checked Stamped, and Bold Checked Stamped and Linear Check Stamped pottery. These wares indicate a date range extending from 500 BC-A.D. 500 and are consistent with the Early to Middle Woodland Periods. The Early Woodland period is marked by the occurrence of Refuge Simple Stamped pottery and Yadkin projectile points. Interestingly, Thoms Creek and Stallings Island fiber tempered pottery were absent at Topper in these units.

In 1986, a Middle to Late Archaic component was identified at Topper from ca. 30–50cmbs. Although ceramics are lacking from these deposits, a substantial thermally altered chert horizon was identified and consisted of large quantities of heat treated bifaces and concentrations of burned rock. The burned rock could indicate the presence of cooking activities on site. However, no charcoal was present in sufficient quantities that would allow for radiocarbon dating of the contents of the Archaic biface layer. Although bifaces were found to be variable in form, according to Goodyear, they appear to be expanded stem or corner notched forms (Goodyear 1986:5). A small sample of the points recovered during this season appear to be what

have commonly been referred to as MALA points (Sassaman 1985) and since renamed Allendale (Whatley 2002:13). These points predominantly have a biconvex cross section, relatively thick blade forms and symmetrical blade margins. Examples of Allendale points recovered at Topper are presented in A35–13–A35–14. Based on stratigraphic association, these artifacts would appear to date within a range of 5,000–6,000 cal yr B.P.

Below the Allendale zone, an Early Archaic component was identified at Topper between ca. 55–80cmbs. This component consists of "a side- notched Early Archaic deposit characterized by highly weathered chert" (Goodyear 1986:9). Thermally altered lithic bifaces are absent from theses depths, and instead the lithic materials appear to be more weathered than materials from the overlying sediments. Also absent are the concentrations of fire cracked rock that were plentiful in the Allendale levels (Goodyear 1986). Artifacts consistently found from the Early Archaic zone include unifaces and diagnostic Taylor projectile points. As of the 1986 field season, two Taylor points had been mapped *in situ*. One Taylor point was recovered at 69cmbs within the block excavation and the second was recovered from 78cmbs. Based on stratigraphic association and degree of weathering, these points were initially presumed to date approximately 10,000 cal yr B.P (Goodyear 1986), however more recent studies place these dates approximately 11,500–10,000 cal yr B.P. (Anderson and Sassaman 2996; Michie 1996).

Non diagnostic unifaces and bifaces were recovered from 70–100cmbs and are thought to reflect a Paleoindian presence at the site. Because no Clovis projectile points or blades were found during the 1986 excavation, the presence of a Paleoindian occupation at the site could not be definitively verified. However, the discovery of numerous non diagnostic bifaces, unifaces, and utilized tools beneath strata containing the side notched Taylor points suggested a likely earlier, Dalton or Clovis occupation at the site. Such deposits were buried at the base of C-

horizon sands resulting from colluvial slope-wash originating from the hill-slope (Goodyear 2007). Although no artifacts were recovered below the Paleoindian levels in 1986, a notable amount of flakes were recovered below these deposits during the initial season of fieldwork. The 1984 auger tests resulted in the discovery of no fewer than 29 flakes between 120 and 175cmbs in auger tests two and three either indicating great time depth for the site or the potential for assemblage disturbance via bioturbation. After the 1986 field season, excavations at Topper ceased until the summer of 1998. Between 1992 and 1997 archaeological investigations on the Clariant property were focused on the nearby Big Pine Tree Site, an Archaic and Paleoindian lithic workstation approximately 2km north of Topper (Russell 2015; Waters et al. 2007).

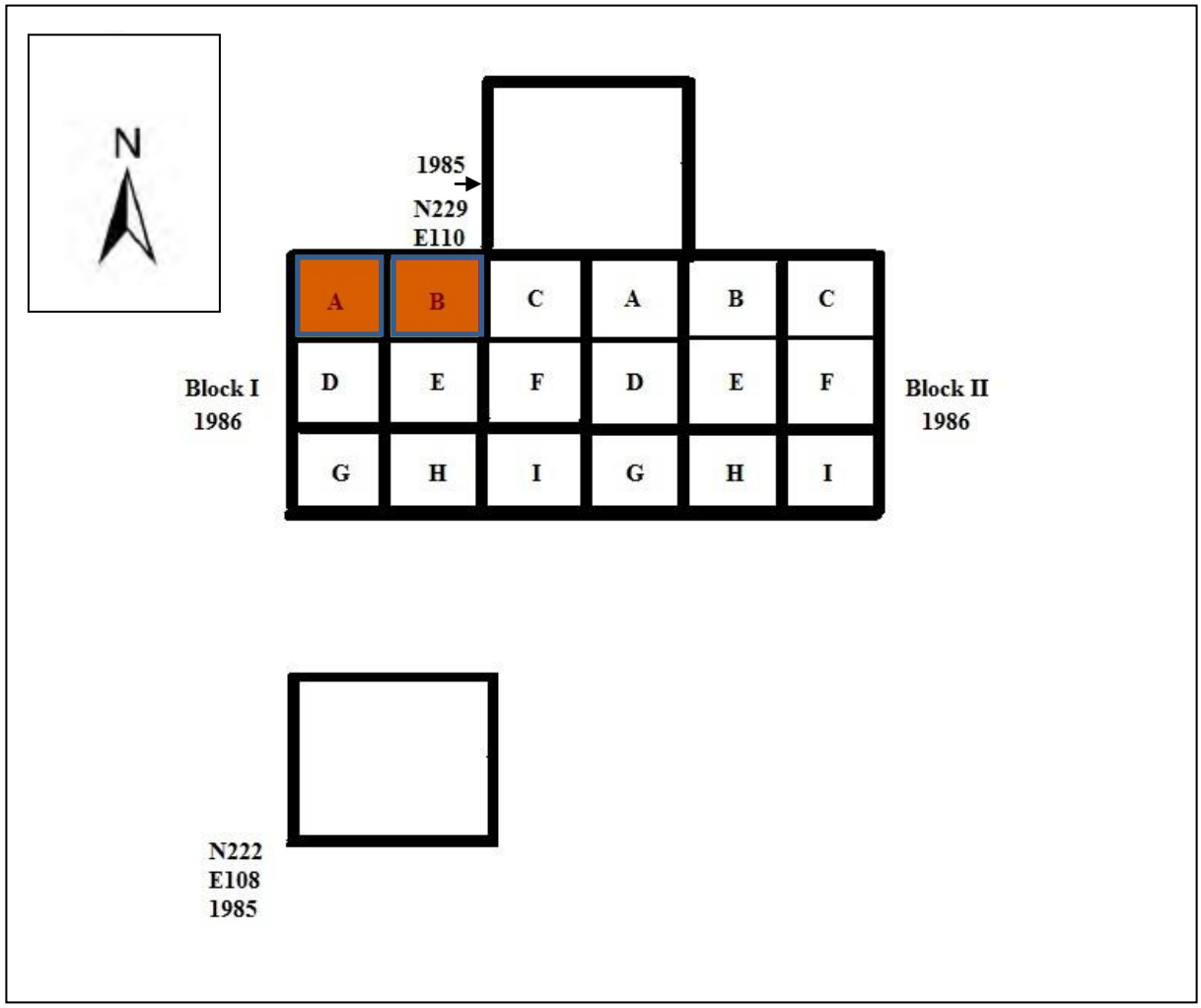


Figure A12–10B

Map showing the 18 1x1m unis excavated in 1986. These comprise two adjacent 3x3 block excavations (Block I and Block II). 2x2m Units N222 E108 and N229 E110 were excavated in 1985. Shaded 1x1m units A and B of Block I represent units selected for ceramic and lithic analysis by Carambelas (1989).



Figure A12–11
Photograph showing Block One, Level F of 1986 Excavations at the Topper Site (38AL23) (Photo by Al Goodyear).



Figure A12–12
Photograph showing Block Two, Level G of 1986 Excavations at the Topper Site (38AL23) (Photo by Al Goodyear).



Figure A12–13
Photograph showing Block One and Two, base of 1986 Excavations at the Topper Site (38AL23) (Photo by Al Goodyear).

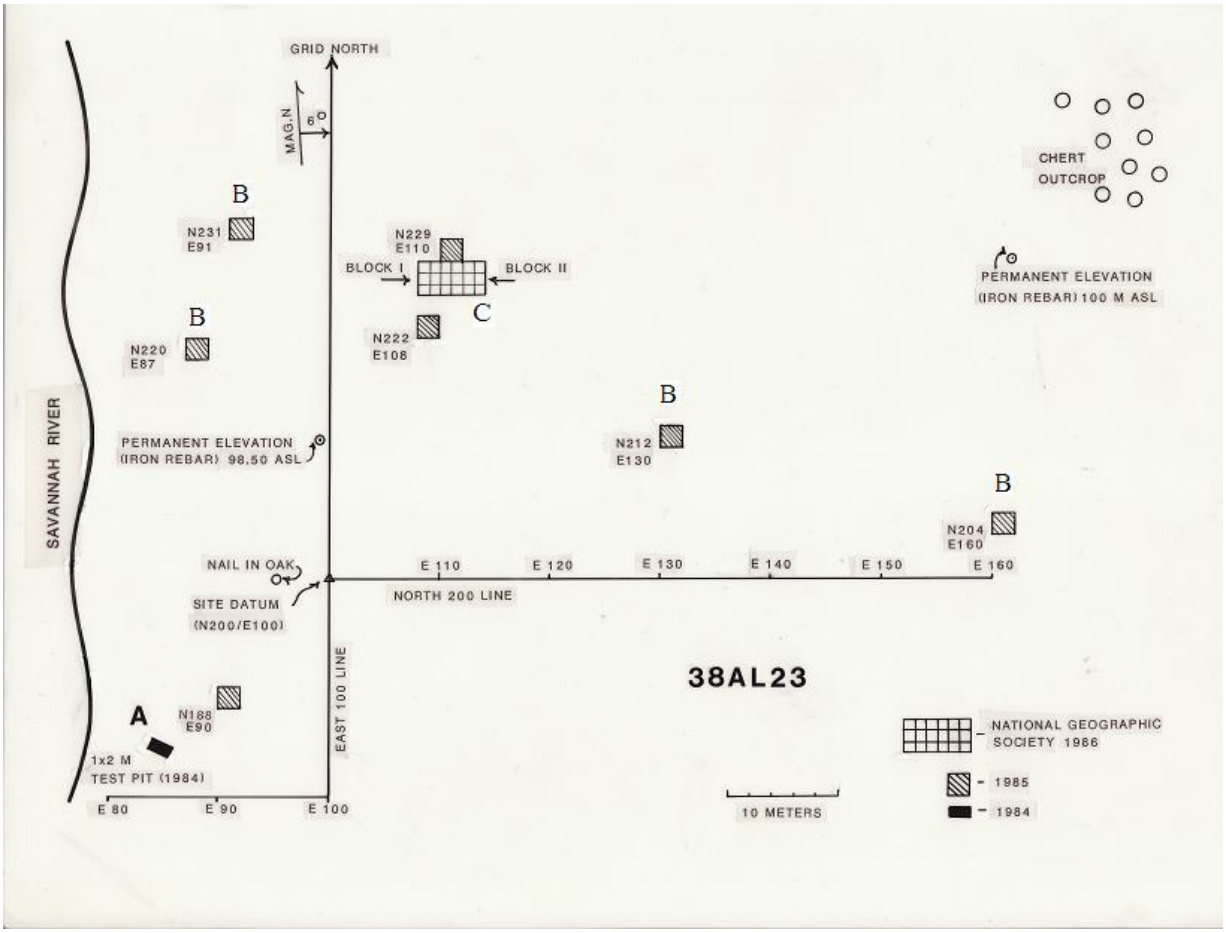


Figure A12–14
Map of Topper Site through 1986 Field Excavations.

Table A12–2
Results of Lithic Analysis for two 1m x1m Units (Unit A and B, Block I) from 1986 excavation. Analysis conducted as part of an Honors Thesis (Carambelas 1989). SHS = shatter, SUT= Utilized flake, R SRT= Retouched flake.

Artifact Category								**Unit**	**Total**							**Art.**
	A								**B**							
	Level								**Level**							
	A	**B**	**C**	**D**	**E**	**F**	**G**	**PZ**	**A**	**B**	**C**	**D**	**E**	**F**	**G**	
Burned Rock	0	0	3	7	8	17	39	95	0	8	9	16	37	56	83	**378**
Burned Chert	0	0	0	0	1	0	1	7	0	2	1	0	0	4	1	**17**
Cortex	0	0	0	0	0	2	0	16	0	0	0	0	0	0	0	**18**
Primary Flake	0	0	2	6	6	17	25	55	0	4	11	17	42	33	48	**266**
Secondary Flake	0	1	1	3	2	1	11	161	0	12	3	2	6	3	25	**231**
Tertiary Flake	0	1	4	5	6	9	11	85	0	12	10	8	12	23	10	**196**
Biface Thinning Flk	0	6	73	146	160	231	330	593	0	96	141	190	379	404	665	**3,414**
Chunk	0	0	2	0	2	5	3	30	0	2	1	1	5	5	6	**62**
Pebble	0	0	4	3	1	6	4	16	0	0	2	5	8	8	36	**93**
Hematite	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	**0**
Retouched Uniface	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0	**3**
End Scraper	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	**1**
Side Scraper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Uniface Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Biface Preform	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Biface Blank	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	**1**
Unidentified Biface	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	**1**
Projectile Point	0	0	0	1	0	0	0	3	0	0	0	0	0	0	0	**4**
Biface Core	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Core	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	**1**
Cobble Tool	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Rock	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Flake SHS	0	0	0	0	0	0	0	1	0	1	0	1	3	0	1	**7**
Flake SUT	0	1	0	1	1	3	3	14	0	2	1	0	7	2	12	**47**
Flake R SRT	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	**3**
Total	**0**	**9**	**90**	**172**	**187**	**291**	**427**	**1,083**	**0**	**140**	**179**	**240**	**499**	**538**	**888**	**4,743**

Table A12–3
Results of Lithic Analysis of two 1m x1m units from 1986 Block Excavation. River versus Upland Cortex by Level. Adapted from Carambelas (1989).

Level	**Upland Chert**				**River Chert**			
	Number	Percent	Weight	Percent	Number	Percent	Weight	Percent
Plowzone	135	95	329	68	7	5	152.1	32
B	15	88	33.4	98	2	12	.7	2
C	16	94	37.4	95	1	6	1.7	5
D	26	93	88.3	99	2	7	.5	1
E	56	100	89.9	100	-	-	-	-
F	53	98	140.3	99	1	2	1.7	1
G	106	97	317.3	99	3	3	4	1
Total	**407**	**96**	**1035.6**	**87**	**16**	**4**	**160.7**	**13**

Table A12–4
Distribution of Lithics from the 1986 analysis of four test pits (N231 E091, N188 E090, N220 E087, N204 E160) at Topper.

Level	**Upland Chert**				**River Chert**			
	Number	**Percent**	**Weight**	**Percent**	**Number**	**Percent**	**Weight**	**Percent**
Plowzone	135	95	329	68	7	5	152.1	32
B	15	88	33.4	98	2	12	.7	2
C	16	94	37.4	95	1	6	1.7	5
D	26	93	88.3	99	2	7	.5	1
E	56	100	89.9	100	-	-	-	-
F	53	98	140.3	99	1	2	1.7	1
G	106	97	317.3	99	3	3	4	1
Total	**407**	**96**	**1035.6**	**87**	**16**	**4**	**160.7**	**13**

Table A12–5
Distribution of Ceramics from the 1986 analysis of four test pits (N231 E091, N188 E090, N220 E087, N204 E160) at Topper.

	Level						Total
Type	**A**	**B**	**C**	**D**	**E**	**F**	
Savanna	1	16	5	-	-	-	**22**
Clay/Grog	5	1	1	-	-	-	**7**
Cape Fear	3	7	2	-	-	-	**12**
Deptford	27	39	46	7	-	-	**119**
Refuge	7	14	28	12	2	1	**64**
Total	**43**	**77**	**82**	**19**	**2**	**1**	**224**

Table A12–6
Distribution of Ceramics from the 1986 analysis of Blocks I and II at Topper.

	Level						Total
Type	**A**	**B**	**C**	**D**	**E**	**F**	
Savanna	38	32	-	-	1	1	**72**
Clay/Grog	4	1	-	-	-	-	**5**
Cape Fear	5	3	-	-	-	-	**8**
Deptford	21	28	5	3	1	1	**59**
Refuge	7	17	3	1	1	-	**29**
Total	**75**	**81**	**8**	**4**	**3**	**2**	**173**

APPENDIX 13

PERCENTAGE OF ARTIFACTS MISSED FOR EACH LEVEL AND RECOVERED FROM SCREEN

An issue concerning site recovery protocol involves the percentage rate of inter observer error in artifact recovery. According to procedure, all items 2.5cm or greater are three dimensionally mapped within the site grid. If an item smaller than 2.5 cm was deemed to be of cultural origin or appears to take the form of chipped stone debris, such materials were also mapped. However, the potential exists that some items that meet this size criteria ($\geq$2.5cm) were missed in the field and subsequently placed in the screen. To determine the rate of error in the mapping protocol, and to ascertain if the spatial array of artifacts has been preserved, all materials from the screen were subjected to a size grade analysis. Accordingly, the combined weight of all screened and plotted items greater than 2.5cm was recorded for each level, the total for which comprises 100% of the materials per level for the given size grade. By comparing the percentage of 2.5inch artifact screen weight by the percentage of 2.5 inch plotted artifact weight, it was possible to determine the error/ artifact recovery rate for each level by stratigraphic deposit. The results of this analysis are presented here in Appendix 13 and in Table A13-1. Based on the analysis, the average percentage of flaking debris greater than 2.5cm that was missed in the field ranges from a high of 8.6% for the Clovis deposits to a low of 4.07% for the Pleistocene Terrace. On average, 4.93% of chipped stone tools and debris from the Pleistocene Sands were missed and not mapped in the field. These findings imply that at least a small portion of the spatial representation of larger artifacts from the site is missing (i.e. was/ were not mapped) and is therefore inaccurate. Although the percentages are not high, the presence of artifacts larger than 2.5 cm from the screen illustrates one shortcoming from of the current approach the study.

Appendix 13 presents the percentage of artifacts, debitage, and lithic materials by level that are larger than 2.5cm and that were missed during level excavation and mistakenly placed in the ¼ inch screen. The appendix includes data on 676 levels of excavated materials. A total of 349 of these levels derive from the Pleistocene Terrace while the remaining 327 levels are from the Holocene and Pleistocene Sands. The Appendix includes eight columns. Column one provides the level provenience information followed by level depth in column two. Columns three through six provide data on the percentage weight of different lithic categories: 3; the sum weight of all materials from the entire level, 4; the sum weight of 2 ½ in or greater cortical materials recovered from the screen, 5; the sum weight of 2 ½ in or greater quartz materials recovered from the screen, and 6; sum weight of 2 ½ in or greater flake materials recovered from the screen. Column seven presents the combined weight of cortical, quartz and flake materials for the 2.5in size grade that were recovered from the screen. Column eight presents the percentage of material from each level that was not mapped, and subsequently placed in the screen. A total of 23 levels were found to have had greater than 25% of the 2.5 inch level sum placed in the screen. Of these, 21 levels were from the Holocene Sands and excavated prior to 2004. Figure A13-1 presents examples of lithic items greater than 2.5cm for comparison.

Table A13-1
Weight and percentage of flakes missed per level during excavation and recovered from screen.

	Av. % Flakes Missed All Levels	**Av. % Flakes Missed for Levels with Flake Occurrence**	**Average Flake Weight for All Levels**	**Average Flake Weight for Levels with Flake Occurrence**
Clovis	8.6	20.64	28.96	84.13
P. Sands	4.93	9.56	8.85	59.09
P. Terrace	4.07	9.9	1.82	27.19



Figure A13-1
Example of cortical chert debris (at left) and quartz pebble (at right) illustrating size threshold for items, regardless of type that should be mapped in situ.

Table A13-2
Percentage of Artifacts Missed for each level and recovered from Screen continued

Provenience	Depth	Level Weight	Cort. Weight	Qtz Weight	Flk Weight	Total (g)	% Missed
N242 E138 NE PT 1	97.04-96.95	191.3	0	0	0	0	0
N242 E138 NE PT 2	96.95-96.90	169.9	0	0	0	0	0
N242 E138 NE PT 3	96.90-96.85	139.3	0	0	0	0	0
N242 E138 NE PT 4	96.85-96.80	302.7	0	0	0	0	0
N242 E138 NE PT 5	96.80-96.75	212.7	0	0	0	0	0
N242 E138 NE PT 6	96.75-96.70	238.9	0	0	0	0	0
N242 E138 NE PT 7	96.70-96.65	223.5	0	0	0	0	0
N242 E138 NE PT 8	96.65-96.60	322.1	38.8	0	0	38.8	12.04
N242 E138 NE PT 9	96.60-96.55	861.3	47.1	35	0	82.1	19.06
N242 E138 NE PT 10	96.55-96.50	299.05	13.8	0	0	13.8	4.61
N242 E138 NE PT 11	96.50-96.45	426	0	0	0	0	0
N242 E138 NE PT 12	96.45-96.40	822.3	0	30.8	0	30.8	3.74
N242 E138 NE PT 13	96.40-96.35	475.3	0	0	0	0	0
N242 E138 NE PT 14	96.35-96.30	791.8	0	0	0	0	0
N242 E138 NE PT 15	96.30-96.25	1071.7	65	0	0	65	0
N242 E138 NE PT 16	96.25-96.20	934.8	0	0	19.7	19.7	21.07
N242 E138 NE PT 17	96.20-96.15	344.3	61.4	0	0	61.4	0
N242 E138 NE PT 18	96.15-96.10	384.2	78.1	0	0	78.1	20.32
N242 E138 NE PT 19	96.10-96.05	210.4	0	0	0	0	0
N242 E138 NE PT 20	96.05-96.00	295.7	0	39.8	0	39.8	13.45
N242 E138 NE PT 21	96.00-95.95	326.4	0	0	0	0	0
N242 E138 NE PT 22	95.95-95.90	348.1	0	0	0	0	0
N242 E138 NE PT 23	95.90-95.85	467.2	0	0	0	0	0
N242 E138 NE PT 24	95.85-95.80	470.9	26.9	0	0	26.9	5.71
N242 E138 NE PT 25	95.80-95.75	401	0	0	0	0	0
N242 E138 NE PT 26	95.75-95.70	492.1	0	0	0	0	0

Table A13-2 continued

Provenience	Depth	Level Weight	Cort. Weight	Qtz Weight	Flk Weight	Total (g)	% Missed
N242 E138 NE PT 27	95.70-95.65	381.1	0	0	0	0	0
N242 E138 NE PT 28	95.65-95.60	1075.3	79	0	10.9	89.9	8.36
N242 E138 NE PT 29	95.60-95.55	1503.2	58	0	0	58	3.85
N242 E138 NE PT 30	95.55-95.50	2245	116.1	0	0	116.1	5.17
N242 E140 PT SW (a) 1	97.15-97.10	76.8	0	0	0	0	0
N242 E140 PT SW (a) 2	97.10-97.05	156.3	0	41.7	0	41.7	26.67
N242 E140 PT SW (a) 3	97.05-97.00	319.5	0	0	0	0	0
N242 E140 PT SW (a) 4	97.00-96.95	299.4	0	0	0	0	0
N242 E140 PT SW (a) 5	96.95-96.90	413.5	0	0	0	0	0
N242 E140 PT SW (a) 6	96.90-96.85	555.6	42.1	0	0	42.1	7.57
N242 E140 PT SW (a) 7	96.85-96.80	344	0	0	0	0	0
N242 E140 PT SW (a) 8	96.80-96.75	271.8	39.4	0	0	39.4	14.49
N242 E140 PT SW (a) 9	96.75-96.70	242.8	0	0	0	0	0
N242 E140 PT SW 10	96.70-96.65	323.6	0	0	0	0	0
N242 E140 PT SW 11	96.65-96.60	381.9	16.5	22.1	0	38.6	10.10
N242 E140 PT SW 1	96.59-96.55	268.89	10.5	0	0	10.5	3.90
N242 E140 PT SW 2	96.55-96.50	488.2	26.4	0	0	26.4	5.40
N242 E140 PT SW 3	96.50-96.45	655.7	0	0	0	0	0
N242 E140 PT SW 4	96.45-96.40	275.2	0	0	0	0	0
N242 E140 PT SW 5	96.40-96.35	152.1	0	0	0	0	0
N242 E140 PT SW 6	96.35-96.30	374.5	0	0	0	0	0
N242 E140 PT SW 7	96.30-96.25	315.9	0	0	0	0	0
N242 E140 PT SW 8	96.25-96.20	165.3	0	0	0	0	0
N242 E140 PT SW 9	96.20-96.15	323.8	18.3	0	0	18.3	5.65
N242 E140 PT SW 10	96.15-96.10	264.2	0	0	0	0	0
N242 E140 PT SW 11	96.10-96.05	605.9	112.8	0	0	112.8	18.61
N242 E140 PT SW 12	96.05-96.00	661.9	16.9	21.8	0	38.7	5.84

Table A13-2 continued

Provenience	Depth	Level Weight	Cort. Weight	Qtz Weight	Flk Weight	Total (g)	% Missed
N242 E140 PT SW 13	96.00-96.95	595.5	16.5	27.7	0	44.2	7.42
N242 E140 PT SW 14	96.95-96.90	481.3	30.4	0	0	30.4	6.31
N242 E140 PT SW 15	96.90-96.85	377.7	0	0	0	0	0
N242 E140 PT SW 16	95.85-95.80	393.6	0	0	0	0	0
N242 E140 PT SW 17	95.80-95.75	469.6	0	0	0	0	0
N242 E140 PT SW 18	95.75-95.70	737.6	109.2	0	0	109.2	14.80
N242 E140 PT SW 19	95.70-95.65	952.2	114.9	0	0	114.9	12.06
N242 E140 PT SW 20	95.65-95.60	634.3	52.1	0	0	52.1	8.21
N242 E140 PT SW 21	95.60-95.55	485.2	0	0	0	0	0
N242 E140 PT SW 22	95.55-95.50	1009.6	93.9	24.4	0	118.3	11.71
N242 E140 PT SW 23	95.50-95.45	2757.7	51	0	0	51	1.84
N242 E140 PT SW 24	95.45-95.40	1228.3	121.8	0	0	121.8	9.91
N242 E140 PT SW 25	95.40-95.35	3296.8	341.1	30.1	0	371.2	11.25
N242 E140 SE PT(a) 1	97.16-97.10	201.1	0	0	0	0	0
N242 E140 SE PT(a) 2	97.10-97.05	465.9	47.2	0	0	47.2	10.08
N242 E140 SE PT(a) 3	97.05-97.00	481.8	0	0	0	0	0
N242 E140 SE PT(a) 4	97.00-96.95	530.7	45.7	0	0	45.7	8.61
N242 E140 SE PT(a) 5	96.95-96.90	517.4	18.7	0	0	18.7	3.61
N242 E140 SE PT(a) 6	96.90-96.85	475.8	0	0	0	0	0
N242 E140 SE PT(a) 7	96.85-96.80	264.9	0	0	0	0	0
N242 E140 SE PT 1	96.80-96.75	203.6	0	0	0	0	0
N242 E140 SE PT 2	96.75-96.70	327.1	0	0	0	0	0
N242 E140 SE PT 3	96.70-96.65	549.9	39	0	0	39	7.09
N242 E140 SE PT 4	96.65-96.60	295.3	0	0	0	0	0
N242 E140 SE PT 5	96.60-96.55	329.4	0	0	0	0	0
N242 E140 SE PT 6	96.55-96.50	432.1	0	0	0	0	0
N242 E140 SE PT 7	96.50-96.45	225.4	13.1	0	0	13.1	5.81

Table A13-2 continued

Provenience	Depth	Level Weight	Cort. Weight	Qtz Weight	Flk Weight	Total (g)	% Missed
N242 E140 SE PT 8	96.45-96.40	246.4	0	0	0	0	0
N242 E140 SE PT 9	96.40-96.35	892.7	108.3	31.5	0	139.8	26.86
N242 E140 SE PT 10	96.35-96.30	581.5	59.2	0	0	59.2	10.18
N242 E140 SE PT 11	96.30-96.25	760.2	0	47.2	0	47.2	6.20
N242 E140 SE PT 12	96.25-96.20	962.2	114.6	0	0	114.6	11.91
N242 E140 SE PT 13	96.20-96.15	827.6	131.2	0	11.1	142.3	17.19
N242 E140 SE PT 14	96.15-96.10	742.4	0	0	0	0	0
N242 E140 SE PT 15	96.10-96.05	988.6	35.6	0	0	35.6	3.60
N242 E140 SE PT 16	96.05-96.00	763.5	55.5	68.3	14.5	138.3	18.11
N242 E140 SE PT 17	96.00-95.95	869.1	137.2	0	0	137.2	15.78
N242 E140 SE PT 18	95.95-95.90	677.8	0	0	0	0	0
N242 E140 SE PT 19	95.90-95.85	722.2	0	0	0	0	0
N242 E140 SE PT 20	95.85-95.80	901.4	21.6	0	0	21.6	2.39
N242 E140 SE PT 21	95.80-95.75	1195.2	154.6	0	0	154.6	12.93
N242 E140 SE PT 22	95.75-95.70	990.6	55.7	0	0	55.7	5.62
N242 E140 SE PT 23	95.70-95.65	1365.2	107.4	0	0	107.4	7.86
N242 E140 SE PT 24	95.65-95.60	1008.13	77.6	0	0	77.6	7.69
N242 E140 SE PT 25	95.60-95.55	2006.4	344.2	163.8	0	163.8	8.16
N242 E140 SE PT 26	95.55-95.50	2748.2	537.8	123.4	0	661.2	24.05
N242 E140 SE PT 26	95.50-95.45	1607.8	231.4	0	0	231.4	14.39
N242 E140 SE PT 27	95.45-95.40	1694.3	94.3	36.3	18.4	149	8.79
N242 E140 SE PT 28	95.40-95.35	3249.6	230	40	18	288	8.86
N242 E142 PT SW (a) 1	97.15-97.10	31.1	0	0	0	0	0
N242 E142 PT SW (a) 2	97.10-97.05	197.2	0	0	0	0	0
N242 E142 PT SW (a) 3	97.05-97.00	563.6	16.8	0	0	16.8	2.98
N242 E142 PT SW (a) 4	97.00-96.95	325.3	0	0	0	0	0
N242 E142 PT SW (a) 5	96.95-96.90	362.8	0	0	0	0	0

Table A13-2 continued

Provenience	Depth	Level Weight	Cort. Weight	Qtz Weight	Flk Weight	Total (g)	% Missed
N242 E142 PT SW (a) 6	96.90-96.85	579.4	0	0	0	0	0
N242 E142 PT SW (a) 7	96.85-96.80	373.5	0	0	0	0	0
N242 E142 PT SW 1	96.80-96.75	379	24.6	0	0	24.6	6.49
N242 E142 PT SW 2	96.75-96.70	416.2	11.3	0	0	11.3	.88
N242 E142 PT SW 3	96.70-96.65	638.4	0	0	0	0	0
N242 E142 PT SW 4	96.65-96.60	504	0	0	0	0	0
N242 E142 PT SW 5	96.60-96.55	394	0	0	0	0	0
N242 E142 PT SW 6	96.55-96.50	373	0	0	0	0	0
N242 E142 PT SW 7	96.50-96.45	621.4	16.8	0	0	16.8	2.70
N242 E142 PT SW 8	96.45-96.40	760.6	10.6	0	0	10.6	1.39
N242 E142 PT SW 9	96.40-96.35	779.6	12.2	0	0	12.2	1.56
N242 E142 PT SW 10	96.35-96.30	887.2	77.7	0	0	77.7	8.75
N242 E142 PT SW 11	96.30-96.25	1182	46.9	0	0	46.9	3.96
N242 E142 PT SW 12	96.25-96.20	1281.8	137.9	0	0	137.9	10.75
N242 E142 PT SW 13	96.20-96.15	1219.2	0	0	0	0	0
N242 E142 PT SW 14	96.15-96.10	1340.9	0	15.3	0	15.3	1.14
N242 E142 PT SW 15	96.10-96.05	946.2	47.5	17.6	0	65.1	6.88
N242 E142 PT SW 16	96.05-96.00	1050.3	43.2	54.1	0	97.3	9.26
N242 E142 PT SW 17	96.00-95.95	991.2	0	18.5	0	18.5	1.86
N242 E142 PT SW 18	95.95-95.90	777	30.4	0	0	30.4	3.91
N242 E142 PT SW 19	95.90-95.85	947.3	50.3	0	0	50.3	5.3
N242 E142 PT SW 20	95.85-95.80	1307.9	62.3	58.9	0	121.2	9.26
N242 E142 PT SW 21	95.80-95.75	1143.2	51.1	0	0	51.1	4.46
N242 E142 PT SW 22	95.75-95.70	1775.2	106.8	31.1	0	137.9	7.76
N242 E142 PT SW 23	95.70-95.65	1498	309.9	0	0	309.9	20.68
N242 E142 PT SW 24	95.65-95.60	2175.8	314.6	24.9	0	339.5	15.60
N242 E142 PT SW 25	95.60-95.55	3111	208.3	17.4	16.2	241.9	7.77

Table A13-2 continued

Provenience	Depth	Level Weight	Cort. Weight	Qtz Weight	Flk Weight	Total (g)	% Missed
N242 E142 PT SW 26	95.55-95.50	2002.8	358.1	35.6	0	393.7	19.65
N242 E142 PT SW 27	95.50-95.45	779.1	53.8	0	0	53.8	6.90
N242 E142 PT NW 1	97.18-97.13	12	0	0	0	0	0
N242 E142 PT NW 2	97.13-97.08	17.8	0	0	0	0	0
N242 E142 PT NW 3	97.08-97.03	49.5	0	0	0	0	0
N242 E142 PT NW 4	97.03-96.98	34.4	0	0	0	0	0
N242 E142 PT NW 5	96.98-96.93	78.4	0	0	0	0	0
N242 E142 PT NW 6	96.93-96.88	90.4	0	0	0	0	0
N242 E142 PT NW 7	96.88-96.83	88.6	0	0	0	0	0
N242 E142 PT NW 8	96.83-96.78	161	16.6	0	0	16.6	10.31
N242 E142 PT NW 9	96.78-96.73	211.5	0	0	10.2	10.2	4.82
N242 E142 PT NW 10	96.73-96.68	244.3	0	0	0	0	0
N242 E142 PT NW 11	96.68-96.63	287	0	0	0	0	0
N242 E142 PT NW 12	96.63-96.58	264.5	0	0	0	0	0
N242 E142 PT NW 13	96.58-96.53	391.7	13.3	0	0	13.3	.24
N242 E142 PT NW 14	96.53-96.48	303.1	0	0	0	0	0
N242 E142 PT NW 15	96.48-96.43	208.2	0	0	0	0	0
N242 E142 PT NW 16	96.43-96.38	205.8	0	0	0	0	0
N242 E142 PT NW 17	96.38-96.33	340.2	40.5	0	0	40.5	11.9
N242 E142 PT NW 18	96.33-96.28	624	35.7	38.5	0	74.2	11.89
N242 E142 PT NW 19	96.28-96.23	552.2	50.9	0	21.9	72.8	13.18
N242 E142 PT NW 20	96.23-96.18	518	43.5	0	0	43.5	8.39
N242 E142 PT NW 21	96.18-96.13	581.6	22.7	0	0	22.7	3.90
N242 E142 PT NW 22	96.13-96.08	540.1	53	0	0	0	0
N242 E142 PT NW 23	96.08-96.03	744.61	14	61.3	0	75.3	10.11
N242 E142 PT NW 24	96.03-96.00	451	11.7	0	0	11.7	2.59
N242 E142 PT NW 25	95.00-95.95	552.4	37.8	0	0	37.8	6.84

Table A13-2 continued

Provenience	Depth	Level Weight	Cort. Weight	Qtz Weight	Flk Weight	Total (g)	% Missed
N242 E142 PT NW 26	95.95-95.90	722	31.8	0	0	31.8	4.40
N242 E142 PT NW 27	95.90-95.85	802.2	80.6	0	0	80.6	10.04
N242 E142 PT NW 28	95.85-95.80	963.4					0
N242 E142 PT NW 29	95.80-95.75						0
N242 E142 PT NW 30	95.75-95.70	1267.3	50.6	50.1	0	100.7	8.44
N242 E142 PT NW 31	95.70-95.65	1645.7	117.3	0	0	117.3	7.12
N242 E142 PT NW 32	95.65-95.60	2082	463.8	41.4	0	505.2	24.26
N242 E142 PT NW 33	95.60-95.55	3090.6	431	276.2	0	707.2	22.88
N242 E142 PT NW 34	95.55-95.50	1980.3	108.5	40.4	0	148.9	7.51
N242 E142 PT NW 35	95.50-95.45	2736	276.3	81.1	0	357.4	13.06
N244 E138 PT SE 1	97.12-97.07	64	0	0	0	0	0
N244 E138 PT SE 2	97.07-97.00	396.2	0	0	0	0	0
N244 E138 PT SE 3	97.00-96.95	270.9	0	0	0	0	0
N244 E138 PT SE 4	96.95-96.90	285.9	0	0	0	0	0
N244 E138 PT SE 5	96.90-96.85	293.1	0	0	0	0	0
N244 E138 PT SE 6	96.85-96.80	304.6	54.3	0	0	54.3	17.82
N244 E138 PT SE 7	96.80-96.75	199.9	0	0	0	0	0
N244 E138 PT SE 8	97.75-97.70	214.3	0	0	0	0	0
N244 E138 PT SE 9	97.70-97.65	372.5	0	0	0	0	0
N244 E138 PT SE 10	96.65-96.60	180.2	0	0	0	0	0
N244 E138 PT SE 11	96.60-96.55	225.2	0	0	0	0	0
N244 E138 PT SE 12	96.60-96.55	198.2	0	0	0	0	0
N244 E138 PT SE 13	96.55-96.50	359	0	0	0	0	0
N244 E138 PT SE 14	96.50-96.45	479.9	38.4	0	0	0	0
N244 E138 PT SE 15	96.45-96.40	785.3	49.4	45.2	0	94.6	12.04
N244 E138 PT SE 16	96.40-96.35	340	0	0	0	0	0
N244 E138 PT SE 17	96.35-96.30	262.2	0	0	0	0	0

Table A13-2 continued

Provenience	Depth	Level Weight	Cort. Weight	Qtz Weight	Flk Weight	Total (g)	% Missed
N244 E138 PT SE 18	96.30-96.25	161	0	0	0	0	0
N244 E138 PT SE 19	96.25-96.20	123	0	0	0	0	0
N244 E138 PT SE 20	96.20-96.15	283.7	0	0	0	0	0
N244 E138 PT SE 21	96.15-96.10	51.5	0	0	0	0	0
N244 E138 PT SE 22	96.10-96.05	161.8	0	0	0	0	0
N244 E138 PT SE 23	96.05-96.00	176.2	0	0	0	0	0
N244 E138 PT SE 24	96.00-95.95	334.8				0	0
N244 E138 PT SE 25	95.95-95.90	193.6	0	0	0	0	0
N244 E138 PT SE 26	95.90-95.85	161.8	0	0	0	0	0
N244 E138 PT SE 27	95.85-95.80	437.7	0	72.9	0	0	0
N244 E138 PT SE 28	95.80-95.75	111.6	0	0	0	0	0
N244 E138 PT SE 29	95.75-95.70	129.6	0	0	0	0	0
N244 E138 PT SE 30	95.70-95.65	127.1	0	0	0	0	0
N244 E138 PT SE 31	95.65-95.60	419	0	0	0	0	0
N246 E140 PT SE 1	97.37-97.30	407.6	24.1	0	0	0	0
N246 E140 PT SE 2	97.30-97.25	280	0	0	0	0	0
N246 E140 PT SE 3	97.25-97.20	547.4	0	0	15.2	15.2	2.77
N246 E140 PT SE 4	97.20-97.15	538.6	0	0	0	0	0
N246 E140 PT SE 5	97.15-97.10	634.3	39.9	0	0	0	0
N246 E140 PT SE 6	97.10-97.05	436.5	17.9	0	0	0	0
N246 E140 PT SE 7	97.05-97.00	402.1	0	0	0	0	0
N246 E140 PT SE 8	97.00-96.95	521.8	0	0	0	0	0
N246 E140 PT SE 9	96.95-96.90	469.6	72.4	0	0	0	0
N246 E140 PT SE 10	96.90-96.85	523	18.8	0	0	0	0
N246 E140 PT SE 11	96.85-96.80	211	0	0	0	0	0
N246 E140 PT SE 12	96.80-96.75	501	0	19.4	0	19.4	3.87
N246 E140 PT SE 13	96.75-96.70	208.4	0	0	0	0	0

Table A13-2 continued

Provenience	Depth	Level Weight	Cort. Weight	Qtz Weight	Flk Weight	Total (g)	% Missed
N246 E140 PT SE 14	96.70-96.65	823.65	0	0	0	0	0
N246 E140 PT SE 15	96.65-96.60	515.1	0	0	0	0	0
N246 E140 PT SE 16	96.60-96.55	457.9	0	0	0	0	0
N246 E140 PT SW 1	97.35-97.30	249.4	0	0	0	0	0
N246 E140 PT SW 2	97.30-97.25	322.9	0	0	0	0	0
N246 E140 PT SW 3	97.25-97.20	120.3	0	0	0	0	0
N246 E140 PT SW 4	97.20-97.15	487.8	0	0	0	0	0
N246 E140 PT SW 5	97.15-97.10	517	0	0	0	0	0
N246 E140 PT SW 6	97.10-97.05	575.7	0	0	0	0	0
N246 E140 PT SW 7	97.05-97.00	511.9	0	0	0	0	0
N246 E140 PT SW 8	97.00-96.95	461.3	0	0	0	0	0
N246 E140 PT SW 9	96.95-96.90	524.5	0	0	0	0	0
N246 E140 PT SW 10	96.90-96.85	515	0	0	0	0	0
N246 E140 PT SW 11	96.85-96.80	420.6	0	0	0	0	0
N246 E140 PT SW 12	96.80-96.75	533.2	0	0	0	0	0
N246 E140 PT SW 13	96.75-96.70	468.2	0	0	0	0	0
N246 E140 PT SW 14	96.70-96.65	329.2	0	0	0	0	0
N246 E140 PT SW 15	96.65-96.60	370.1	0	0	0	0	0
N246 E140 PT SW 16	96.60-96.55	507.1	0	0	0	0	0
N246 E140 PT NE 1	97.37-97.30	391.7	0	0	0	0	0
N246 E140 PT NE 2	97.30-97.25	366.8	0	0	0	0	0
N246 E140 PT NE 3	97.25-97.20	362.4	18.6	0	0	18.6	5.13
N246 E140 PT NE 4	97.20-97.15	352.2	15.2	0	0	15.2	4.30
N246 E140 PT NE 5	97.15-97.10	390.5	0	0	38.8	38.8	9.93
N246 E140 PT NE 6	97.10-97.05	358.9	38.4	0	0	38.4	10.66
N246 E140 PT NE 7	97.05-97.00	376.4	0	0	0	0	0
N246 E140 PT NE 8	97.00-96.95	303.5	0	0	0	0	0

Table A13-2 continued

Provenience	Depth	Level Weight	Cort. Weight	Qtz Weight	Flk Weight	Total (g)	% Missed
N246 E140 PT NE 9	96.95-96.90	466.3	0	0	0	0	0
N246 E140 PT NE 10	96.90-96.85	473.4	0	0	0	0	0
N246 E140 PT NE 11	96.85-96.80	447.1	0	0	0	0	0
N246 E140 PT NE 12	96.80-96.75	155.2	0	0	0	0	0
N246 E140 PT NE 13	96.75-96.70	423.7	0	0	0	0	0
N246 E140 PT NE 14	96.70-96.65	556.4	0	0	10.4	10.4	1.86
N246 E140 PT NE 15	96.65-96.60	505.9	0	0	0	0	0
N246 E140 PT NE 16	96.60-96.55	285.9	0	0	0	0	0
N246 E140 PT NW 1	97.38-97.25	167	0	0	0	0	0
N246 E140 PT NW 2	97.25-97.20	266.4	0	0	0	0	0
N246 E140 PT NW 3	97.20-97.15	228.3	0	0	0	0	0
N246 E140 PT NW 4	97.15-97.10	348.3	0	0	0	0	0
N246 E140 PT NW 5	97.10-97.05	362.1	0	0	0	0	0
N246 E140 PT NW 6	97.05-97.00	285.7	0	0	0	0	0
N246 E140 PT NW 7	97.00-96.95	315.2	0	0	0	0	0
N246 E140 PT NW 8	96.95-96.90	274.5	0	0	0	0	0
N246 E140 PT NW 9	96.90-96.85	371.4	0	0	0	0	0
N246 E142 PT SW 1	97.41-97.35	81.3	0	0	0	0	0
N246 E142 PT SW 2	97.35-97.30	505.3	0	0	0	0	0
N246 E142 PT SW 3	97.30-97.25	388.2	31.7	0	0	31.7	8.16
N246 E142 PT SW 4	97.25-97.20	579.7	0	28	0	28	4.83
N246 E142 PT SW 5	97.20-97.15	480.6	0	0	0	0	0
N246 E142 PT SW 6	97.15-97.10	409.7		0	0	0	0
N246 E142 PT SW 7	97.10-97.05	586.8	0	0	0	0	0
N246 E142 PT SW 8	97.05-97.00	292.4	0	0	0	0	0
N246 E142 PT SW 9	97.00-96.95	353.6	0	0	0	0	0
N246 E142 PT SW 10	96.95-96.90	429.6	0	0	0	0	0

Table A13-2 continued

Provenience	Depth	Level Weight	Cort. Weight	Qtz Weight	Flk Weight	Total (g)	% Missed
N246 E142 PT SW 11	96.90-96.85	514.3	0	0	0	0	0
N246 E142 PT SW 12	96.85-96.80	465	0	0	0	0	0
N246 E142 PT SW 13	96.80-96.75	365.6	0	0	0	0	0
N246 E142 PT SW 14	96.75-96.70	438.9	0	0	0	0	0
N246 E142 PT SW 15	96.70-96.65	407.45	0	0	0	0	0
N246 E142 PT SW 16	96.65-96.60	351.6	0	0	0	0	0
N246 E142 PT SW 17	96.60-96.55	365.9	0	0	19.7	19.7	5.38
N248 E140 PT SE 1	97.50-97.45	185.2	12.2	0	0	12.2	6.58
N248 E140 PT SE 2	97.45-97.40	472.6	0	0	0	0	0
N248 E140 PT SE 3	97.40-97.35	222.8	0	0	0	0	0
N248 E140 PT SE 4	97.35-97.30	238.7	0	0	0	0	0
N248 E140 PT SE 5	97.30-97.25	518.2	0	0	0	0	0
N248 E140 PT SE 6	97.25-97.20	180.4	0	0	0	0	0
N248 E140 PT SE 7	97.20-97.15	266.1	0	0	0	0	0
N248 E140 PT SE 8	97.15-97.10	396.7	22.9	0	0	22.9	5.77
N248 E140 PT SE 9	97.10-97.05	335.6	14.2	0	0	14.2	4.23
N248 E140 PT SE 10	97.05-97.00	356.6	30	0	0	30	8.41
N248 E140 PT SE 11	97.00-96.95	374.2	11.7	0	21.3	33	8.81
N248 E140 PT SE 12	96.95-96.90	345.4	27	0	0	27	7.81
N248 E140 PT SE 13	96.90-96.85	233.3	0	0	0	0	0
N248 E140 PT SE 14	96.85-96.80	333	0	0	0	0	0
N248 E140 PT SE 15	96.80-96.75	246.5		0	0	0	0
N248 E140 PT SE 16	96.75-96.70	363.8	0	0	0	0	0
N248 E140 PT SE 17	96.70-96.65	357.4	0	0	0	0	0
N248 E140 PT SE 18	96.65-96.60	287.8	0	0	0	0	0
N248 E140 PT SE 19	96.60-96.55	258.7	0	0	0	0	0
N248 E140 PT SE 20	96.55-96.50	224.4	0	0	0	0	0

Table A13-2 continued

Provenience	Depth	Level Weight	Cort. Weight	Qtz Weight	Flk Weight	Total (g)	% Missed
N248 E140 PT SE		30.35				0	0
N248 E140 PT SE 21	96.50-96.45	274.5	0	0	0	0	0
N248 E140 PT SW 1	97.40-97.35	366.2	0	0	0	0	0
N248 E140 PT SW 2	97.35-97.30	470.4	13.4	0	0	13.4	2.84
N248 E140 PT SW 3	97.30-97.25	458.6	13.3	0	50.6	63.9	13.93
N248 E140 PT SW 4	97.25-97.20	490.4	0	0	8.9	8.9	1.81
N248 E140 PT SW 5	97.20-97.15	145.1	0	0	0	0	0
N248 E140 PT SW 6	97.15-97.10	371.3	0	0		0	0
N248 E140 PT SW 7	97.10-97.05	369.4	0	0	21.7	21.7	5.87
N248 E140 PT SW 8	97.05-97.00	272.5	0	0	0	0	0
N248 E140 PT SW 9	97.00-96.95	462	68.7	0	0	68.7	14.87
N248 E140 PT SW 10	96.95-96.90	292.6	0	25.1	0	25.1	8.57
N248 E140 PT SW 11	96.90-96.85	338.7	0	0	0	0	0
N248 E140 PT SW 12	96.85-96.80	222	0	0	0	0	0
N248 E140 PT SW 13	96.80-96.75	351.5	0	0	0	0	0
N248 E140 PT SW 14	96.75-96.70	274.2	0	0	0	0	0
N248 E140 PT SW 15	96.70-96.65	321.2	0	0	0	0	0
N248 E140 PT SW 16	96.65-96.60	304.9	0	0	0	0	0
N248 E140 PT SW 17	96.60-96.55	418.3	0	0	0	0	0
N246 E138 PT SE 1	97.30-97.25	115.8	0	0	0	0	0
N246 E138 PT SE 2	97.25-97.20	62.3	0	0	0	0	0
N246 E138 PT SE 3	97.20-97.15	80.5	0	0	0	0	0
N246 E138 PT SE 4	97.15-97.10	457.5	0	0	0	0	0
N246 E138 PT SE 5	97.10-97.05	378.5	0	0	0	0	0
N246 E138 PT SE 6	97.05-97.00	275.9	0	0	0	0	0
N246 E138 PT SE 7	97.00-96.95	663.5	0	0	0	0	0
N246 E138 PT SE 8	96.95-96.90	388.9	0	0	0	0	0

Table A13-2 continued

Provenience	Depth	Level Weight	Cort. Weight	Qtz Weight	Flk Weight	Total (g)	% Missed
N246 E138 PT SE 9	96.90-96.85	554.7	0	0	0	0	0
N246 E138 PT SE 10	96.85-96.80	493.6	0	0	0	0	0
N246 E138 PT SE 11	96.80-96.75	333.2	0	0	0	0	0
N246 E138 PT SE 12	96.75-96.70	449.7	0	0	0	0	0
N246 E138 PT SE 13	96.70-96.65	331.2	0	0	0	0	0
N246 E138 PT SW 1	97.27-97.20	678.4	0	0	0	0	0
N246 E138 PT SW 2	97.20-97.15	678.4	0	0	0	0	0
N246 E138 PT SW 3	97.15-97.10	678.4	0	0	0	0	0
N246 E138 PT SW 4	97.10-97.05	678.4	0	0	0	0	0
N246 E138 PT SW 5	97.05-97.00	678.4	0	0	0	0	0
N246 E138 PT SW 6	97.00-96.95	312.6	0	0	0	0	0
N246 E138 PT SW 7	96.95-96.90	397.7	0	0	0	0	0
N246 E138 PT SW 8	96.90-96.85	241.5	0	0	0	0	0
N246 E138 PT SW 9	96.85-96.80	284.5	0	0	0	0	0
N246 E138 PT SW 10	96.80-96.75	298.3	0	0	0	0	0
N246 E138 PT SW 11	96.75-96.70	250.1	0	0	0	0	0
N263 E 145 PS 1	97.90-97.80	642.1	0	0	0	0	0
N263 E 145 PS 2	97.80-97.70	996.6	0	0	0	0	0
N263 E 145 PS 3	97.70-97.60	1513.5	0	0	0	0	0
N263 E 145 PS 4	97.60-96.50	1785.1	0	0	0	0	0
N263 E 145 PS 5	97.50-97.40	1097.6	0	0	0	0	0
N263 E 145 PS 6	97.40-97.30	1275	0	0	0	0	0
N263 E 145 PS 7	97.30-97.20	1206.4	0	0	0	0	0
N263 E 145 PS 8	97.20-97.10	1248.2	0	0	0	0	0
N263 E 145 PS 9	97.10-97.00	1300	11.6		0	11.6	.892
N263 E 145 PS 10	97.00-96.90	723.1	0	0	0	0	0
N263 E 145 PS 11	96.90-96.80	563.7	0	0	0	0	0

Table A13-2 continued

Provenience	Depth	Level Weight	Cort. Weight	Qtz Weight	Flk Weight	Total (g)	% Missed
N248 E140 PS SE 17	97.80-97.75	398.7	0.0	0.0	0.0	0	0
N248 E140 PS SE 18	97.75-97.70	419.3	0.0	0.0	0.0	0	0
N248 E140 PS SE 19	97.70-97.65	219.5	0.0	0.0	0.0	0	0
N248 E140 PS SE 20	97.65-97.60	531.7	0.0	0.0	0.0	0	0
N248 E140 PS SE 21	97.60-97.55	1618	62.1	0	24.6	86.7	5.35
N248 E140 PS SE			0	0	9.7	9.7	
N248 E140 PS SE 22	97.55-97.50	2564.3	360.1	0	79	439.1	17.12
N248 E140 PS SE 23	97.50-97.45	1273	0	0	41.3	41.3	3.24
N248 E140 PS SE 24	97.45-97.40	257.2	0	0	0	0	0
N248 E140 PS SW 16	97.85-97.80	767.7	0	0	0	0	0
N248 E140 PS SW 17	97.80-97.75	895.3	0	0	0	0	0
N248 E140 PS SW 18	97.75-97.70	139.8	0	0	0	0	0
N248 E140 PS SW 19	97.70-97.65	147.9	0	0	0	0	0
N248 E140 PS SW 20	97.65-97.60	288.6	0	0	0	0	0
N248 E140 PS SW 21	97.60-97.55	672.9	0	0	0	0	0
N248 E140 PS SW 22	97.55-97.50	559.1	0	0	28.8	28.8	4.27
N248 E140 PS SW 23	97.50-97.45	941.6	36.8	0	56.7	93.5	9.92
N248 E140 PS SW 24	97.45-97.40	761.9	18.2	0	0	18.2	2.38
N246 E140 PS NE 23	97.49-97.40	898.6	0	0	0	0	0
N246 E140 PS NE 24	97.40-97.35	601.3	0	0	0	0	0
N246 E140 PS NE 25	97.35-97.30	168.8	0	0			
N246 E140 PS NE 26	97.30-97.25	88.8	0	0	0	0	0
N246 E140 PS NW 23	97.53-97.40	1052.1	106.8	0	0	106.8	10.15
N246 E140 PS NW 24	97.40-97.35	285	0	0	0	0	0
N246 E140 PS NW 25	97.40-97.35	381.7	0	0	0	0	0
N246 E140 PS SE 23	97.47-97.40	447.6	0	0	0	0	0
N246 E140 PS SE 24	97.40-97.35	426.6	0	0	15.3	15.3	3.58

Table A13-2 continued

Provenience	Depth	Level Weight	Cort. Weight	Qtz Weight	Flk Weight	Total (g)	% Missed
N246 E140 PS SE 25	97.35-97.30	265.5	0	0	0	0	0
N246 E140 PS SE 26	97.30-97.25	111.3	0	0	0	0	0
N246 E140 PS SW 23	97.47-97.40	140.4	0	0	0	0	0
N246 E140 PS SW 24	97.40-97.35	348.3	0	0	0	0	0
N246 E140 PS SW 25	97.35-97.30	424.7	0	0	0	0	0
N246 E140 PS SW 26	97.30-97.25	181.5	0	0	0	0	0
N246 E140 PS SW 27	97.25-97.20	377.5	0	0	0	0	0
N246 E138 PS SW 06	97.92-97.80	127.8	0	0	1	1	.78
N246 E138 PS SW 07	97.80-97.75	256.9	0	0	0	0	0
N246 E138 PS SW 08	97.75-97.70	571.3	18.9	0	0	18.9	33.08
N246 E138 PS SW 09	97.70-97.65	1058	0	0	0	0	0
N246 E138 PS SW 10	97.65-97.60	3273.6	0	0	0	0	0
N246 E138 PS SW 11	97.60-97.55	5695.7	0	0	0	0	0
N246 E138 PS SW 12	97.55-97.50	2892.3	58.5	28.8	0	87.3	3.01
N246 E138 PS SW 13	97.50-97.45	1665.6	19.8	0	15.7	35.5	3.34
N246 E138 PS SW 14	97.45-97.40	719.9	9.5	46.2	0	55.7	7.73
N246 E138 PS SW 15	97.40-97.35	710.7	25.3	0	0	25.3	3.55
N246 E138 PS SW 16	97.35-97.30	720.3	42.4	0	0	42.4	5.88
N246 E138 PS SW 17	97.30-97.25	625.9	0	0	0	0	0
N246 E138 PS SW 18	97.25-97.20	330.7	0	0	0	0	0
N246 E138 PS SW 19	97.20-97.15	273	0	0	0	0	0
N246 E138 PS SW 20	97.15-97.10	214.4	26.1	0	0	26.1	12.17
N246 E138 PS SW 21	97.10-97.05	119.8	0	0	0	0	0
N246 E138 PS SE 06	97.92-97.80	150.4	0	0	0	0	0
N246 E138 PS SE 07	97.80-97.75	208.9	0	0	0	0	0
N246 E138 PS SE 08	97.75-97.70	434.3	0	0	0	0	0
N246 E138 PS SE 09	97.70-97.65	387.6	0	0	0	0	0

Table A13-2 continued

Provenience	Depth	Level Weight	Cort. Weight	Qtz Weight	Flk Weight	Total (g)	% Missed
N246 E138 PS SE 10	97.65-97.60	666.4	15.9	0	0	15.9	2.38
N246 E138 PS SE 11	97.60-97.55	637.6	0	0	0	0	0
N246 E138 PS SE 12	97.55-97.50	2121.2	72.7	40	58.6	171.3	8.07
N246 E138 PS SE 13	97.50-97.45	615.1	16.7	0	79.8	96.5	15.68
N246 E138 PS SE 14	97.45-97.40	810.5	0	0	41	41	5.05
N246 E138 PS SE 15	97.40-97.35	684	17.4	24.3	26.6	68.3	9.98
N246 E138 PS SE 16	97.35-97.30	1003.2	103.9	0	67	170.9	17.03
N246 E138 PS SE 17	97.30-97.25	560.3	20.7	0	0	20.7	3.69
N246 E138 PS SE 18	97.25-97.20	534.4	24.1	0	0	24.1	4.50
	97.20-97.15	269.9	37.8	0	0	37.8	14
N246 E138 PS SE 19	97.15-97.10	70.5	0	0	0	0	0
N246 E138 PS SE 20	97.75-97.65	1315.5	15.2	0	333.1	348.3	26.47
N242 E130 LT 9	97.65-97.55	775.9	0	0	323.2	323.2	41.65
N242 E130 LT 10	97.55-97.45	2716.5	0	0	0	0	0
N242 E130 LT 11	97.45-97.35	3875.9	0	0	48	48	1.23
N242 E130 LT 12	97.35-97.25	6897.2	0	0	0	0	0
N242 E130 LT 13	97.25-97.15	3618.2	26.8	32.9	58.1	117.8	3.25
N242 E130 LT 14	97.15-97.05	4717.6	191.2	34.1	35	260.3	5.51
N242 E130 LT 15	97.05-96.95	4441.2	426.5	0	87.1	513.6	11.56
N242 E130 LT 16	96.95-96.85	3973.6	440.1	0	50.3	490.4	12.34
N242 E130 LT 17	96.85-96.80	1482.33	330.9	0	10.4	341.04	23
N242 E130 LT 19 SE	96.80-96.75	2146.4	201.6	0	57.9	259.5	12.09
N242 E130 LT 20 SE	96.75-96.70	457.5	117.4	0	117.1	234.5	51.25
N242 E130 LT 21 SE	96.85-96.80	465.7	0	0	0	0	0
N242 E130 LT 19 NE	96.80-96.75	849.7	110.7	0	0	110.7	13.02
N242 E130 LT 20 NE	96.75-96.70	1170.7	131.6	0	0	131.6	11.24
N242 E130 LT 21 NE	96.70-	576.5	33	0	11.4	44.4	7.70

Table A13-2 continued

Provenience	Depth	Level Weight	Cort. Weight	Qtz Weight	Flk Weight	Total (g)	% Missed
N242 E130 LT 22 NE	96.85-96.80	1439.3	89.1	0	0	89.1	6.19
N242 E130 LT 19 SW	96.80-96.75	1141.1	241.6	34.4	50.1	326.1	28.57
N242 E130 LT 20 SW	96.75-96.70	971.2	66.7	0	0	66.7	6.86
N242 E130 LT 21 SW	96.70-96.65	289.4	0	0	0	0	0
N242 E130 LT 22 SW	96.85-96.80	774.9	49.8	0	0	49.8	6.42
N242 E130 LT 19 NW	96.80-96.75	891.7	67.4	0		67.4	7.55
N242 E130 LT 20 NW	96.75-96.70	980	91	0		91	9.28
N242 E130 LT 21 NW	96.70-	1049.3	57.5	0	0	57.5	5.47
N242 E130 LT 22 NW	97.90-97.85	145.1	0	0	0	0	0
N242 E138 LT 6SW	97.90-97.85	203.4	0	0	0	0	0
N242 E138 LT 6SE	97.90-97.85	329.8	0	0	64.6	64.6	19.58
N242 E138 LT 6NE	97.90-97.85	520	0	0	0	0	0
N242 E138 LT 6NW	97.85-97.80	244	0	0	0	0	0
N242 E138 LT 7SE	97.20-97.15	269.9	37.8	0	0	37.8	14
N242 E138 LT 7NE	97.85-97.80	320	0	26.1	0	26.1	8.15
N242 E138 LT 7SW	97.85-97.80	234.5	0	0	0	0	0
N242 E138 LT 7NW	97.85-97.80	721.3	0	0	0	0	0
N242 E138 LT 8SW	97.80-97.75	347.9	0	0	0	0	0
N242 E138 LT 8SE	97.80-97.75	443.5	0	0	0	0	0
N242 E138 LT 8NE	97.80-97.75	986.7	0	0	8.9	8.9	.901
N242 E138 LT 8NW	97.80-97.75	1646.4	0	0	0	0	0
N242 E138 LT 9SW	97.75-97.70	689.8	0	0	0	0	0
N242 E138 LT 9SE	97.75-97.70	1003.2	0	0	0	0	0
N242 E138 LT 9NE	97.75-97.70	1378.5	0	0	0	0	0
N242 E138 LT 9NW	97.75-97.70	5250.2	0	0	0	0	0
N242 E138 LT 10SW	97.70-97.65	564.9	0	0	0	0	0
N242 E138 LT 10NW	97.70-97.65	2447.4	0	0	0	0	0

Table A13-2 continued

Provenience	Depth	Level Weight	Cort. Weight	Qtz Weight	Flk Weight	Total (g)	% Missed
N242 E138 LT 10SE	97.70-97.65	1163	0	0	0	0	0
N242 E138 LT 10NE	97.70-97.65	2218.9				0	0
N242 E138 LT 11SW	97.65-97.60	418.1	0	0	0	0	0
N242 E138 LT 11NE	97.65-97.60	632.2	0	0	0	0	0
N242 E138 LT 11NW	97.65-97.60	1451.9	0	0	0	0	0
N242 E138 LT 11SE	97.65-97.60	1994.6	0	0	0	0	0
N242 E138 LT 12SW	97.60-97.55	408.8	0	0	0	0	0
N242 E138 LT 12SE	97.60-97.55	620.2	0	0	0	0	0
N242 E138 LT 12NW	97.60-97.55	716.3	0	0	0	0	0
N242 E138 LT 12NE	97.60-97.55	4747.1	0	0	0	0	0
N242 E138 LT 13SW	97.55-97.50	561.8	0	0	21.7	21.7	3.8
N242 E138 LT 13SE	97.55-97.50	1161.6	166.9	0	0	166.9	14.36
N242 E138 LT 13NW	97.55-97.50	1230.9	167.8	114	0	281.8	22.89
N242 E138 LT 13NE	97.55-97.50	1957	0	0	0	0	0
N242 E138 LT 14SW	97.50-97.45	207.6	62.1	0	0	62.1	29.91
N242 E138 LT 14NW	97.50-97.45	1295.3	209.1	0	0	209.1	12.90
N242 E138 LT 14SE	97.50-97.45	1271.6	128.5	35	0	163.5	12.85
N242 E138 LT 14NE	97.50-97.45	1963.9	56.5	0	56.7	113.2	5.76
N242 E138 LT 15NE	97.45-97.40	2132.6	214.6	104.7	31.6	350.9	1.58
N242 E138 LT 15NW	97.45-97.40	1454.6	158.9	85.7	0	244.6	16.81
N242 E138 LT 15SE	97.45-97.40	1784.6	450.8	0	0	450.8	25.26
N242 E138 LT 15SW	97.45-97.40	713	70.5	0	0	70.5	9.88
N242 E138 LT 16SE	97.40-97.35	317.3	27.4	0	0	27.4	8.63
N242 E138 LT 16NE	97.40-97.35	377.3	0	0	0	0	0
N242 E138 LT 16SW	97.40-97.35	621.2	19.4	0	1.1	20.5	3.30
N242 E138 LT 16NW	97.40-97.35	826.7	37.9	0	0	37.9	4.58
N242 E138 LT 17SE	97.35-97.30					0	0

Table A13-2 continued

Provenience	Depth	Level Weight	Cort. Weight	Qtz Weight	Flk Weight	Total (g)	% Missed
N242 E138 LT 17SW	97.35-97.30					0	0
N242 E138 LT 17NE	97.35-97.30					0	0
N242 E138 LT 17NW	97.35-97.30					0	0
N242 E138 LT 18SE	97.30-97.25	1040	100.1	0	61.5	161.6	15.53
N242 E138 LT 18SW	97.30-97.25	1269.5	191.3	30.7	17.7	239.7	18.88
N242 E138 LT 18NE	97.30-97.25						0
N242 E138 LT 18NW	97.30-97.25	1197.1	65.1	0	0	65.1	5.43
N242 E138 LT 19NE	97.25-97.20	1997.6	234.8	0	0	234.8	11.75
N242 E138 LT 19SE	97.25-97.20	1606	85.3	129.9	0	215.2	13.33
N242 E138 LT 19SW	97.25-97.20	958.2	98.2	0	0	98.2	10.24
N242 E138 LT 19NW	97.25-97.20	972.5	54.8	38.9	0	93.7	9.6
N242E140LT 3	98.25-98.20	579.2	0	0	237.5	237.5	41.00
N242E140LT 4	98.20-98.10	921.8	35.2	0	453.6	488.8	53.02
N242E140LT 5	98.10-98.00	521.3	46	0	93.3	139.3	26.72
N242 E140 LT 6	98.00-97.95	245.97	11.07	19.6	44.7	75.37	30.64
N242 E140 LT 7SW	97.95-97.90	69.9	0	0	4.3	4.3	6.15
N242 E140 LT 7SE	97.95-97.90	31.6	0	0	0	0	0
N242 E140 LT 7NW	97.95-97.90	201	53.8	0	35.2	89	44.27
N242 E140 LT 7NE	97.95-97.90	205.4	0	0	0	0	0
N242 E140 LT 8SW	97.90-97.85	94.5	0	0	0	0	0
N242 E140 LT 8NW	97.90-97.85	223	0	0	0	0	0
N242 E140 LT 8SE	97.90-97.85	160.2	0	0	36.5	36.5	22.78
N242 E140 LT 8NE	97.90-97.85	247.7	0	0	0	0	0
N242 E140 LT 9SW	97.85-97.80	64.1	0	0	0	0	0
N242 E140 LT 9NE	97.85-97.80	387.7	0	0	0	0	0
N242 E140 LT 9NW	97.85-97.80	507.9	0	0	27.5	27.5	5.41
N242 E140 LT 9SE	97.85-97.80	260.6	0	0	0	0	0

Table A13-2 continued

Provenience	Depth	Level Weight	Cort. Weight	Qtz Weight	Flk Weight	Total (g)	% Missed
N242 E140 LT 10SW	97.80-97.75	232.3	0	0	0	0	0
N242 E140 LT 10SE	97.80-97.75	514.2	0	0	0	0	0
N242 E140 LT 10NE	97.80-97.75	675.3	0	0	0	0	0
N242 E140 LT 10NW	97.80-97.75	915	0	0	0	0	0
N242 E140 LT 11SW	97.75-97.70	409.7	0	0	0	0	0
N242 E140 LT 11NE	97.75-97.70	754.9	0	0	0	0	0
N242 E140 LT 11SE	97.75-97.70	829.9	0	0	0	0	0
N242 E140 LT 11NW	97.75-97.70	1392.6	0	0	0	0	0
N242 E140 LT 12NE	97.70-97.65	1447.2	0	0	0	0	0
N242 E140 LT 12NW	97.70-97.65	3559.74	0	0	0	0	0
N242 E140 LT 12SE	97.70-97.65	2520.9	0	0	0	0	0
N242 E140 LT 12SW	97.70-97.65	1130.7	0	0	0	0	0
N242 E140 LT 13NE	97.65-97.60	4487.8	74.9	0	0	74.9	16.68
N242 E140 LT 13SW	97.65-97.60	5564.7	78.8	0	0	78.8	1.41
N242 E140 LT 13SE	97.65-97.60	17418	72.3	0	0	72.3	.415
N242 E140 LT 13NW	97.65-97.60	13792.7	0	0	0	0	0
N242 E140 LT 14NE	97.60-97.55	3966.3	161	0	0	161	4.05
N242 E140 LT 14NW	97.60-97.55	12242.8	109	79.2	24.1	212.3	1.73
N242 E140 LT 14SW	97.60-97.55	4095	44.3	0	0	44.3	1.08
N242 E140 LT 14SE	97.60-97.55	3117.1	0	0	0	0	0
N242 E140 LT 15SW	97.55-97.50	2506.7	0	0	0	0	0
N242 E140 LT 15SE	97.55-97.50	3822.7	36	0	0	36	.94
N242 E140 LT 15NE	97.55-97.50	4572.9	168.3	50.4	0	218.7	4.78
N242 E140 LT 15NW	97.55-97.50	6200.8	238.8	118.9	46.7	404.4	6.52
N242 E140 LT 16SW	97.50-97.45	616.5	0	0	0	0	0
N242 E140 LT 16NE	97.50-97.45	2450.5	168.5	35.2	0	203.7	8.31
N242 E140 LT 16NW	97.50-97.45	4508.2	301	0	0	301	6.67

Table A13-2 continued

Provenience	Depth	Level Weight	Cort. Weight	Qtz Weight	Flk Weight	Total (g)	% Missed
N242 E140 LT 16SE	97.50-97.45	5030.5	805.1	89.3	0	894.4	17.77
N242 E140 LT 17SE	97.45-97.40	3261.9	135.6	235.1	0	370.7	11.36
N242 E140 LT 17NW	97.45-97.40	2002.1	253.4	0	0	253.4	12.65
N242 E140 LT 17 SW	97.45-97.40	1295.3	190.5	0	0	190.5	14.70
N242 E140 LT 17 NE	97.45-97.40	1920.8	118.1	0	13	131.1	6.82
N242 E140 LT 18SW	97.40-97.35	1187.2	204.3	0	14.4	218.7	18.42
N242 E140 LT 18NE	97.40-97.35	2036.1	41.3	0	0	41.3	2.02
N242 E140 LT 18NW	97.40-97.35	1925.8	358.8	129.1	45.9	533.8	27.71
N242 E140 LT 18SE	97.40-97.35	1359.3	117.6	0	0	117.6	8.65
N242 E140 LT 19SE	97.35-97.30	669.7	0	0	0	0	0
N242 E140 LT 19SW	97.35-97.30	1857.3	65.4	0	0	65.4	3.52
N242 E140 LT 19NW	97.35-97.30	2018	132.5	70.9	0	203.4	10.07
N242 E140 LT 19NE	97.35-97.30	1165.2	125.9	0	0	125.9	10.80
N242 E140 LT 20SW	97.30-97.25	7575	1106.4	160.6	64.2	1331.2	17.57
N242 E140 LT 20NW	97.30-97.25	5397.7	1202.7	132.9	26	1361.6	25.22
N242 E140 LT 20SE	97.30-97.25	992.7	50.7	0	312.7	363.4	36.60
N242 E140 LT 20NE	97.30-97.25	443.5	133.6	0	0	133.6	30.12
N242 E142 LT 6SE	98.00-97.95	98.7	0	0	0	0	0
N242 E142 LT 6SW	98.00-97.95	28.3	0	0	0	0	0
N242 E142 LT 6NW	98.00-97.95	117.1	0	0	0	0	0
N242 E142 LT 6NE	98.00-97.95	312	0	0	29.2	29.2	9.35
N242 E142 LT 7SE	97.95-97.90	57.7	0	0	0	0	0
N242 E142 LT 7SW	97.95-97.90	41.2	0	0	0	0	0
N242 E142 LT 7NE	97.95-97.90	371.4	0	0	60.7	60.7	16.34
N242 E142 LT 7NW	97.95-97.90	201.6	0	0	0	0	0
N242 E142 LT 8SW	97.90-97.85	48.1	0	0	15.6	15.6	32.43
N242 E142 LT 8SE	97.90-97.85	157.4	0	0	0	0	0

Table A13-2 continued

Provenience	Depth	Level Weight	Cort. Weight	Qtz Weight	Flk Weight	Total (g)	% Missed
N242 E142 LT 8NW	97.90-97.85	196.5	0	0	0	0	0
N242 E142 LT 8NE	97.90-97.85	381.1	0	0	21.7	21.7	5.69
N242 E142 LT 9SW	97.85-97.80	64.2	0	0	0	0	0
N242 E142 LT 9SE	97.85-97.80	377.3	42.6	54.3	13.3	110.2	29.20
N242 E142 LT 9NW	97.85-97.80	408.4	0	0	0	0	0
N242 E142 LT 9NE	97.85-97.80	676.2	200.2	0	49.9	250.1	36.98
N242 E142 LT 10SW	97.80-97.75	127.2	0	0	0	0	0
N242 E142 LT 10NW	97.80-97.75	384.4	0	0	0	0	0
N242 E142 LT 10NE	97.80-97.75	302.2	0	0	0	0	0
N242 E142 LT 10SE	97.80-97.75	309.4	0	0	10	10	3.23
N242 E142 LT 11SE	97.75-97.70	453.2	13.2	0	0	13.2	2.91
N242 E142 LT 11NW	97.75-97.70	461.4	0	0	0	0	0
N242 E142 LT 11NE	97.75-97.70	436.5	40.6	0	0	40.6	9.30
N242 E142 LT 11SW	97.75-97.70	551.2	0	0	0	0	0
N242 E142 LT 12SE	97.70-97.65	243	0	0	0	0	0
N242 E142 LT 12NW	97.70-97.65	362.3	0	0	0	0	0
N242 E142 LT 12NE	97.70-97.65	405.5	0	0	0	0	0
N242 E142 LT 12SW	97.70-97.65	912.9	0	0	0	0	0
N242 E142 LT 13NE	97.65-97.60	456.9	61.9	30.5	16.5	108.9	23.83
N242 E142 LT 13NW	97.65-97.60	408.4	0	0	0	0	0
N242 E142 LT 13SW	97.65-97.60	1340.3	0	0	0	0	0
N242 E142 LT 13SE	97.65-97.60	273.8	0	0	0	0	0
N242 E142 LT 14 NE	97.60-97.55	808.7	81.1	0	33.5	114.6	14.17
N242 E142 LT 14SE	97.60-97.55	428.8	0	0	0	0	0
N242 E142 LT 14NW	97.60-97.55	888.3				0	0
N242 E142 LT 14SW	97.60-97.55	4934	0	0	0	0	0
N242 E142 LT 15SW	97.55-97.50	3778.5	0	0	0	0	0

Table A13-2 continued

Provenience	Depth	Level Weight	Cort. Weight	Qtz Weight	Flk Weight	Total (g)	% Missed
N242 E142 LT 15SE	97.55-97.50	1182.4	0	0	0	0	0
N242 E142 LT 15NW	97.55-97.50	1129.7	0	65.8	0	65.8	5.82
N242 E142 LT 15NE	97.55-97.50	1549.8	0	75.1	0	75.1	4.84
N242 E142 LT 16SE	97.50-97.45	755.4	0	0	0	0	0
N242 E142 LT 16NW	97.50-97.45	1013.8	318.5	0	0	318.5	31.41
N242 E142 LT 16SW	97.50-97.45	1649.7	107.8	55.9	0	163.7	9.92
N242 E142 LT 16NE	97.50-97.45	2213.9	413.8	0	85.1	48.9	2.20
N242 E142 LT 17SE	97.45-97.40	4271	30.7	46.7	201.7	279.1	6.53
N242 E142 LT 17SW	97.45-97.40	3764.8	187.1	0	0	187.1	4.96
N242 E142 LT 17NE	97.45-97.40	2534.8	262.8	186	0	448.8	17.7
N242 E142 LT 17NW	97.45-97.40	987.2	0	0		0	0
N242 E142 LT 18NW	97.40-97.35	1863.9	601.4	0	0	601.4	332.26
N242 E142 LT 18SE	97.35-97.30	6538	431.6	0	0	431.6	6.60
N242 E142 LT 18NE	97.35-97.30	4179	323.9	0	46	323.9	7.75
N242 E142 LT 18SW	97.35-97.30	10391.1	423.4	212.4	0	635.8	6.11
N242 E142 LT 19SE	97.35-97.30	1313.3	0	0	0	0	0
N242 E142 LT 19NE	98.30-98.25	399.5	0	0	0	0	0
N242 E142 LT 19SW	98.25-98.20	216.7	0	0	0	0	0
N242 E142 LT 19NW	98.20-98.15	1401.7	749.9	0	0	749.9	53.49
N246 E140 LT 6N	98.15-98.10	891.9	252.2	0	0	252.2	28.27
N246 E140 LT 7 N	98.10-98.05	449.4	0	0	34	34	7.56
N246 E140 LT 8 N	98.05-98.00	425.2	23.8	0	394	417.8	9.8
N246 E140 LT 9 N	98.00-97.95	672	16.4	0	76	92.4	13.75
N246 E140 LT 10 N	97.95-97.90	995.3	0	0	64.5	64.5	6.48
N246 E140 LT 11 N	97.90-97.85	201.8	12.3	0	0	12.3	6.09
N246 E140 LT 12 N	97.90-97.85	196.6	0	0	0	0	0
N246 E140 LT 13 N	97.90-97.85	377.4	0	0	0	0	0

Table A13-2 continued

Provenience	Depth	Level Weight	Cort. Weight	Qtz Weight	Flk Weight	Total (g)	% Missed
N246 E140 LT 14SW	97.90-97.85	243.6	0	0	0	0	0
N246 E140 LT 14SE	97.85-97.80	283.2	0	0	0	0	0
N246 E140 LT 14NW	97.85-97.80	607.6	12.8	0	0	12.8	2.10
N246 E140 LT 14NE	97.85-97.80	2761.5	0	0	0	0	0
N246 E140 LT 15SE	97.85-97.80	2191.2	0	0	0	0	0
N246 E140 LT 15NE	97.80-97.75	2214.6	0	0	0	0	0
N246 E140 LT 15SW	97.80-97.75	1251.4	0	0	0	0	0
N246 E140 LT 15NW	97.80-97.75	377.3	0	0	0	0	0
N246 E140 LT 16NW	97.80-97.75	294.3	33.8	0	0	33.8	11.48
N246 E140 LT 16SW	97.75-97.70	909	0	0	0	0	0
N246 E140 LT 16NE	97.75-97.70	2068.4	95.6	0	0	95.6	4.62
N246 E140 LT 16SE	97.75-97.70	1309.7	0	0	21.6	21.6	1.64
N246 E140 LT 17NE	97.75-97.70	1064.4	0	0	0	0	0
N246 E140 LT 17SE	97.70-97.65	1159.8	0	0	3.6	3.6	.310
N246 E140 LT 17NW	97.35-97.30	6538	431.6	0	0	431.6	6.60
N246 E140 LT 17SW	97.35-97.30	4179	323.9	0	0	323.9	7.75
N246 E140 LT 18NE	97.35-97.30	10391.1	423.4	212.4	0	635.8	6.11
N246 E140 LT 18NW	97.70-97.65	479.6	0	0	0	0	0
N246 E140 LT 18SE	97.70-97.65	474.4	0	0	0	0	0
N246 E140 LT 18SW	97.70-97.65	640.1	0	0	0	0	0
N246 E140 LT 19SE	97.65-97.60	839.7	46.8	0	0	46.8	5.57
N246 E140 LT 19NE	97.65-97.60	834.6	0	0	0	0	0
N246 E140 LT 19NW	97.65-97.60	506.4	0	0	0	0	0
N246 E140 LT 19SW	97.65-97.60	447.2	0	0	0	0	0
N246 E140 LT 20NW	97.60-97.55	612.1	0	0	0	0	0
N246 E140 LT 20NE	97.60-97.55	785.6	0	0	0	0	0
N246 E140 LT 20SE	97.60-97.55	911.3	34.2	0	0	34.2	3.75

Table A13-2 continued

Provenience	Depth	Level Weight	Cort. Weight	Qtz Weight	Flk Weight	Total (g)	% Missed
N246 E140 LT 20SW	97.60-97.55	990.5	0	30.7	0	30.7	3.09
N246 E140 LT 21NE	97.55-97.50	1059	0	0	0	0	0
N246 E140 LT 21SE	97.55-97.50	1060.1	83	0	0	83	7.82
N246 E140 LT 21SW	97.55-97.50	856.8	0	0	0	0	0
N246 E140 LT 21NW	97.55-97.50	920	25.1	0	0	25.1	2.72
N246 E140 LT 22NE	97.50-97.45	1678.4	39.2	0	0	39.2	2.33
N246 E140 LT 22SW	97.50-97.45	657.1	19.2	0	0	19.2	2.92
N246 E140 LT 22SE	97.50-97.45	519.42	0	0	0	0	0
N246 E140 LT 22NW	97.50-97.45	413	0	0	0	0	0

APPENDIX 14

BACKHOE TRENCH EXCAVATIONS AT THE TOPPER SITE (38AL23)

The use of a backhoe was also occasionally warranted at Topper to test for the presence of cultural materials, and to examine the geostratigraphy of the site. As of 2012, a total of 20 backhoe trenches (BHT) have been excavated at Topper. Figure 4-13 presents the location of all backhoe trenches relative to unit excavation through the 2005 field season. A list of all Backhoe Trenches is provided in Appendix 14. The majority of the trenches were excavated in 1999 and 2000 in conjunction with the geoarchaeological investigations by Waters et al. (2009) in order to investigate the stratigraphic profile of the Pleistocene deposits at the site and to obtain materials suitable for radiometric or OSL dating. No backhoe trenches have been excavated onsite since 2005. A total of 18 of the 20 backhoe trenches were excavated on the floodplain terrace, while the remaining two trenches were situated on the Topper hillside and hilltop respectively. When backhoe trenches were opened, a small sample of materials fill from each trench was screened through ¼ inch screen mesh and diagnostic artifacts were subsequently bagged and labeled.

Table A14-1
Backhoe trench excavations at the Topper Site (38AL23)

BHT	Location/Provenience (SE corner)	Strata	Year
1	N250 E100	Terrace	5-29-1999
2	N246 E162	Terrace	5-29-1999
3	N224 E108	Terrace	5-29-1999
4	N244 E152	Terrace	5-29-1999
5	N240 E140	Terrace	2000
6	N248 E106	Terrace	2000
7	N198 E174	Terrace	2000
8	N206 E156	Terrace	2000
9	N192 E176	Terrace	2000
10	N180 E180	Terrace	2000
11	N178 E188	Terrace	2000
12	N318 E120	Terrace	2000
13	N236 E084	Terrace	2000
14	N242 E130	Terrace	2001
15	N278 E134	Terrace	2002
16	N270 E146	Terrace	2003
17	N243 E138	Terrace	2003
18	N244 E088	Terrace	2003
19	Hilltop Grid	Hilltop	2005
20	Firebreak Grid	Hillside	2005

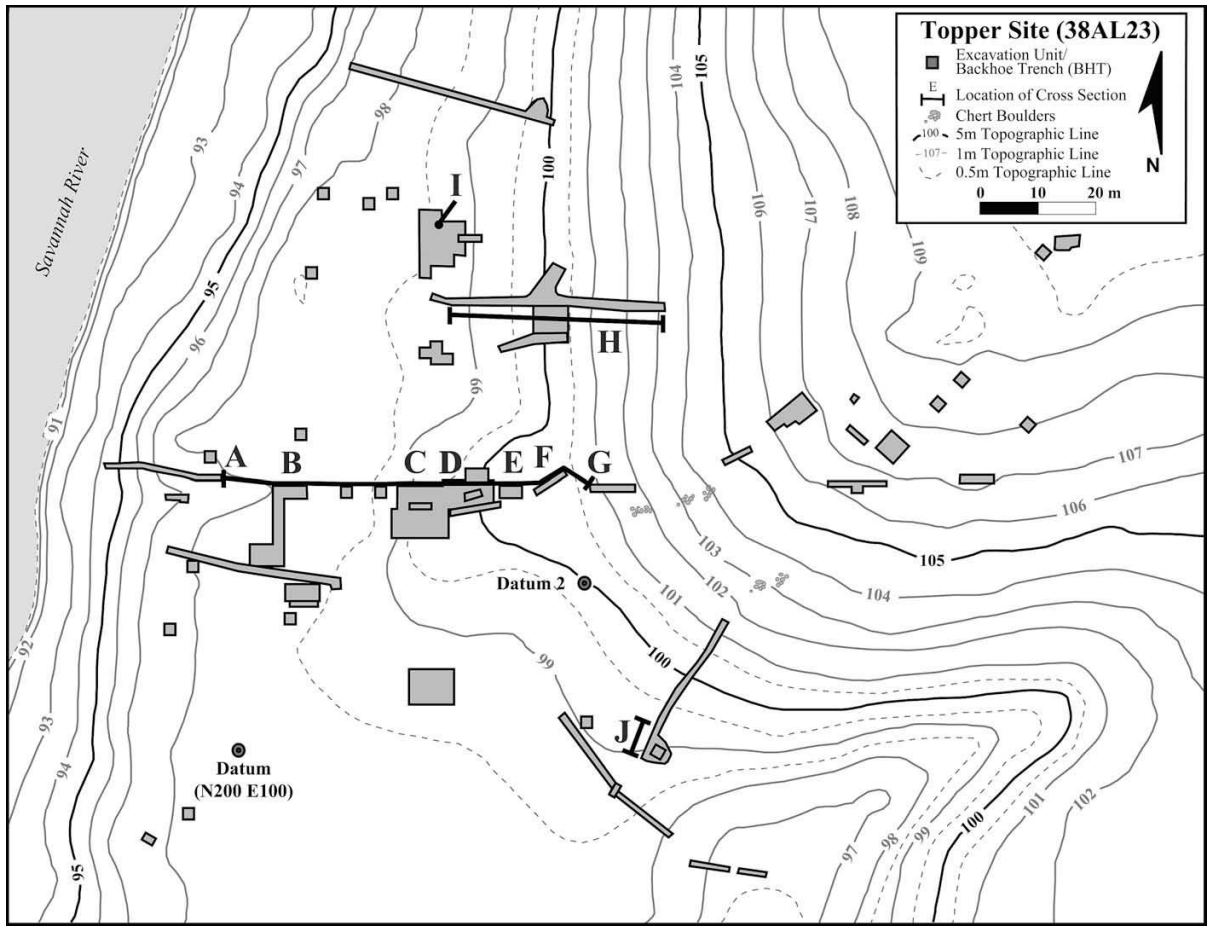


Figure A 14-i
Map of Topper Excavations showing locations of cross sections of Backhoe trenches. Cross section H refers to Backhoe trench 15. Map adapted from Waters (et al. 2009).





Figure A14-ii
Backhoe trench placed at base of 1998 block excavation.



Figure A14-1
BHT15 showing Clovis artifacts in profile wall of trench.
(Photo by Al Goodyear).



Figure A14-2
Excavation of BHT 15 at left; at right, weathered paleosol in profile of BHT15 between Holocene colluvium and Pleistocene alluvial sands. Clovis materials are present above red Paleosol at Right. (Image credit: Courtesy Albert C. Goodyear).

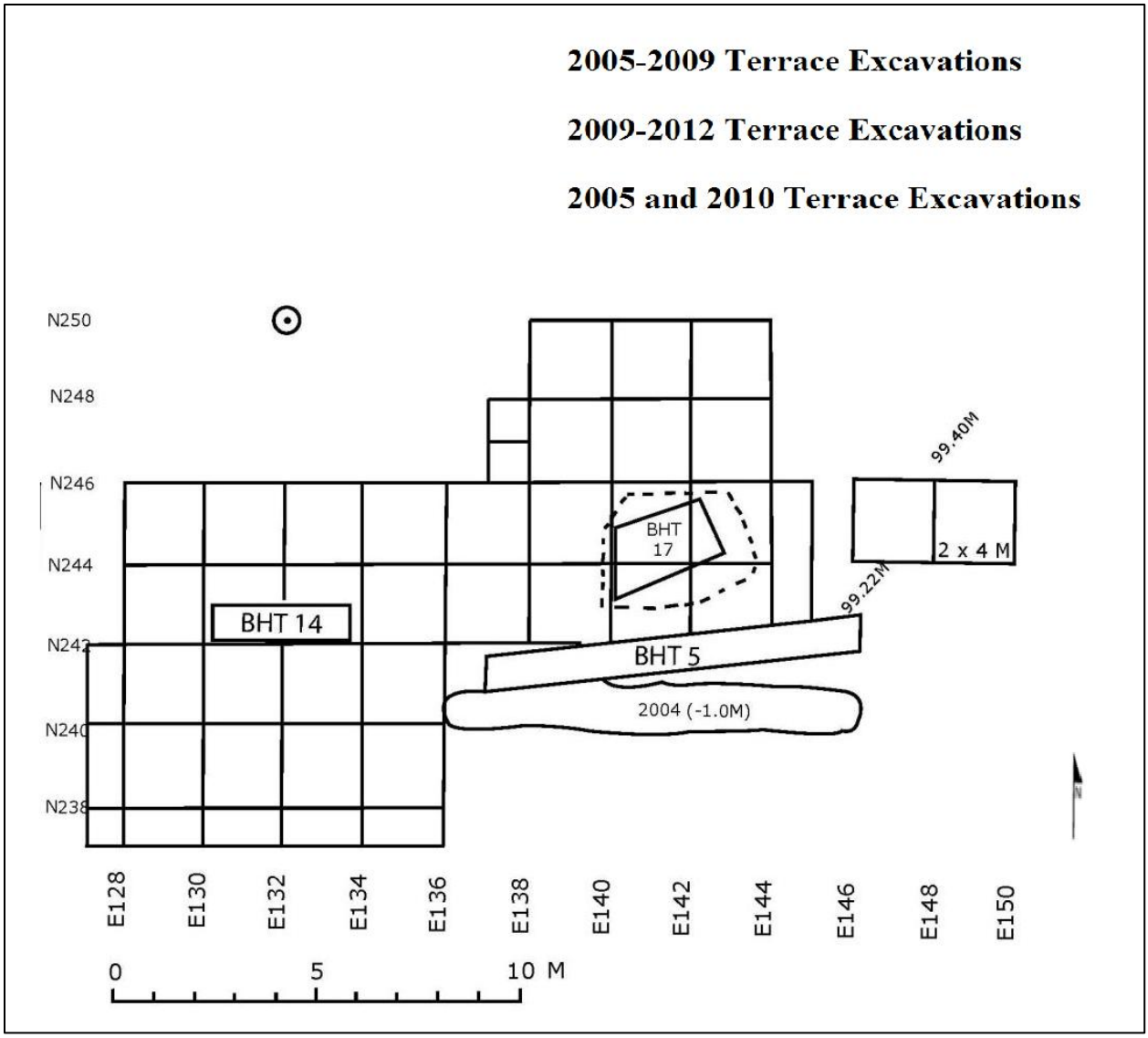
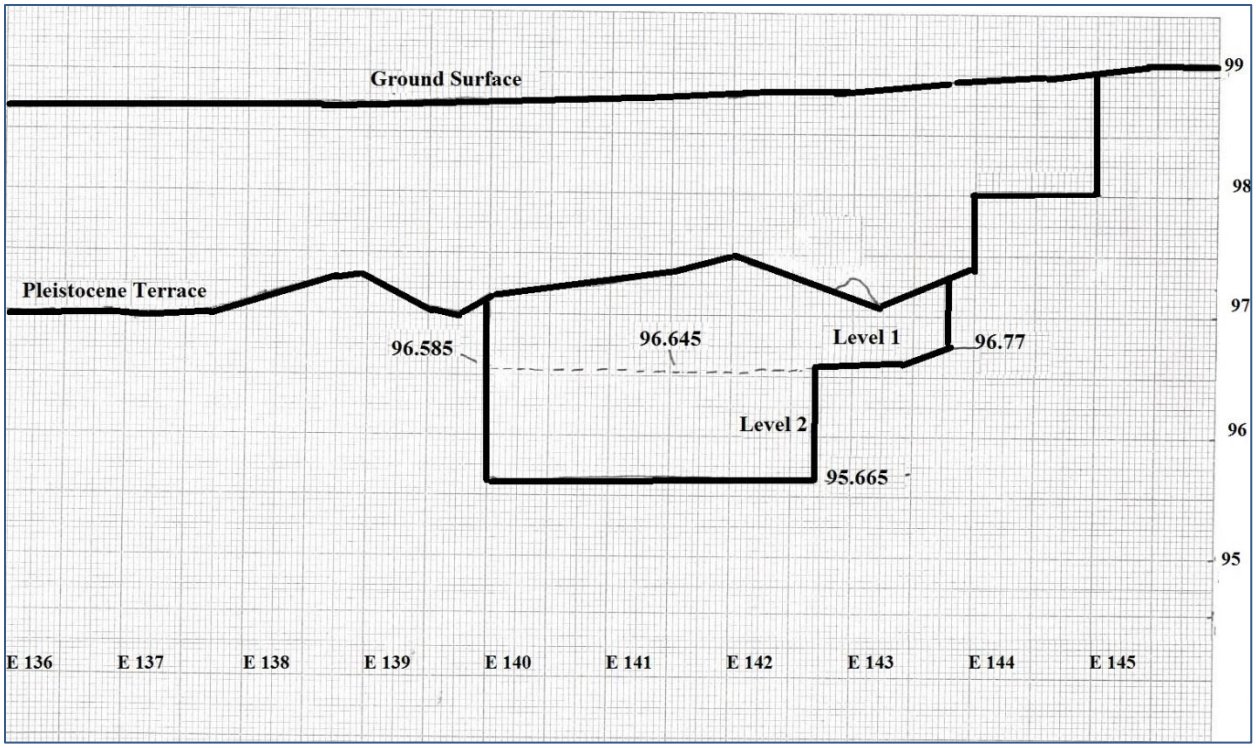


Figure A14-3
Map showing location of BHT 17



Figure A14-4
Before and after shot of 2002-2003 5x9 Pleistocene Terrace excavation. At top; Terrace surface at completion of hand excavation. At bottom; BHT 17 excavated into the top of the Terrace. (Images courtesy of Albert C. Goodyear). View East.



FigureA14-5
Profile map Reconstruction of BHT 17 excavation



Figure A14-6
BHT 5, 2000



Figure A14-7
Excavation and mapping of BHT 15 showing weathered paleosol in profile of BHT15 between Holocene colluvium and Pleistocene alluvial sands (Image courtesy of Al Goodyear).

APPENDIX 15

MAPPED ARTIFACTS FROM THE TOPPER SITE (38AL23)

Results of 1998 Field Season

The 1998 investigations resulted in the discovery of an abundance of lithic material from the manufacture of chipped stone tools. A list of the recovered mapped items by type for the 1998 field excavation is provided in Appendix 15. Based on the available level records, the results of the excavation produced a total of 68 mapped formalized tools from the Holocene and Paleoindian deposits including 11 cores, 31 biface tools, 22 flake tools, and four production tools (Table A15-1). In addition to these artifacts, 113 informal tools and flakes were also mapped. The 1998 excavations at Topper resulted in the discovery of lithic tools of Archaic and probable Clovis age. A Woodland component was also identified base d on the presence of Refuge and Deptford pottery.

Artifacts recovered from the Archaic deposits include Allendale and Morrow Mountain points, bifaces (n=21), blades (n=4), cores (n=6), unifaces and scrapers (n=5), and hammerstones (n=3) (Table A15-2). Materials from the MALA horizon (40-60cmbs) consistently display evidence for thermal alteration. An Early Archaic component was identified in unit N244 E106 based on the discovery of a Taylor side notched point at 70cmbs. A fluted biface was recovered from 81cmbs in unit N244 E106 providing good indication of intact stratified deposits for this unit. Artifacts recovered from the Paleoindian deposits included bifaces (n=2), fluted performs (n=1), scrapers (n=1), cores (n=2), and utilized flakes (n=3) (Appendix A15-2). Of note was the discovery of large prismatic blades and cores found in association with the bifaces from the Paleoindian stratum in levels 7-10 from unit N244 E106 (Sain 2012).

Table A15-1
Results of 1998 Excavation Field Season at the Topper Site: Mapped Artifacts by Unit.

Provenience	Core Tools	Biface Tools	Flake Tools	Bend Break Tools	Production Tools	Other Mapped
N244 E106	5	13	8	0	0	64
N244 E110	2	7	8	0	3	23
N244 E118	1	6	2	0	1	22
N244 E124	3	5	4	0	0	4
N254 E110						
N244 E130						
N250 E092						
N282 E112						
	11	31	22	0	4	113

Table A15-2
Results of 1998 excavation. Lithic tool types mapped in situ by culture chronology.
Includes mapped data for four of eight units excavated in 1998 (N244 E106, N244 E110, N244 E118, and N244 E124).

	Mississippian	Woodland	Archaic	Paleoindian	PS	Total
	0-10cmbs	10-40cmbs	40-90cmbs	>90cmbs	>120cmbs	
Bifaces	4	1	21	2	0	28
Blades	0	0	4	0	0	4
Cores	0	0	6	2	0	8
Unifaces	0	0	4	0	0	4
Hammer-stone	0	0	3	0	0	3
Scraper	0	0	1	1	0	2
Flake Tool	0	0	2	3	3	8
Graver	0	0	0	0	0	
Not Specified	1	12	74	0	0	87
Total	5	13	115	8	3	144

PS = Pleistocene Sands

Results of 1999 Field Season

A total of 430 artifacts and lithic items were mapped from these units over the course of the 1999 field season in addition to the excavation of four backhoe trenches (BHT1-4) and 18 features (Table A15-3). According to the record levels presented in appendix A15-3, lithic artifacts recorded in 1999 include 30 core tools, 36 bifaces, 63 flake tools, two hammerstones, 299 flakes and flake fragments. Many of these items were recovered from features. Of the 430 items mapped this field season, 122 derive from pre Clovis deposits. Lithic specimens such as rocks that were not considered artifacts but that were larger than 2.5cm were also mapped *in situ*, and were classified as "items" as opposed to artifacts. The provenience information for such specimens was recorded on the level bag but was not always recorded or drawn in the level records. In addition to the mapped artifacts, a total 77 artifacts were recovered from the screen, and were documented in the artifact logs. These artifacts are presented by type in Appendix 15, and include 16 bifaces and projectile points, 14 blades, 15 unifaces and scrapers, 10 cores, five flake tools, and two hammerstones in addition to a number of rocks, and debitage.

A Paleoindian horizon was identified from 90-110cmbs in the 48 square meter primary block excavation (Goodyear 1999:9). Of 276 mapped artifacts from this block excavation, a total of 45 were recovered from the presumed Paleoindian deposits. An additional 64 lithic items were mapped and recovered from the Paleoindian deposits but were not given artifact numbers. Most of the Paleoindian tools from the 48sq, meter block included utilized flakes, unifaces, and scrapers, with other artifact forms such as cores and bifaces occurring in lesser abundances.

A total of 48 of the 122 mapped pre Clovis artifacts recovered in 1999 were recovered from the Pleistocene Terrace in the 48sqm block. However, these artifacts differed in morphology when compared with the items recovered from units excavated to the North at the

base of the hill slope the prior field season. Most artifacts recovered were identified as either small flake tools (n=6), broken quartz pebbles/tools (n=72), or unspecified rocks or debitage (n=34).

A 4m x2m block was excavated to a depth of 170cmbs in units N242 E130 and N242 E132. Excavation carried out at this location resulted in the mapping and recovery of 124 artifacts and lithic items (Table A15-3). Among the artifacts identified are 23 Woodland and Archaic period artifacts, nine Paleoindian tools, and 92 artifacts from the Pleistocene Sands. Formal tools from the 4m x2m block include nine cores, nine bifaces, 16 flake tools, one hammerstone in addition to 89 unspecified artifacts.

At least two distinct lithic working surfaces were identified in the 1999 4m x2m block and include an Archaic biface cache (labeled as F48) situated between 98.30-98.40m and a linear distribution of lithic artifacts and debris situated at the base of the Pleistocene Sands from elevation of 96.90-97.05m. In the Pleistocene Sands of unit N242 E132, a pre Clovis lithic cluster (labeled as F49was observed in close proximity with Feature 23 which had been previously identified the prior field season. Excavation of Feature 49 revealed a number lithic cobbles and small flake tools. Interestingly, a high percentage of the lithic cobbles from this Feature were relatively large and greater than 10cm in diameter. In addition to Feature 49, other artifacts recovered from the Pleistocene Sands in unit N242 E132 include flake tools, an end scraper, and a number of small blade-like flakes that have square cross sections and are similar in morphology to burins and burin spalls (Goodyear 1999:9).

In addition to the 4x2m block excavation, two additional 2m x 2m units were excavated at the northern end of the Topper Site in 1999. These units include N268E132 and N282 E132. A total of twenty two artifacts were recovered in unit N268E132 and include three core tools, 11

bifaces, a flake tool, and seven additional flakes and flake fragments. The bifaces were most prevalent from the Archaic and Paleoindian levels. Flakes, flake tools, and cores were recovered from the Pleistocene Sands of unit N268 E132. An examination of the contents of unit N282 E132 revealed fewer artifacts (n=8). Of these, five were recovered from the Paleoindian deposits and include a uniface, blade core, scraper, and bladelet. A single burin spall was recovered from the Pleistocene Sands of unit N282 E132.

Table A15-3
Results of 1999 Excavation Field Season at the Topper Site: Mapped Artifacts by Unit.

Provenience	Core Tools	Biface Tools	Flake Tools	Bend Break Tools	Production Tools	Other Mapped
*N208 E130	0	0	0	0	0	22
*N208 E132	7	2	12	0	0	60
N208 E134	0	2	2	0	0	19
N208 E106	2	2	4	0	0	2
*N210 E130	0	0	1	0	0	18
*N210 E132	0	1	2	0	0	72
N210 E134	0	1	8	0	0	4
N210 E136	1	3	6	0	0	0
N212 E132	0	0	3	0	0	0
N212 E134	1	1	0	0	1	0
N212 E136	1	0	0	0	0	0
N210 E130-36	5	3	6	0	0	2
*N242 E130	5	0	7	0	0	53
*N242 E132	4	9	9	0	1	36
N268 E132	3	11	1	0	0	7
N282 E132	1	1	2	0	0	4
Total	**30**	**36**	**63**	**0**	**2**	**299**
Cum. total						**430**

Table A15-4

Results of 1999 Excavation. Lithic Tool Types mapped in situ by Culture Chronology. (Excludes artifacts that were mapped but were subsequently not given artifact numbers and not recorded such as lithic items).

Artifact	**Mississippian**	**Woodland**	**Archaic**	**Paleoindian**	**Pleistocene**	
	0-10cmbs	**10-40cmbs**	**40-90cmbs**	**90-110cmbs**	**>110cmbs**	
Bifaces	0	6	18	3	0	**27**
Blades	0	0	13	4	0	**17**
Cores	0	0	11	3	1	**15**
Unifaces	0	0	2	0	0	**2**
Pottery	0	0	0	0	0	**0**
Hammerstone	0	0	0	0	0	**0**
Scraper	0	1	11	1	0	**13**
Flake Tool	0	0	15	3	6	**24**
Graver	0	0	0	0	0	**0**
Quartz	0	11	10	2	72	**95**
Not Spec.	0	0	53	29	34	**116**
Qtz Cobble	0	0	0	0	9	**9**
Total	**0**	**18**	**133**	**45**	**122**	**318**

Results of 2000 Field Season

A 4m x 8m meter block excavation was opened in 2000 extending from N242 to N244 along the E128 to E136 grid lines. A second 2x4 meter block excavation opened along the N244grid line from E146 to E150 (Goodyear 2000). A total of 505 lithic items were mapped from the block excavations of the 2000 Field season, and at least 46 items were recovered from the screen over the course of the 2000 field season (Table A15-5). Table A15-6 presents the chronological distribution of mapped artifacts by tool type recovered in 2000. Woodland Period artifacts consist largely of stemmed projectile points or bifaces (n=5) and were frequently found in association with broken ceramics. Other mapped artifacts from the Woodland component include a blade, a flake tool, and 15 non-specified flakes and flake fragments. The Archaic and Paleoindian deposits are characterized by an increase in the frequency of bifaces (n=11), blades (n=9), cores (n=5), and flake tools (n=5). Most of the bifaces are preforms or are early stage blanks as opposed to finished points. The most frequent tool types from the pre Clovis deposits were utilized flakes and flakes tools, cores, and blades. A high percentage of mapped items from these deposits also consisted of broken chert and quartz cobbles.

As is evident from the vertical distribution of artifacts in Table A15-6, the base of the Holocene colluvium (97.80-98.10m) is dominated by bifaces (n=9), blades and flake tools (n= 13), cores (n=5) and hammerstones (n=3). Although temporally non-diagnostic, these artifacts are frequently associated with Clovis chipped stone tool production. Below the Clovis deposits there is an increase in the amount of flake tools and scrapers (n=11), as well as small pebble/cobble tools (n=4). In addition to these artifacts, a total of 164 additional artifacts were mapped including rocks, cobbles, boulders, flakes and flake fragments, burins, burin spalls, small

utilized chert flakes with striking platforms and bulbs, unifacially retouched flakes, and small blades and bladelets (Goodyear 2000).

A total of 296 artifacts were mapped from units N244 E146, and N244 E148 (A15-5) which comprises the 2000 2x4m block. Of the artifacts recovered, 25 derive from the Woodland deposits, 25 were mapped from the Archaic deposits, 86 from the Paleoindian levels and 160 were recovered from the Pleistocene Sands between elevations of 140 and 220cmbs. These findings indicate a substantial deposit quantity of lithic materials came from the Pleistocene Sands in this area.

Very few formal tools were recovered from the Holocene deposits of the 2000 2x4m block. A single Yadkin point was recovered from the Woodland deposits and a MALA point from the Archaic levels. The MALA point and associated flakes from the Holocene deposits were used to distinguish a Middle to Late Archaic lithic reduction zone in this area of the site. By contrast, the density of formalized tools was found to increase in the Paleoindian deposits. Formalized Paleoindian artifacts include three biface fragments, three flake tools, two cores, a scraper, and two Paleoindian hammerstones. A biface perform fragment was recovered at 95cmbs and is considered to be Paleoindian in origin. Additional artifacts from the Paleoindian deposits consist of a cluster of rocks, flakes and small blades that was labeled as Feature 62 and is presented in plan-view in Appendices 18 and 23. Most lithic artifacts recovered from the pre Clovis deposits in the 2000 2x4m block were preliminarily identified as flakes, debitage, or chert pebbles/cobbles.

Table A15-5
Results of 2000 Excavation Field Season at the Topper Site: Mapped Artifacts by Unit.

Provenience	Core Tools	Biface Tools	Flake Tools	Bend Break Tools	Production Tools	Other Mapped
*N242 E128	1	6	15	0	1	37
*N242 E130	0	0	1	0	0	6
*N242 E132	0	0	2	0	0	2
*N242 E134	5	1	6	0	0	78
*N244 E108	0	3	0	0	1	1
*N244 E128	1	1	5	0	0	3
*N244 E132	0	3	0	0	0	16
*N244 E134	1	3	6	0	1	51
*N244 E146	3	0	3	0	1	78
*N244 E148	3	6	3	0	0	199
Total	**14**	**23**	**41**	**0**	**4**	**471**

Table A15-6
Results of 2000 Excavation: Lithic Tool Types Mapped in situ by Culture Chronology.

	Mississippian	Woodland	Archaic	Paleoindian	Pre Clovis	Total
	0-10cmbs	10-40cmbs	40-90cmbs	90-140cmbs	>140cmbs	
Bifaces	0	5	4	7	0	16
Blades	0	1	0	9	2	12
Cores	0	0	0	5	4	9
Unifaces	0	0	0	0	0	0
Pottery	0	0	0	0	0	0
Hammer-stone	0	0	0	3	0	3
Scraper	0	0	0	5	2	7
Flake Tool	0	1	1	5	11	18
Graver	0	0	0	0	0	0
Flake	0	0	0	0	0	0
/Other Mapped	0	27	21	91	164	303
Feature Items	0	15	29	0	93	137
Total	0	49	55	125	276	505

Results of 2001 Field Season

The results of the 2001 Field season at the Topper Site resulted in the mapping and recovery of 436 lithic items and artifacts, of which 297 were recorded in the level records. These artifacts were recovered from three excavation blocks including a5x10m block, a 4x6m block and 10 1x2m units presented in Appendix 22. The distribution of artifacts by unit and by type are presented in Table A15-7. In addition to the mapped items, 110 artifacts were recovered from the screen and are presented in Appendix 16. Excavations carried out in units N240 E128-E132 produced a dense layer of Clovis and pre Clovis artifacts resulting in the recovery of 156 mapped items or approximately 35% of all materials plotted from the field season (Table A15-7). From unit N240 E132, 73 artifacts were mapped from the Clovis deposits and consist of bifaces, blades, and utilized flakes. An additional 108 lithic items were mapped from the pre Clovis levels of units N240 E128-E132 consisting of small flakes, cores, utilized pebbles and bend breaks. In total, the results of the entire 2001 5x10m block pre Clovis excavation produced a total of 19 tools (two blades, four cores, 11 flake tools), in addition to 164 flakes, flake fragments, cobbles, and boulders. A total of four lithic clusters were also identified below the Clovis contexts (Appendix 23). These clusters were subsequently given feature numbers and include Features 77, 80, 82, and 83. The pre Clovis features were well defined and typically consisted of numerous lithic items that under preliminary observation, exhibit attributes consistent with chipped stone debris (Goodyear 2001). A total of 60 lithic items were mapped and recovered from Feature 77 which extends from 150-155cmbd (97.25-97.20M) making it one of the largest pre Clovis lithic clusters identified at the site to date (see Appendix 18).

Excavations were conducted along the southern, eastern, and western perimeter of the 5x10m block excavation were conducted to serve as a baulk that would prevent collapse of the

sandy profile wall as excavation progressed deeper. In total, ten 1x2m units were placed and were excavated to a depth of 97.80m (approximately 110cmbd) to the base of the Clovis deposits. A total of 17 artifacts were mapped from these units and include a single MALA point, and 10 scrapers, one biface preform, and one utilized flake from the Clovis deposits. To the west of the 1x2m units, a 4x6 block was excavated to 97.00m or 113cmbd, the base of the Clovis zone. Excavation below the Clovis zone was not undertaken in this block. A total of 117 lithic items were mapped, including four features (F 73, 75, 78, and 79). Features 73 and 79 are Early Archaic/Paleoindian lithic workstations consisting of chert scrapers, denticulates, blades, cores, hammerstones, and flakes. The interpretation that this area served as a lithic workstation is based primarily on the diversity of tool forms and associated manufacture debris recovered in close proximity.

Table A15-7
Results of 2001 Excavation Field Season at the Topper Site: Mapped Artifacts by Unit.

Provenience	Core Tools	Biface Tools	Flake Tools	Bend Break Tools	Production Tools	Other Mapped
N238 E128	0	0	0	0	0	17
N238 E130	0	1	1	0	0	0
N238 E132	0	0	0	0	0	0
N238 E134	1	2	3	0	0	14
N240 E128	7	3	2	0	2	7
N240 E130	1	2	4	0	0	9
N240 E132	0	4	1	0	0	114
N240 E134	0	0	0	0	0	21
N236 E126	0	0	0	0	0	0
N236 E128	0	1	4	0	0	0
N236 E130	0	0	1	0	0	0
N236 E132	0	0	0	0	0	0
N236 E134	0	0	0	0	0	0
N236 E136	0	0	0	0	0	5
N237 E136	0	5	0	0	0	1
N238 E126	0	0	0	0	0	0
N238 E136	0	0	0	0	0	0
N240 E126	0	0	1	0	0	0
N240 E136	0	1	1	0	0	0
N230 E106	0	1	2	0	1	0
N232 E102	1	0	1	0	1	45
N232 E104	0	1	0	0	0	0
N232 E106	0	4	0	0	0	0
N234 E102	0	0	0	0	0	0
N234 E104	0	0	0	0	0	0
N234 E106	0	1	7	0	0	73
N236 E106	0	1	0	0	0	34
N238 E106	0	2	6	1	1	11
N240 E106	0	1	0	0	0	0
N242 E106	0	0	0	0	0	6
Total	**10**	**30**	**34**	**1**	**4**	**357**
Cum Total						**436**

Results of 2002 Field Season

Excavations at the Topper site in 2001 resulted in the recovery of 828 mapped lithic items, the most of any season up to this date. The distribution of these artifacts by unit and by type is presented in Table A15-8. During the field season a new 5m x 9m excavation block was opened up immediately to the East of the 2000 4m x 8m block. This excavation was situated along the N242-N246 and E136-E144 grid lines, and was taken to the top of the Pleistocene terrace at 97.35m.

The distribution of mapped artifacts from the 2002 5m x 9m block excavation is presented in Table A15-8. Biface (38), Core (81), and flake tools 9130) make up the most dominant tool types recovered from the 5m x 9m block. Table A15-9 presents the distribution of lithic tool types by culture chronology. The results of the 5m x 9m block investigation revealed 1; a minor Woodland and Mississippian component consisting of 1; pottery (n=3), shell (n=2), and bifaces (n=8); 2; a substantial Middle to Late Archaic component from 35-50cmbs dominated by numerous hafted bifaces (n=48), 3; a Paleoindian component approximately 1 meter below the ground surface consisting of numerous unifacial and un-diagnostic bifacial tools from Pleistocene age sediments (n=23) and including a single feature (F85);, and 4; a possible pre Clovis assemblage stratigraphically separated from the Paleoindian deposits and consisting of spatially clustered concentrations of chert cobbles and pebbles and associated flake tools within 25cm of the top of the Pleistocene Terrace.

The Archaic levels are dominated by MALA and Early archaic Archaic bifaces and projectile point preforms including Allendale and Taylor types (27). Cores (20) and scrapers (14) were also frequently encountered. Numerous pieces of thermally altered debitage document were

found in the upper levels of the Archaic zone with a transition to more weathered chert flakes from the Early Archaic levels

The Paleoindian deposits from the 5m x 9m block are represented by the occurrence of 104 three dimensionally mapped artifacts and 36 additional artifacts recovered from the screen (Table A15-9 and Appendix 16). The Paleoindian deposits in this area of the site are identified by an increase in the number of transverse biface thinning flakes, blades, and Clovis fluted preforms and a reduction in flake tools and scrapers. A single feature, feature, F85, was identified from the Middle Paleoindian deposits from the 5m x 9m block excavation at an elevation of 98.10m and was assigned the feature number 85. This feature was located in unit N244 E136 and contained bifaces (3), unifaces (6), cores (2), burned chert fragments (7), a single utilized flake, blade, and chert cobble. The plan-view map in Figure A23-12 of Appendix 23 shows the spatial distribution of Feature 85. Below this feature, colluvial and alluvial sediments were predominantly sterile of lithic materials until reaching elevation 97.50m where putative artifacts of pre Clovis origin were encountered.

The pre Clovis deposits from the 5m x 9m block excavation are characterized as spatially clustered associations of chert cobbles, cores, and microlithic tools including small blades, flake tools and bend breaks. The lack of bifaces distinguishes the pre Clovis zone from the overlying Clovis and Archaic materials. The pre Clovis lithic deposits in this area of the site range in depth from 97.75m to 97.10m to the contact with the Pleistocene Terrace. In total, 354 mapped items and seven screen items were recovered from the 5m x 9m pre Clovis deposits and include flake tools (n=49), cores (n=46), scrapers (n=28), flakes (n=22), bend breaks (n=18), and blades (n=6). The majority of these items were preliminarily identified in the field as chert cobbles or pebbles as described above.

Three features were identified from the pre Clovis zone of the 2002 5m x 9m block excavation, (and are presented in Appendices 18, 23). Feature 86 is a cluster of rocks in the northeast quad of N244 E142 at an elevation of 97.70m. Feature 86 includes 13 rocks, a possible anvil stone, a quartz hammerstone, and two chert cobbles that refit. No diagnostic artifacts were recovered with Feature 86. To the south and west of Feature 86, a chert cluster was identified beginning at an elevation of 97.55m in unit N244 E142. This Feature was designated Feature 88 and consists of over 60 mapped items including chert and quartz cobbles (n=29), flake tools (n=12), bend breaks (n=8), cores (n=5), flakes (n=5), and hammerstones (n=3). The feature was restricted to an area approximately 60cm N/S and 40cm E/W. The third Feature feature (F87) identified from the pre Clovis deposits in 2002 includes a cluster of chert cobbles and tools at an elevation ranging from 97.50-97.36m in unit N244 E138. A total of 67 lithic items were mapped associated with this feature and include chert and quartz cobbles (45), chert flake tools (13), chert cores (6), bend breaks (2), and quartz hammerstones (2). By the completion of the field season, excavation in the 5m x 9m block had reached within 15cm of the top of the Pleistocene Terrace surface.

Apart from the 5m x 9m block excavation, two additional block excavations were carried out in 2002. These include a 4x4m block from N267-E134 to N269 E136 and a 4x6m block from N284 E134 to N286 E138. A substantial Clovis lithic workstation was also encountered in both of these excavation blocks. The Clovis artifacts were identified based on the co-occurrence of outré passé' flakes recovered in association with the base of a single fluted point. As such, the lithic deposits were interpreted as a Clovis workstation where biface and blades were produced and subsequently discarded after use. The N267 E134 block produced 51 mapped artifacts, 31 of which were classified as bifaces. A single core tool and 14 flake tools

were also identified. A total of 118 artifacts were mapped from the N284 E134 block. These include cores 929), bifaces (17), flake tools (32) and a single hammertone.

In the N267 E134 block, excavation below the Clovis zone commenced as a 2m x 2m unit (N267 E135) to the top of the Pleistocene Terrace. The purpose of this excavation was to test the proposition that a pre Clovis occupation was present north of the primary 5m x 9m block excavation, and upstream from all other identified materials of such age (Goodyear 2003). Four square meters of sediments were excavated down to the Pleistocene Terrace in 11 10cm levels, with little evidence for artifact bearing deposits below the Clovis levels. A total of 11 items were mapped and consist of rocks small flakes, a possible core fragment. This distribution contrasts markedly with the high artifact densities encountered at the base of the Pleistocene Sands in the primary block excavation ca. 20 m to the south.

Table A15-8
Results of 2002 Excavation Field Season at the Topper Site: Mapped Artifacts by Unit.

Provenience	Core Tools	Biface Tools	Flake Tools	Bend Break Tools	Production Tools	Other Mapped
N242 E136	7	3	12	0	1	19
N242 E138	7	0	18	1	3	30
N242 E140	7	5	15	0	1	27
N242 E142	7	2	14	0	1	8
N242 E144	4	2	3	0	0	8
N244 E136	4	3	15	2	1	15
N244 E138	15	5	16	9	9	99
N244 E140	12	6	7	1	3	47
N244	6	2	20	10	6	75
N244 E144	4	0	2	0	0	1
N246	1	1	1	0	1	0
N246 E138	1	3	0	0	0	3
N246 E140	3	2	1	0	0	5
N246 E142	1	4	5	0	0	0
N246 E144	2	0	1	0	0	0
N267 E134	0	2	5	0	0	0
N267 E136	0	23	3	0	4	0
N269 E134	1	6	6	0	1	0
N284 E134	0	1	0	0	0	2
N284 E136	6	4	10	0	0	20
N285 E135	0	0	0	0	0	0
N285 E137	0	0	0	0	0	0
N286 E134	5	2	3	0	0	5
N286 E136	13	9	12	0	0	6
N286 E138	5	1	7	0	1	6
Trench A	0	2	2	0	0	0
Trench B	0	4	3	0	0	0
Trench C	0	4	0	0	0	0
Trench D	0	1	2	0	0	0
Trench E	0	5	1	0		0
Total	**111**	**102**	**184**	**24**	**32**	**376**
						828

Table A15-9
Results of 2002 Excavation: Identified Lithic Tool Types mapped in situ by Culture Chronology.

	Mississippian	**Woodland**	**Archaic**	**Paleoindian**	**Pre Clovis**	**Total**
	0-10cmbs	**10-40cmbs**	**40-90cmbs**	**90-140cmbs**	**>140cmbs**	
Biface	0	0	27	17	0	**44**
Flake Tool	0	0	12	3	49	**64**
Blade	0	0	7	12	6	**25**
Core	0	0	20	18	47	**85**
Hammerstone	0	0	4	2	20	**26**
Uniface	0	0	7	10	12	**29**
Bend Break	0	0	0	0	18	**18**
Scraper	0	0	14	3	28	**45**
Flake	0	0	6	12	22	**40**
Pottery	0	2	0	0	0	**2**
Pebble	0	0	1	27	152	**168**
Total	**0**	**2**	**98**	**104**	**354**	**558**

Results of 2003 Field Season

Three block excavations were carried out during Archaeological investigations at the Topper Site in 2003. These include the 5m x 9m block excavation begun in 2002, a new 6m x 6m block excavation and a series of 2x3m units along the northern perimeter of the site (illustrated in Appendix 22). The provenience and artifact classification for all mapped artifacts recovered during the 2003 field season is presented in Table A15-10. In total, 592 lithic items were mapped in 2003. This number includes 383 mapped artifacts in addition to 209 lithic items that were mapped, labeled and bagged, but were not recorded in the level records. A total of 12 artifacts were recovered from the screen (Appendix 16).

In 2003, excavation continued in four of the 2m x 2m units from the 5m x 9m block excavation begun the prior year. These units include N242 E140, N242 E142, N244 E140, and N244 E142. All materials excavated from these units in 2003 were from pre Clovis deposits. A total of 146 pre Clovis artifacts were mapped from these units in 2003 revealing additional cobble clusters and putative stone tools. While nearly 50% of these pieces (72) were identified as chert cobbles or pebbles, the remaining lithics were preliminarily classified as bend breaks (n=13), hammerstones (n=11), cores (n=18), flake tools (n=18), flakes (n=6), scrapers (n=5) or small blades (n=3) (Table A15-10). Unit N244E142 was found to have the highest abundance of potential tools with 27 items mapped from the pre Clovis contexts. These included nine flake tools, two core tools, three bend breaks, and four production tools.

Of note, six retouched or utilized chert tools were recovered from the 2003 5m x 9m block, and at least two were found in close proximity to a large chert boulder resting at the contact of the Pleistocene Terrace. These items, according to Goodyear (2005) are irrefutable evidence of human agency in the production of chipped stone tools.

A single feature was identified in 2003; a lithic cluster assigned Feature 90 and composed of chert cobbles (n=9), flakes, a utilized flake (n=1), cores (n=2), a single bend break (n=1), and a quartz hammerstone fragment (n=1) (Appendix 18). Feature 90 was encountered resting near the contact with the Pleistocene Terrace surface at elevation 97.30-97.25m at the coordinate of N243 E141. A profile and plan view map of the 2003 5m x 9m excavation presents the spatial distribution of mapped artifacts associated with Feature 90 (A23-13). In addition to Feature 90, a second lithic cluster was encountered in unit N244 E142 between 97.30-97.25m that was not assigned a feature number. This association cluster consists of 24 lithic items including chert scrapers (n=2), utilized flakes (n=2), battered quartz (n=1), chert cobbles (n=17), chert flakes (n=1), and an anvil. Two of the chert flakes associated with this lithic cluster were found to refit to scars on the surface of the adjacent boulder classified as an anvil (Figure 4-27). A search of the level records revealed that this association was not assigned a feature number.

The 6m x 6m block excavation was placed at the N270 E152 grid line and extending to N276 E158. The goal of this excavation was to determine if there are similar patterns in the distribution of pre Clovis materials along the northern perimeter of the site. Excavation began at ground surface (ca. 99.30m) and continued to the base of the Clovis deposits. Clovis artifacts encountered in this block are interpreted, based on observation, to represent early stage lithic reduction and core preparation, as the majority of lithic cobbles were relatively large and still retain cortex (Goodyear 2003). Although than 700 individual lithic items were identified and recovered from the Paleoindian levels in this block, less than 200 were actually three dimensionally plotted. Among the notable artifacts mapped from these deposits included 22 bifaces, 14 flake tools, 11 blades, 26 cores, 4 hammerstones, and 17 scrapers.

Immediately Beneath the Clovis deposits, the excavation area was condensed reduced to a 4m x 5m block (N272 E152 to N276 E157) and excavation continued through a "red" paleosol (Goodyear 2005:4). Other than quartz pebbles and "chemically weathered cortical material", the paleosol was sterile of archaeological materials within the 20 square meters indicating an absence of human occupation between the Clovis and reported pre Clovis assemblage from the Pleistocene Sands (Goodyear 2005:5). Below the paleosol, excavation continued as a 2m x 4m unit (N274 E154) from 98.25m through white Pleistocene age alluvial sands to the top of the Terrace Pleistocene Terrace at 97.00m. From the Pleistocene Sands, small flakes were recovered from the screen, some of which had bend break fractures consistent with those found in the primary 5m x 9m block (N242-N246 and E136-E144) excavated to the south in 2002-2003. At 97.35m a spatially concentrated chert cluster containing seven lithic items was revealed but was not given a feature number. This cluster was similar in form to those identified from the 2002 5m x 9m excavation (Goodyear 2005). No other artifacts larger than 2.5cm were encountered or mapped from the pre Clovis deposits in this unit.

To the north of the 6m x 6m block excavation, a series of units were excavated along the N284gridline and include 5 2m x 2m units placed extending from N284 E132 to N288 E136. Excavation began at 98.50m and concluded at the base of the Holocene Colluvium at 97.30m. Of the 203 artifacts mapped from this block, cultural materials associated with Woodland (25) and Archaic (59) periods were recovered and mapped from the Holocene deposits. A possible Paleoindian assemblage was identified from the 5 2m x 2m unit excavations. Artifacts mapped and recovered from the Clovis deposits (n=119) include side and end scrapers, blades, and utilized flakes (n=67), hammerstones (n=5) and biface preforms and biface fragments (n=33). Associated with these artifacts were clusters of debitage, presumably deposited as the byproducts

of the lithic manufacture process. Artifacts were not encountered below the Clovis deposits in this block.

Table A15-10
Results of 2003 Excavation Field Season at the Topper Site: Mapped Artifacts by Unit.

Provenience	Core Tools	Biface Tools	Flake Tools	Bend Break Tools	Production Tools	Other Mapped
N242 E140	7	0	6	3	3	25
N242 E142	7	0	4	2	5	20
N244 E140	1	0	2	3	0	5
N244 E142	2	0	9	3	4	27
N270 E152	2	3	0	0	0	2
N270 E154	0	0	3	0	0	18
N270 E156	12	4	12	0	2	10
N272 E152	0	0	1	0	0	0
N272 E154	1	4	0	0	0	1
N272 E156	15	3	13	0	2	7
N274 E152	2	0	1	0	0	1
N274 E154	19	4	11	0	0	23
N274 E156	17	6	21	0	2	4
N284 E132	2	3	6	0	1	9
N286 E132	3	5	9	0	0	10
N288 E132	4	10	5	0	2	0
N288 E134	12	8	19	0	1	25
N288 E136	16	7	28	0	1	8
BHT 17	6	0	3	4	0	21
Total	**128**	**57**	**153**	**15**	**23**	**216**
Cum. Total						**592**

Table A15-11
Results of 2003 Excavation. Lithic Tool Types mapped in situ by Culture Chronology.

	Mississippian	**Woodland**	**Archaic**	**Paleoindian**	**Pre Clovis**	**Total**
	0-10cmbs	**10-40cmbs**	**40-90cmbs**	**90-140cmbs**	**>140cmbs**	
Biface	0	4	15	22	0	**41**
Flake Tool	0	1	7	14	11	**33**
Blade	0	2	6	11	3	**22**
Core	0	4	10	26	18	**58**
Hammerstone	0	0	2	4	11	**17**
Uniface	0	3	2	6	11	**22**
Bend Break	0	0	0	0	13	**13**
Scraper	0	4	1	17	0	**22**
Flake	0	1	17	30	6	**54**
Pottery	0	4	4	0	0	**8**
Pebble	0	3	6	12	72	**93**
Total	**0**	**26**	**70**	**142**	**146**	**383**

Results of 2004 Field Season

Tables A15-12-13 present the distribution of artifacts recovered from the 2004 Field season at the Topper Site (38AL23). Excavations were carried out in two areas on the Terrace in 2004; the 5m x 9m block and a 4m x 8m block excavation along the N288-N290 gridlines. In all, a combined 384 artifacts were mapped on the alluvial Terrace over the course of the field season. Of these, 27 pre Clovis items were recovered from the lower three levels (15cm) of the primary 5m x 9m block in the Pleistocene Sands deposits. Below these deposits, 90 items from were mapped from the Pleistocene Terrace deposits. This excavation began at the top of the terrace at 97.35m. Three full (N242 E140 SE, N242 E140 SW, N242 E142 SW) and one partial (N242 E140 NE) 1x1 meter units were placed around the margins of BHT17 and within the grid system. Within these units, a cluster of lithic artifacts was mapped, the majority of items occurring between 96.90-96.80m. These artifacts were preliminarily identified as flakes (n=20), worked chert cobbles (n=1), bend breaks (n=11), flake tools (n=3), cores (n=2), and weathered chert cobbles (n=45) (Goodyear 2005:6). However, most (61) items recovered from the pre Clovis deposits from the Pleistocene Terrace in 2004 derive from unit N242 E140 and include two flake tools and three bend breaks.

A total of 236 artifacts were recovered from the Holocene and Paleoindian deposits from the N288-N290 4m x 8m block. Very few Woodland (n=3) and Archaic (n=19) artifacts were recovered from this block as evidenced by the profile map in Figure A23-15. Similar to the discoveries in this area in 2002, a dense Clovis floor was uncovered which is approximately 20cm in thickness and "overlain by relatively sterile" Holocene deposits (Goodyear 2005:7).

This “floor” contains 131 artifacts from the Clovis deposits, the majority consisting of blades (n=23), cores (n=27), and flakes (n=35) (Table A15-13). A total of five Clovis preforms were recovered from this block in 2004 in addition to nine additional bifaces from the Paleoindian levels.

Table A15-12
Results of 2004 Excavation Field Season at the Topper Site: Mapped Artifacts by Unit.

Provenience	Core Tools	Biface Tools	Flake Tools	Bend Break Tools	Production Tools	Other Mapped	Total
N288 E138	3	3	9	0	1	1	**17**
N290 E132	3	4	8	0	0	0	**15**
N290 E134	1	2	7	0	3	12	**25**
N290 E136	8	4	8	0	1	3	**24**
N292 E134	8	3	24	1	2	5	**43**
N292 E136	8	4	8	0	1	5	**26**
N238 E138	0	0	1	3	0	27	**31**
N290 E138	7	2	25	0	2	2	**38**
N292 E132	2	5	6	0	2	2	**17**
N294 E122	2	4	3	0	1	0	**10**
N296 E114	1	13	1	0	0	0	**15**
N296 E126	0	3	2	0	1	0	**6**
N242 E140PT	0	0	2	3	1	55	**61**
N242 E142PT	2	0	0	8	0	19	**29**
5m x 9m PS	0	0	0	0	0	27	**27**
Total	**45**	**47**	**104**	**15**	**15**	**174**	**384**

Table A15-13
Distribution of identified mapped artifacts by type and culture chronology from 2004 4m x 8m block excavation.

Type	Woodland	Archaic	Clovis	Total
Bifaces	0	6	14	**20**
Blades	0	3	23	**26**
Cores	3	4	27	**34**
Scraper	0	2	15	**17**
Hammerstone	0	1	8	**9**
Flake Tools	0	2	9	**11**
Flake	0	1	35	**36**
Total	**3**	**19**	**131**	**153**

2005-2012 Field Seasons

2005-2009 Southern Pleistocene Sands and Terrace Pleistocene Terrace Excavations

Since 2005, excavations into the Pleistocene age sediments at Topper have continued in four specific locations. These areas include excavations at the southern end of the Terrace surrounding BHT 17 from 2005-2009; excavations of Holocene and Pleistocene sediments to the north of BHT17 from 2009-2012; excavations of the Pleistocene Sands in three 1x1m quads along the eastern margin of BHT17 in 2005 and 2011; and the excavation of Holocene and Pleistocene sediments from a 4x4m block 20m north of the primary pre Clovis excavation from 2010-2012. Tables A15–14 through A15–18 present the distribution of mapped items by type for each provenience for each of the excavation areas. All levels excavated over the course of this time period derive from pre Clovis contexts with the exception of the 2009-2012 Northern Terrace excavation which includes materials from Holocene, Pleistocene Clovis, and Pleistocene pre Clovis deposits.

Between 2005 and 2009 excavations in 6 1m x1m units from the Pleistocene Terrace have resulted in the recovery of 428 artifacts preliminarily classified as flake tools, bend breaks, cores, or hammerstones based on initial observation (Table A15-14). The majority of these artifacts are bend breaks (n=172) or flake tools (n=177). In addition, total of 25 artifacts and 185 lithic specimens were preliminarily classified from the partial units in 2005 (Table A15-15). By the completion of the 2007 field season, excavation in units N242 E140 and N242 E142 had been taken to a depth of 95.25m, arbitrarily considered the base of the Pleistocene terrace excavation. One new quad, N244 E138 SE was opened in 2007 and taken to a depth of 96.55m by the completion of the field season. A total of 71 of the 314 lithic items mapped in 2007 derive from the N244 E138 quad (Table A15-16). The majority of items encountered in this unit were

classified as cortical chert pebbles. In 2008 excavation began in the Pleistocene Terrace of unit N242 E138 SE and continued through the completion of the 2009 field season. Of the 2,633 pre Clovis items mapped from the Southern Pleistocene Terrace units between 2004 and 2009, approximately 16.6% were classified as tools whereas the remaining items consist of flakes, flake fragments debris and cortical chert and quartz pebbles.

2005-2012 Northern Pleistocene Sands and Terrace Pleistocene Terrace Excavations

Beginning in 2009 excavations commenced at Topper on in units N246 E136-E142 and N248 E136-E142. This area is referred to as the Northern Terrace block. During the 2005 field season, excavation of the Northern Terrace block consisted of the systematic removal of the Holocene Sands to the top of the Pleistocene Terrace at 97.15m. A total of 62 bifaces and biface fragments were recovered from these excavations in addition to smaller quantities of flake, core, and production tools. Between 2009 and 2012 excavations continued into the Pleistocene Terrace in 9 1m x1m quads to a depth of 96.65m. The results of this excavation are presented in Table A15-19. Of the 1,921 artifacts identified from these units, 81 artifacts were classified as bend breaks, the majority recovered from the Lower Pleistocene Sands and Upper Pleistocene Terrace. Excavation was not taken below 96.65m in this area.

Table A15-14
Mapped artifacts by type from the 6 full 1m x1m terrace units surrounding BHT 17 (2005-2009)

	Core Tools	**Flake Tools**	**Bend Break Tools**	**Production Tools**	**Total Tools**	**Other Mapped**	**Total**
*N242 E140 SE/SW	24	93	59	7	183	697	
*N242 E142 SW/NW	14	43	81	2	140	671	
N242 E138	1	21	23	0	55	212	
N244 E138	31	20	9	0	60	187	
Total	**70**	**177**	**172**	**9**	**438**	**1767**	**2633**

Table A15-15
Mapped artifacts by type from the 4 partial 1m x1m terrace units surrounding BHT 17 2004-2009.

	Core Tools	**Flake Tools**	**Bend Break Tools**	**Production Tools**	**Other Mapped**
N244 E140 SW/SE	0	0	4	1	26
N242 E140 NW/NE	1	11	6	2	159
Total	**1**	**11**	**10**	**3**	**185**

Table A15-16
Results of Pleistocene Terrace excavation by year from 2004-2009. Figures reflect total mapped items per unit

	N242 E140 SE				**N242 E142**		**N242 E138 SE**	**N244 E138 NE**	**Total**
	SE	SW	NE*	NW*	SW	NW			
2004	24	30	7	-	29	-	-	-	90
2005	-	-	53	106	-	-	-	-	159
2006	108	102	-	-	51	3	-	-	264
2007	175	63	-	-	-	5	-	71	314
2008	48	36	-	-	275	72	79	118	510
2009	-	-	-	-	93	164	133	1	391
Total	**355**	**231**	**60**	**106**	**448**	**244**	**212**	**190**	

Table A15-17
Mapped artifacts by type from 2005 Eastern Terrace Excavation

	Core tools	**Flake Tools**	**Bend Break Tools**	**Production Tools**	**Other Mapped**
N244 E144 SW	0	2	2	1	66
N242 E144 NW	1	0	3	1	81
Total	**1**	**2**	**5**	**2**	**147**

Table A15-18
Mapped artifacts by type from 2011 Eastern Terrace Excavation

	Core Tools	**Biface Tools**	**Flake Tools**	**Bend Break Tools**	**Production Tools**	**Other Mapped**
N244 E144 SE	3	0	6	7	6	369
N244 E144 NE	2	0	1	2	0	124
N242 E144 SE	2	0	0	0	1	48
N242 E144 NE	4	0	52	38	19	630
N242 E144 SW	3	1	9	4	1	131
Total	**14**	**1**	**68**	**51**	**27**	**1302**

Table A15-19
Mapped artifacts by type from the 2009–2012 Northern Terrace Excavation

Provenience	Core Tools	Biface Tools	Flake Tools	Bend Break Tools	Production Tools	Other Mapped
N246 E136 NE	14	44	3	2	0	24
N246 E136 SE	0	0	0	2	1	8
N246 E136 NW	0	5	0	0	0	4
N248 E136	0	3	0	0	2	1
N246 E138 NE	1	1	2	1	3	7
N246 E138 SE	0	0	4	6	2	127
N246 E138 NW	1	1	3	2	2	10
N246 E138 SW	2	0	5	11	0	92
N246 E140 NE	1	0	2	4	0	108
N246 E140 SE	0	0	16	11	0	216
N246 E140 NW	0	0	5	0	0	61
N246 E140 SW	1	0	9	10	3	257
N246 E142 SE	0	0	0	0	0	1
N246 E142 SW	2	0	3	15	0	270
N248 E138 NE	0	0	0	0	1	1
N248 E138 SE	1	2	0	0	0	1
N248 E138 NW	0	1	0	0	1	2
N248 E138 SW	0	3	0	0	1	2
N248 E140 NE	1	2	2	0	1	0
N248 E140 SE	9	0	11	9	4	195
N248 E140 NW	0	0	0	0	0	0
N248 E140 SW	6	0	17	7	2	224
N248 E142	0	0	0	0	0	0
TSF094	0	0	0	0	0	0
TSF105	0	0	1	0	0	11
TSF107	1	0	0	0	0	9
Total	**40**	**62**	**83**	**81**	**23**	**1632**
Cumulative Total						**1921**

Mapped Artifacts from 1998 Excavations at the Topper Site (38 AL23)

Appendix 15 below presents the mapped artifacts for each field season (1998-2012) of excavation on the Alluvial terrace at the Topper Site. Columns, in order from left to right include: provenience northing, provenience easting, artifact depth, Artifact classification, Artifact number, unit northing, unit easting. All artifact information was taken directly from the site level records on file at the South Carolina Institute of Archaeology and Anthropology (SCIAA).

Table A15-20 A
Mapped Artifacts from 1998 Excavations at the Topper Site (38AL23).

1998 N	E	Depth	Type	Art #	Unit N	Unit E
208.96	130.88	97.79	Retouched Flake	1	208	130
244.86	107	97.77	Concentration	0	244	106
245.46	107.14	97.735		1	244	106
245.88	107.58	97.5		1	244	106
245.03	106.75	97.48	Biface Preform	1	244	106
245.11	107.02	97.46	Blade	1	244	106
244.5	107.35	97.5	Blade	1	244	106
245.68	106.95	97.38	Core	1	244	106
245.98	107.15	97.4	Utilized Flake	1	244	106
244.51	106.73	97.43	Utilized Flake	1	244	106
244.31	107.89	97.395	Worked Flake	1	244	106
245.06	106.98	97.74	Concentration	2	244	106
245.55	107.52	97.58	Core	2	244	106
245.22	107.04	97.46	Blade	2	244	106
245.68	107.1	97.45	Blade	2	244	106
245.78	106.43	97.39	Fluted Preform	2	244	106
245.06	106.74	97.775	Concentration	3	244	106
245.9	106.9	97.5	Core	3	244	106
245.3	106.61	97.45	Uniface	3	244	106
245.37	107.12	97.45	Blade	3	244	106
245.05	106.8	97.74	Concentration	4	244	106
245.23	106.63	97.49	Taylor Point	4	244	106
245.91	107.52	97.45	Core	4	244	106
244.95	106.89	97.775	Concentration	5	244	106
244.9	106.3	97.57	Burned Rock	5	244	106
245	106.67	97.76	Concentration	6	244	106
245.25	106.11	97.56	Core	6	244	106
244.95	106.76	97.755	Concentration	7	244	106
245.94	106.9	97.51	Cortical	7	244	106
244.94	106.81	97.765	Concentration	8	244	106
245.49	107.33	97.5	Macro Blade	8	244	106
244.85	106.96	97.755	Concentration	9	244	106
245.32	106.65	97.75		11	244	106
244.42	107.3	97.75		12	244	106
244.56	106.41	97.77		13	244	106
245.13	106.34	97.79		14	244	106
244.48	106.95	97.72		15	244	106
244.3	107.01	97.81		16	244	106
244.61	106.9	97.8		17	244	106
245.71	107.38	97.75		18	244	106
244.98	106.15	97.74		19	244	106
245.96	106.57	97.77		20	244	106

Table A15–20 A continued

1998 N	E	Depth	Type	Art #	Unit N	Unit E
244.64	106.62	97.74		21	244	106
244.99	106.1	97.76		22	244	106
244.98	106.13	97.77		23	244	106
244.32	107.06	97.82		24	244	106
244.34	107.05	97.73		25	244	106
244.35	106.81	97.7		26	244	106
245.91	106.78	97.73		27	244	106
245.66	107.85	97.71		28	244	106
245.5	106.73	97.71		29	244	106
245.48	106.93	97.7		30	244	106
244.37	107.995	97.74		31	244	106
245.99	107.775	97.755		32	244	106
244.58	106.72	97.64	Biface		244	106
245.06	106.02	97.7	Biface		244	106
245.5	106.29	97.605	Biface		244	106
244.96	107.82	97.62	Point	244	106	244.96
246	106.39	97.63	Point Tip		244	106
245.46	106.91	97.98	Charcoal Stain	245.46	106.91	97.98
244.84	106.55	97.83	Sandstone	244.84	106.55	97.83
244.46	107.56	97.86		244.46	107.56	97.86
244.44	107.57	97.87		244.44	107.57	97.87
244.44	107.61	97.89		244.44	107.61	97.89
245.7	110.65	98.08	Stemmed Point	1	244	110
245.49	111.58	97.965	Mala Preform	1	244	110
244.37	111.76	97.85	Cortical Chert	1	244	110
244.04	111.18	97.83	Preform	1	244	110
245.86	110.87	97.64	Hammerstone	1	244	110
245.81	111.48	97.62	Hammerstone	1	244	110
245.8	111.34	98.09	Refuge Pot	2	244	110
245.93	110.04	98.08	Utilized Flake	2	244	110
245.39	111.84	97.9	Cortical Chert	2	244	110
244.215	111.84	97.8	Utilized Flake	2	244	110
245.46	111.15	97.59	Hammerstone	2	244	110
245.95	110.38	97.56	Uniface	2	244	110
245.64	111.91	97.9	Cortical Chert	3	244	110
244.4	111.61	97.7375		3	244	110
245.8	111.42	97.6	Unifacial Tool	3	244	110
245.68	111.71	97.875	Cortical Chert	4	244	110
245.24	110.83	97.57	Biface	4	244	110
245.5	111.68	97.88	Cortical Chert	5	244	110
245.19	110.49	97.57		5	244	110
245.51	111.62	97.87	Cortical Chert	6	244	110
245.92	111.48	97.91	Cortical Chert	7	244	110
245.75	111.16	97.93	Cortical Chert	8	244	110

Table A15–20 A continued

1998 N	E	Depth	Type	Art #	Unit N	Unit E
245.65	110.91	97.915	Cortical Chert	9	244	110
244.96	110.68	97.91	Cortical Chert	10	244	110
245.32	110.61	97.93	Cortical Chert	11	244	110
245.38	110.58	97.89	Cortical Chert	12	244	110
244.76	110.55	97.93	Cortical Chert	13	244	110
245.85	110.43	97.92	Cortical Chert	14	244	110
245.27	110.46	97.92	Cortical Chert	15	244	110
245.16	110.41	97.91	Cortical Chert	16	244	110
245.51	110.44	97.9	Cortical Chert	17	244	110
245.29	110.22	97.89	Cortical Chert	18	244	110
245.83	110.22	97.88	Cortical Chert	19	244	110
245.83	110.12	97.91	Cortical Chert	20	244	110
245.78	110.01	97.88	Cortical Chert	21	244	110
245.02	110.46	97.905	Cortical Chert	22	244	110
245.25	112	97.58	Large Core	1	244	112
244.6	125.14	98.22	Uniface	1	244	112
245.06	124.11	98.26	Mala Preform	2	244	112
244.43	125.11	98.18		3	244	112
244.82	124.26	98.12	Mala Preform	4	244	112
245.77	125.62	98.14	Mala Preform	5	244	112
244.35	125.17	98.14	Core Fragment	6	244	112
244.9	118.89	98.16		1	244	118
246	118	97.655	Scraper	1	244	118
244.66	118.88	98.16		2	244	118
244.9	118.14	98.16		3	244	118
244.8	118.6	98.16		4	244	118
245.01	118.67	98.145		5	244	118
244.88	118.49	98.14		6	244	118
245.63	119.495	96.5475	Concentration	244	118	
245.03	119.04	97.73			244	118
		97.85	Axe		244	118
246	118	97.92	Biface Tip		244	118
245.65	119.82	97.94	Biface Preform		244	118
245.78	118.44	97.98	Large Flake		244	118
244	119.2	97.97	Ta Chert		244	118
244.26	118.72	97.95	Rock		244	118
245.18	118.7	97.96	Cortex		244	118
245	118.9	97.96	Biface Preform		244	118
244	118.9	98.02	Flake		244	118
244	118.95	97.46	Refuge Pot S		244	118
245.65	118.97	97.46	Biface Preform		244	118
244.65	118.7	97.45	Biface Preform		244	118
244.41	118.04	97.86	Stone		244	118
246	119.32	98.24		7	244	118

Table A15–20 A continued

1998 N	E	Depth	Type	Art #	Unit N	Unit E
244.86	119.6	98.13			244	118
245.3	118.3	98.1			244	118
244.3	119.5	98.1			244	118
245.3	119.31	98.08			244	118
244.34	119.58	98.045	Ceramic Sherd		244	118
244	119.14	98.02	TA Sherd		244	118
244.33	119.06	97.99	Cortical Chert	244	118	244.33
244.1	119.19	98.01	Large Flake		244	118
245.3	119.4	97.99	Rock		244	118
245.1	119.4	97.99	Rock		244	118
244	119.5	98	Core		244	118
245	118	97.99	Biface Tip		244	118
244.84	119.42	98.01	Flake		244	118
244.9	118.6	97.95	Core		244	118

Table A15-20 B
Mapped Artifacts from 1999 Excavations at the Topper Site (38AL23).

1999 N	E	Depth	Type	Art#	North	East
208.96	130.88	97.79	Retouched Flake	1	208	130
208.73	130.42	97.72	Not Specified	19	208	130
208.79	130.68	97.707	Not Specified	20	208	130
208.54	130.74	97.81	Not Specified	1	208	130
209	130.79	97.76	Not Specified	3	208	130
209.05	130.81	97.75	Not Specified	5	208	130
208.8	130.9	97.76	Not Specified	8	208	130
208.42	130.92	97.71	Not Specified	4	208	130
208.57	130.92	97.76	Not Specified	12	208	130
209.35	130.95	97.78	Not Specified	6	208	130
209.97	130.97	97.75	Not Specified	18	208	130
208.92	130.98	97.76	Not Specified	10	208	130
209.36	130.98	97.77	Not Specified	9	208	130
208.44	131	97.77	Not Specified	14	208	130
208.31	131.04	97.76	Not Specified	13	208	130
209.48	131.04	97.79	Not Specified	7	208	130
208.59	131.11	97.82	Not Specified	2	208	130
208.9	131.2	97.77	Not Specified	11	208	130
208.69	131.56	97.77	Not Specified	15	208	130
209.85	131.62	97.74	Not Specified	17	208	130
209.86	131.67	97.76	Not Specified	16	208	130
208.04	131.87	97.686	Not Specified	1	208	130
208.23	131.9	97.672	Not Specified	2	208	130
209.46	132.54	96.652	Biface	1	208	132
209.4	132.36	96.665	Clay Pocket	7	208	132
208.87	133.52	97.72	Cluster Of Flakes	7	208	132
209.62	132.26	96.682	Cluster Of Pieces	3	208	132
209.27	132.47	96.717	Cluster Of Pieces	1	208	132
209.15	133	96.707	Cluster Of Pieces	4	208	132
208.91	133.2	96.663	Cluster Of Pieces	2	208	132
208.52	133.44	96.67	Cluster Of Pieces	5	208	132
208.57	132.18	97.68	Core	18	208	132
209.401	132.52	97.69	Core	11	208	132
208.27	133.02	97.7	Core	19	208	132
208.9	133.16	97.73	Core	13	208	132
208.85	132.4	97.7	Core	14	208	132
209.2	133	97.7	Flake	15	208	132
208	133.41	97.707	Flake	20	208	132
209.16	133.6	97.73	Flake	8	208	132
208.58	132.92	97.99	Preform Distal	1	208	132
208.08	132.15	97.74	Scraper	10	208	132
209.18	133.21	97.71	Scraper	17	208	132

Table A15–20 B continued

1999 N	E	Depth	Type	Art#	North	East
208.97	133.36	97.72	Scraper	12	208	132
208.44	133.45	97.78	Scraper	3	208	132
209.13	133.55	97.77	Scraper	2	208	132
209.3	133.72	97.75	Scraper	4	208	132
208.15	133.92	97.74	Scraper	16	208	132
208.69	133.64	97.8	Utilized Flake	1	208	132
208.78	133.9	97.73	Utilized Flake	6	208	132
209.61	133.94	97.73	Utilized Flake	9	208	132
209.96	133.91	97.73	Utilized Scraper	5	208	132
209.5	132.13	96.623	Not Specified	8	208	132
208.78	132.2	96.128	Not Specified	5	208	132
208.56	132.28	96.442	Not Specified	1	208	132
208.54	132.37	95.726	Not Specified	2	208	132
209.62	132.43	96.654	Not Specified	1	208	132
208.51	132.59	95.96	Not Specified	2	208	132
209.49	132.62	95.951	Not Specified	1	208	132
209.5	132.68	96.107	Not Specified	8	208	132
209.47	132.76	95.948	Not Specified	3	208	132
210	132.76	95.905	Not Specified	8	208	132
209.86	132.9	95.917	Not Specified	7	208	132
208.35	133.16	96.634	Not Specified	6	208	132
209.58	133.27	96.58	Not Specified	9	208	132
208.43	133.28	96.168	Not Specified	2	208	132
209.8	133.28	96.31	Not Specified	2	208	132
209.34	133.3	96.088	Not Specified	4	208	132
209	133.38	96.148	Not Specified	4	208	132
209.7	133.55	96.128	Not Specified	7	208	132
209.95	133.55	96.09	Not Specified	1	208	132
209.45	133.65	95.98	Not Specified	4	208	132
209.48	133.65	95.885	Not Specified	1	208	132
209.97	133.65	95.94	Not Specified	6	208	132
209.73	133.66	96.094	Not Specified	2	208	132
208.5	133.7	96.14	Not Specified	3	208	132
208.82	133.72	97.706	Not Specified	1	208	132
209.17	133.72	95.935	Not Specified	5	208	132
209.78	133.73	96.085	Not Specified	3	208	132
209.83	133.8	96.138	Not Specified	6	208	132
208.5	133.81	96.382	Not Specified	1	208	132
209.96	133.92	95.997	Not Specified	6	208	132
209.65	133.95	96.194	Not Specified	1	208	132
209.97	133.97	96.007	Not Specified	5	208	132
209.95	134	96.101	Not Specified	9	208	132
208.87	135.34	97.84	Biface Core	1	208	134
208.65	135.65	96.995	Blade Medial	1	208	134

Table A15–20 B continued

1999 N	E	Depth	Type	Art#	North	East
209.33	135.34	96.46	Flake	2	208	134
208.83	135.46	96.34	Flake	1	208	134
209.85	136	96.268	Flake	1	208	134
208.55	135.1	96.085	Flake	1	208	134
209.15	134.36	97.8	Macroblade	2	208	134
208.66	134.13	97.89	Mala Point	1	208	134
209.71	134.13	97.73	Not Specified	9	208	134
209.65	134.2	97.77	Not Specified	2	208	134
208.12	134.25	97.75	Not Specified	7	208	134
208.88	134.26	97.72	Not Specified	8	208	134
208.8	134.7	97.75	Not Specified	1	208	134
209.81	134.9	97.76	Not Specified	3	208	134
209.6	134.96	96.305	Not Specified	1	208	134
209.09	134.98		Not Specified	3	208	134
208.68	135	96.207	Not Specified	2	208	134
208.68	135	96.207	Not Specified	2	208	134
208.95	135.14	97.75	Not Specified	6	208	134
209.85	135.16	97.77	Not Specified	4	208	134
209.9	135.17	97.74	Not Specified	5	208	134
209.18	136	96.2	Not Specified	1	208	134
208.61	136.35	97.69	Biface Blade	5	208	136
208.14	137.31	97.69	Biface Flake	8	208	136
208.15	136.5	97.67	Core	6	208	136
208.1	137.23	97.68	Core	7	208	136
208.44	136.5	97.661	Flake	1	208	136
209.12	136.12	97.7	Rhyolite	4	208	136
208.4	137.45	97.73	Side Scraper	2	208	136
208.85	137.65	97.72	Side Scraper	3	208	136
209.58	137.69	97.68	Unifacial Scraper	9	208	136
208.35	136.15	97.76	Utilized Flake	1	208	136
209.02	139.35	96.111	Not Specified	1	208	138
210.13	133.8	97.7	Broken Biface	2	210	132
210.06	133.9	97.79	End Scraper	1	210	132
210.35	132.36	97.145	Microblade	1	210	132
211.3	132.7	97.081	Microblade	1	210	132
210.58	132.28	96.912	Not Specified	1	210	132
211.88	132.33	96.631	Not Specified	1	210	132
210.62	132.57	96.91	Not Specified	2	210	132
210.07	134.28	97.64	Blade	1	210	134
210.3	134.42	97.653	Blade	2	210	134
211.78	135.79	97.361	Blade		210	134
210.95	135.92	97.619	Blade	3	210	134
210.51	135.74	96.73	Flake	1	210	134
210.67	134.14	96.654	Thinning Flake	1	210	134

Table A15–20 B continued

1999 N	E	Depth	Type	Art#	North	East
210.94	134.4	97.91	Not Specified	3	210	134
210.02	134.42	97.79	Not Specified	1	210	134
211.08	134.48	97.76	Not Specified	4	210	134
210.74	134.75	97.76	Not Specified	2	210	134
210.57	137.48	97.7	Blade	7	210	136
211.27	137.64	97.76	Blade	1	210	136
211.9	136.32	97.79	Broken Biface	4	210	136
210.85	136.38	97.79	Broken Biface	3	210	136
210.02	136.58	97.75	Retouched Flake	6	210	136
210.77	136.25	97.73	Side Scraper	8	210	136
210.95	137.02	97.75	Taylor Preform	2	210	136
211.64	136.18	97.71	Uniface	9	210	136
211.7	136	97.81	Utilized Blade	1	210	136
211.86	136.44	97.78	Utilized Flake	5	210	136
211.83	130.007	97.84	Not Specified	2	210	136
211.44	131.475	97.89	Not Specified	1	210	136
211.18	131.61	97.84	Not Specified	4	210	136
211.5	132	97.87	Not Specified	7	210	136
211.26	136.015	97.85	Not Specified	3	210	136
211.96	136.2	97.86	Not Specified	5	210	136
211.4	136.63	97.81	Not Specified	8	210	136
211.6	138	97.86	Not Specified	6	210	136
213.55	132.6	97.96	Blade	1	212	132
212.56	132.4	97.81	Scraper	1	212	132
212.1	133.17	97.81	Scraper	2	212	132
213.59	134.36	97.97	Large Core	2	212	134
213.32	135.1	97.89	Preform Distal	3	212	134
214	134.75	60cmbs	Not Specified	1	212	134
214	137.43	97.86	Large Core	1	212	136
243.61	131.68	97.41	Blade	2	242	130
242.94	130.85	97.677	Blade Core	1	242	130
211.4	136.63	97.81	Not Specified	8	210	136
242.94	130.85	97.677	Blade Core	1	242	130
242.31	130.76	97.51	Blade	1	242	130
243.88	130.865	96.9	Broken Quartz	31	242	130
243.88	130.865	96.9	Broken Quartz	31	242	130
243.62	130.915	96.9	Broken Quartz		242	130
243.85	130.95	96.9	Broken Quartz		242	130
243.85	131.155	96.9	Broken Quartz	39	242	130
243.88	131.285	96.91	Broken Quartz	30	242	130
243.84	131.49	96.95	Chert Cobble		242	130
243.54	131.23	96.86	Chert Flake	40	242	130
242.89	131.545	97.08	Chert Nodule	1	242	130
243.61	130.485	96.845	Chert Pebble	6	242	130

Table A15–20 B continued

1999 N	E	Depth	Type	Art#	North	East
243.885	130.49	96.885	Chert Pebble	19	242	130
243.88	130.52	96.955	Chert Pebble		242	130
243.83	130.69	96.89	Chert Pebble	25	242	130
243.86	130.72	96.89	Chert Pebble		242	130
243.725	130.86	96.9	Chert Pebble	1	242	130
243.86	131.275	96.92	Chert Pebble	26	242	130
243.76	131.8	96.91	Chert Pebble	41	242	130
243.22	131.27	96.952	Chert Rock	1	242	130
243.75	131.93	97.407	Core	1	242	130
243.745	130.29	96.86	Cortical Chert Cobble		242	130
243.85	131.11	96.9	Cortical Chert Cobble		242	130
243.695	130.275	96.895	Cortical Chert Pebble		242	130
243.67	130.34	96.875	Cortical Chert Pebble		242	130
243.7	130.385	96.88	Cortical Chert Pebble		242	130
243.74	130.47	96.86	Cortical Chert Pebble		242	130
243.84	130.47	96.89	Cortical Chert Pebble		242	130
243.655	130.485	96.86	Cortical Chert Pebble		242	130
243.88	130.52	96.905	Cortical Chert Pebble		242	130
243.925	130.63	96.9	Cortical Chert Pebble		242	130
243.95	130.68	96.925	Cortical Chert Pebble		242	130
243.625	130.685	96.865	Cortical Chert Pebble		242	130
243.715	130.745	96.87	Cortical Chert Pebble		242	130
243.9	130.765	96.86	Cortical Chert Pebble		242	130
243.86	130.96	96.895	Cortical Chert Pebble		242	130
243.92	130.97	96.88	Cortical Chert Pebble		242	130
243.825	131.02	96.9	Cortical Chert Pebble		242	130
243.8	131.05	96.9	Cortical Chert Pebble		242	130
243.84	131.065	96.9	Cortical Chert Pebble		242	130
243.78	131.56	97.41	Flake	3	242	130
243.65	130.03	96.87	Quartz Pebble		242	130
243.775	130.695	96.87	Quartz Pebble	24	242	130
243.755	130.745	96.865	Quartz Pebble		242	130
243.89	130.82	96.875	Quartz Pebble	30	242	130
243.85	130.89	96.9	Quartz Pebble		242	130
243.88	130.99	96.9	Quartz Pebble		242	130
243.86	131.035	96.9	Quartz Pebble	36	242	130
243.81	131.045	96.9	Quartz Pebble	35	242	130
242.8	131.46	96.95	Quartz Pebble		242	130
242.52	130.97		Rhyolite	1	242	130
242.52	130.47	97.58	Rhyolite Scraper	1	242	130
243.4	131.2	97.187	Sandstone Cobble	1	242	130
243.01	130.95	97.63	Spokeshave	2	242	130
243.72	130.51	96.89	Weathered Chert		242	130
243.565	130.535	96.89	Weathered Chert	18	242	130

Table A15–20 B continued

1999 N	E	Depth	Type	Art#	North	East
243.3	132.15	97.115	Broken Quartz	3	242	132
243.21	132.23	97.12	Broken Quartz	8	242	132
243.68	133.85	98.32	Chert Biface	4	242	132
243.72	133.89	98.32	Chert Biface	3	242	132
243.78	133.93	98.315	Chert Biface	7	242	132
243.69	133.95	98.32	Chert Biface	5	242	132
243.78	133.97	98.32	Chert Biface	1	242	132
243.8	133.91	98.31	Chert Bifacial Scraper	11	242	132
243	133.66	97.04	Chert Cobble	12	242	132
243.2	132.15	97.11	Chert Pebble	6	242	132
243.23	132.24	97.12	Chert Pebble	7	242	132
243.2	132.19	97.12	Chert Flake	5	242	132
243.72	133.84	98.315	Cortical Chert Pebble	8	242	132
243.4	132.6	97.57	Cortical Cherts	1	242	132
242.3	133.25	97.58	Cortical Cherts	2	242	132
242.27	132.26	97.835	Denticulate	1	242	132
242.25	132.45	97.23	Quartz Cobble	1	242	132
243.21	132.29	97.12	Quartz Cobble	1	242	132
243.27	132.3	97.12	Quartz Cobble	2	242	132
243.145	132.375	97.12	Quartz Cobble	1	242	132
242.25	132.45	97.23	Quartz Cobble	1	242	132
243.09	132.2	97.12	Quartz Cobble	4	242	132
242.56	132.42	97.105	Quartz Cobble	4	242	132
242.87	133.77	97.065	Quartz Cobble	5	242	132
242.33	132.73	98.135	Uniface	1	242	132
243.69	132.82	97.115	Utilized Flake	3	242	132
243.43	132.08	97.03	Not Specified	3	242	132
243.29	132.13	97.01	Not Specified	2	242	132
243.44	132.28	97	Not Specified	4	242	132
243.49	132.35	97.04	Not Specified	1	242	132
243.73	132.73	97.07	Not Specified	9	242	132
243.25	132.75	97.91	Not Specified	4	242	132
243.25	132.75	97.91	Not Specified	5	242	132
243.26	132.8	97.91	Not Specified	3	242	132
242.45	133.08	97.92	Not Specified	1	242	132
243.78	133.13	97.94	Not Specified	2	242	132
243.71	133.15	97.15	Not Specified	8	242	132
243.75	133.15	97.065	Not Specified	10	242	132
243.33	133.18	97.09	Not Specified	7	242	132
243.87	133.18	97.05	Not Specified	7	242	132
243.9	133.27	97.02	Not Specified	8	242	132
242.43	133.32	96.93	Not Specified	1	242	132
243.58	133.35	97	Not Specified	6	242	132
242.075	133.43	98.255	Not Specified	2	242	132

Table A15–20 B continued

1999 N	E	Depth	Type	Art#	North	East
242.88	133.45	96.96	Not Specified	9	242	132
243.57	133.47	97.005	Not Specified	5	242	132
243.588	133.52	98.29	Not Specified	1	242	132
243.06	133.6	97.08	Not Specified	6	242	132
242.98	133.67	96.95	Not Specified	14	242	132
243.07	133.7	97.05	Not Specified	11	242	132
243.18	133.71	97.05	Not Specified	10	242	132
243.7	133.83	98.315	Not Specified	10	242	132
243.4	133.87	98.04	Not Specified	1	242	132
242.86	133.88	96.98	Not Specified	13	242	132
243.72	133.89	98.32	Not Specified	3	242	132
243.76	133.89	98.32	Not Specified	6	242	132
243.64	133.9	98.32	Not Specified	9	242	132
243.8	133.91	98.31	Not Specified	11	242	132
243.76	133.93	98.32	Not Specified	2	242	132
243.78	133.93	98.315	Not Specified	7	242	132
243.69	133.95	98.32	Not Specified	5	242	132
243.78	133.97	98.32	Not Specified	1	242	132
242.58	134	98.01	Not Specified	2	242	132
243.62	134	98.22	Not Specified	12	242	132
268.71	132.18	97.6	Biface	2	268	132
269.3	132.35	97.715	Biface	2	268	132
269.1	133.15	97.735	Biface	3	268	132
268.52	133.45	97.71	Biface	4	268	132
269.83	133.6	98.03	Biface	1	268	132
268.84	133.85	97.755	Biface	1	268	132
269.92	133.92	96.895	Biface	2	268	132
269.41	132	97.085	Blade	1	268	132
268.08	132.15	97.705	Blade	5	268	132
268.65	132.46	97.65	Blade Core	1	268	132
268.98	133.81	96.87	Blade Core	1	268	132
268.5	133.51	97.355	Chert	1	268	132
269.64	132.31	97.19	F36	3	268	132
269.57	132.35	97.19	F36	4	268	132
269.71	132.365	97.19	F36	2	268	132
269.505	132.395	97.19	F36	5	268	132
269.72	132.48	97.19	F36	8	268	132
269.51	132.535	97.19	F36	6	268	132
269.63	132.55	97.19	F36	7	268	132
269.45	133.11	97.24	F36	1	268	132
269.68	133.55	97.035	F37	1	268	132
269.46	133.57	97.035	F37	3	268	132
269.4	133.67	97.035	F37	5	268	132
269.4	133.81	97.035	F37	2	268	132

Table A15–20 B continued

1999 N	E	Depth	Type	Art#	North	East
269.61	134.01	97.035	F37	4	268	132
268.25	133.1	97.695	Point Base	7	268	132
269.62	133.855	98.705	Point Tip	6	268	132
269.74	133.2	97.775	Not Specified	2	268	132
269.48	133.67	97.785	Not Specified	1	268	132
283.95	133.42	97.79	Biface	2	282	132
283.75	133.85	97.7	Blade	4	282	132
283.66	133.81	96.47	Burin Spall	1	282	132
282.95	133.87	97.69	Chert	5	282	132
282.2	132.23	97.76	Large Core	1	282	132
283.54	132.89	97.69	Sandstone	2	282	132
283.35	133.1	97.72	Scraper	1	282	132
283.62	133.5	97.67	Stone	3	282	132

Table A15-20 C
Mapped Artifacts from 2000 Excavations at the Topper Site (38AL23).

2000 N	E	Depth	Type	Art#	North	East
242.02	129.59	96.74	F65	6	242	128
242.02	129.78	96.75	F65	26	242	128
242.02	134.12	96.9	Rock	7	242	134
242.08	128.77	97.825			242	128
242.09	128.15	96.71		3	242	128
242.09	129.59	96.74	F65	7	242	128
242.09	129.67	96.74	F65	24	242	128
242.09	135.88	97.03	F59 Sm. Flake	6	242	134
242.1	128.64	97.82			242	128
242.1	135.75	97.06	F59	8	242	134
242.11	129.82	96.77	F65	15	242	128
242.11	134.33	96.99	Ut Flake	1	242	134
242.12	129.83	96.74	F65	27	242	128
242.13	129.68	96.76	F65	14	242	128
242.14	128.94	97.805			242	128
242.15	131.03	96.71		5	242	130
242.15	135.83	97.16	F59 Large Flake	5	242	134
242.16	128.73	96.76		2	242	128
242.16	129	96.85	Burin Spall	1	242	128
242.17	128.9	97.81			242	128
242.17	128.9	97.81			242	128
242.17	135.56	98.37	Ut Flake	2	242	134
242.18	128.78	97.83			242	128
242.18	135.89	97.03	F59	9	242	134
242.2	134.73	96.94	Chert Core	2	242	134
242.2	134.8	97.15	Rock	2	242	134
242.2	135.76	97.02	F59	7	242	134
242.21	129.63	96.74	F65	21	242	128
242.22	129.76	96.75	F65	28	242	128
242.22	129.84	96.76	F65	16	242	128
242.22	135.88	98.06	Blade Core	1	242	134
242.23	129.57	96.73	F65	23	242	128
242.23	129.69	96.78		1	242	128
242.24	128.41	97.82	Biface	6	242	128
242.24	129.65	96.73	F65	18	242	128
242.24	129.86	96.73	F65	30	242	128
242.24	135.85	97.02	F59 Chert Cobble	2	242	134
242.25	135.63	97.08	F59	12	242	134
242.25	135.98	97.08	F59	4	242	134
242.26	129.5	96.72	F65	1	242	128
242.27	129.45	96.72	F65	5	242	128

Table A15-20 C continued

2000 N	E	Depth	Type	Art#	North	East
242.27	130.7	96.71		4	242	130
242.28	129.56	96.75	F65	8	242	
242.28	129.84	96.74	F65	29	242	
242.29	129.44	96.76	F65	20	242	
242.3	129.25	97.83	Blade	8	242	
242.3	129.57	96.72	F65	10	242	
242.31	135.68	97.06	F59	11	242	
242.32	129.55	96.72	F65	2	242	
242.32	135.52	97.03	F59	14	242	
242.33	135.78	97.1	F59	10	242	
242.36	129.55	96.75	F65	9	242	
242.36	129.63	96.75	F65	11	242	
242.36	129.71	96.76	F65	12	242	
242.36	129.8	96.74	F65	17	242	
242.37	128.69	97.785	Blade	12	242	
242.39	128.23	97.77	Blade	13	242	
242.39	129.99	96.75	F65	22	242	
242.41	129.25	96.72	F65	13	242	
242.42	129.47	96.71	F65	3	242	
242.42	135.46	97.03	F59	15	242	
242.43	130.01	96.75	F65	25	242	
242.44	132.27	96.79		2	242	
242.45	130.73	96.67		3	242	
242.47	129.86	96.72	F65	19	242	
242.48	129.49	96.74	F65	4	242	
242.52	134.51	97.1	Rock	5	242	
242.54	136.04	97.09	F59 Core	1	242	
242.6	132.06	96.88		1	242	
242.6	135.73	96.95	Rock	1	242	
242.61	128.58	97.9	Ut Flake	5	242	
242.61	128.71	97.84		5	242	
242.64	135.34	96.98	F66	3	242	
242.7	133.85	96.96	Rock	6	242	
242.7	135.22	96.99	F66	8	242	
242.72	135.48	96.98	F66	1	242	
242.73	129.34	97.845	Blade	7	242	
242.74	128.13	97.82	Denticulate	11	242	
242.75	132.89	96.8		3	242	
242.75	134.93	98.56	F51	15	242	
242.76	128.38	98.08	Chert Scraper	3	242	
242.76	134.33	97.135	Rock	1	242	
242.8	135.196	96.93	Rock	5	242	
242.82	128.36	96.9	Rock	1	242	
242.84	134.7	98.55	F51	7	242	

Table A15-20 C continued

2000 N	E	Depth	Type	Art#	North	East
242.84	135.41	96.96	F66	5	242	
242.85	135.66	96.93	Rock	2	242	
242.86	131.9	96.83	Retouched Flake	1	242	
242.87	128.635	98.085	Preform	1	242	
242.87	135.18	97	F66	11	242	
242.87	135.52	96.98	F66	9	242	
242.88	135.24	96.99	F66	10	242	
242.88	135.48	97	F66	4	242	
242.89	129.17	97.92	Biface	3	242	
242.89	135.5	97.01	F66	1	242	
242.9	132.4	96.82		6	242	
242.9	134.8	98.56	F51	2	242	
242.9	135.44	97.01	F66	4	242	
242.9	135.88	96.94	Rock	5	242	
242.91	135.1	98.58	F51	1	242	
242.92	135.44	97.02	F66	7	242	
242.93	135.34	97.01	F66	2	242	
242.94	128.82	96.9	Rock	3	242	
242.94	136.02	97.05	F59	2	242	
242.945	128.91	98.11	Hammerstone	3	242	
242.95	135.76	96.99	Rock	2	242	
242.96	135.5	96.98	F66	2	242	
242.97	129.15	97.835	Side Scraper	3	242	
243.02	129.06	97.85	Blade	6	242	
243.02	135.38	96.96	F66	10	242	
243.03	129.08	97.807	Blade Section	9	242	
243.05	134.8	98.58	F51	13	242	
243.06	134.75	98.55	F51	8	242	
243.06	134.89	98.56	F51	2	242	
243.15	135.08	98.6	F51	10	242	
243.16	134.4	98.5	F51	12	242	
243.17	134.87	98.57	F51	3	242	
243.18	134.88	98.58	F51	1	242	
243.19	134.96	98.36	Metate	14	242	
243.2	134.8	98.56	F51	11	242	
243.22	134.9	98.6	F51	1	242	
243.23	131.85	96.75		1	242	
243.24	136.42	98.5	Point Base	3	242	
243.26	135.74	96.97	Blade	4	242	
243.27	129.28	97.83	End Scraper	1	242	
243.28	134.9	98.61	F51	2	242	
243.33	131.63	96.71		2	242	
243.37	129.22	96.7		1	242	
243.39	135.09	97.965	Side Scraper	1	242	

Table A15-20 C continued

2000 N	E	Depth	Type	Art#	North	East
243.39	135.51	97.1		2	242	
243.4	135.95	97.51		1	242	
243.42	135.08	98.52	F51	4	242	
243.42	135.35	97.423	Possible Ut Flake	1	242	
243.42	135.77	97.09	F60	3	242	
243.44	128.41	97.89	Biface	1	242	
243.45	128.58	97.875	Biface	7	242	
243.51	134.5	96.965	Blade Core	1	242	
243.51	135.46	97.07	F59	18	242	
243.53	135.86	97.11	F60	7	242	
243.54	135.81	97.11	F60	5	242	
243.55	134.86	98.35	Mala Preform	1	242	
243.56	131.01	96.67		2	242	
243.57	129.67	96.71		1	242	
243.58	135.94	97.12	F60	8	242	
243.59	136	97.1	F60	9	242	
243.63	135.83	97.11	F60 Core	6	242	
243.64	135.8	97.08	F60	4	242	
243.68	134.14	97.08	F59	16	242	
243.69	134.08	97.07	F59	17	242	
243.81	129.38	97.85	Blade	1	242	
243.82	130.53	96.665		1	242	
243.84	128.84	97.88		3	242	
243.85	129.14	97.85	Core	2	242	
243.9	135.7	97.11	F59 Flake	19	242	
243.99	128.85	97.82	Blade	9	242	
244	146.74	97.81		11	244	
244.01	134.6	97.15	Blade Core	1	244	
244.04	134.16	97.145	Uniface Scraper	1	244	
244.05	133.46	97.09		2	244	
244.05	134.69	97.12	Feature 61	5	244	
244.05	148.95	98.14		39	244	
244.06	134.58	97.12	Feature 61	3	244	
244.06	134.64	97.12	Feature 61	6	244	
244.06	148.92	98.2		8	244	
244.06	149.854		Rock		244	
244.07	129.2	97.75	Blade	1	244	
244.08	134.73	97.13	Feature 61	4	244	
244.08	134.76	97.13	Feature 61	16	244	
244.08	135.72	98.26	Feature 52	11	244	
244.08	148.63	98.13		40	244	
244.08	148.81	98.12		37	244	
244.08	149.9	99.1		35	244	
244.1	135.25	97.07		1	244	

Table A15-20 C continued

2000 N	E	Depth	Type	Art#	North	East
244.1	148.81	98.12		36	244	
244.11	134.6	97.12	Feature 61	7	244	
244.12	134.8	97.11	Feature 61	15	244	
244.12	148.51	98.18		32	244	
244.13	148.67	98.23		12	244	
244.13	148.67	98.1		41	244	
244.13	148.7	98.11		33	244	
244.14	135.36	97.07	Feature 61	2	244	
244.14	148.73	98.16		21	244	
244.15	149.58	97.34		1	244	
244.16	148.55	98.14		35	244	
244.17	147.55	97.86	Scraper	1	244	
244.18	134.62	97.12	Feature 61	8	244	
244.18	134.68	97.12	Feature 61	9	244	
244.18	146.22	98	Hammerstone	2	244	
244.19	135.83	98.16		1	244	
244.19	148.76	98.18		14	244	
244.2	135.4	97.03	Ut Flake	1	244	
244.2	148.44	98.2		1	244	
244.2	148.74	98.1		34	244	
244.21	135.22	97.28	Quartz Cobble		244	
244.21	148.86	98.1		38	244	
244.21	149.82	97.5		4	244	
244.21	149.97	97.29		29	244	
244.22	134.69	97.12	Feature 61	12	244	
244.22	146.57	97.65		5	244	
244.22	148.67	98.18		13	244	
244.23	134.63	97.12	Feature 61	10	244	
244.23	148.79	97.3		23	244	
244.23	149.1	98.1		42	244	
244.24	134.6	97.11	Feature 61	11	244	
244.25	134.68	97.12	Feature 61	13	244	
244.25	148.63		Rock		244	
244.26	134.71	97.12	Feature 61	14	244	
244.26	148.64	97.59		3	244	
244.27	149.81	98.3	Chert	5	244	
244.27	149.9	99.01		40	244	
244.28	148.47	98.12		16	244	
244.29	148.42	98	Rock		244	
244.29	148.82	98.11		31	244	
244.29	149.46	97.36		12	244	
244.3	148.73	98.15		18	244	
244.3	148.83	98.11		23	244	
244.3	149.36	97.31		22	244	

Table A15-20 C continued

2000 N	E	Depth	Type	Art#	North	East
244.3	149.71	97.84		6	244	
244.31	148.5	98.19		2	244	
244.31	148.5	98.19		28	244	
244.31	148.57	98.12		15	244	
244.32	148.66	98.15		27	244	
244.32	148.74	98.11		45	244	
244.32	148.99	98.07		1	244	
244.33	148.03	97.93	Burin Spall	19	244	
244.33	148.75	98.15		22	244	
244.33	148.95	98.13		17	244	
244.34	148.67	98.17		30	244	
244.34	148.9	98.11		1	244	
244.35	128.43	96.74		4	244	
244.35	148.635	97.7		8	244	
244.35	148.65	97.41		25	244	
244.35	148.77	98.11		29	244	
244.36	148.69	98.11			244	
244.365	148.38		Rock	24	244	
244.37	144.89	98.13		43	244	
244.37	148.8	98.1		26	244	
244.37	148.81	98.1		44	244	
244.37	149.68	99.02		2	244	
244.38	133.49	97.11		37	244	
244.39	149.91	99.07		10	244	
244.4	148.51	98.18		20	244	
244.4	148.81	98.14		44	244	
244.4	148.9	98.09		41	244	
244.4	149.9	99.01		9	244	
244.404	149.1	98.2		5	244	
244.41	148.93	98.2		1	244	
244.44	148.83	98.13		7	244	
244.45	133.48	97.12		1	244	
244.45	147.44	97.5	Rock		244	
244.45	147.58	97.38			244	
244.45	148.58	98.14		11	244	
244.46	148.86	97.32		2	244	
244.46	148.88	98.15		6	244	
244.47	132.84	97.2	Blade	1	244	
244.47	149.71	97.43		13	244	
244.49	149.17	98.3	Chert	4	244	
244.5	133	97.11	Feature 61	1	244	
244.5	133.3	97.02	F63/64		244	
244.5	133.7	96.96	F63/64		244	
244.5	149.7	99.07		39	244	

Table A15-20 C continued

2000 N	E	Depth	Type	Art#	North	East
244.51	149.07	98.33	Biface	2	244	
244.52	133.5	97.02	F63/64		244	
244.53	133.05	97.15	Flake	1	244	
244.53	149.89	99.1		36	244	
244.53	149.9	99.06		38	244	
244.55	147.36	97.4			244	
244.56	149.71	97.57		1	244	
244.59	148.05	98.93		15	244	
244.6	129.26	96.87	Chert Cobble	1	244	
244.6	148.9	97.24		27	244	
244.6	149.51	97.26		25	244	
244.6	149.67	97.42		11	244	
244.6	149.8	99.09		34	244	
244.61	149.81	97.83		2	244	
244.63	146.56	98.355			244	
244.63	146.875	97.5	Rock		244	
244.64	148.24	98.24		3	244	
244.65	148.99	97.38		3	244	
244.65	149.25	97.2		30	244	
244.66	147.455	97.525		10	244	
244.67	129.76	97.165	Chert	1	244	
244.67	149.87	99.1		42	244	
244.69	149.6	97.88		1	244	
244.7	148.83	98.64	Biface	1	244	
244.71	148.33	97.3		4	244	
244.72	146.7	97.67		2	244	
244.73	148.73	98.88	Mala Preform	16	244	
244.74	134.75	97.19	Ut Flake	1	244	
244.74	148.61	97.39		7	244	
244.76	149.48	97.24		26	244	
244.77	146.44	97.76		5	244	
244.77	147.09	97.57		7	244	
244.78	148.34	98.15		4	244	
244.78	149.59	97.3		28	244	
244.8	147.71	97.68		18	244	
244.8	147.71	97.61		20	244	
244.8	149.04	98.92		1	244	
244.84	148.69	97.51		2	244	
244.84	148.83	97.74	Item	1	244	
244.86	148.19	97.34		3	244	
244.86	149.76	97.67		2	244	
244.87	148.16	97.35			244	
244.87	149.73	97.3		21	244	
244.87	149.82	97.36		20	244	

Table A15-20 C continued

2000 N	E	Depth	Type	Art#	North	East
244.87	149.9	97.37		24	244	
244.88	135.73	98.24	Feature 52	12	244	
244.88	149.93	97.41		23	244	
244.885	146.775	97.5	Rock		244	
244.89	135.73	98.22	Feature 52	17	244	
244.9	146.44	98.15			244	
244.9	149.91	99.1		43	244	
244.92	135.71	98.27	Feature 52	15	244	
244.92	146.16	97.39			244	
244.92	146.7	98	Core	3	244	
244.93	146.55	97.57		4	244	
244.93	148.94	97.34		12	244	
244.93	149.65	98.94		13	244	
244.935	149.5	97.81		1	244	
244.94	135.72	98.23	Feature 52	16	244	
244.94	146.54	97.56		5	244	
244.95	133.1	97.04	F63/64		244	
244.95	135.75	98.24	Feature 52	14	244	
244.95	146.2	97.7		12	244	
244.95	149.8	97.33		19	244	
244.97	135.69	98.25	Feature 52	30	244	
244.97	135.7	98.26	Feature 52	31	244	
244.97	135.77	98.21	Feature 52	29	244	
244.97	149.86	98.93		14	244	
244.98	146.24	97.67		13	244	
244.98	148.51	97.53		1	244	
244.99	135.56	98.22	Feature 52	18	244	
244.99	135.62	98.26	Feature 52	6	244	
244.99	135.67	98.25	Feature 52	13	244	
244.99	135.76	98.24	Feature 52	23	244	
245	133.2	96.57	Cobble	1	244	
245	135.65	98.24	Feature 52	5	244	
245	146.44	97.62		16	244	
245	148.59	97.39		6	244	
245	148.95	97.37		9	244	
245.01	146.99	98.1			244	
245.01	148.6	97.825		5	244	
245.01	148.81	97.76	Item	2	244	
245.02	149.02	97.35		8	244	
245.03	135.6	98.27	Feature 52	3	244	
245.05	147.65	97.79	Chert Rock	3	244	
245.06	133.11	97.02	F63/64		244	
245.06	135.68	98.26	Feature 52	28	244	
245.06	146.94	97.58		3	244	

Table A15-20 C continued

2000 N	E	Depth	Type	Art#	North	East
245.07	108.4	29cmbs		1	244	
245.07	135.47	98.24	Feature 52	1	244	
245.07	149.505	97.76		2	244	
245.08	135.66		Feature 52	27	244	
245.09	148.89	97.71	Item	3	244	
245.09	149.43	97.5		3	244	
245.1	133.45	96.95	F63/64		244	
245.1	135.72	98.26	Feature 52	19	244	
245.1	135.78	98.23	Feature 52	21	244	
245.1	149.84	97.73		11	244	
245.11	135.41	98.25	Feature 52	2	244	
245.11	135.63	98.28	Feature 52	25	244	
245.11	135.65	98.28	Feature 52	7	244	
245.11	135.74	98.23	Feature 52	22	244	
245.11	146.75	97.68		14	244	
245.11	149.01	97.33		15	244	
245.12	135.69	98.22	Feature 52	26	244	
245.13	135.72	98.27	Feature 52	20	244	
245.13	146.93	97.5			244	
245.14	135.56		Feature 52	24	244	
245.14	135.72	98.26	Feature 52	10	244	
245.15	149.03	97.63	Item	4	244	
245.16	135.68	98.26	Feature 52	8	244	
245.16	148.52	97.33		14	244	
245.16	149.24	97.36		16	244	
245.16	199.16	97.34		10	244	
245.17	135.7	98.26	Feature 52	9	244	
245.17	148.75	97.33		11	244	
245.17	149.15	97.34		10	244	
245.175	146.62	97.76		6	244	
245.18	147.2	97.795		1	244	
245.18	148.95	97.44		1	244	
245.195	146.325	97.665		3	244	
245.2	147.16	97.8		2	244	
245.21	146.5	97.72		4	244	
245.21	148.91	97.7	Item	5	244	
245.22	148.45	98.97		4	244	
245.22	148.64	97.33		13	244	
245.22	148.82	97.35		18	244	
245.23	135.79		Blade	2	244	
245.23	147.83	97.6		19	244	
245.25	135.99	98.535	Pont Base	1	244	
245.25	145.71	97.38		17	244	
245.25	147.01	97.87	Flake	2	244	

Table A15-20 C continued

2000 N	E	Depth	Type	Art#	North	East
245.26	146.99	97.8		3	244	
245.265	146.75	97.725		9	244	
245.28	146.6	97.7		12	244	
245.29	146.11	97.61		11	244	
245.31	146.8	97.765		4	244	
245.33	129.1	97.85		3	244	
245.33	146.7	97.73		8	244	
245.33	147.63	97.6		9	244	
245.34	146.62	97.758		7	244	
245.35	133.43	96.95	Rock	4	244	
245.35	133.43	96.95	Broken Flake	4	244	
245.35	147.68	97.59		1	244	
245.36	133.4	96.96	Rock	1	244	
245.36	148.22	97.45		4	244	
245.38	146.68	98.32			244	
245.38	149.68	97.46		2	244	
245.39	128.59	97.91	Biface	6	244	
245.4	133.3	96.96	Rock	2	244	
245.4	147	98.02		4	244	
245.41	147.71	97.52		9	244	
245.42	133.4	96.96	Rock	3	244	
245.42	135.4	96.96		3	244	
245.43	132.79	98.28	Mala Point	1	244	
245.43	146.78	97.97	Hammerstone		244	
245.43	149.64	97.36		15	244	
245.45	129.44	97.95	Blade Core	1	244	
245.45	148.27	97.7	Worked Chert	6	244	
245.455	148.55	97.825	Worked Chert	5	244	
245.455	149.51		Rock		244	
245.46	134.55	97.025		2	244	
245.46	146.51	97.56		6	244	
245.47	133.42	96.96		1	244	
245.47	133.42	96.96		1	244	
245.47	134.4	97.03		1	244	
245.48	146.45	97.41			244	
245.48	146.81	98.035	Core	1	244	
245.48	149.75	98.44		1	244	
245.485	149.15		Rock		244	
245.5	134.27	97.99		1	244	
245.52	148.12	98.94		11	244	
245.525	146.12	97.77		10	244	
245.54	135.1	98.16		2	244	
245.54	148.48	98.97		5	244	
245.55	128.95	98.19	Point Base	1	244	

Table A15-20 C continued

2000 N	E	Depth	Type	Art#	North	East
245.55	146.9	98.354			244	
245.56	147.1	97.55		8	244	
245.57	134.49	97.1	End Scraper	1	244	
245.58	148.01	97.34		7	244	
245.6	148.11	98.97		10	244	
245.6	148.13		Rock		244	
245.6	148.15	97.46		5	244	
245.6	148.28	98.97		6	244	
245.6	148.29	99		7	244	
245.61	149.25	97.31		5	244	
245.62	147.62	97.616		6	244	
245.64	148.63	97.36		19	244	
245.64	149.06	97.36		21	244	
245.65	149.84	97.76		10	244	
245.65	149.84	97.36		9	244	
245.66	148.37	97.26		24	244	
245.67	148.08	98.93		12	244	
245.68	146.77	97.39			244	
245.68	147.51	97.6		2	244	
245.68	149.64	97.87		4	244	
245.685	148.055	97.725		8	244	
245.69	149	98.9		2	244	
245.7	146.24	97.6		15	244	
245.7	147.76	97.5			244	
245.7	149.93	97.42		14	244	
245.71	149.29	97.38		22	244	
245.72	129.62	97.21	Utilized Flake	2	244	
245.72	148.52		Rock		244	
245.73	146.16	97.66		17	244	
245.73	148.43	97.4		20	244	
245.74	148.08	98.3	Chert	3	244	
245.75	146.62	98.32			244	
245.76	133.7	96.97	Rock		244	
245.77	147.73	97.5			244	
245.78	135.68	98.26	Mala Preform	1	244	
245.8	133.85	96.96	Rock		244	
245.8	146.5	97.6		7	244	
245.81	149.18	97.36		17	244	
245.82	133.82	96.95	Rock		244	
245.82	133.89	98.45	Yadkin Point	1	244	
245.83	133.76	96.95	Rock		244	
245.83	148.045	97.78		9	244	
245.84	147.22	97.6		8	244	
245.84	147.74	97.5			244	

Table A15-20 C continued

2000 N	E	Depth	Type	Art#	North	East
245.84	148.025		Rock		244	
245.86	149.35	97.37		18	244	
245.87	148.3	97.73		7	244	
245.89	128.51	97.92	Utilized Flake	2	244	
245.89	147.45	97.67		1	244	
245.9	148.37	98.85		8	244	
245.9	149.22	97.4		6	244	
245.9	149.81	97.88		3	244	
245.91	148.84	98.92		3	244	
245.915	149.315	97.72		3	244	
245.92	148.54	98.89		9	244	
245.925	147.78	97.5			244	
245.93	148.99		Rock		244	
245.95	135.59	98.27	Feature 52	4	244	
245.96	147.17	97.63		10	244	
245.98	129.49	97.2	Utilized Flake	1	244	
245.98	148.82	98.6	Utilized Flake	2	244	
245.98	149.36	97.41		16	244	
246.13	148.5	98.3			246	
246.14	148.55	98.31			246	
246.22	148.69	98.3			246	
246.26	135.58	97.04	F59	13	246	
246.34	148.45	98.26			246	

Table A15-20 D

Mapped Artifacts from 2001 Excavations at the Topper Site (38AL23).

2001 N	E	Depth	Type	Art#	North	East
237.82	128.7	97.9	Denticulate	1	236	128
237.22	128.81	97.91	Biface Preform	2	236	128
237.15	128.65	97.93	Ut Flake	3	236	128
237.22	130.08	97.795	Unifacial Scraper	1	236	130
237.63	129.67	97.87	Scraper	5	236	130
237.74	129.67	97.9	Scraper	4	236	130
237.4	136.28	97.93	End Scraper	5	236	130
237.43	136.72	97.935	Anvil	4	236	130
237.5	136.23	97.95	Ut Flake	2	236	130
237.715	136.61	97.95	End Scraper	3	236	136
237.63	136.04	97.97	Cortex	1	236	136
237.77	136.78	98.26	Preform Tip	1	236	136
237.93	136.25	98.38	Point Base	1	236	136
238.955	128.21	96.96	Chert Flake	1	238	128
238.12	129.83	97.01	Large Chert Cortex	2	238	128
238.13	128.354	97.1	Chert Cortex	14	238	128
238.04	128.566	97.108	Chert	11	238	128
238.042	128.49	97.117	Chert Flake	15	238	128
238.187	128.455	97.12	Chert	10	238	128
238.125	128.51	97.13	Large Chert Cobble	7	238	128
238.14	128.535	97.14	Quartz Flake	8	238	128
238.095	128.416	97.14	Chert Cortex	9	238	128
238.1	128.42	97.14	Chert	12	238	128
238.085	128.366	97.204	Quartz	13	238	128
238.25	128.435	97.215	Chert Flake	3	238	128
238.225	128.425	97.215	Quartz Pebble	4	238	128
238.2	128.51	97.23	Chert Pebble	1	238	128
238.23	128.42	97.23	Quartz Pebble	2	238	128
238.1	128.413	97.232	Chert Flake	6	238	128
238.09	128.42	97.25	Chert Flake	5	238	128
239.56	131.71	97.77	Unifacial Scraper	1	238	130
239.51	131.62	97.875	B. Face Base	1	238	130
239.67	131.21	97.88	Bolo Stone	1	238	130
240.44	135.96	96.95	Not Specified	1	238	134
238.98	135.81	96.98	Not Specified	1	238	134
239.91	134.84	96.98	Not Specified	1	238	134
238.54	135.6	97.02	Not Specified	2	238	134
238.06	135.12	97.05	Not Specified	2	238	134
238.53	135.2	97.06	Not Specified	1	238	134
238.57	134.94	97.1	Not Specified	1	238	134
238.2	134.57	97.11	Not Specified	3	238	134

Table A15-20 D continued

2001 N	E	Depth	Type	Art#	North	East
238.25	134.38	97.115	Not Specified	2	238	134
239.93	135.69	97.915	Uniface	4	238	134
238.62	135.555	97.968	End Scraper	3	238	134
239.06	134	97.975	Biface Preform	2	238	134
238.145	134.305	97.985	Preform	1	238	134
239.59	134.87	98	Utilized Blade	6	238	134
238.11	135.96	98.02	Preform	5	238	134
238.05	135.27	98.05	Blade	2	238	134
238.32	135.17	98.07	Biface Tip (Refitted)	3	238	134
238.33	134.755	98.075	Blade Core	1	238	134
239.245	135.06	98.08	Hafted Scraper	4	238	134
239.44	136.05	98.27	Preform Tip	2	238	136
241.51	127.2	97.83	Unifacial Scraper	1	240	126
240	127.77	97.9	Scraper	1	240	126
241.58	129.31	96.68	Not Specified	4	240	128
241.5	129.315	96.705	Not Specified	2	240	128
241.245	129.53	96.76	Not Specified	1	240	128
240.01	129.485	96.965	Chert Flake	1	240	128
240.55	129.9	97.73	Blade	1	240	128
240.47	129.85	97.76	Blade Core	3	240	128
240.35	129.92	97.78	Biface Denticulate	2	240	128
240.55	129.38	97.8	End Scraper	1	240	128
240.115	129.04	97.86	Core Fragment	1	240	128
240.23	129.12	97.86	Core Fragment	3	240	128
240.5	129.11	97.86	Core Fragment	5	240	128
240.445	128.7	97.86	Hammerstone	7	240	128
240	129.235	97.87	Core Fragment	2	240	128
240.36	129.05	97.87	Core Fragment	4	240	128
241.755	129.005	97.87	Taylor Preform	4	240	128
240.435	128.665	97.87	Core Fragment	6	240	128
241.105	128.64	97.88	Uniface	3	240	128
241.18	129.51	97.89	Taylor Point	1	240	128
241.355	129.56	97.89	Mala Preform	2	240	128
240.86	130.9	96.68	Not Specified	3	240	130
241.2	131.6	96.68	Core	4	240	130
241.485	130.05	96.7	Not Specified	1	240	130
241.06	130.63	96.72	Chert	2	240	130
241.24	130.35	96.74	Chert	1	240	130
241.36	131.46	96.79	Spokeshave	1	240	130
241.36	131.42	96.79	Utilized Flake		240	130
241.05	131.8	96.84	Large Flake	1	240	130
241.31	131.9	96.89	Spoke	1	240	130
241.31	131.9	96.89	Spoke	1	240	130

Table A15-20 D continued

2001 N	E	Depth	Type	Art#	North	East
240.74	131.92	96.9	Lg Flake	2	240	130
240.84	131.54	96.91	Lg Flake	1	240	130
240.76	130.03	97.67	Lg Bf Core	1	240	130
240.47	131.41	97.67	Pottery	2	240	130
240.47	131.41	97.67	Pottery	2	240	130
240.51	131.44	97.67	Lg Bf Fragment	3	240	130
240.36	131.59	97.75	Mala Preform Base	1	240	130
240.36	131.59	97.75	Mala Preform Base	1	240	130
240.56	131.32	97.86	Biface Core	2	240	130
240.57	130.19	97.89	Side Scraper	1	240	130
241.49	131.695	97.94	Side Scraper	1	240	130
241.75	130.87	98	Deer Bone	2	240	130
240.45	130.56	98.34	Mala Point	18	240	130
240	130		Not Specified	1	240	130
240.8	133.01	96.91	Chert	1	240	132
240.8	133.01	96.91	Chert	1	240	132
240.22	132.84	96.92	Chert	2	240	132
240.7	132.19	96.98	Not Specified	1	240	132
240.7	132.19	96.98	Not Specified	1	240	132
240.66	132.32	97	Not Specified	2	240	132
240.73	132.57	97.09	Big Fractured Rock	1	240	132
241.3	132.54	97.12	Core	5	240	132
241.20	132.56	97.14	Core	7	240	132
240.67	132.43	97.15	Not Specified	2	240	132
240.67	132.43	97.15	Not Specified	2	240	132
241.2	132.53	97.15	Core	3	240	132
240.85	132.6	97.15	Not Specified	4	240	132
240.85	132.6	97.15	Not Specified	4	240	132
241.27	132.62	97.15	Not Specified	8	240	132
241.17	132.47	97.16	Not Specified	2	240	132
241.29	132.47	97.16	Core	4	240	132
241.3	132.6	97.17	Chert Cobble	1	240	132
240.87	132.45	97.17	Not Specified	3	240	132
241.13	132.60	97.17	Not Specified	6	240	132
240.44	132.82	97.2	Not Specified	37	240	132
240.89	132.86	97.21	Not Specified	50	240	132
241.12	132.58	97.22	Not Specified	1	240	132
240.43	132.91	97.22	Not Specified	7	240	132
240.47	132.88	97.22	Not Specified	21	240	132
240.7	132.87	97.225	Not Specified	1	240	132
240.4	132.8	97.23	Not Specified	38	240	132

Table A15-20 D continued

2002 N	E	Depth	Type	Art#	North	East
240.4	132.73	97.23	Not Specified	39	240	132
240.91	132.91	97.23	Not Specified	49	240	132
241.03	132.93	97.23	Not Specified	51	240	132
240.89	132.97	97.23	Not Specified	56	240	132
240.52	132.87	97.235	Not Specified	44	240	132
240.47	132.59	97.24	Chert Core	10	240	132
240.47	132.59	97.24	Not Specified	10	240	132
240.53	132.74	97.24	Not Specified	13	240	132
240.46	132.82	97.24	Not Specified	41	240	132
240.45	132.68	97.24	Not Specified	42	240	132
240.52	132.9	97.24	Not Specified	45	240	132
240.54	132.8	97.24	Not Specified	46	240	132
240.83	132.98	97.24	Not Specified	47	240	132
240.88	132.14	97.24	Not Specified	48	240	132
240.87	133.01	97.24	Not Specified	52	240	132
240.85	132.95	97.24	Not Specified	55	240	132
240.625	132.78	97.25	Not Specified	29	240	132
240.44	132.79	97.25	Not Specified	40	240	132
240.785	133.1	97.25	Not Specified	53	240	132
240.97	133.08	97.25	Not Specified	57	240	132
240.935	132.98	97.25	Not Specified	58	240	132
241	132.97	97.25	Not Specified	60	240	132
240.51	132.96	97.26	Not Specified	5	240	132
240.51	132.935	97.26	Not Specified	20	240	132
240.96	132.99	97.26	Not Specified	59	240	132
240.5	132.83	97.265	Not Specified	43	240	132
240.6	132.89	97.27	Not Specified	27	240	132
240.46	132.74	97.27	Not Specified	36	240	132
240.895	133.06	97.27	Not Specified	54	240	132
240.58	132.91	97.28	Not Specified	4	240	132
240.49	132.91	97.28	Not Specified	6	240	132
240.45	132.9	97.28	Not Specified	22	240	132
240.635	132.84	97.28	Not Specified	30	240	132
240.46	132.81	97.28	Not Specified	33	240	132
240.55	132.89	97.28	Not Specified	35	240	132
240.65	132.87	97.285	Not Specified	2	240	132
240.505	132.875	97.29	Not Specified	23	240	132
240.515	132.87	97.29	Not Specified	24	240	132
240.535	132.82	97.29	Not Specified	25	240	132
240.48	132.8	97.29	Not Specified	26	240	132
240.47	132.84	97.29	Not Specified	31	240	132
240.46	132.835	97.29	Not Specified	32	240	132
240.56	132.87	97.29	Not Specified	34	240	132

Table A15-20 D continued

2002 N	E	Depth	Type	Art#	North	East
240.6	132.87	97.3	Not Specified	3	240	132
240.435	132.84	97.3	Not Specified	8	240	132
240.46	132.69	97.3	Not Specified	15	240	132
240.605	132.8	97.3	Not Specified	18	240	132
240.55	132.82	97.3	Not Specified	19	240	132
240.475	132.72	97.31	Not Specified	11	240	132
240.48	132.715	97.31	Not Specified	12	240	132
240.49	132.71	97.31	Not Specified	14	240	132
240.575	132.83	97.31	Not Specified	28	240	132
240.58	132.795	97.315	Not Specified	17	240	132
240.51	132.78	97.32	Not Specified	16	240	132
240.46	132.805	97.65	Not Specified	9	240	132
240.51	132.015	97.75	Mala Point	1	240	132
240.51	132.015	97.75	Mala Point	1	240	132
241.405	132.15	97.88	Denticulate	1	240	132
240.24	132.88	97.98	Side Scraper	2	240	132
241.35	132.28	97.99	Mala Preform	1	240	132
241.35	132.28	97.99	Mala Preform	1	240	132
240.3	132.76	98.25	Mala Preform	19	240	132
241.82	135.6	96.82	Not Specified	1	240	134
241.02	135.7	96.82	Not Specified	2	240	134
240.34	134.7	96.86	Not Specified	3	240	134
240.25	135.65	96.86	Not Specified	5	240	134
240.17	134.69	96.87	Not Specified	2	240	134
240.8	135.76	96.89	Not Specified	4	240	134
240.12	134.6	96.9	Not Specified	1	240	134
240.18	135.87	96.9	Not Specified	4	240	134
241.11	134.17	96.91	Not Specified	5	240	134
240.38	134.81	96.96	Not Specified	1	240	134
240.62	134.38	96.965	Not Specified	3	240	134
240.38	134.3	96.97	Not Specified	2	240	134
240.37	134.6	96.98	Not Specified	6	240	134
240.69	135.94	96.99	Not Specified	5	240	134
240.2	135.95	97	Not Specified	1	240	134
240.63	135.83	97	Not Specified	2	240	134
240.67	135.88	97	Not Specified	3	240	134
240.62	135.75	97	Not Specified	4	240	134
240.44	136.94	98	Scraper	2	240	136
241.345	136.7	98.05	Notched Point	1	240	136
240.86	136.25	98.4	Mala Point	1	240	136
242	106	97.62	Not Specified	3	242	132
232.5	102.32	97.21	Denticulate	1	230	102
232.83	102.3	97.21	Hammerstone	3	230	102

Table A15-20 D continued

2002 N	E	Depth	Type	Art#	North	East
232.5	103.52	97.23	Hammerstone	F 79	230	102
231.42	106.25	97.43	Uniface	2	230	106
231.02	106.58	97.43	Hammerstone	4	230	106
231	107.15	97.44	Preform	3	230	106
231.1	106.62	97.5	Uniface Scraper	1	230	106
233.09	102.11	97.21	Bipolar Core	2	232	102
233.07	103.92	97.21	Blade Proximal	F 79	232	102
233.25	102.99	97.22	Sidescraper	F 79	232	102
233.25	103.67	97.22	Crested Blade	F 79	232	102
233.61	103.05	97.23	Hammerstone	F 79	232	102
233.74	103.36	97.25	Tertiary Flake	F 79	232	102
233.8	103.17	97.25	Blade Core	F 79	232	102
233.8	103.55	97.25	Scraper	F 79	232	102
233.82	103.95	97.25	Outre Passe	F 79	232	102
233.38	103.6	97.26	Decortication Flake	F 79	232	102
233.76	103.57	97.26	Bipolar Core	F 79	232	102
233.79	103.58	97.26	Denticulate	F 79	232	102
233.34	103.67	97.27	Bend Break	F 79	232	102
233.47	103.54	97.27	Chert	F 79	232	102
233.84	103.56	97.27	Bipolar Core	F 79	232	102
233.89	103.62	97.27	End Scraper Bit	F 79	232	102
233.24	103.25	97.28	Rejuvination Flake	F 79	232	102
233.62	103.43	97.28	Tertiary Flake	F 79	232	102
233.65	103.73	97.28	Tertiary Flake	F 79	232	102
233.09	103.98	97.29	Core	F 79	232	102
233.11	103.71	97.29	Tertiary Flake	F 79	232	102
233.18	103.83	97.29	Not Specified	F 79	232	102
233.18	103.99	97.29	Scraper	F 79	232	102
233.2	103.77	97.29	Turtle Back Scraper	F 79	232	102
233.22	103.55	97.29	Decortication Flake	F 79	232	102
233.22	103.63	97.29	Tertiary Flake	F 79	232	102
233.22	103.73	97.29	Tertiary Flake	F 79	232	102
233.22	103.95	97.29	Decortication Flake	F 79	232	102
233.27	103.64	97.29	Tertiary Flake	F 79	232	102
233.27	103.78	97.29	Tertiary Flake	F 79	232	102
233.28	103.88	97.29	Smashed Core	F 79	232	102
233.29	103.76	97.29	Bend Break	F 79	232	102
233.3	103.91	97.29	Smashed Core	F 79	232	102
233.32	103.85	97.29	Sandstone	F 79	232	102
233.33	103.19	97.29	Blade Distal	F 79	232	102
233.35	103.8	97.29	Bend Break	F 79	232	102
233.47	103.9	97.29	Crested Blade	F 79	232	102
233.53	103.48	97.29	Tertiary Flake	F 79	232	102

Table A15-20 D continued

2002 N	E	Depth	Type	Art#	North	East
233.61	103.87	97.29	Tertiary Flake	F 79	232	102
233.69	103.65	97.29	Decortication Flake	F 79	232	102
233.77	103.88	97.29	Tertiary Flake	F 79	232	102
233.84	103.48	97.29	Decortication Flake	F 79	232	102
233.88	103.88	97.29	Ut Flake	F 79	232	102
233.16	103.42	97.3	Decortication Flake	F 79	232	102
234.56	107.58	97.34	Scraper	1 F73	234	106
235.51	107.36	97.34	Gneiss Abrader	2 F73	234	106
234.67	107.77	97.35	Sidescraper	5 F73	234	106
235.48	107.27	97.36	Taylor Preform Base	3 F73	234	106
235.25	107.36	97.36	Scraper	4 F73	234	106
235.36	106	97.37	Denticulate	7 F73	234	106
235.02	108	97.37	Sidescraper	8 F73	234	106
235.16	106.14	97.39	Denticulate	6 F73	234	106
234.19	106.18	97.4	Denticulate	1	234	106
235.95	106.46	97.61	Mala Preform Base	5	234	106
235.68	106.12	97.63	Mala Preform	3	234	106
235.71	106.92	97.64	Mala Preform	2	234	106
234.79	107.91	97.65	Mala Point	1	234	106
234.02	107.98	97.675	Mala Point	4	234	106
236.44	108.43	97.89	Mala	1	236	108

Table A15-20 D continued

2002 N/E	Art	Type	Level	Depth		Date
238.15	107.55	97.24	Scraper	2	238	106
239.59	107.24	97.26	Quartz Scraper	1	238	106
239.59	107.24	97.26	Quartz Scraper	1	238	106
238.15	107.55	97.29	Scraper	2	238	106
239.1	107.58	97.3	Scraper	1	238	106
239.1	107.58	97.3	Scraper	1	238	106
239.76	107.8	97.3	Scraper	3	238	106
239.76	107.8	97.3	End Scraper	3	238	106
239.29	107.38	97.32	Scraper	2	238	106
239.29	107.38	97.32	Scraper	2	238	106
238.25	106.6	97.4	Not Specified	2	238	106
238.28	106.08	97.47	Not Specified	1	238	106
239.42	107.82	97.5	Not Specified	2	238	106
238.58	107.32	97.5	Not Specified	3	238	106
238.58	107.32	97.5	Biface	3	238	106
238.2	107.36	97.5	Not Specified	4	238	106
238.2	107.36	97.5	Starter Blade	4	238	106
239.89	107.03	97.54	Not Specified	1	238	106
239.89	107.03	97.54	Clovis Preform	1	238	106
239.42	107.82	97.54	Blank Base	2	238	106
239.33	107.33	97.61	Mala Preform	1	238	106
239.3	136.09	98.27	Point Base	2	238	106

Table A15-20 E
Mapped Artifacts from 2002 Excavations at the Topper Site (38AL23).

2002 N/E	Art	Type	Level	Depth		Date
N242 E136	1	Kirk Distal	1	70-80		2002
N242 E136	2	Chert Flake	1	80-90		2002
N242 E136	3	River Cortex				2002
N242 E136	4	Uniface	1	90-100		2002
N242 E136	5	Blade	1	90-100		2002
N242 E136	6	Ta Flake	1	100-105		2002
N242 E136	7	Blade	1	105-110		2002
N242 E136	8	Scraper	1	150-155		2002
N242 E138	1	Blade Core	1	80-90		2002
N242 E138	2	Microblade Core	1	90-100		2002
N242 E138	3	Microblade	1	105-110		2002
N242 E138	4	Flake	1	110-115		2002
N242 E138	5	Bend Break	1	130-135		2002
N242 E140	1	Burned Flakes	1	105-110		2002
N242 E140	2	Crest Blade	1	120-125		2002
N242 E142	1	Biface Flake		110-115		2002
N242 E142	2	Flake	1	115-120		2002
N242 E142	3	Cortical	1	130-135		2002
N242 E142	4	Flake	1	140-145		2002

Table A15-20 E continued

2002 N/E	Art	Type	Level	Depth		Date
N244 E136	1	Blade Proximal	1	90-100		2002
N244 E136	2	Retouched Blade	1	115-120		2002
N244 E136	3	Chert Boulder	1	155-160		2002
N244 E138	1	Utilized Flakes	1	80-90		2002
N244 E138	2	Bone	1	80-90		2002
N244 E138	3	Chert Core	1	90-100		2002
N244 E138	4	Biface Tip	1	90-100		2002
N244 E140	1	Biface Tip	1	20-80		2002
N244 E140	2	Biface Tip	1	80-90		2002
N244 E140	3	Taylor Preform	1	80-90		2002
N244 E140	1	Sidescraper	1	90-100		2002
N244 E140	2	Ta Biface	1	90-100		2002
N244 E140	3	Hammerstone	1	90-100		2002
N244 E140	4	Chert	2	90-100		2002
N244 E140	5	Pottery	3	100-105		2002
N244 E140	6	Hammerstone	1	145-150		2002
N244 E140	7	Core	2	145-150		2002
N244 E142	1	Uniface	1	70-80		2002
N244 E142	2		3	70-80		2002
N244 E142	3		1	140-145		2002
N244 E144	1	Blades	2	100-110		2002
N246 E136	1	Hammerstone	1	80-90		2002
N246 E138	1	Cortical Flake	1	90-100		2002
N246 E140		Chert	1	80-90		2002
N246 E140		Core	1	80-90		2002
N246 E140		Utilized Flakes	1	80-90		2002
N246 E140		Biface Tip	1	90-100		2002
N246 E140		Core	1	90-100		2002
N246 E140		Ta Preform	1	90-100		2002
N246 E140		Pottery	1	90-100		2002
N246 E142		Chert Cobble	1	70-80		2002
N246 E144		Chert	1	100-110		2002
N267 E134	1	Simple Stamped	1	5-15		2002
N267 E134	2		1	15-25		2002
N267 E134	3		1	25-35		2002
N267 E134	4	Mala Point	1	35-45		2002
N267 E134	5	MALA Tip	1	45-55		2002
N267 E134	6		1	45-55		2002
N267 E134	7	Point Tip (EA)		65-75		2002
N267 E136	1	Mala Preform	4	45-50		2002
N267 E136	2	Savanna Point	1	45-50		2002
N267 E136	3	Hammerstone	1	45-50		2002

Table A15-20 E continued

2002 N/E	Art	Type	Level	Depth		Date
N267 E136	4	Adze	1	50-55		2002
N267 E136	5	Preform	5	50-55		2002
N267 E136	6	Rock	1	90-95		2002
N267 E136	7	Mala Flake	1	104		2002
N269 E134	1	Mala Point		0-5		2002
N269 E134	2	S	2			2002
N269 E134	3	Biface Tip	1	5-15		2002
N269 E134	4	MALA Point Tip	1	45-55		2002
N269 E134	5	Eggstone	1	55-65		2002
N269 E134	6	MALA Tip	2			2002
N269 E134	7	Denticulate	1	55-65		2002
N269 E134	8	Biface Blank	1	65-75		2002
N269 E134	9	Point Tip	1	65-76		2002
N284 E134	1	Hammerstone		55-65		2002
N284 E134	2	Core		55-65		2002
N284 E134	3	Core		55-65		2002
N284 E134	4	Scraper		75-85		2002
N284 E134	5	Scraper		85-95		2002
N284 E134	6	Blade		85-95		2002
N284 E134	7	Hammerstone		85-95		2002
N284 E134	1	Taylor Point		95-105		2002
N286 E134	1	Shell	2	0-5		2002
N286 E136	1	Point	1	15-25		2002
N286 E136	2	Triangular Point	1	15-25		2002
N286 E136	3	Cord Marked Sherd	1	45-55		2002
N286 E136	4	Ta Biface	1	55-65		2002
N286 E136	5	Plain Sherd	1	64		2002
N286 E136	6	Mala Point	1	85-95		2002
N286 E136	7	Microblade	1	95-105		2002
N286 E136	8	Utilized Flake	1	95-105		2002
N286 E136	9	Bifacial Chopper	1	105-115		2002
N286 E138	1	Blade	1	90-95		2002
N286 E138	2	Clovis Biface	1	90-95		2002
N286 E138	3	Hammerstone	1	95-105		2002
N286 E138	4	Core	1	95-105		2002
N286 E138	5	Blade	1	95-105		2002
N286 E138	6	Blade Fragment	1	105-110		2002
N286 E138	7	Flake	1	105-110		2002
N286 E138	8	Blade Core	1	105-110		2002
N286 E138	9	Flake	1	105-110		2002
N286 E138	10	Core	1	105-110		2002
N286 E138	11	Core	1	105-110		2002
N286 E138	12	Flake	1	105-110		2002

Table A15-20 E continued

2002 N/E	Art	Type	Level	Depth		Date
N286 E138	13	Flake	1	110-115		2002
N286 E138	14	Flake	1	110-115		2002
N286 E138	15	Core	1	110-115		2002
N286 E138	16	Core	1	110-115		2002
N286 E138	17	Flake	1	110-115		2002
N286 E138	18	Denticulate	1	110-115		2002
N286 E138	19	Starter Blade	1	110-115		2002
N286 E138	20	Blade	1	110-115		2002
N286 E138	21	Blade	1	110-115		2002

Table A15-20 E continued

2002 N/E	Art	Type	Level	Depth		Date
Trench A	1	Blade	1	98.40		2002
Trench A	2	Mala	1	99.55		2002
Trench A	3	Mala	1	98.57		2002
Trench A	4	Blade	1	98.40		2002
Trench A	5	Scraper	1	98.40		2002
Trench B	1	Yadkin	1	98.73		2002
Trench B	2	Scraper	1	98.73		2002
Trench B	3	Mala Base	1	98.30		2002
Trench B	4	Mala Base	1	98.30		2002
Trench B	5	Paleo Base	1	98.70		2002
Trench B	6	Taylor Base	1	98.42		2002
Trench B	7	Taylor Preform	1	98.37		2002
Trench B	8	Scraper	1	98.42		2002
Trench B	9	Core	1	98.315		2002
Trench C	1	Mala Point	1	98.25		2002
Trench C	2	Biface Tip	1	98.25		2002
Trench C	3	Mala Tip	1	98.25		2002
Trench C	4	Mala Tip	1	98.55		2002
Trench C	5	Mala Base	1	98.52		2002
Trench C	6	Mala Point	1	98.465		2002
Trench C	7	Mala Base	1	98.42		2002
Trench C	8	Scraper	1	98.36		2002
Trench C	9	Yadkin	1	98.25		2002
Trench C	10	Mala Point	1	98.365		2002
Trench C	11	Mala Base	1	98.25		2002
Trench D	1	Woodland	1	98.20		2002
Trench D	2	Scraper	1	98.54		2002
Trench D	3	Blade Core	1	98.45		2002
Trench D	4	Mala Tip	1	98.47		2002
Trench D	5	Mala Tip	1	98.20		2002
Trench D	6	Mala Preform	1	98.39		2002
Trench D	7	Mala Preform	1	98.35		2002
Trench D	8	Mala Preform	1	98.38		2002
Trench D	9	Mala Point	1	98.33		2002
Trench D	10	Mala Tip	1	98.215		2002
Trench D	11	Bifacial Tool	1	98.20		2002
Trench D	12	Mala Tip	1	98.265		2002
Trench D	13	Steatite	1	98.32		2002
Trench D	14	Biface Scraper	1	98.205		2002
Trench D	15	Mala Preform	1	98.245		2002
Trench D	16	Mala Preform	1	98.20		2002
Trench D	17	Mala Preform	1	98.20		2002

Table A15-20 E continued

2002 N/E	Art	Type	Level	Depth		Date
Trench E	1	Mala Base	1	98.625		2002
Trench E	2	Mala Tip	1	98.415		2002
Trench E	3	Yadkin	1	98.10		2002
Trench E	4	Mala Point	1	98.10		2002
Trench E	5	Mala Preform	1	98.10		2002
Trench E	6	Mala	1	98.10		2002
Trench E	7	Mala Point	1	98.25		2002
Trench E	8	Mala Tip	1	98.23		2002
Trench E	9	Mala Preform	1	98.20		2002
Trench E	10	Mala Base	1	98.20		2002
Trench E	11	Mala Base	1	98.35		2002
Trench E	12	Mala Tip	1	98.295		2002
Trench E	13	Mala Base	1	98.27		2002
Trench E	14	Mala Point	1	98.37		2002
Trench E	15	Mala Base	1	98.36		2002
Trench E	16	Mala Blade	1	98.415		2002
Trench E	17	Mala Base	1	98.27		2002
Trench E	18	Mala Base	1	98.37		2002
Trench E	19	Mala Base	1	98.195		2002
Trench E	20	Hammerstone	1	98.10		2002
Trench E	21	Mala Pick	1	98.10		2002
Trench E	22	Scraper	1	98.10		2002
Trench E	23	Point Base	1	98.10		2002

Table A15-20 F
Mapped Artifacts from 2003 Excavations at the Topper Site (38AL23).

2003 N	E	Depth	Type	Art#	North	East
243.08	141.59	97.345	End Scraper	1	242	140
242.6	140.13	97.295	Pebble	1	242	140
242.95	140.93	97.345	Hammerstone	1	242	140
243.63	141.84	97.4	Bend Break	1	242	140
243.9	141.79	97.345	Bend Break	2	242	140
242.58	140.22	97.29	Cortical	2	242	140
243.35	141.21	97.285	Core Tool	2	242	140
243.25	141.29	97.36	Blade	2	242	140
242.63	140.29	97.34	Bend Break	3	242	140
242.65	140.35	97.23	Cortical	3	242	140
243.23	140.9	97.32	Chert Cobble	3	242	140
243.79	140.2	97.395	Flake	3	242	140
243.82	141.38	97.325	Chert Cobble	4	242	140
242.3	140.67	97.255	Cortical	4	242	140
243.19	141	97.36	Cortical	4	242	140
243.38	140.59	97.4	Utilized Flake	4	242	140
243.42	141.32	97.315	Cortical	5	242	140
242.8	140.07	97.29	Chert	5	242	140
242.98	141.01	97.36	Cortical	5	242	140
242.97	141.97	97.36	Core	5	242	140
243.76	141.95	97.3	Rock	6	242	140
243.65	140.79	97.215	Cortical	6	242	140
243.04	141.06	97.355	Cortical	6	242	140
243.27	140.43	97.305	Side Scraper	7	242	140
242.07	140.6	97.235	Large Core	7	242	140
243.06	140.97	97.365	Cortical	7	242	140
243.37	140.44	97.32	Hammerstone	8	242	140
242.84	140.3	97.28	Core Fragment	8	242	140
242.97	141.12	97.32	Core	8	242	140
243.49	140.8	97.32	Chert	9	242	140
242.88	140.38	97.26	Cortical	9	242	140
243.12	141.15	97.315	Cortical	9	242	140
243.3	140.73	97.3	Cortical	10	242	140
242.86	140.18	97.275	Cortical	10	242	140
243.1	141.03	97.355	Cortical	10	242	140
242.49	140.12	97.32	Blade	11	242	140
243	140.23	97.23	Large Core	11	242	140
243.28	141.03	97.335	Cortical	11	242	140
242.6	141.73	97.325	Cortical	12	242	140
242.98	141.05	97.35	Flake	12	242	140
242.3	141.16	97.3	Cortical	13	242	140
243.13	141.03	97.32	Cortical	13	242	140

Table A15-20 F continued

2003 N	E	Depth	Type	Art#	North	East
242.85	142.53	97.38	Utilized Flake	1	242	142
242.73	143.03	97.325	Bend Break	1	242	142
243.9	142.64	97.42	Hammerstone	1	242	142
242.8	142.72	97.365	Hammerstone	2	242	142
242.4	143.57	97.3	Core	2	242	142
242.56	142.1	97.4	Core	2	242	142
243	143.25	97.37	Quartz	3	242	142
242.6	143.35	97.295	Cortical	3	242	142
242.71	142.03	97.41	Flake	3	242	142
243.17	143.98	97.37	Quartz	4	242	142
242.42	143.29	97.305	Cortical	4	242	142
243.09	142.4	97.445	Bend Break	4	242	142
242.9	143	97.4	Cortical	5	242	142
243.48	143.89	97.315	Hammerstone	5	242	142
242.75	143.66	97.44	Flake	5	242	142
243.79	143.84	97.355	Possible Core	6	242	142
243.2	143.08	97.42	Hammerstone	6	242	142
243.54	143.89	97.34	Cortical	7	242	142
243.6	143.86	97.34	Cortical	8	242	142
243.67	143.79	97.36	Cortical	9	242	142
242.54	143.9	97.355	Cortical	10	242	142
242.6	143.78	97.33	Core	11	242	142
242.89	143.57	97.335	Uniface	12	242	142
242.9	143.07	97.335	Core Tool	13	242	142
243.07	143.04	97.26	Cortical	14	242	142
243.28	143.51	97.255	Cortical	15	242	142
243.64	143.07	97.33	Cortical	16	242	142
243.25	143.6	97.195	Core	17	242	142
243.66	143.99	97.27	Uniface	18	242	142
242.6	143.96	97.275	Cortical	19	242	142
243.54	143.26	97.21		20	242	142
243.16	143.45	97.2	Cortical	21	242	142
243.2	143.92	97.22	Cortical	22	242	142
243.65	143.85	97.22	Cortical	23	242	142
243.74	143	97.335	Cortical	24	242	142
242.47	142.82	97.28	Core	25	242	142
242.3	142.27	97.155	Cortical	26	242	142
242.46	142.25	97.1	Cortical	27	242	142
243.25	142.91	97.22	Cortical	28	242	142
245.23	141.46	97.32	Bend Break	1	244	140
245.8	140.44	97.27	Cortical	1	244	140
245.84	140.24	97.24	Cortical	1	244	140
245.43	140.43	97.36	Tested Core	1	244	140

Table A15-20 F continued

2003 N	E	Depth	Type	Art#	North	East
244.94	141.02	97.315	Flake	2	244	140
244.13	140.1	97.3	Bend Break	2	244	140
245.58	140.17	97.14	Chert	2	244	140
245.76	140.65	97.37	Cortical	2	244	140
244.63	140.34	97.28	Bend Break	3	244	140
244.13	141.3	97.27	Chert	3	244	140
245.75	142.7	97.395	Cortical	1	244	142
245.03	143.14	97.3	Unifacial Tool	1	244	142
245.08	142.84	97.43	Bend Break	1	244	142
245.62	142.78	97.395	Cortical	2	244	142
245.13	143.14	97.295	Utilized Flake	2	244	142
244.87	142.73	97.43	Scraper	2	244	142
245.18	142.83	97.37	Bend Break	3	244	142
245.07	143.73	97.315	Chert Cobble	3	244	142
244.17	142.53	97.41	Utilized Flake	3	244	142
273.80	153.92	99.05	Allendale Preform	2	270	152
270.96	152.95	98.925	Core	1	270	152
270.30	152.88	98.665	Flake	1	270	152
270.25	152.90	98.68	Flake	2	270	152
271.25	152.85	98.56	Core	3	270	152
271	155.49	99.31	Blade	1	270	154
270.06	154.85	99.265	Flake	2	270	154
270.66	154.55	99.055		3	270	154
270.90	155.70	99.285	Blade	4	270	154
270.10	154.80	99.235	Flake	5	270	154
270.46	155.18	99.32	Uniface	6	270	154
270.30	155.36	99.195	Flake	7	270	154
270.61	155.51	99.28		8	270	154
270.24	155.59	99.195		9	270	154
270.10	155.71	99.275	Flake	10	270	154
270.33	155.78	99.305		11	270	154
270.54	155.74	99.305	Flake	12	270	154
270.54	155.48	99.175	Flake	13	270	154
270.02	155.76	99.275		14	270	154
271.14	154.22	99.26	Flake	15	270	154
271.15	154.17	99.26	Flake	16	270	154
271.25	154.13	99.26	Flake	17	270	154
271.32	154.14	99.255	Flake	18	270	154
271.31	154.20	99.265	Flake	19	270	154
271.30	154.26	99.265	Flake	20	270	154
271.28	154.29	99.225	Flake	21	270	154
271.04	155.30	99.115	Blade	1	270	154
271.51	155.85	99.085	Core	2	270	154

Table A15-20 F continued

2003 N	E	Depth	Type	Art#	North	East
271.83	154.98	99.00	Core	3	270	154
271.43	154.95	99.045	Core	4	270	154
271.83	154.94	99.02	Denticulate	5	270	154
271.49	154.70	99.04	Hammerstone	6	270	154
270.28	155.14	98.955	Preform	7	270	154
	156.28	99.58	Biface Preform	1	270	156
275.50	156.20	99.225	Blade	2	270	156
	156.21	99.88	Sherd	3	270	156
	157.10	99.875	Sherd	4	270	156
	156.42	99.78	Sherd	5	270	156
270.07	157.54	99.44	Core	1	270	156
270.03	157.14	99.275	Core	2	270	156
270.09	157.83	99.35	Hammerstone	3	270	156
270.42	157.62	99.30	Core	4	270	156
270.5	157.98	99.285	Flake	5	270	156
270.68	157.75	99.325	Flake	6	270	156
270.70	157.88	99.385	Flake	7	270	156
270.85	157.90	99.385	Flake	8	270	156
270.95	157.68	99.345	Biface	9	270	156
270.96	157.73	99.345	Flake	10	270	156
271.30	158	99.365	Core	11	270	156
271.30	158	99.365	Blade	12	270	156
271.37	157.24	99.225	Spall	13	270	156
271.80	157.28	99.25	Hammerstone	14	270	156
271.51	157.85	99.33	Blade	15	270	156
271.67	57.80	99.335	Blade	16	270	156
271.50	157.55	99.275	Uniface	17	270	156
271.68	157.46	99.295	Core	18	270	156
271.68	157.34	99.27	Core	19	270	156
271.52	157.40	99.28	Core	20	270	156
271.52	157.60	99.26	Core	21	270	156
271.77	157.16	99.29	Flake	22	270	156
272	`57.53	99.225	Biface	23	270	156
270.51	156.16	99.135	Chopper	24	270	156
271.22	156.22	99.105	Blade Core	25	270	156
271.73	156.75	99.18	Blade	26	270	156
271.88	156.28	99.245	Blade	27	270	156
271.95	156.20	99.16	Flake	28	270	156
272.19	153.96	99.03	Denticulate	1	272	152
272.18	154.20	99.205	Biface	1	272	154
272.54	154.20	99.205	Biface	2	272	154
272.16	154.87	99.23	Biface	3	272	154
273.47	155.92	99.145	Biface	4	272	154

Table A15-20 F continued

2003 N	E	Depth	Type	Art#	North	East
272.78	155.30	99.11	Flake	5	272	154
272.15	155.76	99.14	Core	6	272	154
		99.095	Core Top	1	272	154
272.26	154.15	98.865	Blade	2	272	154
273.28	154.43	98.84	Blade	3	272	154
272.4	157.04	99.215	Flake	1	272	156
272.2	157.07	99.26	Blade	2	272	156
272.28	157.16	99.25	Core	3	272	156
272.05	157.15	99.325	Core	4	272	156
272.04	257.26	99.255	Core	5	272	156
273.25	157.33	99.25	Blade	6	272	156
273.14	157.90	99.285	Flake	7	272	156
273.03	158	99.26	Hammerstone	8	272	156
273.23	157.74	99.26	Flake	9	272	156
273.28	157.68	99.25	Flake	10	272	156
273.35	157.66	99.28	Biface	11	272	156
273.4	157.72	99.285	Flake	12	272	156
273.46	157.53	99.27	Blade	13	272	156
273.36	157.44	99.19	Blade	14	272	156
273.27	157.20	99.18	Core	15	272	156
273.71	157.4	99.29	Hammerstone	16	272	156
273.92	157.65	99.32	Blade	17	272	156
273.82	157.26	99.27	Core	18	272	156
273.76	157.16	99.30	Flake	19	272	156
273.50	157.96	99.51	Blade	20	272	156
273.53	156.96	99.215	Core	21	272	156
273.94	156.5	99.15	Denticulate	22	272	156
273.88	156.44	99.14	Denticulate	23	272	156
273.83	156.30	99.115	Biface	24	272	156
		99.11	Denticulate	25	272	156
273.60	156.43	99.18	Core	26	272	156
273.98	156.08	99.09	Core	27	272	156
273.52	156.02	99.115	Blade	28	272	156
273.15	156.35	99.14	Core Top	29	272	156
272.90	156.73	99.20	Core	30	272	156
274.26	152.92	98.895	Core	1	274	152
275.93	152.87	98.965	Flake	2	274	152
275.28	152.16	98.94	Core	3	274	152
274.08	153.07	98.92	Uid	4	274	152
274.05	153.25	98.94	Cobble	5	274	152
274.09	157.65	99.31	Blade	1	274	156
274.05	157.5	99.33	Blade	2	274	156
274.03	157.4	99.295	Blade	3	274	156

Table A15-20 F continued

2003 N	E	Depth	Type	Art#	North	East
274.3	157.1	99.265	Blade	4	274	156
274.27	157.11	99.26	Blade	5	274	156
274.23	157.59	99.31	Core	6	274	156
274.2	157.96	99.335	Core	7	274	156
274.08	158.06	99.445	Blade	8	274	156
274.66	158	99.32	Outrepasse	9	274	156
274.7	157.84	99.295	Core	10	274	156
274.54	157.54	99.285	Core	11	274	156
274.60	157.63	99.3	Biface	12	274	156
274.7	157.37	99.27	Hammerstone	13	274	156
274.77	157.14	99.295	Blade	14	274	156
274.99	157.23	99.31	Blade	15	274	156
274.96	157.22	99.265	Scraper	16	274	156
274.64	157	99.215	Core	17	274	156
274.75	157.63	99,255	Core	18	274	156
274.56	157.96	99.235	Blade	19	274	156
274.29	156.13	99.11	Core	20	274	156
274.61	156.22	99.055	Flake	21	274	156
274.35	156.47	99.145	Biface	22	274	156
274.27	156.82	99.2	Denticulate	23	274	156
274.15	156.32	99.115	Core	24	274	156
274.37	156.80	99.185	Blade	25	274	156
274.45	156.68	99.185	Core	26	274	156
274.52	156.72	99.165	Core	27	274	156
274.93	156.83	99.185	Uniface	27.2	274	156
275.16	157.49	99.305	Biface	28	274	156
275.21	157.62	99.295	Biface	29	274	156
275.37	157.32	99.25	Uniface	30	274	156
276.8	154.42	99.17	Flake	1	274	154
274.1	154.37	99.11	Flake	1	274	154
274.07	154.55	99.105	Core	2	274	154
274.17	154.5	99.12	Flake	3	274	154
274.19	154.54	99.14	Flake	4	274	154
274.13	154.56	99.14	Flake	5	274	154
274.13	154.58	99.12		6	274	154
274.13	154.51	99.1	Flake	7	274	154
274.13	154.55	99.1	Flake	8	274	154
274.09	154.62	99.125	Flake	9	274	154
274.09	154.61	99.11	Fcr	10	274	154
274.05	154.58	99.115	Fcr	11	274	154
274.06	154.68	99.145		12	274	154
274.11	154.7	99.12	Core	13	274	154
274.1	154.6	99.11		14	274	154

Table A15-20 F continued

2003 N	E	Depth	Type	Art#	North	East
274.03	154.76	99.15	Core	15	274	154
273.98	154.57	99.045	Core	16	274	154
274.14	155.47	98.98	Biface	1	274	154
274.33	155.13	98.945	Core	2	274	154
274.65	155.9	99.04	Core	3	274	154
274.80	155.63	99.04	Outrepasse	4	274	154
274.64	155.42	98.96	Core	5	274	154
274.64	155.03	98.925	Core	6	274	154
275.07	155.67	99.03	Uniface	7	274	154
275.12	155.45	99	Denticulate	8	274	154
275.38	155.89	99.02	Uniface	9	274	154
274.14	155.47	98.98	Biface	1	274	154
274.33	155.13	98.945	Core	2	274	154
274.65	155.9	99.04	Flake	3	274	154
274.8	155.63	99.04	Outrepasse	4	274	154
274.64	155.42	98.96	Core	5	274	154
274.64	155.03	98.925	Core	6	274	154
275.07	155.67	99.03	Uniface	7	274	154
275.12	155.45	99	Denticulate	8	274	154
275.38	155.89	99.02	Uniface	9	274	154
275.4	155.78	99.035	Denticulate	10	274	154
275	155.05	98.91	Outrepasse	11	274	154
275.55	155.07	98.97	Biface	12	274	154
275.5	155.6	99	Core	13	274	154
275.46	155.84	99.045	Biface	14	274	154
275.67	155.55	99.02	Core	15	274	154
275.69	155.75	99.035	Core	16	274	154
275.87	155.21	98.93	Core	17	274	154
275.90	155	98.95	Core	18	274	154
276	155.27	98.975	Core	19	274	154
274.98	154.83	98.755	Core	20	274	154
274.67	154.20	98.7	Core	21	274	154
275.33	154.35	98.695	Core	22	274	154
275.07	154.92	98.935	Flake	23	274	154
275.38	154.36	98.705	Core	24	274	154
274.16	155.31	97.50	Uniface	1	274	154
274.36	155.46	97.525	Uniface	2	274	154
274.45	155.61	97.495	Uniface	3	274	154
274.13	155.28	97.485	Uniface	4	274	154
274.15	155.36	97.505	Nodule	5	274	154
274.44	155.48	97.61	Cobble	6	274	154
274.58	155.64	97.595	Cobble	7	274	154
284.4	132.61	12	Pottery	1	284	132

Table A15-20 F continued

2003 N	E	Depth	Type	Art#	North	East
284.75	132.58	12.4	Pottery	2	284	132
285.92	132.01	15	Core	3	284	132
285.71	132.84	38	Core	1	284	132
284.29	133.7	46	Blade	1	284	132
284.915	132.83	60	Sherd	1	284	132
284.69	133.1	63.5	Sherd	2	284	132
284.73	132.58	60.5	Sherd	3	284	132
284.63	132.33	68		4	284	132
285.98	133.36	52	Biface	1	284	132
285.24	133.2	59	Blade	2	284	132
284.04	132.8	65	Flake	1	284	132
284.03	132.82	69	Preform	2	284	132
285.85	133.33	75	Scraper	1	284	132
285.9	132.3	85	Blade	1	284	132
285.65	132.28	85	Pebble	2	284	132
285.04	132.01	84.5	Blade	3	284	132
284.77	132.71	93	Biface	1	284	132
284.20	132.24	94	Cortex	2	284	132
284.4	132.7	93	Chert	3	284	132
284.75	132.21	94	Flake	4	284	132
286.5	133.92	19	Pottery	1	286	132
288.16	133.07	20	Pottery	2	286	132
286.6	132.6	30	Pottery	1	286	132
286.03	132.06	50	Core	1	286	132
287.63	133.46	55	Blade	1	286	132
286.4	133.76	52	Biface	2	286	132
287.55	132.95	60	Allendale	3	286	132
287.21	133.56	63	Mala	1	286	132
287.44	133.80	70	Biface	1	286	132
286.13	133.8	75	Flake	1	286	132
286.06	132.32	72	Point Distal	1	286	132
286.23	132.41	73	Core	2	286	132
287.1	133.46	85	Blade	1	286	132
287.56	132.44	85	Scraper	1	286	132
286.08	132.75	90	Scraper	2	286	132
287.58	132.86	90	Scraper	1	286	132
286.36	132.99	91	Flake	2	286	132
286.19	133.1	97	Flake	1	286	132
186.77	133.1	96	Scraper	2	286	132
286.7	133	99		3	286	132
286.15	132.65	95	Flake	4	286	132
287.18	132.04	105	Flake	1	286	132
286.36	132.78	114	Blade	1	286	132

Table A15-20 F continued

2003 N	E	Depth	Type	Art#	North	East
286.44	132.75	119	Core	1	286	132
289.855	132.45	23	Clay	1	288	132
288.97	133.15	37	Chert	1	288	132
289.11	133.42	52	Savannah Point	1	288	132
288.92	133.72	55	Core	2	288	132
289.63	132.365	61	Preform	1	288	132
288.63	133.6	75	Preform	1	288	132
288.63	133.6	75	Preform	1	288	132
288.93	132.92	78	Preform	1	288	132
288.7	132.74	79	Biface	2	288	132
289.82	132.2	84.5	Preform	1	288	132
289.105	133.36	83	Hammerstone	2	288	132
289.79	132.655	88	Hammerstone	1	288	132
188.845	133.22	88	Scraper	2	288	132
188.68	133.94	90	Flake	3	288	132
189.79	133.27	90.5	Uniface	4	288	132
189.83	133.22	93.5	Core	5	288	132
269.14	133.49	91	Preform	6	288	132
288.79	133.47	93	Preform	1	288	132
288.555	133.47	94	Biface	2	288	132
288.46	133.83	93	Biface	3	288	132
288.16	133.19	95	Endscraper	4	288	132
288.17	133.5	94	Hammerstone	1	288	132
289.44	135.94	43	Core	1	288	134
289.63	135	54	Flake	1	288	134
289.93	136.18	56	Flake	2	288	134
289.85	134.85	61	Biface	1	288	134
288.28	135.21	62	Biface	2	288	134
289.75	135.1	72	Scraper	1	288	134
289.29	135.46	72	Blade	2	288	134
288.95	132.08	73	Scraper	3	288	134
289.79	132.44	74	Blank	4	288	134
289.44	132.24	74	Pebble	5	288	134
290	135.06	78	Biface	1	288	134
288.65	135.6	80	Preform	2	288	134
289.95	134.25	78	Nutting Stone	3	288	134
289.67	134.29	87	Flake	1	288	134
289.92	134.21	86	Flake	2	288	134
289.91	134.26	87.9	Flake	3	288	134
289.42	134.76	88	Denticulate	4	288	134
288.69	134.76	89	Flake	5	288	134
289.95	134.76	88.5	Retouch	6	288	134
289.52	134.8	90	Core	7	288	134

Table A15-20 F continued

2003 N	E	Depth	Type	Art#	North	East
289.10	134.57	88	Flake	8	288	134
289.88	134.09	90	Quartz	9	288	134
289.73	134.93	90	Flake	10	288	134
289	134.49	90		11	288	134
288.43	134.22	89	Core	12	288	134
289.86	135.1	89	Flake	13	288	134
289.44	135.64	88	Flake	14	288	134
289.75	135.11	87	Biface	15	288	134
289.66	135.1	90	Core	16	288	134
289.49	135.1	89	Core	17	288	134
288.62	135.33	89	Uid	18	288	134
288.56	135.22	90	Uid	19	288	134
288.71	135.39	89	Flake	20	288	134
289.75	134.35	90	Uniface	21	288	134
289.46	135.24	90	Uniface	22	288	134
288.11	135.98	86	Blade	23	288	134
288.34	135.48	86	Flake	24	288	134
288.83	135.8	90	Flake	25	288	134
289.00	135.69	90	Flake	26	288	134
288.45	134.52	91	Unidentified	1	288	134
288.51	134.61	91	Unidentified	2	288	134
288.24	134.90	91	Uniface	3	288	134
288.12	135.05	91	Core	4	288	134
289.44	135.68	92	Core	5	288	134
288.78	135.23	94	Flake	6	288	134
288.11	135.17	91	Flake	7	288	134
288.12	135.05	92	Flake	8	288	134
289.38	135.48	94	Flake	9	288	134
288.61	135.18	95	Biface	10	288	134
288.73	135.47	95	Blade	11	288	134
289.35	135.54	93	Core	12	288	134
289.28	135.48	95	Flake	13	288	134
289.39	135.03	95	Core	14	288	134
289.77	135.14	95	Preform	15	288	134
289.86	135.90	91	Core	16	288	134
289.32	135.24	96	Core	1	288	134
289.27	135.19	96	Blade	2	288	134
289.36	135.47	96	Blade	3	288	134
288.30	135.73	97	Flake	1	288	134
289.36	137.73	9	Point	1	288	136
289.06	136.62	10	Scraper	1	288	136
288.28	137.73	11	Scraper	2	288	136
288.56	136.79	20	Biface	3	288	136

Table A15-20 F continued

2003 N	E	Depth	Type	Art#	North	East
289.90	136.93	18	Scraper	4	288	136
288.55	137.22	20	Preform	5	288	136
289.35	136.96	17	Uniface	6	288	136
289.45	136.87	20	Uid	7	288	136
288.07	136.7	23		1	288	136
288.54	136.79	21	Scraper	2	288	136
288.65	136.57	25	Flake	3	288	136
288.65	137.35	27	Uid	4	288	136
288.77	136.84	24	Uid	5	288	136
288.77	136.92	21	Uniface	6	288	136
288.84	137.08	26	Flake	7	288	136
289.28	136.69	20	Core	8	288	136
288.2	136.47	40	Biface	1	288	136
288.16	136.53	50	Biface	2	288	136
289.17	137.10	46	Core	3	288	136
289.79	137.77	42	Flake	4	288	136
289.25	136.22	48	Flake	5	288	136
289.32	136.8	53	Blade	1	288	136
289.28	136.73	59	Core	2	288	136
288.34	137.03	58	Uniface	3	288	136
288.04	137.42	55	Core	4	288	136
288.01	137.41	60	Uniface	5	288	136
288.24	136.87	62	Uid	1	288	136
288.09	137.18	70	Uid	1	288	136
288.35	136.56	70	Scraper	2	288	136
289.1	137.92	72	Hammerstone	1	288	136
288.18	137.48	75	Scraper	2	288	136
288.25	137.12	72	Core	3	288	136
288.72	137.5	75	Scraper	1	288	136
288.3	136.4	75	Core	2	288	136
288.241	136.6	75	Flake	3	288	136
288.87	137.24	103	Preform	1	288	136
288.05	136.2	96	Core	2	288	136
288.94	136.29	110	Core	1	288	136
288.70	136.26	85	Denticulate	1	288	136
288.26	137.6	83	Core	2	288	136
288.21	137.55	82	Scraper	3	288	136
288.54	137.2	84	Flake	4	288	136
288.35	137.35	84	Flake	5	288	136
288.34	137.30	82	Core	6	288	136
288.1	137.95	83	Core	7	288	136
288.29	137.93	85	Core	8	288	136
289.32	137.28	82	Flake	9	288	136

Table A15-20 F continued

2003 N	E	Depth	Type	Art#	North	East
289.02	137.25	82	Scraper	10	288	136
289.82	136.8	92	Core	1	288	136
289.5	136.94	90	Core	2	288	136
289.55	137.02	90	Uniface	3	288	136
288.88	136.3	90	Uid	4	288	136
288.56	137.92	86	Blade	5	288	136
289.55	137.8	93	Wedge	6	288	136
288.58	137.7	86	Scraper	7	288	136
288.68	137.92	86	Scraper	8	288	136
289.07	137.49	88	Taylor	9	288	136
289.38	137.80	90	Preform	10	288	136
289.26	237.69	89	Core	11	288	136
289.47	137.96	92	Core	12	288	136
289.07	137.97	86	Uniface	13	288	136

Table A15-20 G
Mapped Artifacts from 2004 Excavations at the Topper Site (38AL23).

2004 N	E	Depth	Type	Art#	North	East
288.05	139.8	97.84	Bifacial Tool	1	288	138
288.05	139.5	97.69	Retouched Flake	2	288	138
288.05	139.8	97.69	Biface Blank	3	288	138
288.36	138.44	97.7	Retouched Flake	1	288	138
288.5	138.54	97.69	Hammerstone	2	288	138
288.77	138.27	88.9	Uniface	3	288	138
288.78	138.45	97.68	Core	4	288	138
288.38	138.27	97.7	Scraper	5	288	138
288.32	138.17	97.6995	Bifacial Tool	6	288	138
289.01	138.81	97.69	Scraper	1	288	138
289.61	139.18	97.68	Flake, Overshot	2	288	138
289.53	138.5	97.63	Core	1	288	138
289.94	138.92	97.6495	Scraper	2	288	138
289.94	138.73	97.64	Core	3	288	138
289.73	138.41	97.62	Flake, Burin	4	288	138
289.57	138.06	97.6	Scraper	5	288	138
291.45	132.18	98.03	Core , T/A	1	290	132
290.78	132.9	98.01	Scraper , T/A	2	290	132
290.2	132.52	97.89	Scraper	1	290	132
292.32	132.34	97.84	Biface	2	290	132
290.88	132.34	97.86	Preform, Biface (T/A)	3	290	132
291.4	133.26	97.64	Distal, Blade	1	290	132
290.7	132.9	97.63	Core	2	290	132
291.95	132.6	97.61	Scraper	3	290	132
291.33	132.01	97.61	Blade	4	290	132
291.66	132.05	97.6	Preform, Final Stage Clovis	5	290	132
290.46	132.17	97.55	Base Of Preform	1	290	132
290.85	134	97.55	Scraper	2	290	132
290.48	133.2	97.54	Core Top, Blade	1	290	132
290.56	133.37	97.52	Flake, Retouched Core Trim	2	290	132
290.48	133.32	97.5	Flake, Argillite	3	290	132
290.6	135.91	97.62	Scraper, Unifacial	1	290	134
290.46	135.78	97.61	Biface	2	290	134
290.12	15.72	97.6	Flake	3	290	134
290.29	135.48	97.61	Flake	4	290	134
290.13	135.47	97.61	Flake	5	290	134
290.6	135.46	97.63	Flake	6	290	134
290.43	135.42	97.62	Flake, Blade Preparation	7	290	134
290.42	135.47	97.62	Flake	8	290	134
290.5	135.43	97.65	Flake	9	290	134
290.3	135.46	97.62	Core	10	290	134

Table A15-20 G continued

2004 N	E	Depth	Type	Art#	North	East
290.41	135.26	97.62	Blade, Core Rejuvenation	11	290	134
290.49	135.21	97.63	Biface	12	290	134
290.61	135.15	97.63	Hammerstone	13	290	134
290.81	135.1	97.63	Hammerstone	14	290	134
290.57	134.92	97.62	Hammerstone	15	290	134
290.65	135.05	97.6	Blade	16	290	134
290.26	135.2	97.63	Blade	17	290	134
290.76	134.89	97.6	Scraper	18	290	134
290.48	134.68	97.61	Flake	19	290	134
290.14	134.91	97.63	Flake	20	290	134
290.1	134.45	97.64	Flake	21	290	134
290.34	134.3	97.61	Blade	22	290	134
290.41	134.1	97.62	Flake	23	290	134
290.25	135.05	97.63	Flake	24	290	134
291.3	135.02	97.64	Flake	25	290	134
290.1	135.54	97.59	Flake	1	290	134
291.19	135.06	97.57	Biface	2	290	134
291.14	134.9	97.57	Flake	3	290	134
291.04	134.93	97.56	Flake	4	290	134
290.75	134.96	97.59	Flake	5	290	134
290.63	134.84	97.6	Lying Flat	6	290	134
290.58	134.8	97.59	Debris, Lithic	7	290	134
290.49	134.81	97.59	Flake	8	290	134
290.59	134.83	97.57	Hammerstone	9	290	134
291.55	134.27	97.54	Core	10	290	134
291.58	134.12	97.55	, Core	11	290	134
291.49	134.01	97.55	Flake	12	290	134
291.14	134.15	97.58	Biface	13	290	134
291.93	134.3	97.59	, Core	14	290	134
291.02	134.07	97.55	Blade	15	290	134
290.54	134.43	97.59	, Core	16	290	134
290.14	134.23	97.57	, Core	17	290	134
291.72	134.08	97.52	Biface	1	290	134
291.72	134.99	97.53	, Core	2	290	134
291.64	135.1	97.51	, Core	3	290	134
291.79	135.15	97.49	Core	4	290	134
291.11	137.98	98.04	Chert Tool	1	290	136
290.5	137.25	97.92	Biface Fragment	1	290	136
291.2	137.7	97.66	Possible Overshot	1	290	136
290.82	137.53	97.69	Biface	2	290	136
290.95	136.16	97.65	Scraper W/ Spur	3	290	136
290.43	136.77	97.65	Scraper	4	290	136
290.39	136.7	97.62	Broken Hammerstone	1	290	136

Table A15-20 G continued

2004 N	E	Depth	Type	Art#	North	East
290.4	136.61	97.62	Chert Flake	2	290	136
290.53	136.36	97.61	Chert Flake	3	290	136
291.22	136.16	97.61	Thinning Flake	4	290	136
291.26	136.27	97.65	Denticulate	5	290	136
291.39	136.01	97.6	Clovis Preform	6	290	136
290.19	137.98	97.65	Scraper	1	290	136
290.26	137.37	97.6	Core	2	290	136
290.32	137.38	97.6	Core Fragment	3	290	136
290.24	137.29	97.6	Core Fragment	4	290	136
290.54	137.16	97.64	Tool	5	290	136
290.51	136.15	97.59	Core	6	290	136
290.23	137.33	97.59	Scraper	7	290	136
291.27	136.32	97.59	Core	8	290	136
291.15	136.33	97.57	Core	9	290	136
291.04	136.61	97.56	Core Rejuvenation Flake	10	290	136
290.79	137.8	97.57	Biface Fragment	11	290	136
290.72	136.97	97.6	Scraper	12	290	136
291.96	137.77	98.3	Biface Core	1	290	136
293.68	135.14	98.19	Core Fragment	1	292	134
293.58	134.9	98.09	Core Fragment	1	292	134
292.88	135.39	98.01	Early Archaic Preform	1	292	134
293.63	135.76	97.89	Hematite	1	292	134
293.42	134.82	97.88	Biface Fragment	2	292	134
292.9	134.17	98.355	Core Top	3	292	134
293.54	134.31	97.81	Hammerstone Fragment	1	292	134
292.82	135.4	97.82	Blade Fragment	2	292	134
292.26	135.52	97.79	Core Fragment	1	292	134
292.61	135.38	97.76	Blade/Rejuvenation	2	292	134
292.72	135.46	97.76	Blade/Rejuvenation	3	292	134
293.72	134.72	97.71	Denticulate	1	292	134
292.63	135.36	97.72	Quartz Pebble	2	292	134
293.37	134.9	97.72	Starter Blade	3	292	134
292.3	135.21	97.71	Bend Break	4	292	134
292.87	135.29	97.68	Blade Rejuv.	1	292	134
293.21	135.77	97.65	Core Fragment	2	292	134
293.29	135.35	97.65	Lg. Decorticated Flake	3	292	134
293.51	134.98	97.65	Blade	4	292	134
293.1	134.26	97.62	Clovis Base	1	292	134
293.57	135.77	97.62	Blade Prox.	2	292	134
292.87	135.43	97.57	Blade	1	292	134
293.35	134.57	97.57	Core Top/Rejuv.	2	292	134
293.58	135.67	97.57	Blade Fragment.	3	292	134
293.43	135.94	97.57	Blade	4	292	134

Table A15-20 G continued

2004 N	E	Depth	Type	Art#	North	East
292.14	134.29	97.58	Scraper /Denticulate	5	292	134
292.2	135.99	97.58	Denticulate	6	292	134
293.28	134.77	97.52	Core Rejuv.	1	292	134
293.15	134.17	97.54	Blade	2	292	134
293.3	134.2	97.54	Starter Blade	3	292	134
293.24	134.39	97.51	Uniface	4	292	134
293.6	135.4	97.52	Blade	5	292	134
293.85	135.95	97.52	Core	6	292	134
293.22	135.96	97.54	Blade	7	292	134
293.09	135.64	97.54	Blade Fragment	8	292	134
292.01	135.34	97.53	Uniface/Blade	9	292	134
292.96	134.21	97.51	Starter Blade	10	292	134
292.05	134.05	97.5	Hammerstone	11	292	134
292.51	134.01	97.48	Core Rejuv./Uniface	1	292	134
293.64	135.85	97.49	Blade Rejuv. Flake	2	292	134
293.6	135.99	97.5	Blade	3	292	134
292.68	135.95	97.5	Blade Fragment	4	292	134
291.96	137.77	98.3	Core , Bifacial	4	290	136
291.11	137.98	98.04	Tool, Chert	2	290	136
290.5	137.25	97.92	Biface	1	290	136
291.2	137.7	97.66	Flake, Possible Overshot	1	290	136
290.82	137.53	97.69	Biface	2	290	136
290.95	136.16	97.65	Scraper W/ Graver Spur	3	290	136
290.43	136.77	97.65	Scraper	4	290	136
290.39	136.7	97.62	Hammerstone, Broken	1	290	136
290.4	136.61	97.62	Flake, Chert	2	290	136
290.53	136.36	97.61	Flake, Chert	3	290	136
291.22	136.16	97.61	Flake, Thinning	4	290	136
291.26	136.27	97.65	Denticulate	5	290	136
291.39	136.01	97.6	Preform, Late Stage Clovis	6	290	136
290.19	137.98	97.65	Scraper	1	290	136
290.26	137.37	97.6	Core	2	290	136
290.32	137.38	97.6	Core	3	290	136
290.24	137.29	97.6	Core	4	290	136
290.54	137.16	97.64	Tool, Unidentified	5	290	136
290.51	136.15	97.59	Core	6	290	136
290.23	137.33	97.59	Scraper	7	290	136
291.27	136.32	97.59	Core	8	290	136
291.15	136.33	97.57	Core	9	290	136
291.04	136.61	97.56	Flake, Core Rejuvenation	10	290	136
290.79	137.8	97.57	Biface	11	290	136
290.72	136.97	97.6	Scraper	12	290	136
239.33	138	97.25	Flake	1	238	138

Table A15-20 G continued

2004 N	E	Depth	Type	Art#	North	East
241.09	138.3	97.25	Flake	2	238	138
238.67	137.81	97.245	Cortex	3	238	138
238.79	139.3	97.25	Bend Break	4	238	138
239.88	139.67	97.15	Blade Fragment	1	238	138
238.7	138.08	97.19	Quartz Cobble	2	238	138
239.43	139.88	97.17	Flake	3	238	138
238.68	139.57	97.15	Core TAB/Bend Break	4	238	138
239.58	139.38	97.16	Platform	5	238	138
238.53	138.29	97.19	Flake	6	238	138
238.94	138.24	97.15	Bend Break	7	238	138
238.57	139.21	97.18	Chert	8	238	138
238.59	139.21	97.18	Small Chert	9	238	138
238.62	139.32	97.18	Chert	10	238	138
238.89	139.68	97.15	Chert	11	238	138
238.5	139.61	97.16	Chert Fragment	12	238	138
238.51	139.62	97.16	Chert Fragment	13	238	138
238.79	138.86	97.15	Chert Fragment	14	238	138
238.59	139.71	97.15	Chert Fragment	15	238	138
238.57	139.76	97.15	Chert	16	238	138
238.59	139.74	97.16	Chert Fragment	17	238	138
238.53	139.72	97.15	Chert Fragment	18	238	138
238.54	139.73	97.15	Chert Fragment	19	238	138
238.54	139.76	97.15	Chert	20	238	138
238.59	139.79	97.15	Chert Fragment	21	238	138
238.56	139.8	97.16	Chert Fragment	22	238	138
238.59	139.84	97.15	Chert Fragment	23	238	138
238.51	139.87	97.15	Chert Fragment	24	238	138
238.52	139.94	97.15	Chert	25	238	138
239.27	138.86	97.15	Chert Fragment	26	238	138
238.52	137.85	97.16	Chert	27	238	138
291.72	139.96	98.36	Biface	1	290	138
291.66	139.35	97.8	Core Top/ Rejuv. Flake	1	290	138
291.66	138.57	97.78	End Thin Flake	2	290	138
290.25	139.93	97.72	Hammerstone	1	290	138
291.33	139.81	97.73	Hammerstone	2	290	138
291.16	139.44	97.67	Bi/Uniface	1	290	138
291.4	139.68	97.66	Blade Fragment	2	290	138
290.91	139.44	97.665	Blade	3	290	138
290.65	139.61	97.67	Blade Prox.	4	290	138
290.99	138.57	97.65	Blade	5	290	138
290.91	138.41	97.65	Blade	6	290	138
291.96	138.26	97.68	Blade Fragment	7	290	138
291.83	138.57	97.65	Uniface	8	290	138

Table A15-20 G continued

2004 N	E	Depth	Type	Art#	North	East
291.44	139.6	97.65	Crest Blade	9	290	138
290.48	138.27	97.67	Cortex	10	290	138
290.69	138.43	97.65	Blade Fragment	11	290	138
291.39	138.55	97.63	Bifacial Preform	1	290	138
291.46	138.28	97.6	Bifacial Preform	2	290	138
291.88	138.33	97.6	Blade Fragment	3	290	138
291.95	138.62	97.61	Uniface	4	290	138
291.77	138.73	97.6	Core Fragment	5	290	138
291.34	138.51	97.61	Blade Prox.	6	290	138
291.29	138.8	97.91	Blade Core	7	290	138
290.71	138.38	97.6	Core Fragment	8	290	138
291.51	138.9	97.62	Blade Fragment. Prox.	9	290	138
291.22	138.91	97.605	Starter Blade	10	290	138
291.53	139.09	97.605	Core Fragment	11	290	138
291.39	139.11	97.63	Blade Distal	12	290	138
291.03	139.16	97.63	Blade Core	13	290	138
290.78	139.12	97.62	Blade Core	14	290	138
291.49	139.06	97.61	Small Blade	15	290	138
291.22	139.37	97.605	Blade (Starter) Distal	16	290	138
290.86	139.43	97.605	Blade Distal	17	290	138
291.13	139.6	97.6	Blade Medial	18	290	138
290.81	139.53	97.615	Small Blade	19	290	138
290.88	138.79	97.535	Utilized Flake	1	290	138
291.63	138.38	97.515	Blade Fragment	2	290	138
291.82	138.32	97.525	Blade	3	290	138
291.84	138.88	97.452	Core Top (Prox)	1	290	138
293.69	132.07	98.13	Blade Core	1	292	132
293.69	133.63	97.88	Preform, Allendale	1	292	132
292.02	133.19	97.89	Denticulate	2	292	132
293.65	132.65	97.77	Distal	1	292	132
293.85	132.47	97.71	Core	1	292	132
292.27	133.24	97.7	Core	2	292	132
292.24	132.37	97.6	Blank, Stage 3	1	292	132
292.37	132.67	97.55	Blank	1	292	132
293.04	132.27	97.54	Preform, Broken	1	292	132
293.07	133.46	97.5	Scraper	2	292	132
292.25	132.14	97.53	Denticulate	3	292	132
292.93	133.62	97.53	Hammerstone	4	292	132
293.05	132.68	97.49	Scraper	1	292	132
292.98	132.33	97.46	Flake, Core Rejuvenation	2	292	132
294.36	123.79	97.64	Allendale Preform	1	294	122
294.69	123.54	97.6	Crest Blade	2	294	122
295.45	122.63	97.54	Preform Base	1	294	122

Table A15-20 G continued

2004 N	E	Depth	Type	Art#	North	East
295.63	123.4	97.46	Chert Hammerstone	1	294	122
294.35	122.86	97.45	Biface Fragment	2	294	122
295.53	123.77	97.43	Biface Fragment	1	294	122
295.15	123.53	97.39	Core	1	294	122
294.31	123.75	97.36	Core Fragment	2	294	122
296	123.67	97.3	Denticulate	1	294	122
295.77	122.1	97.27	Starter Blade	1	294	122
297.2	114.45	97.6	Biface Preform	1	296	114
297.21	115.35	97.6	Biface Fragment	2	296	114
296.71	115.3	97.61	Biface Preform	3	296	114
296.43	115.44	97.62	Biface Preform	4	296	114
296.18	115.8	97.61	Biface Preform	5	296	114
296.09	115.59	97.62	Biface Fragment	6	296	114
297.29	115.09	97.62	Allendale Point	7	296	114
296.26	115.47	97.6	Allendale Pre.	8	296	114
297.2	114.04	97.6	Biface Fragment	1	296	114
297.12	115.16	97.6	Biface Preform	2	296	114
296.94	115.49	97.55	Biface Preform	3	296	114
296.04	115.85	97.58	Biface Fragment	4	296	114
297.5	115.76	97.52	Biface Fragment	1	296	114
297.33	114.41	97.39	Utilized Flake	1	296	114
296.77	115.04	97.23	Core Fragment	1	296	114
296.43	126.68	97.89	Hammerstone	1	296	126
296.47	127.53	97.61	Allendale	1	296	126
297.58	126.83	97.49	Uniface Scraper	1	296	126
297.96	127.87	97.46	Scraper	2	296	126
297.27	126.8	97.3475	Biface	1	296	126
242.28	140.78	97.12	Bend Break	1	242	140
242.54	142.64	97.06	Chert Pebble	1	242	140
243.34	141.27	96.54	Bend Break	1	242	140
243.39	141.73	96.415	Unidentified	2	242	140
242.52	141.5	97.025	, Cortical	2	242	140
242.55	140.82	97.025	Flake	5	242	140
242.16	140.36	97.043	Flake	6	242	140
242.37	140.56	97.03	Unidentified	4	242	140
242.3	140.66	97.005	Flake	2	242	140
242.26	140.83	97.025	Unidentified	1	242	140
242.3	140.78	97	Cortex	3	242	140
243.39	141.74	96.44	Large Rock	1	242	140
243.595	141.425	96.345	Flake	1	242	140
242.54	141.28	96.955	Quartz , Retouched	2	242	140
242.92	141.9	96.99	, Chert	1	242	140
242.11	140.42	97.005	Unidentified	1	242	140

Table A15-20 G continued

2004 N	E	Depth	Type	Art#	North	East
242.24	140.74	96.95	Cortex	3	242	140
242.18	140.41	97.005	Unidentified	2	242	140
243.56	141.61	96.29	Flake	1	242	140
242.04	140.34	96.925	Cortex	2	242	140
242.63	140.56	96.945	Cobble	1	242	140
242.7	141.57	96.905	Scraper	2	242	140
242.69	141.65	96.905	Flake, Utilized	1	242	140
242.4	142.18	96.885	Bend Break	7	242	140
242.35	141.25	96.825	Chert	5	242	140
242.74	141.02	96.885	Chert Pebble	6	242	140
242.65	141.67	96.87	Cortical	2	242	140
242.56	141.15	96.85	Cortical	9	242	140
242.11	141.78	96.86	Cortical Chert	8	242	140
242.69	141.12	96.88	Quartz Pebble	4	242	140
242.76	141.15	96.85	Quartz Pebble	10	242	140
242.12	141.88	96.885	Chert	1	242	140
242.78	141.18	96.87	Hammerstone	3	242	140
242.19	140.06	96.87	Core Top	1	242	140
242.54	141.16	96.8	Cortical	9	242	140
242.92	141.71	96.82	Chert Flake	4	242	140
242.78	141.64	96.83	Chert	1	242	140
242.36	141.22	96.825	Chert Flake	7	242	140
242.51	141.33	96.815	Chert	6	242	140
242.93	141.72	96.8	Chert Piece	5	242	140
242.87	141.57	96.805	Cert Flake	2	242	140
242.22	141.75	96.8	Cortical	10	242	140
242.93	141.65	96.83	Chert	3	242	140
242.41	140.5	96.85	Chert Cobble	11	242	140
242.31	141.12	96.87	Chert Cobble	8	242	140
242.73	140.82	96.84	Bend Break	1	242	140
242.07	140.82	96.805	Chert Pebble	3	242	140
242.33	140.73	96.845	Chert Pebble	2	242	140
243.06	141.165	95.975		2	242	140
243.185	141.22	95.9		1	242	140
242.15	140.09	96.785	Cortical	1	242	140
242.12	140.21	96.75	Quartz Bend Break	1	242	140
242.14	140.25	96.705	Chert Pebble	2	242	140
242.6	140.35	96.7	Chert Flake	4	242	140
242.3	140.31	96.725	Core Top	3	242	140
242.31	140.21	96.67	TA Chert Flake	3	242	140
242.32	140.35	96.67	Cortical Flake	4	242	140
242.33	140.2	96.69	Chert Pebble	1	242	140
242.27	140.3	96.68	Quartz Pebble	2	242	140

Table A15-20 G continued

2004 N	E	Depth	Type	Art#	North	East
242.61	140.17	96.64	Flake	1	242	140
242.37	140.21	96.63		2	242	140
242.55	140.17	96.64	Chert	4	242	140
242.36	140.18	96.61	Chert	3	242	140
243.84	141.89	95.83			242	140
243.29	141.69	96.12	Blade	1	242	140
242.6	141.8	97	Bend Break	1	242	140
242.24	142.69	96.83	Cortical Flake	1	242	142
242.66	142.01	97	Flake	2	242	142
242.39	142.08	97.01	Flake	3	242	142
242.15	142.24	97.01	Bend Break	4	242	142
242.71	142.06	97.03	Cortex	1	242	142
242.75	142.75	96.975		5	242	142
242.41	142.64	96.955	Flake	2	242	142
242.17	142.54	96.975	Flake	3	242	142
242.67	142.11	96.96		1	242	142
242.51	142.08	96.98		4	242	142
242.84	142.13	96.92	Broken Flake	1	242	142
242.92	143	96.85	TA Chert Flake	6	242	142
242.18	142.46	96.86	Bend Break	4	242	142
242.14	142.62	96.86	Cortical	3	242	142
242.67	142.77	96.9	Bend Break	2	242	142
242.92	142.88	96.87	Weathered Chert	5	242	142
242.52	142.81	96.885	Cortical	1	242	142
242.59	142.64	96.8	Quartz Cobble	6	242	142
242.39	142.8	96.81	Bend Break	3	242	142
242.38	142.84	96.825	Bend Break	2	242	142
242.64	142.77	96.82	Chert Pebble	5	242	142
242.78	142.79	96.815	Quartz Fragment	9	242	142
242.17	142.01	96.795	Chert	11	242	142
242.91	142.86	96.84	Chert Cobble	10	242	142
242.64	142.8	96.82	Cortical Cobble	12	242	142
242.79	142.94	96.8	Chert Cobble	8	242	142
242.49	142.93	96.83	Cortical	4	242	142
242.7	142.92	96.835	Chert Cobble	7	242	142
242.42	142.55	97.055	Flake	1	242	142
244.13	142.25	95			244	142

Table A15-20 H
Mapped Artifacts from 2005 Excavations at the Topper Site (38AL23).

2005 N	E	Depth	Type	Art	N	E
243.08	141.84	95.95	Cortical Chert Pebble	1	242	140
243.1	141.96	95.89	Chert Pebble	1	242	140
243.38	141.72	95.48	Hammerstone	1	242	140
243.08	141.87	95.95	Chert Pebble	2	242	140
243.34	141.84	95.86	Chert Flake	2	242	140
243.27	141.92	95.91	Chert Flake	3	242	140
243.31	141.745	95.87	Chert Pebble	3	242	140
243.23	141.92	95.9	Chert Pebble	4	242	140
243.38	141.65	95.83	Chert Pebble	5	242	140
243.03	141.27	95.8	Chert Pebble	6	242	140
243.18	141.42	95.8	Chert Pebble	7	242	140
243.39	141.73	95.861	Chert Pebble	8	242	140
243.1	141.61	95.86	Chert Flake	10	242	140
243.22	141.49	95.8	Chert Pebble	11	242	140
243.47	141.74	95.85	Quartz. Pebble	12	242	140
243.29	141.74	95.84	Chert Pebble	14	242	140
243.09	141.57	95.83	Chert Flake	16	242	140
243.1	142	95.82	Chert Pebble	18	242	140
243.05	141.94	95.66	Chert Pebble	3	242	140
243.15	141.92	95.65	Chert Pebble	5	242	140
243.57	141.8	95.63	Chert Pebble	6	242	140
243.48	141.57	95.64	Cortical Chert Pebble	7	242	140
243.47	141.84	95.61	Chert Debris	10	242	140
243.25	141.35	95.6	Broken Quartz. Pebble	14	242	140
243.5	141.7	95.69	Chert Debitage	1	242	140
243.41	141.75	95.79	Cortical Chert Pebble	2	242	140
243.12	141.77	95.75	Quartz. Pebble	3	242	140
243.17	141.35	95.68	Chert Flake	4	242	140
243.5	141.54	95.72	Chert Flake	7	242	140
243.22	140.28	95.74	Cortical Chert Pebble	8	242	140
243.23	141.4	95.7	Chert Pebble	9	242	140
243.42	141.82	95.62	Broken Quartz. Pebble	9	242	140
243.37	141.64	95.61	Chert Flake	11	242	140
243.16	141.17	95.7	Chert Pebble	12	242	140
243.3	141.19	95.695	Chert Debitage	12	242	140
243.22	141.1	95.77	Chert Debitage	10	242	140
243.13	141.74	95.79	Cortical Chert Pebble	1	242	140
243.49	141.95	95.71	Cortical Chert Pebble	6	242	140
243.37	140.2	96.17	Chert Pebble	2	242	140
243.77	140.175	96.18	Cortical Chert	12	242	140
243.75	140.14	96.16	Cortical Chert	13	242	140
243.92	140.15	96.15	Bend Break	15	242	140

Table A15-20 H continued

2005 N	E	Depth	Type	Art	N	E
243.825	140.02	96.19	Broken Quartz. Pebble	16	242	140
243.755	140.21	96.1	Weathered Chert Pebble	18	242	140
243.515	140.15	96.18	Weathered Chert Pebble	19	242	140
243.325	140.29	96.19	Weathered Chert Pebble	21	242	140
243.3	140.37	96.17	Weathered Chert Pebble	22	242	140
243.29	140.34	96.16	Weathered Chert Pebble	25	242	140
243.38	140.12	96.115	Chert Flake	26	242	140
243.345	140.15	95.19	Quartz. Pebble	33	242	140
243.52	140.08	96.125	Chert Pebble	35	242	140
243.52	140.08	96.145	Chert Pebble	37	242	140
243.6	140.255	96.11	Cortical Chert	7	242	140
243.53	140.23	96.13	Cortical Chert	9	242	140
243	140.64	96.14	Chert Pebble	39	242	140
243.52	140.2	96.15	Cortical Chert	10	242	140
243.71	140.08	96.1	Chert Flake	11	242	140
243.53	140.11	96.195	Chert Pebble	23	242	140
243.5	140.1	96.18	Chert Pebble	24	242	140
243.38	140.15	96.17	Chert Pebble	27	242	140
243.54	140.13	96.15	Chert Pebble	28	242	140
243.51	140.08	96.175	Chert Pebble	31	242	140
243.06	140.69	96.1	Chert Pebble	38	242	140
243.15	140.88	96.115	Chert Pebble	40	242	140
243.55	140.19	96.17	Cortical Chert	1	242	140
243.41	140.22	96.15	Chert Pebble	4	242	140
243.79	140.02	96.16	Broken Quartz. Pebble	5	242	140
243.55	141.72	95.5	Bend Break	6	242	140
243.53	140.24	96.18	Cortical Chert	8	242	140
243.725	140	96.14	Chert Flake	17	242	140
243.54	140.13	96.16	Chert Pebble	29	242	140
243.52	140.06	96.19	Chert Pebble	30	242	140
243.54	140.07	96.16	Chert Pebble	32	242	140
243.54	140.04	96.19	Chert Pebble	34	242	140
243.56	140.04	96.11	Chert Pebble	36	242	140
243.82	140.35	96.25	Chert Pebble	1	242	140
243.18	140.18	96.21	Chert Pebble	2	242	140
243.66	140.18	96.21	Chert Flake	3	242	140
243.52	140.275	96.215	Chert Pebble	4	242	140
243.89	140.21	96.24	Cortical Chert Flake	5	242	140
243.77	140.145	96.2	Chert Flake	6	242	140
243.8	140.16	96.22	Cortical Chert Pebble	7	242	140
243.84	140.23	96.21	Chert Pebble	8	242	140
243.85	140.125	96.22	Chert Pebble	9	242	140
243.94	140.14	96.23	Chert Pebble	10	242	140

Table A15-20 H continued

2005 N	E	Depth	Type	Art	N	E
243.43	140.21	96.49	Cortical Pebble	1	242	140
243.75	140.1	96	Quartz. Pebble	2	242	140
243.66	140.28	96.3	Cortical Chert Pebble	6	242	140
243.89	140.12	96.31	Chert Pebble	9	242	140
243.78	140.07	96.35	Chert Pebble	12	242	140
243.91	140	96.3	Chert Flake	13	242	140
243.77	140.365	96.3	Chert Flake	1	242	140
243.79	140.33	96.31	Chert Pebble	2	242	140
243.82	140.335	96.3	Chert Flake	3	242	140
243.74	140.37	96.3	Quartz. Pebble	4	242	140
243.78	140.36	96.3	Chert Flake	5	242	140
243.79	140.2	96.3	Quartz. Pebble	7	242	140
243.77	140.33	96.3	Chert Pebble	8	242	140
243.88	140.2	96.3	Chert Pebble	10	242	140
243.67	140.05	96.35	Chert Pebble	11	242	140
243.93	140.05	96	Chert Flake	14	242	140
243.735	140.41	96.08	Weathered Chert Pebble	1	242	140
243.11	140.485	96.08	Broken Quartz. Pebble	3	242	140
243.2	140.605	96.06	Chert Flake	4	242	140
243.17	140.71	96.08	Chert Pebble	7	242	140
243.095	140.58	96.06	Quartz. River Pebble	8	242	140
243.18	140.89	96.015	Chert Pebble	13	242	140
243.585	140.15	96.05	Chert Pebble	18	242	140
243.585	140.12	96.05	Chert Pebble	19	242	140
243.69	140.22	96.04	Chert Debitage	20	242	140
243.18	140.425	96.01	Chert Debitage	22	242	140
243.16	140.255	96.085	Chert Pebble	2	242	140
243.22	140.69	96.06	Quartz. Pebble	5	242	140
243.195	140.67	96.07	Chert Pebble	6	242	140
243.08	140.71	96.075	Chert Pebble	9	242	140
243.08	140.55	96	Chert Pebble	11	242	140
243.08	140.83	96.055	Weathered Chert	12	242	140
243.15	140.88	96	Chert Pebble	14	242	140
243.07	140.26	96.09	Broken Quartz. Pebble	15	242	140
243.58	140.23	96.025	Weathered Chert Cobble	16	242	140
243.56	140.18	96.04	Weathered Chert Pebble	17	242	140
243.65	140.15	96.02	Chert Pebble	21	242	140
243.22	140.875	96.09	Chert Pebble	10	242	140
243.34	140.24	95.71	Bend Break	2	242	140
244.42	140.49	95.64	Smashed Flake	1	244	140
244.35	140.41	95.6	Quartz Pebble	2	244	140
244.84	140.16	95.74	Smash Flake	3	244	140
244.9	140.17	97.065	Bend Break	1	244	140

Table A15-20 H continued

2005 N	E	Depth	Type	Art	N	E
244.31	140.02	96.74	Quartz. Pebble	1	244	140
244.64	140.07	96.75	Chert Flake	2	244	140
244.44	140.3	96.6	Chert Flake	1	244	140
244.87	140.87	96.55	Chert Flake	1	244	140
244.46	140.37	96.46	Chert Flake	1	244	140
244.11	140.1	95.57	Smashed Quartz Pebble	1	244	140
244.21	140.05	96.65	Chert Pebble	2	244	140
244.5	140.17	95.58	Smashed Chert Flake	2	244	140
244.51	140.08	96.55	Chert Flake	5	244	140
244.48	140.08	96.41	Chert Flake	2	244	140
243.21	144.67	97.95	Chert Flake	1	242	144
243.38	141.55	95.47	Smashed Cortical Chert	1	242	140
243.4	140.64	95.74	Smashed Flake	1	242	140
243.7	140.56	95.6	Flake	1	242	140
243.2	140.68	95.59	Split Quartz Pebble	1	242	140
243.38	140.91	95.47	Quartz Pebble	1	242	140
243.25	141.8	95.66	Chert Flake	2	242	140
243.05	141.92	95.5	Quartz. Pebble	2	242	140
243.5	141.86	95.46	Chert Flake	2	242	140
243.52	140.14	95.65	Blade Fragment	2	242	140
243.56	140.36	95.58	Bend Break W/ Retouch	2	242	140
243	140.55	95.495	Quartz	2	242	140
243.17	141.29	95.5	Chert Flake	3	242	140
243.01	141.1	95.43	Possible Core	3	242	140
243.53	140.07	96.17	Chert Pebble	3	242	140
243.3	140.9	95.75	Utilized Flake	3	242	140
243.68	140.09	95.62	Ta Flake	3	242	140
243.58	140.18	95.57	Smash Debitage	3	242	140
243.965	141.89	95.89	Chert Flake	4	242	140
243.42	141.75	95.74	Cortical Chert Flake	4	242	140
243.07	141.4	95.5	Chert Flake	4	242	140
243.07	140.88	95.75	Broken Quartz Pebble	4	242	140
243.88	140.37	95.53	Quartz Pebble	4	242	140
243.18	141.75	95.72	Chert Flake	5	242	140
243.3	141.94	95.5	Bend Break	5	242	140
243.3	140.66	95.74	Smashed Flake	5	242	140
243.59	140.27	95.5	Quartz Pebble	5	242	140
243.55	140.24	96.15	Cortical Chert	6	242	140
243.61	140.19	95.5	Battered Quartz	6	242	140
243.05	141.7	95.65	Bend Break	8	242	140
243.35	141.69	95.83	Chert Flake	9	242	140
243	141.91	95.79	Cortical Chert Flake	11	242	140
243.82	140.05	96.2	Thermal Pot Chert Flake	11	242	140

Table A15-20 H continued

2005 N	E	Depth	Type	Art	N	E
243.22	141.75	95.85	Cortical Chert	12	242	140
243.34	141.2	95.68	Chert Flake	13	242	140
243.35	141.6	95.84	Chert Pebble	14	242	140
243.74	140.09	96.18	Cortical Chert Flake	14	242	140
243.35	141.09	95.67	Chert Flake (Smashed)	15	242	140
243.34	140.77	95.81	Chert Flake	17	242	140
243.415	140.21	96.12	Broken Quartz. Pebble	20	242	140
243.45	140.26	96.04	Weathered Chert Pebble	23	242	140
243.23	144.72	97.88	Chert Cobble	1	242	144
243.59	144.69	97.84	Chert Cobble	1	242	144
243.32	144.89	97.77	Cortex Pebble	1	242	144
243.37	144.62	97.73	Chert Flake	1	242	144
243.05	144.44	97.69	Chert Cobble	1	242	144
243.42	144.55	97.62	Flake	1	242	144
243.77	144.79	97.56	Quartz Pebble	1	242	144
243.28	144.3	97.51	Chert Cobble	1	242	144
243.84	144.9	97.53	Cortical Chert Flake	1	242	144
243.09	144.54	97.47	Chert Flake	1	242	144
243.65	144.74	97.44	Quartz Pebble	1	242	144
243.68	144.815	97.39	Quartz Pebble	1	242	144
243.81	144.46	97.32	Chert Flake	1	242	144
243.135	144.61	97.94	Chert Flake	2	242	144
243.39	144.72	97.88	Chert Flake	2	242	144
243.03	144.89	97.82	Chert Flake	2	242	144
243.08	144.6	97.78	Chert Flake	2	242	144
243.4	144.43	97.65	Quartz Pebble	2	242	144
243.55	144.95	97.64	Chert Pebble	2	242	144
243.33	144.7	97.56	Cracked Quartz Pebble	2	242	144
243.34	144.48	97.5	Chert Boulder	2	242	144
243.265	144.44	97.5	Quartz Pebble	2	242	144
243.43	144.2	97.49	Bend Break	2	242	144
243.36	144.35	97.425	Chert Pebble	2	242	144
243.22	144.86	97.38	Chert Pebble	2	242	144
243.64	144.97	97.35	Chert Flake	2	242	144
243.12	144.51	97.91	Chert Cobble	3	242	144
243.19	144.73	97.86	Chert Flake	3	242	144
243.28	144.75	97.81	Quartz Pebble	3	242	144
243.23	144.91	97.76	Quartz Pebble	3	242	144
243.44	144.44	97.67	Chert Flake	3	242	144
243.87	144.79	97.55	Cortex Pebble	3	242	144
243.8	144.95	97.52	Cortical Chert Pebble	3	242	144
243.56	144.78	97.48	Chert Flake	3	242	144
243.47	144.46	97.42	Quartz Pebble	3	242	144

Table A15-20 H continued

2005 N	E	Depth	Type	Art	N	E
243.05	144.7	97.4	Chert Pebble	3	242	144
243.96	144.58	97.35	Chert Pebble	3	242	144
243.31	144.6	97.83	Chert Flake	4	242	144
243.18	144.7	97.8	Chert Flake	4	242	144
244	145	97.79	Chert Flake	4	242	144
243.48	144.71	97.65	Chert Pebble	4	242	144
243.88	144.82	97.55	Cortex Pebble	4	242	144
243.8	144.95	97.55	Chert Flake	4	242	144
243.65	144.79	97.45	Quartical Chert Cobble	4	242	144
243.69	144.81	97.43	Conglomerate	4	242	144
243.25	144.64	97.39	Quartz Pebble	4	242	144
243.15	144.29	97.32	Chert Cobble	4	242	144
243.98	144.96	97.58	Chert Pebble	5	242	144
243.21	144.57	97.5	Chert Flake	5	242	144
243.6	144.75	97.47	Quartical Chert	5	242	144
243.34	144.79	97.41	Cortical Chert Cobble	5	242	144
243.335	144.33	97.38	Chert Pebble	5	242	144
243.33	144.54	97.59	Quartz Pebble	6	242	144
243.19	144.375	97.49	Possible Bend Break	6	242	144
243.18	144.285	97.44	Chert Pebble	6	242	144
243.15	144.37	97.385	Chert Pebble	6	242	144
243.84	144.89	97.45	Quart Chert	7	242	144
243.32	144.38	97.41	Chert Pebble	7	242	144
243.44	144.15	97.39	Chert Pebble	7	242	144
243.44	144.2	97.45	Quart Chert	8	242	144
244	144.39	97.43	Cortical Chert Pebble	8	242	144
243.36	144.73	97.37	Chert Flake	8	242	144
243.28	144.43	97.45	Quart. Chert	9	242	144
243.24	144.88	97.44	Chert Flake (Secondary)	9	242	144
243.39	144.78	97.37	Chert Flake	9	242	144
243.22	144.53	97.45	Quart. Chert	10	242	144
243.425	144.46	97.41	Cortex Pebble	10	242	144
243.93	144.56	97.38	Hammerstone	10	242	144
243.12	144.83	97.46	Chert Flake	11	242	144
243.18	144.54	97.41	Quartz	11	242	144
243.95	144.65	97.38	Chert Flake	11	242	144
243.46	144.33	97.41	Quartz	12	242	144
243.8	144.77	97.38	Quartz Pebble	12	242	144
243.38	144.38	97.4	Chert Pebble	13	242	144
243.52	144.9	97.37	Quartz Pebble	13	242	144
243.45	144.63	97.41	Cortex Pebble	14	242	144
243.25	144.55	97.35	Cortex Pebble	14	242	144
243.71	144.49	97.4	Chert Pebble	15	242	144

Table A15-20 H continued

2005 N	E	Depth	Type	Art	N	E
243.095	144.65	97.39	Chert Pebble	15	242	144
243.97	144.94	97.42	Quartz Pebble	16	242	144
243.16	144.3	97.35	Chert Cobble	16	242	144
243.185	144.27	97.37	Quartz Pebble	17	242	144
243.825	144.98	97.365	Chert Flake	18	242	144
243.5	144.725	97.37	Broken Quartz	19	242	144
243.11	144.645	97.36	Cortex Pebble	20	242	144
244.65	140.005	96.12	Thermally Altered Flake	1	244	140
244.43	140.53	95.96	Flake	1	244	140
244.9	140.44	95.67	Distal Flake	1	244	140
244.21	140.1	95	Chert Flake	1	244	140
244.875	140.635	96.55	Chert Flake	2	244	140
244.23	140.14	123.5	TA Bend Break	2	244	140
244.9	140.3	95.7	Smash Debitage	2	244	140
244.7	140.15	96.72	Quartz. Pebble	3	244	140
244.28	140.03	96.62	Chert Flake	3	244	140
244.375	140.145	96.55	Chert Flake	3	244	140
244.28	140.24	95.505	Chert Flake	3	244	140
245	140	96.75	Bend Break	4	244	140
244.46	140.04	96.5	Chert Flake	4	244	140
244.3	144.8	97.93	Flake	1	244	144
244.96	144.8	97.85	Cortical Flake	1	244	144
244.81	144.91	97.825	Cortical Pebble	1	244	144
244.46	144.55	97.75	Quartz Pebble	1	244	144
244.54	144.91	97.74	Chert Pebble	1	244	144
244.15	144.66	97.69	Battered Cobble	1	244	144
244.39	144.42	97.62	Chert Cobble	1	244	144
244.28	144.58	97.55	Quartz Pebble	1	244	144
244.08	144.665	97.565	TA Cortex Pebble	1	244	144
244.72	144.93	97.495	Chert	1	244	144
244.63	144.26	97.43	Cortical	1	244	144
245	144.85	97.38	Chert Boulder	1	244	144
244.9	144.7	97.33	Chert Cobble	1	244	144
244.63	144.98	97.925	Flake	2	244	144
244.91	144.92	97.81	Cortical Pebble	2	244	144
244.6	144.27	97.76	Bend Break W/ Fragment	2	244	144
244.34	144.79	97.74	Chert	2	244	144
244.67	144.38	97.69	Cobble	2	244	144
244.22	144.37	97.62	Chert Cobble	2	244	144
244.5	144.52	97.555	Bend Break	2	244	144
244.275	144.88	97.565	Utilized Flake	2	244	144
244.72	144.365	97.48	Flake	2	244	144
244.22	144.355	97.44	Chert Flake	2	244	144

Table A15-20 H continued

2005 N	E	Depth	Type	Art	N	E
244.85	144.86	97.37	Chert Cobble	2	244	144
244.87	144.465	97.315	Chert Flake	2	244	144
244.71	144.88	97.905	Flake	3	244	144
244.85	144.5	97.75	Chert	3	244	144
244.39	144.45	97.7	Broken Quartz	3	244	144
244.74	144.26	97.68	Chert	3	244	144
244.13	144.68	97.63	Chert Cobble	3	244	144
244.65	144.37	97.565	Cortical Cobble	3	244	144
244.82	144.25	97.525	Flake	3	244	144
244.6	144.94	97.48	Cortical	3	244	144
244.33	144.44	97.445	Chert Cobble	3	244	144
244.02	144.31	97.39	Quartz Pebble	3	244	144
244.67	144.66	97.3	Chert Pebble	3	244	144
244.07	144.37	97.71	Cobble	4	244	144
244.72	144.65	97.66	Chert	4	244	144
244.87	144.64	97.64	Chert Cobble	4	244	144
244.65	144.68	97.55	TA Chert Pebble	4	244	144
244.27	144.645	97.515	Flake	4	244	144
244.2	144.92	97.47	Chert	4	244	144
244.28	144.37	97.405	Chert Flake	4	244	144
244.48	144.77	97.39	Possible Blade	4	244	144
244.97	144.67	97.33	Chert	4	244	144
244.33	144.85	97.71	Chert Cobble	5	244	144
244.67	144.63	97.66	Cobble	5	244	144
244.59	144.53	97.505	Chert	5	244	144
244.555	144.81	97.45	Cortical	5	244	144
244.43	144.85	97.41	Cortex Cobble	5	244	144
244.405	144.92	97.32	Chert Flake	5	244	144
244.82	144.93	97.72	Chert	6	244	144
244.91	144.4	97.7	Flake	6	244	144
244.13	144.71	97.455	Cortical	6	244	144
244.99	144.945	97.42	Cortex	6	244	144
244.96	144.8	97.73	Chert	7	244	144
244.43	144.85	97.7	Cobble	7	244	144
244.72	145	97.48	Cortex	7	244	144
245.03	144.83	97.7	Fractured Chert	8	244	144
244.57	144.34	97.66	Battered Cobble	8	244	144
244.41	144.92	97.45	Part Of Hammerstone	8	244	144
244.89	144.44	97.66	Chert Fragment	9	244	144
245	144.52	97.495	Quartz Piece	9	244	144
244.95	144.63	97.68	Chert Fragment	10	244	144
244.19	144.8	97.46	Cortical Pebble	10	244	144
244.61	144.35	97.66	Fractured Cobble	11	244	144

Table A15-20 H continued

2005 N	E	Depth	Type	Art	N	E
245.09	144.74	97.67	Chert Flake	12	244	144
244.55	144.68	97.66	Chert Fragment	13	244	144
244.4	144.99	97.7	Chert Fragment	14	244	144
244.91	144.64	97.64	Chert Fragment	15	244	144
244.1	144.7	97.66	Chert Fragment	16	244	144
247.62	141.48	98.72	Utilized Quartz. Pebble	1	246	140
247.66	141.79	98.65	Hammerstone	1	246	140
247.58	140.72	98.15	Taylor Projectile	1	246	140
247.96	141	98.15	River Rock	1	246	140
247.3	140.32	98.09	Utilized Flake	1	246	140
247.95	140.25	97.99	Starter Blade	1	246	140
247.1	141.85	97.92	Hammerstone	1	246	140
246.85	141.56	97.88	Bifacial Flake	1	246	140
247.71	140.88	97.81	Quartz. Pebble	1	246	140
247.6	140.3	97.75	Chert Cobble	1	246	140
247.65	141.97	97.74	Utilized /Bend Break	1	246	140
246.68	141.92	97.65	Uniface	1	246	140
246.13	141.6	97.6	Hammerstone Fragment	1	246	140
246.8	141.96	97.56	Cortical Chert Pebble	1	246	140
246.18	141.33	97.52	Chert	1	246	140
247.74	141.11	97.49	Chert Pebble	1	246	140
247.6	140.26	98.71	Mala Biface Preform	2	246	140
247.84	140.59	98.12	Biface	2	246	140
247.49	141.69	98.08	Bladelette	2	246	140
246.84	141.67	97.87	Corner Blade	2	246	140
246.28	141.4	97.83	Smashed Flake	2	246	140
247.65	141.2	97.75	Cortical Chert Flake	2	246	140
246.62	141.53	97.74	Cortical Chert	2	246	140
246.36	141.54	97.69	Flake	2	246	140
247.2	140.65	97.62	Chert Flake	2	246	140
246.35	140.48	97.55	Cortical Chert Pebble	2	246	140
246.57	141.3	97.54	Chert	2	246	140
247.69	141.7	97.49	Chert Cobble	2	246	140
247.89	140.93	98.1	Utilized Flake	3	246	140
247.96	140.43	98.06	Bladelette	3	246	140
246.69	141.73	97.89	Flake	3	246	140
246.3	141.3	97.83	Chert Flake	3	246	140
246.7	141.3	97.73	Cortical Chert Flake	3	246	140
246.15	141.58	97.66	Cortical Chert Cobble	3	246	140
247.3	141.25	97.62	Chert Cobble	3	246	140
246.26	140.92	97.6	Cortical Chert	3	246	140
146.95	141.28	97.52	Chert, Possible Tool	3	246	140
247.57	141.9	97.49	Chert Pebble	3	246	140

Table A15-20 H continued

2005 N	E	Depth	Type	Art	N	E
247.38	141.19	98.12	Core	4	246	140
246.5	141.76	97.89	Flake	4	246	140
246.8	141.42	97.81	Bifacial Flake	4	246	140
246.76	141.93	97.75	Chert Bend Break	4	246	140
246.2	140.96	97.65	Chert Cobble	4	246	140
247.48	141.63	97.64	Bend Break	4	246	140
246.24	140.03	97.55	Cortical Chert Pebble	4	246	140
146.22	141.08	97.5	Chert	4	246	140
246.4	140.575	97.48	Chert Cobble	4	246	140
247.77	140.82	98.13	Biface	5	246	140
246.46	141.25	97.87	Reduction Flake	5	246	140
246.37	141.46	97.8	Bifacial Flake	5	246	140
246.5	141.41	97.75	Chert Flake	5	246	140
247.1	140.18	140.18	Chert Flake	5	246	140
246.12	140.8	97.58	Chert Pebble	5	246	140
146.77	141.17	97.51	Possible Tool	5	246	140
247.92	140.32	98.1	Corner Blade	6	246	140
246.28	141.46	97.8	Bifacial Flake	6	246	140
246.46	141.26	97.73	Chert	6	246	140
247.06	141.68	141.68	Cortical Chert Pebble	6	246	140
247.27	140.93	97.56	Chert Bend Break	6	246	140
146.49	141.04	97.53	Chert	6	246	140
246.25	141.4	97.75	Chert Tool/Bend Break	7	246	140
247.07	140.87	97.55	Bend Break	7	246	140
143.37	141.29	97.52	Possible Burin	7	246	140
246.16	141.96	97.74	Quartz. Tool	8	246	140
247.03	140.25	97.55	Chert Pebble	8	246	140
146.46	141.26	97.5	Chert Pebble	8	246	140
246.33	141.4	97.73	Chert	9	246	140
247.81	140.09	97.5	Chert Cobble	9	246	140
246.5	140.295	97.53	Chert Pebble	9	246	140
246.93	141.35	97.72	Chert Tool/Utilized	10	246	140
247.23	141.23	97.55	Cortical Chert Pebble	10	246	140
246.38	140.33	97.52	Cortical Pebble	10	246	140
246.76	141.43	97.73	Chert Flake	11	246	140
247.31	141.44	97.555	Quartz Pebble	11	246	140
246.28	140.07	97.53	Chert Cobble	11	246	140
246.64	141.25	97.73	Cortical Chert Flake	12	246	140
247.08	141.28	97.57	Cortical Chert Pebble	12	246	140
246.36	140.41	97.52	Chert Pebble	12	246	140
246.8	140.9	97.7	Chert Boulder	13	246	140
246.3	140.57	97.53	Chert Pebble	13	246	140
246.25	141.74	97.71	Chert Pebble	14	246	140

Table A15-20 H continued

2005 N	E	Depth	Type	Art	N	E
246.36	140.92	97.52	Cortical	14	246	140
246.92	140.53	97.53	Chert Pebble	15	246	140
246.3	140.28	97.53	Cortical Pebble	16	246	140
246.78	140.12	97.5	Chert Pebble , Poss. Tool	17	246	140
247.285	141.38	97.51	Chert Flake	18	246	140
247.55	140.42	97.51	Chert Boulder	19	246	140
247.74	141.11	97.49	Chert Pebble	20	246	140
247.7	141.58	97.5	Chert Cobble	21	246	140
247.69	141.7	97.49	Chert Cobble	22	246	140
247.57	141.9	97.49	Chert Pebble	23	246	140
246.4	140.575	97.48	Chert Cobble	24	246	140
247.85	142.12	98.9	Biface	1	246	142
247.41	142.39	98.72	Rim Sherd	1	246	142
248.93	142.9	98.6	Hammerstone	1	246	142
247.76	142.25	98.53	Chert Core	1	246	142
247.66	143.18	98.41	Biface (Chert)	1	246	142
247.19	142.35	98.31	Blade	1	246	142
247.68	143.63	98.27	Core	1	246	142
247.63	143.86	98.23	Burin Spall	1	246	142
247.5	143.85	98.205	Cortical Rock	1	246	142
247.9	142.12	98.14	Utilized Flake	1	246	142
247.96	143.15	98.09	Core	1	246	142
247.96	143.17	98.05	Chert Pebble	1	246	142
246.96	142.25	97.55	Chert Pebble	1	246	142
246.76	142.33	97.95	Chert Cobble	1	246	142
246.48	142.66	97.9	Chert Flake	1	246	142
246.15	142.01	97.85	Bend Break	1	246	142
247.39	142.14	97.72	Chert Pebble	1	246	142
247.6	142.31	97.65	Cortical Chert Pebble	1	246	142
246.64	143.88	97.6	Quartz Pebble	1	246	142
247.81	142.25	97.57	Chert Pebble	1	246	142
246.24	142.02	97.52	Chert Pebble	1	246	142
246.28	143.37	97.5	Chert Flake	1	246	142
246.21	143.07	97.4	Bend Break	1	246	142
247.42	142.44	98.72	Body Sherd	2	246	142
247.5	143.5	98.49	Biface	2	246	142
247.55	143.37	98.25	End Scraper	2	246	142
247.16	143.16	98.23	Biface	2	246	142
247.38	142.74	98.19	Prox. Blade	2	246	142
247.36	142.4	98.13	Proximal Blade	2	246	142
247.3	143.25	98.05	Preclovis	2	246	142
247.4	143.08	98.02	Chert Pebble	2	246	142
246.36	143.73	97.95	Cortical Chert	2	246	142

Table A15-20 H continued

2005 N	E	Depth	Type	Art	N	E
246.77	142.6	97.95	Chert Cobble	2	246	142
246.84	142.12	97.86	Flake	2	246	142
247.65	142.36	97.81	Flake	2	246	142
247.84	142.12	97.72	Chert Pebble	2	246	142
247.87	142.13	97.68	Chert Pebble	2	246	142
246.67	143.02	97.62	Quartz Pebble	2	246	142
247.64	142.03	97.57	Chert Cobble	2	246	142
246.39	142.09	97.52	Cortical Chert Cobble	2	246	142
246.31	142.76	97.47	Quartz. Pebble	2	246	142
247.35	142.4	98.72	Rim Sherd	3	246	142
247.58	143.98	98.42	Chert Flake	3	246	142
247.2	143.45	98.24	Chert	3	246	142
247.12	142.11	98.23	Blade Fragment	3	246	142
247.91	142.83	98.17	Outre Passe Biface	3	246	142
247.28	143	98.03	Chert Pebble	3	246	142
246.83	143.44	97.96	Cortical Chert Rock	3	246	142
247.05	142.85	97.92	Chert Cobble	3	246	142
246.73	142.89	97.88	Flake	3	246	142
246.8	142.375	97.67	Cortical Chert Pebble	3	246	142
246.66	143.01	97.62	Chert Pebble	3	246	142
246.44	142.04	97.55	Cortical Chert Pebble	3	246	142
246.18	142.4	97.52	Chert Flake	3	246	142
246.25	142.65	97.47	Bend Break	3	246	142
247.36	142.46	98.72	Body Sherd	4	246	142
247.83	143.98	98.25	Biface Fragment	4	246	142
247.66	143.68	98.02	Chert Pebble	4	246	142
247.15	143.3	97.99	Chert Cobble	4	246	142
247.66	142.33	97.94	Chert Cobble	4	246	142
247.12	142.4	97.88	Chert Pebble	4	246	142
246.63	143.15	97.66	Cortical Chert Pebble	4	246	142
246.64	143.25	97.63	Chert Cobble	4	246	142
246.2	142.04	97.55	Cortical Chert Pebble	4	246	142
246.4	142.71	97.51	Chert Flake	4	246	142
246.27	142.56	97.47	Quartz. Pebble	4	246	142
247.36	142.36	98.76	Body Sherd	5	246	142
247.63	143.3	98.25	Core Flake	5	246	142
247.1	143.09	98.04	Broken Battered	5	246	142
247.07	142.86	97.93	Microblade	5	246	142
247.06	142.19	97.88	Chert Cobble	5	246	142
246.37	143.07	97.65	Quartz Pebble	5	246	142
247.55	142.34	97.6	Chert Cobble	5	246	142
246.57	142.69	97.55	Chert Pebble	5	246	142
246.34	142.72	97.51	Thermally Altered	5	246	142

Table A15-20 H continued

2005 N	E	Depth	Type	Art	N	E
246.22	142.74	97.47	Chert Pebble	5	246	142
247.38	142.41	98.71	Body Sherd	6	246	142
247.72	143.16	98.27	Biface Fragment	6	246	142
247.64	142.78	97.93	Chert Flake	6	246	142
246.44	143.19	97.65	Chert Cobble	6	246	142
246.31	143.06	97.57	Chert Pebble	6	246	142
246.45	142.45	97.5	Quartz Pebble	6	246	142
246.74	142.15	97.45	Chert Flake	6	246	142
247.32	142.39	98.71	Base	7	246	142
247.46	142.83	97.95	Flake/Bend Break	7	246	142
246.85	143.15	97.45	Possible Bend Break	7	246	142
247.13	142.74	97.95	Quartz. Pebble	8	246	142
246.79	142.1	97.45	Chert Pebble	8	246	142
247.77	142.67	97.92	Chert Cortex	9	246	142
246.81	142.18	97.45	Quartz. Pebble	9	246	142
247.49	142.66	97.95	Chert Tool	10	246	142
246.72	142.11	97.45	Chert Pebble	10	246	142
247.38	142.66	97.95	Quartz. Pebble	11	246	142
247.04	142.29	97.45	Chert Bend Break	11	246	142
247.49	142.53	97.92	Cortex Pebble	12	246	142
247.1	142.33	97.45	Cortical Chert Pebble	12	246	142
247.2	142.49	97.95	Chert Pebble	13	246	142
247.15	142.34	97.45	Quartz. Pebble	13	246	142
247.1	142.28	97.95	Quartz. Pebble	14	246	142
247.2	142.42	97.45	Chert Flake	14	246	142
247.8	142.2	97.95	Chert Pebble	15	246	142
247.61	142.15	97.45	Chert Cobble	15	246	142
247.06	142.1	97.95	Cortex Pebble	16	246	142
247.01	142.39	97.45	Chert Cobble	16	246	142
247.24	142.86	97.93	Quartz. Pebble	17	246	142
247.76	142.8	97.93	Bend Break	18	246	142
247.17	142.47	97.91	Cortical Chert	19	246	142
247.78	143	97.965	Bend Break	20	246	142
247.52	142.97	97.95	Bend Break	21	246	142
246.64	143.05	97.95	Flake	22	246	142
246.21	143.39	97.95	Flake	23	246	142
246.21	143.26	97.92	Bladelette	24	246	142
248.85	140.09	98.77	Biface	1	248	140
248.1	141.3	98.67	Biface	1	248	140
248.45	140.3	98.46	Mala Preform	1	248	140
248.6	141	98.15	Core	1	248	140
248.75	140.1	98.1	Core	1	248	140
248.38	140.24		Possible Tool	2	248	140

Table A15-20 H continued

2005 N	E	Depth	Type	Art	N	E
248.82	141.4	98.44	Chert Cobble	2	248	140
248.4	140.7	98.15	Cortical Chert	2	248	140
248.9	140.05	98.1	Chert Boulder	2	248	140
248.25	140.3	98.67	Linear Check Stamp	3	248	140
248.88	141.65	98.41	River Cortex (Chert)	3	248	140
248	140.9	98.15	Blade	3	248	140
248.92	140.6	98.1	Core	3	248	140
248.64	141.94	98.71	Hammerstone	4	248	140
248.17	140.34	98.41	Mala Preform	4	248	140
248.65	141.1	98.17	Cortical Flake	4	248	140
248.31	140.25	98.4	Mala Preform	5	248	140
248.47	143.3	98.85	Chert Pebble	1	248	142
248.7	142.6	98.78	Large Chert Flake	1	248	142
248.9	142.14	98.68	Mala Preform Biface	1	248	142
248.62	143.58	98.5	Chert Cobble	1	248	142
248.5	143.57	98.45		1	248	142
248.44	143.75	98.24	Chert Flake	1	248	142
248.65	142.73	98.25	Chert Cobble	1	248	142
248.3	142.03	98.81	Biface Preform	2	248	142
248.83	142.57	98.73	Hammerstone	2	248	142
248	142.57	98.61	Hammerstone	2	248	142
248.8	142.03	98.51	Chert Boulder	2	248	142
248.99	142.8	98.45	Preform/Biface	2	248	142
248.07	142.8	90.25	Core	2	248	142
248.82	142.78	98.78	Large Chert Flake	3	248	142
248.58	143.94	98.62	Cortical Reduc. Flake	3	248	142
248.97	143.62	98.58	Core	3	248	142
248.67	142.49	98.75	Sherd	4	248	142
248.22	142.55	98.73	Sherd (Debt Ford)	5	248	142
248.45	142.5	98.75	Chert Pebble /	6	248	142
248.63	142.2	98.79	Debt Ford Pottery Sherd	7	248	142
248.5	142.2	98.76	Large Flake	8	248	142
248.5	142.38	98.74	Debt Ford Pottery Sherd	9	248	142
248.83	142.41	98.78	Eroded Sherd	10	248	142
248.9	142.21	98.75	Eroded Sherd	11	248	142
248.35	142.2	98.79	Debt Ford Sherd	12	248	142
248.43	142.15	98.73	Hammerstone	13	248	142
248.15	143.05	98.72	Clay Lump	14	248	142
248.39	142.17	98.7	Sherd	15	248	142
248.45	142.1	98.7	Rim Sherd	16	248	142

Table A15-20 I
Mapped Artifacts from 2006 Excavations at the Topper Site (38AL23).

2006 N	E	Depth	Type	Art#	N	E
242.57	141.37	96.77	Chert	2	242	140
242.66	141.75	96.755	Chert Pebble	3	242	140
242.78	141.6	96.75	Chert Pebble	4	242	140
242.82	141.63	96.78	Chert Pebble	5	242	140
242.83	141.64	96.745	Chert Pebble	6	242	140
242.855	141.635	96.78	Chert Pebble	7	242	140
242.8	141.58	96.745	Chert Pebble	8	242	140
242.655	141.325	96.75	Chert Pebble	9	242	140
242.22	140.15	96.55	Possible Bend Break	1	242	140
242.54	140.18	96.55	Chert Pebble	2	242	140
242.12	140.11	96.55	Small Chert Pebble	3	242	140
242.2	140.35	96.55	Chert Pebble	4	242	140
242.32	140.72	96.52	Chert	1	242	140
242.31	141.66	96.71	Quartz. Pebble	2	242	140
242.28	140.12	96.53	Chert	2	242	140
242.3	141.08	96.71	Quartz. Pebble	3	242	140
242.22	140.97	96.51	Possible Bend Break	4	242	140
242.91	140.3	96.53	Chert	5	242	140
242.12	140.2	96.54	Flake	8	242	140
242.48	140.3	96.54	Chert Boulder	9	242	140
242.38	140.5	96.54	Chert Flake	3	242	140
242.53	140.18	96.53	Possible Bend Break	6	242	140
242.07	140.51	96.5	Chert Pebble	10	242	140
242.35	141.63	96.7	Quartz. Pebble	1	242	140
242.15	141.6	96.7	Cortical Chert	2	242	140
242.33	141.7	96.7	Cortical Chert	3	242	140
242.3	141.56	96.63	Cortical Chert	4	242	140
242.13	140.28	96.49	Chert Pebble	1	242	140
242.75	141.8	96.65	Chert Flake	1	242	140
242.52	141.32	96.61	Chert	3	242	140
242.29	141.47	96.65	Chert	4	242	140
242.44	140.68	96.4	TA Flake	2	242	140
242.37	140.2	96.42	TA Flake	1	242	140
242.09	140.27	96.45	Chert Flake	3	242	140
242.14	140.25	96.45	Chert	4	242	140
242.82	141.73	96.56	Chert	1	242	140
242.12	141.33	96.5	Chert Pebble	1	242	140
242.4	141.05	96.5	Chert Pebble	3	242	140
242.65	141.31	96.5	Quartz. Pebble	4	242	140
242.98	141.89	96.5	Chert Pebble	5	242	140
242.98	141.56	96.5	Chert Flake	6	242	140
242.49	141.2	96.502	Chert Biface	7	242	140

Table A15-20 I continued

2006 N	E	Depth	Type	Art#	N	E
242.562	141.23	96.55	Chert Pebble	8	242	140
242.602	141.22	96.5	Chert Cobble	9	242	140
242.75	140.2	96.33	Chert Pebble	1	242	140
242.46	140.68	96.33	Chert Boulder	2	242	140
242.83	141.24	96.45	Cortical Pebble	2	242	140
242.84	141.08	96.45	Flake	1	242	140
242.92	141.69	96.45	Cortical Chert Pebble	4	242	140
242.86	140.93	96.27	Chert Flake	1	242	140
242.4	140.53	96.28	Chert Flake	4	242	140
242.02	140.52	96.28	Bend Break	8	242	140
242.94	140.23	96.3	Chert Flake	9	242	140
242.74	140.24	96.28	Cortical Chert	2	242	140
242.2	140.45	96.27	Chert Flake	3	242	140
242.04	140.29	96.29	Chert Cobble	7	242	140
242.9	140.32	96.29	Chert Flake	10	242	140
242.79	140.19	96.285	Chert Flake	3	242	140
242.31	140.225	96.235	Bend Break	5	242	140
242.81	141.83	96.35	Bend Break	3	242	140
242.7	141.11	96.35	Chert Flake	9	242	140
242.99	141.35	96.4	Chert Flake	1	242	140
242.8	141.32	96.4	Chert Flake	7	242	140
242.98	140.8	96.19	Chert Flake	1	242	140
242.665	140.185	96.17	Chert Flake Tool	2	242	140
242.72	141.82	96.35	Chert Flake	4	242	140
242.98	141.13	96.32	Chert Pebble /Flake	5	242	140
242.19	141.84	96.31	Chert Flake	11	242	140
242585	141.76	96.335	Chert Flake	9	242	140
242.82	140.72	96.1	Chert Flake	3	242	140
242.96	140.21	96.12	Chert Flake	5	242	140
242.93	140.18	96.115	Chert Pebble	6	242	140
242.025	140.09	96.11	Chert Flake	8	242	140
242.97	141.09	96.29	Chert Flake Pot Lid	1	242	140
242.85	141.05	96.29	Chert Flake	3	242	140
242.14	141.39	96.255	Chert Flake	6	242	140
242.42	141.59	96.29	Chert Pebble /Core	2	242	140
242.98	140.99	96.06	Chert Flake	10	242	140
242.63	140.7	96.06	Chert Flake	11	242	140
242.59	140.91	96.075	Cortical Chert Flake	13	242	140
242.92	140.24	96.105	Chert Tool	4	242	140
242.83	141.23	96.21	Chert Flake	3	242	140
242.61	141.24	96.22	Chert Flake	4	242	140
242.98	141.7	96.2	Chert Flake	7	242	140
242.09	141.81	96.22	Chert Flake	8	242	140

Table A15-20 I continued

2006 N	E	Depth	Type	Art#	N	E
242.12	141.33	96.22	Chert Flake/Pebble	11	242	140
242.96	141.78	96.23	Chert Flake/Debris	2	242	140
242.64	141.68	96.31	Chert Flake	12	242	140
242.03	141.265	96.22	Chert Flake	12	242	140
242.33	141.82	96.21	Bend Break	6	242	140
242.85	140.31	96.03	Decort. Flake	1	242	140
242.79	140.29	96.01	Decor. Flake	2	242	140
242.9	141.38	96.24	Chert Flake	1	242	140
242.93	140.38	96	Chert Flake	3	242	140
242.8	140.97	96	Chert Pebble , Cortical	4	242	140
242.25	140.77	96	Chert Pebble	6	242	140
242.35	140.43	96	Chert Pebble	7	242	140
242.15	141.43	96.24	Chert Pebble	9	242	140
242.6	140.5	96.03	Chert Flake	5	242	140
242.63	140.38	95.95	Chert Flake/	2	242	140
242.89	140.23	95.95	Chert Pebble	1	242	140
242.38	140.63	95.95	Chert Flake	3	242	140
242.47	140.79	95.96	Chert Pebble	4	242	140
242.42	140.1	95.95	Chert Pebble	5	242	140
242.7	140.88	95.95	Chert Pebble	7	242	140
242.53	141.92	96.185	Chert Pebble	1	242	140
242.33	141.92	96.15	Chert Flake	2	242	140
242.12	141.9	96.15	Angular Chert Pebble	3	242	140
242.11	141.19	96.15	Chert Flake	5	242	140
242.99	141.22	96.145	Chert Flake	3	242	140
242.4	141.07	96.14	Chert Pebble	5	242	140
242.9	141.99	96.13	Chert Flake	2	242	140
242.56	140.34	95.9	Chert Flake	3	242	140
242.99	141.97	96.1	Chert Cobble	1	242	140
242.43	141.71	96.14	Chert Pebble	6	242	140
242.54	141.18	96	Broken Quartz. Pebble	7	242	140
242.26	141.21	96.14	Chert Pebble /Cobble	8	242	140
242.68	141.35	96.1	Quartz. Pebble	9	242	140
242.57	141.15	96.05	Chert Flake	2	242	140
242.81	141.92	96.08	Chert Flake	5	242	140
242.45	141.75	96.07	Tertiary Flake Chert	6	242	140
242.83	141	96.05	Chert Pebble	1	242	140
242.56	141.03	96.09	Quartz. Pebble	3	242	140
242.46	141.05	96.09	Chert Pebble Utilized	4	242	140
242.07	141.71	96.06	Quartz. Pebble	7	242	140
242.86	140.29	95.87	Chert Flake	1	242	140
242.16	140.9	95.85	Chert Flake	2	242	140
242.82	141.82	96	Chert Core	1	242	140

Table A15-20 I continued

2006 N	E	Depth	Type	Art#	N	E
242.7	140.17	95.82	Chert Pebble	1	242	140
242.8	140.94	95.81	Flake	3	242	140
242.37	140.56	96.77	Chert Flake	1	242	140
242.49	141.41	96.72	Utilized Tool	1	242	140
242.35	141.63	96.7	Quartz. Pebble	1	242	140
242.82	141.73	96.56	Chert	1	242	140
242.84	141.08	96.45	Flake	1	242	140
242.58	141.29	96.43	Chert Pebble	1	242	140
242.86	141.07	96.35	Chert Pebble	1	242	140
242.77	141.56	96.77	Chert Flake	1	242	140
242.49	141.41	96.72	Utilized Tool	1	242	140
242.75	141.8	96.65	Chert Flake	1	242	140
242.12	141.33	96.5	Chert Pebble	1	242	140
242.58	141.29	96.43	Chert Pebble	1	242	140
242.9	141.35	96.4	Chert Flake	1	242	140
242.86	141.07	96.35	Chert Pebble	1	242	140
242.32	140.72	96.51	Chert	1	242	140
242.24	140.68	96.36	Bend Break	1	242	140
242.95	140.7	96.22	Chert Pebble	1	242	140
242.8	140.68	96.14	Chert Flake	1	242	140
242.22		96.55	Possible Bend Break	1	242	140
242.13	140.28	96.48	Chert Pebble	1	242	140
242.37	140.2	96.42	TA Flake	1	242	140
242.24	140.68	96.36	Bend Break	1	242	140
242.75	140.2	96.33	Chert Pebble	1	242	140
242.86	140.93	96.28	Chert Flake	1	242	140
242.95	140.7	96.22	Chert Pebble	1	242	140
242.98	140.8	96.19	Chert Flake	1	242	140
242.8	140.68	96.14	Chert Flake	1	242	140
242.84	140.535	96.085	Chert Flake	1	242	140
242.93	140.36	95.9	Chert Pebble	1	242	140
242.57	140.34	96.77	Chert	2	242	140
242.96	141.76	96.61	Chert Flake	2	242	140
242.42	141.24	96.5	Quartz. Pebble	2	242	140
242.22	141.88	96.37	Chert Pebble	2	242	140
242.78	141.13	96.35	Chert Flake	2	242	140
242.31	141.66	96.71	Quartz. Pebble	2	242	140
242.15	141.6	96.7	Cortical Chert	2	242	140
242.96	141.76	96.61	Chert Flake	2	242	140
242.42	141.24	96.5	Chert Pebble	2	242	140
242.83	141.24	96.45	Cortical Pebble	2	242	140
242.22	141.88	96.37	Chert Pebble	2	242	140
242.78	141.13	96.35	Chert Flake	2	242	140

Table A15-20 I continued

2006 N	E	Depth	Type	Art#	N	E
242.9	141.82	96.04	Chert Pebble	2	242	140
242.28	140.12	96.53	Chert	2	242	140
242.01	140.57	96.47	Quartz. Pebble /Tool	2	242	140
242.44	140.68	96.4	TA Flake	2	242	140
242.5	140.45	96.37	Chert Boulder	2	242	140
242.74	140.24	96.28	Cortical Chert Pebble	2	242	140
242.95	140.7	96.22	Chert Pebble	2	242	140
242.065	140.185	96.17	Chert Flake	2	242	140
242.92	140.6	96.15	Chert Pebble	2	242	140
242.54	140.18	96.55	Chert Pebble	2	242	140
242.01	140.57	96.47	Quartz. Pebble /Tool	2	242	140
242.5	140.45	96.37	Chert Boulder	2	242	140
242.95	140.7	96.22	Chert Pebble	2	242	140
242.92	140.6	96.15	Chert Pebble	2	242	140
242.19	140.58	96.085	Chert Flake	2	242	140
242.55	140.36	95.9	Chert Pebble	2	242	140
242.73	140.36	95.8	Chert Flake	2	242	140
242.52	141.32	96.61	Chert	3	242	140
242.98	141.89	96.5	Chert Pebble	3	242	140
242.35	141.84	96.45	Bend Break	3	242	140
242.83	141.27	96.34	Chert Flake	3	242	140
242.66	141.75	96.755	Chert Pebble	3	242	140
242.3	141.68	96.71	Quartz. Pebble	3	242	140
242.33	141.7		Cortical Chert	3	242	140
242.35	140.84	96.45	Bend Break	3	242	140
242.81	141.83	96.35	Bend Break	3	242	140
242.83	141.27	96.34	Chert Flake	3	242	140
242.82	141.97	96.04	Quartz. Pebble	3	242	140
242.27	140.45	96.27	Chert Flake	3	242	140
242.93	140.61	96.19	Chert Flake	3	242	140
242.82	140.72	96.1	Chert Flake	3	242	140
242.12	140.11	96.55	Small Chert Pebble	3	242	140
242.38	140.5	96.54	Chert Flake	3	242	140
242.09	140.27	96.45	Chert Flake	3	242	140
242.79	140.19	96.225	Chert Flake	3	242	140
242.93	140.61	96.19	Chert Flake	3	242	140
242.96	140.65	96.07	Chert Pebble	3	242	140
242.78	141.6	96.75	Chert Pebble	4	242	140
242.35	141.85	96.73	Reduction Chert Piece	4	242	140
242.65	141.31	96.5	Quartz. Pebble	4	242	140
242.92	141.69	96.45	Cortical Pebble	4	242	140
242.48	141.25	96.375	Chert Pebble	4	242	140
242.35	141.85	96.73	Reduction/Chert	4	242	140

Table A15-20 I continued

2006 N	E	Depth	Type	Art#	N	E
242.3	141.56	96.63	Cortical Chert	4	242	140
242.29	141.47	96.65	Chert	4	242	140
242.48	141.25	96.375	Chert Pebble	4	242	140
242.72	141.82	96.35	Chert Flake	4	242	140
242.45	141.52	96.27	Chert Pebble	4	242	140
242.39	141.18	96.8	Possible Bend Break	4	242	140
242.4	141.46	96.145	Chert Bend Break	4	242	140
242.97	141.63	96.03	Chert Flake	4	242	140
242.14	140.25	96.45	Chert	4	242	140
242.53	140.3	96.24	Chert Pebble	4	242	140
242.7	140.68	96.155	Chert Flake/Bend Break	4	242	140
242.2	140.35	96.55	Chert Pebble	4	242	140
242.22	140.97	96.51	Possible Bend Break	4	242	140
242.4	140.53	96.28	Bend Break Spall	4	242	140
242.53	140.3	96.24	Chert Pebble	4	242	140
242.7	140.68	96.155	Chert Flake/Bend Break	4	242	140
242.92	140.24	96.105	Chert Tool	4	242	140
242.74	140.665	96.06	Chert Flake	4	242	140
242.32	140.32	95.91	Cortical Chert Pebble	4	242	140
242.33	140.8	95.8	Chert Flake	4	242	140
242.82	141.63	96.78	Chert Pebble	5	242	140
242.11	141.89	96.65	Quartz. Pebble	5	242	140
242.98	141.89	96.5	Chert Pebble	5	242	140
242.95	141.23	96.39	Chert Pebble	5	242	140
242.11	141.89	96.65	Quartz. Pebble	5	242	140
242.95	141.23	96.39	Chert Pebble	5	242	140
242.98	141.13	96.32	Chert Pebble /Flake	5	242	140
242.15	141.54	96.28	Chert Pebble	5	242	140
242.31	141.47	96.22	Chert (Utilized)	5	242	140
242.8	141.7	96.03	Chert Pebble	5	242	140
242.31	140.68	96.25	Bend Break/ Blade Core	5	242	140
242.68	140.66	96.15	Chert Flake	5	242	140
242.91	140.3	96.53	Chert	5	242	140
242.31	140.68	96.25	Chert Bend Break	5	242	140
242.31	140.225	96.235	Bend Break	5	242	140
242.68	140.66	96.13	Chert Flake	5	242	140
242.96	140.21	96.12	Chert Flake	5	242	140
242.95	140.22	96.07	Chert Flake	5	242	140
242.35	140.43	96	Chert Flake	5	242	140
242.14	140	95.93	Bend Break	5	242	140
242.83	141.64	96.745	Chert Pebble	6	242	140
242.48	141.77	96.35	Bend Break	6	242	140
242.775	141.77	96.33	Chert Pebble /Flake	6	242	140

Table A15-20 I continued

2006 N	E	Depth	Type	Art#	N	E
242.98	141.56	96.5	Chert Flake	6	242	140
242.48	141.77	96.35	Bend Break	6	242	140
242.775	141.77	96.33	Chert Pebble /Flake	6	242	140
242.23	141.28	96.02	Chert Flake	6	242	140
242.17	140.19	96.255	Bend Break	6	242	140
242.53	140.18	96.53	Possible Bend Break	6	242	140
242.117	140.19	96.255	Bend Break	6	242	140
242.93	140.18	96.115	Chert Pebble	6	242	140
242.93	140.13	96.06	Cortical	6	242	140
242.4	140.44	95.95	Chert Flake	6	242	140
242.855	141.635	96.78	Chert Pebble	7	242	140
242.49	141.2	96.502	Chert Biface	7	242	140
242.47	141.73	96.34	Chert Debris	7	242	140
242.47	141.73	96.34	Chert Debris	7	242	140
242.13	141.71	96.275	Chert Debris	7	242	140
242.2	141.5	96.02	Chert Flake	7	242	140
242.5	140.45	96.51	Reduction Flake	7	242	140
242.04	140.29	96.29	Chert Cobble	7	242	140
242.76	140.88	96.11	Chert Flake	7	242	140
242.5	140.45	96.15	Reduction Flake	7	242	140
242.76	140.88	96.11	Chert Flake	7	242	140
242.85	140.85	96.06	Microflake	7	242	140
242.8	141.58	96.745	Chert Pebble	8	242	140
242.64	141.865	96.34	Chert Flake	8	242	140
242.562	141.23	96.55	Chert Pebble	8	242	140
242.19	141.21	96.37	Chert Flake	8	242	140
242.64	141.865	96.34	Chert Flake	8	242	140
242.03	141.84	96.25	Chert Pebble	8	242	140
242.28	142.185	96.02	Chert Flake	8	242	140
242.02	140.52	96.28	Bend Break	8	242	140
242.12	140.2	96.54	Flake	8	242	140
242.025	140.09	96.11	Chert Flake	8	242	140
242.72	140.67	96.05	Chert Cortical Flake	8	242	140
242.22	140.62	96.01	Chert Flake	8	242	140
242.655	141.325	96.75	Chert Pebble	9	242	140
242.602	141.22	96.5	Chert Cobble	9	242	140
242.585	141.76	96.335	Chert Flake	9	242	140
242.315	141.79	96.255	Chert Pebble	9	242	140
242.99	140.39	96.1	Chert Boulder	9	242	140
242.48	140.3	96.54	Chert Boulder	9	242	140
242.94	140.23	96.3	Chert Flake	9	242	140
242.99	140.39	96.1	Chert Boulder	9	242	140
242.5	140.35	96.06	Chert Boulder	9	242	140

Table A15-20 I continued

2006 N	E	Depth	Type	Art#	N	E
242.83	141.47	96.31	Bend Break	10	242	140
242.83	141.47	96.31	Bend Break	10	242	140
242.04	141.71	96.21	Chert Flake	10	242	140
242.86	140.62	96.085	Chert Core	10	242	140
242.07	140.51	96.5	Chert Pebble	10	242	140
242.9	140.32	96.295	Chert Flake	10	242	140
242.86	140.62	96.085	Chert Core	10	242	140
242.19	141.84	96.31	Chert Flake	11	242	140
242.64	141.68	96.31	Chert Flake	12	242	140
242.29	140.12	96.06	Chert Flake	12	242	140
242.58	140.8	96.055	Quartz. Pebble	14	242	140
242.54	140.84	96.06	Cortical Chert Pebble	15	242	140
242.04	140.37	96.085	Chert Flake	16	242	140
242.13	140.9	96.07	Chert Pebble	17	242	140
242.12	140.41	96.005	Chert Pebble	18	242	140
242.04	140.55	96.06	Chert Flake	19	242	140
243.23	142.69	97.02	Quartz. Pebble	1	242	142
243.195	142.44	96.95	Quartz. Pebble	1	242	142
242.28	142.14	96.755	Chert Flake	1	242	142
242.9	142.17	96.73	Chert Flake	1	242	142
242.69	142.195	96.67	Chert Flake	1	242	142
242.41	142.41	96.625	Chert Flake	1	242	142
242.5	142.87	96.52	Chert Cobble	1	242	142
242.07	142.49	96.45	Bend Break	1	242	142
242.43	142.73	96.43	Chert Flake	1	242	142
242.37	142.06	96.355	Chert Flake	1	242	142
243.24	142.875	96.945	Chert Pebble	2	242	142
242.26	142.68	96.78	Chert Tool/Bend Break	2	242	142
242.75	142.09	96.71	Bend Break	2	242	142
242.86	142.16	96.68	Chert Flake	2	242	142
242.03	142.32	96.605	Chert Flake	2	242	142
242.745	142.895	96.58	Chert Flake	2	242	142
242.205	142.58	96.5	Chert Flake	2	242	142
242.44	142.94	96.45	Chert Flake	2	242	142
242.99	142.24	96.41	Chert Flake	2	242	142
242.4	142.025	96.35	Chert Pebble	2	242	142
242.12	142.91	96.8	Chert Flake	3	242	142
242.77	142.29	96.71	Chert Pebble	3	242	142
242.38	142.825	96.66	Chert Flake	3	242	142
242.98	142.44	96.585	Bend Break	3	242	142
242.19	142.815	96.53	Chert Flake	3	242	142
242.27	142.19	96.415	Chert Pebble	3	242	142
242.71	142.99	96.39	Chert Flake/Pebble	3	242	142

Table A15-20 I continued

2006 N	E	Depth	Type	Art#	N	E
242.08	142.92	96.79	Chert Pebble	4	242	142
242.655	142.55	96.71	Quartz. Pebble	4	242	142
242.43	142.95	96.67	Chert Flake	4	242	142
242.34	142.635	96.51	Bend Break	4	242	142
242	142.35	96.4	Chert Pebble	4	242	142
242.54	142.95	96.39	Chert Pebble	4	242	142
242.15	142.32	96.77	Bend Break	5	242	142
242.29	142.55	96.72	Chert Pebble	5	242	142
242.63	142.65	96.52	Chert Flake	5	242	142
242.76	142.67	96.4	Chert Flake	5	242	142
242.45	142.35	96.38	Chert Pebble	5	242	142
242.46	142.94		Chert Pebble	6	242	142
242.48	142.12	96.7	Chert Flake	6	242	142
242.62	142.58	96.52	Chert Pebble	6	242	142
242.93	142.925	96.42	Chert Pebble	6	242	142
242.37	142.435	96.36	Chert Pebble	6	242	142
242.47	142.7	96.77	Chert Bend Break	7	242	142
242.14	142.04	96.7	Chert Flake	7	242	142
242.72	142.77	96.31	Chert Flake	7	242	142
242.12	142.9	96.76	Chert Bend Break	8	242	142
242.28	142.8	96.7	Boulder	8	242	142
242.23	142.77	96.75	Cortical Chert Flake	9	242	142
242.82	142.88	96.7	Chert Pebble	9	242	142
242.88	142.35	96.76	Cortical Chert Pebble	10	242	142
242.89	142.36	96.77	Quartz. Pebble	11	242	142
242.71	142.22	96.75	Chert Pebble	12	242	142
242.85	142.73	96.755	Chert Cobble	13	242	142

Table A15-20 J
Mapped Artifacts from 2007 Excavations at the Topper Site (38AL23).

2007 N	E	Depth	Type	Art#	N	E
242.97	141.94	95.97	Chert Flake	1	242	140
242.86	140.93	95.8	Chert Pebble	1	242	140
242.69	140.96	95.8	Chert Flake	2	242	140
242.48	140.85	95.8	Broken Quartz.	3	242	140
242.11	140.7	95.76	Broken Quartz. Flake	4	242	140
242.08	140.26	95.8	Broken Quartz. Pebble	5	242	140
242.32	140.12	95.8	Chert Flake	6	242	140
242.71	140.44	95.75	Chert	7	242	140
242.77	140.4	95.8	Chert Flake	8	242	140
242.87	140.3	95.79	Quartz. Pebble	9	242	140
242.91	140.03	95.8	Chert Flake	10	242	140
242.37	141.9	95.93	Quartz. Pebble	2	242	140
241.37	141.9	95.93	Quartz Hammerstone	2	242	140
242.34	141.44	95.93	Chert	3	242	140
241.34	141.44	95.93	Quartz Pebble	3	242	140
242.5	141.5	95.96	Chert Tool	4	242	140
242.84	140.29	95.74	Chert	2	242	140
242.84	140.08	95.71	Battered Chert	3	242	140
242.45	140.47	95.73	Chert Bend Break	4	242	140
242.2	140.54	95.74	Bend Break	5	242	140
242.38	140.27	95.73	Chert	6	242	140
242.5	140.94	95.73	Chert Flake	7	242	140
242.44	140.75	95.75	Chert Flake	9	242	140
242.07	140.7	95.73	Chert Flake	10	242	140
242.76	140.6	95.74	Chert Flake	11	242	140
242.34	141.85	95.87	Quartz/Battered	1	242	140
242.66	141.3	95.9	Broken Quartz. Pebble	2	242	140
242.11	141.66	95.88	Broken Quartz. Pebble	4	242	140
242.65	141.37	95.86	Chert	5	242	140
242.54	141.4	95.88	Chert	6	242	140
242.31	141.49	95.89	Chert Pebble	8	242	140
242.67	140.95	95.67	Flake Tool	1	242	140
242.64	140.78	95.69	Cortical	2	242	140
242.99	140.76	95.69	Cortical	3	242	140
242.47	140.72	95.67	Quartz. Flake	4	242	140
242.44	140.48	95.7	Chert Flake	5	242	140
242.44	140.79	95.67	Broken Quartz. Pebble	6	242	140
242.49	140.82	95.69	Chert Debris	7	242	140
242.6	140.21	95.7	Chert	8	242	140
242.59	140.24	95.7	Chert Flake	9	242	140
242.48	140.19	95.68	Cortical	10	242	140
242.05	140.62	95.67	Chert Flake	12	242	140

Table A15-20 J continued

2007 N	E	Depth	Type	Art#	N	E
242.1	140.02	95.68	Blade Like Flake	13	242	140
242.2	140.24	95.69	Broken Quartz	14	242	140
242.25	140.2	95.67	Broken Quartz	15	242	140
242.3	140.11	95	Bend Break	16	242	140
242.29	140.11	95.69	Cortical Flake	17	242	140
242.29	140.04	95.69	Cortical Chert	18	242	140
242.52	141.95	95.83	Chert Flake	1	242	140
242.67	141.97	95.83	Broken Chert Pebble	2	242	140
242.84	141.42	95.82	Battered Quartz. Pebble	3	242	140
242.82	141.78	95.81	Chert Flake	4	242	140
242.88	141.29	95.82	Chert	5	242	140
242.66	141.34	95.83	Chert	6	242	140
242.59	141.36	95.82	Chert	7	242	140
242.94	141.12	95.82	Broken Quartz Pebble	8	242	140
242.44	141.64	95.8	Broken Quartz Pebble	9	242	140
242.05	141.92	95.83	Chert Flake	12	242	140
242.25	141.82	95.81	Chert Flake	13	242	140
242.43	141.36	95.81	Broken Quartz Pebble	14	242	140
242.3	141.64	95.8	Chert Blade Core	15	242	140
242.79	140.85	95.6	Broken Quartz.	1	242	140
242.66	140.74	95.64	Cortical	2	242	140
242.59	140.72	95.62	Broken Chert	3	242	140
242.38	140.49	95.64	Cortical	4	242	140
242.45	140.95	95.61	Cortical	5	242	140
242.25	140.88	95.65	Cortical Chert	6	242	140
242.27	140.8	95.65	Chert Flake	7	242	140
242.09	141.67	95.79	Chert Core	1	242	140
242.99	141.95	95	Bend Break	2	242	140
242.99	141.87	95.77	Broken Quartz. Pebble	2	242	140
242.81	141.8	95.75	Chert Flake	3	242	140
242.82	141.52	95.77	Quartz. Pebble	4	242	140
242.75	141.44	95.79	Chert Flake	5	242	140
242.71	141.93	95.8	Chert Flake	6	242	140
242.71	141.22	95.76	Chert	7	242	140
242.71	141.13	95.77	Broken Quartz Pebble	8	242	140
242.56	141.8	95.77	Broken Quartz. Pebble	9	242	140
242.49	141.93	95.77	Quartz. Flake	10	242	140
242.44	141.86	95.76	Chert Flake	11	242	140
242.38	141.67	95.7	Bend Break/Flake	12	242	140
242.25	141.75	95.79	Chert Flake	14	242	140
242.24	141.32	95.76	Chert	15	242	140
242.16	141.72	95.77	Chert Tool	16	242	140
242.11	141.71	95.75	Chert Flake	17	242	140

Table A15-20 J continued

2007 N	E	Depth	Type	Art#	N	E
242.11	141.17	95.78	Bend Break	18	242	140
242.06	141.98	95.78	Cortical	19	242	140
242	141.8	95.75	Chert Flake	20	242	140
242.61	140.96	95.59	Broken Quartz. Pebble	3	242	140
242.08	140.75	95.59	Chert Cortex	4	242	140
242.28	140.41	95.59	Broken Quartz. Pebble	5	242	140
242.3	140.04	95.59	Broken Cortex	6	242	140
242.64	140.08	95.6	Quartz Flake	7	242	140
242.99	141.88	95.72	Chert Flake	1	242	140
242.26	141.26	95.7	Chert Flake	3	242	140
242.15	141.11	95.74	Broken Quartz	4	242	140
242.99	141.7	95.7	Cortical Chert	5	242	140
242.98	141.74	95.71	Cortical	6	242	140
242.99	141.61	95.74	Chert Flake	7	242	140
242.93	141.36	95.7	Flake/Bend Break	8	242	140
242.9	141.65	95.73	Chert Flake	9	242	140
242.87	141.93	95.72	Chert Flake	10	242	140
242.89	141.93	95.7	Cortical	11	242	140
242.7	140.52	95.705	Chert Cobble	12	242	140
242.7	141.09	95.73	Chert Pebble	13	242	140
242.56	141.32	95.71	Cortical Debris	15	242	140
242.4	141.35	95.72	Cortical Flake	16	242	140
242.38	141.62	95.72	Chert Flake	17	242	140
242.28	141.7	95.72	Chert Flake	18	242	140
242.26	141.44	95.7	Cortical	19	242	140
242.28	141.18	95.72	Broken Quartz. Pebble	20	242	140
242.18	141.79	95.7	Cortical	21	242	140
242.18	141.73	95.71	Quartz. Pebble	22	242	140
242.13	141.79	95.7	Chert Debris	23	242	140
242.12	141.41	95.71	Cortical	24	242	140
242.53	140.22	95.52	Cortical Pebble	1	242	140
242.54	141.99	95.67	Flake	1	242	140
242.88	141.6	95.65	Chert Flake	2	242	140
242.92	141.35	95.68	Cortical Chert	3	242	140
242.875	141.29	95.65	Chert Flake	4	242	140
242.945	141.22	95.69	Chert Flake	5	242	140
242.785	141.28	95.67	Chert	6	242	140
242.71	141.79	95.65	Chert	7	242	140
242.71	141.79	95.65	Chert	8	242	140
242.58	141.26	95.67	Chert Flake	9	242	140
242.4	141.88	95.66	Chert Flake	10	242	140
242.36	141.74	95.65	Chert Flake	11	242	140
242.26	141.71	95.65	Broken Quartz.	12	242	140

Table A15-20 J continued

2007 N	E	Depth	Type	Art#	N	E
242.28	141.63	95.65	Chert Flake	13	242	140
242.13	141.91	95.66		14	242	140
242.1	141.79	95.66	Broken Quartz.	15	242	140
242.08	141.99	95.655	Bend Break	16	242	140
242	141.8	95.69	Chert Flake	17	242	140
2242.67	140.45	95.45	Chert Core	1	242	140
242.84	140.68	95.46	Chert Flake	2	242	140
242.87	140.46	95.4	Cortical Chert Boulder	3	242	140
242.92	140.8	95.48	Broken Quartz.	4	242	140
242.83	140.74	95.46	Broken Cortex	5	242	140
242.83	140.63	95.45	Cortical Chert Cobble	6	242	140
242.74	140.67	95.48	Chert Cobble	7	242	140
242.75	140.76	95.48	Chert Cobble	8	242	140
242.5	141.13	95.64	Chert Flake	1	242	140
242.5	141.84	95.61	Cortical Flake	2	242	140
242.8	141.17	95.61	Cortical Flake	3	242	140
242.99	141.87	95.62	Chert Flake	4	242	140
242.465	141.52	95.63	Chert Flake	5	242	140
242.73	141.99	95.62	Chert Flake	6	242	140
242.77	141.71	95.64	Cortical	7	242	140
242.24	141.96	95.61	Cortical	8	242	140
242.8	141.28	95.6	Cortical Flake	9	242	140
242.535	141.77	95	Bend Break	10	242	140
242.4	141.8	95.63	Quartz Core	11	242	140
242.34	141.78	95.65	Chert Flake	12	242	140
242.69	141.74	95.63	Cortical Flake	13	242	140
242.32	141.93	95.6	Cortical Debris	14	242	140
242.94	141.8	95.63	Cortical Flake	15	242	140
242.28	141.95	95.6	Cortical	16	242	140
242.93	141.81	95.6	Cortical Flake	17	242	140
242.95	141.85	95.62	Cortical Flake	18	242	140
242.23	141.71	95.64	Cortical Debris	19	242	140
242.14	141.91	95.63	Chert Flake	20	242	140
242.16	141.13	95.64	Chert Flake	21	242	140
242.13	141.46	95.64	Chert Flake	22	242	140
242.18	141.75	95.64	Possible Bend Break	23	242	140
242.14	141.78	95.65	Cortical	24	242	140
242.12	141.86	95.64	Cortical	25	242	140
242.695	141.485	95.71	Battered Boulder	25	242	140
242.33	141.82	95.6	Chert Flake	26	242	140
242.15	141.96	95.6	Chert Flake	27	242	140
242.07	141.03	95.6	Cortical	28	242	140
242.08	141.94	95.6	Chert Flake	29	242	140

Table A15-20 J continued

2007 N	E	Depth	Type	Art#	N	E
242.25	141.93	95.59	Broken Quartz.	12	242	140
242.79	141.69	95.59	Broken Quartz.	22	242	140
242.53	141.46	95.55	Broken Quartz. Pebble	3	242	140
242.98	141.02	95.55	Broken Quartz. Pebble	14	242	140
242.37	141.98	95.585	Broken Quartz. Pebble	34	242	140
242.29	141.88	95.55	Broken Quartz Pebble	38	242	140
242.11	141.71	95.56	Chert Flake	10	242	140
242.99	141.97	95.6	Chert Flake	16	242	140
242.98	141.54	95.59	Chert Flake	18	242	140
242.84	141.85	95.55	Chert Flake	20	242	140
242.82	141.96	95.58	Chert Flake	21	242	140
242.71	141.92	95.56	Chert Flake	24	242	140
242.55	141.94	95.56	Chert Flake	33	242	140
242.35	141.85	95.555	Chert Flake	35	242	140
242.33	141.83	95.55	Chert Flake	36	242	140
242.26	141.61	95.56	Chert Flake	40	242	140
242.07	141.71	95.57	Core	9	242	140
242.22	141.89	95.55	Cortical Chert	41	242	140
242.62	141.77	95.59	Cortical Chert	37	242	140
242.11	141	95.6	Cortical	1	242	140
242.39	141.21	95.59	Cortical	2	242	140
242.58	141.51	95.57	Cortical	4	242	140
242.34	141.68	95.58	Cortical	7	242	140
242.4	141.79	95.56	Cortical	11	242	140
242.99	141.86	95.57	Cortical	15	242	140
242.95	141.22	95.57	Cortical	17	242	140
242.88	141.94	95.55	Cortical	19	242	140
242.8	141.62	95.55	Cortical	23	242	140
242.73	141.69	95.59	Cortical	25	242	140
242.77	141.62	95.55	Cortical	26	242	140
242.73	141.6	95.55	Cortical	27	242	140
242.5	141.7	95.58	Cortical	30	242	140
242.65	141.94	95.56	Cortical Flake	28	242	140
242.67	141.88	95.56	Cortical Flake	29	242	140
242.59	141.98	95.55	Cortical Debris	42	242	140
242.21	141.62	95.56	Possible Utilized …	6	242	140
242.99	141.68	95.55	Quartz. Pebble	13	242	140
242.27	141.6	95.58	Smashed Flake	5	242	140
242.18	141.68	95.57	Smashed Flake	8	242	140
242.99	141.53	95.55		1	242	140
242.93	141.48	95	Flake	2	242	140
242.98	141.96	95.52	Cortical Chert Flake	3	242	140
242.94	141.81	95.52	Cortical	4	242	140

Table A15-20 J continued

2007 N	E	Depth	Type	Art#	N	E
242.76	141.82	95.51	Flake	6	242	140
242.62	141.43	95.5	Cortical Debris	7	242	140
242.57	141.34	95.5	Cortical Debris	8	242	140
242.43	141.86	95.51	Flake Bend Break	9	242	140
242.37	141.37	95.49	Cortical	10	242	140
243.12	142.25	96.81	Quartz Pebble	1	242	142
243.12	142.2	96.81	Quartz Pebble	2	242	142
243.085	142.45	96.74	Bend Break	1	242	142
243.12	142.58	96.75	Chert Cobble	2	242	142
243.62	142.99	96.74	Chert	3	242	142
242.04	140.25	95.75	Bend Break	8	242	140
242.31	140.42	95.67	Broken Hammerstone	11	242	140
242.29	141.42	95.88	Broken Quartz. Tool	7	242	140
242.46	141.92	95.84	Chert Flake	11	242	140
242.99	140.59	95.59	Battered Chert Boulder	2	242	140
242.99	140.5	95.59	Battered Chert Boulder	1	242	140
242.39	141.6	95.77	Chert Flake	13	242	140
242.54	141.77	95.72	Scraper /Flake	14	242	140
242.71	141.22	95.57	Chert Boulder	32	242	140
242.97	141.59	95.55	Chert Boulder	31	242	140
242.26	141.66	95.55	Chert Flake	39	242	140
242.27	141.44	95.52	Chert Flake	11	242	140
242.89	141.72	95.47	Debris	5	242	140
244.77	139.84	97.05	Chert	1	244	138
244.5	139.05	97.01	Bend Break	2	244	138
244.62	139.53	97.005	Flake/Burin	3	244	138
244.97	139.32	97.06	Chert Pebble	6	244	138
244.52	139.54	97.03	Chert Flake	4	244	138
244.85	139.51	96.97	Chert	1	244	138
244.47	139.59	97	Chert /Bend Break	2	244	138
244.97	139.4	96.995	Chert	3	244	138
244.845	139.235	96.965	Chert Flake	5	244	138
244.265	139.145	96.97	Bend Break	7	244	138
244.89	139.29	96.9	Broken Quartz	4	244	138
244.09	139.49	96.93	Broken Quartz. Pebble	3	244	138
244.89	139.27	96.9	Broken Quartz Pebble	7	244	138
244.67	139.41	96.91	Chert	8	244	138
244.3	139.22	96.9	Chert Flake	6	244	138
244.84	139.85	96.905	Cortical Chert Flake	1	244	138
244.77	139.59	95.92	Quartz. Pebble	2	244	138
244.165	139.18	96.905	Bend Break	5	244	138
244.67	139.37	96.88	Broken Quartz. Pebble	2	244	138
244.76	139.31	96.865	Chert Flake	3	244	138

Table A15-20 J continued

2007 N	E	Depth	Type	Art#	N	E
244.67	139.84	96.87	Possible Bend Break	4	244	138
244.67	139.84	96.86	Bend Break	5	244	138
244.225	139.83	96.87	Quartz. Debris	6	244	138
244.44	139.19	96.86	Chert Flake	7	244	138
244.92	139.22	96.89	Chert /Spall	1	244	138
244.44	139.88	96.83	Chert Flake	2	244	138
244.23	139.49	96.82	Chert Flake	3	244	138
244.76	139.85	96.815	Quartz. Pebble	4	244	138
244.4	139.12	96.84	Chert Flake	5	244	138
234.34	139.025	96.82	Chert Flake	7	244	138
244.205	139	96.81	Chert Flake	8	244	138
244.53	139.53	96.8	Chert	9	244	138
244.99	139.28	96.8	Bend Break	10	244	138
244.295	139.48	96.855	Chert Flake	6	244	138
244.6	139.7	96.85	Chert Cobble/Boulder	1	244	138
244.71	139.31	96.785	Chert Flake	1	244	138
244.47	139.88	96.76	Chert Debris	2	244	138
244.32	139.48	96.79	Bend Break	3	244	138
244.58	139.43	96.785	Chert	4	244	138
244.3	139.355	96.74	Chert Flake	1	244	138
244.765	139.66	96.72	Flake	2	244	138
244.39	139.55	96.74	Chert Flake	3	244	138
244.39	139.76	96.7	Cortical Chert Flake	4	244	138
244.46	139.905	96.715	Chert Flake	5	244	138
244.64	139.22	96.66	Chert Flake	1	244	138
244.48	139.26	96.7	Chert Flake	2	244	138
244.54	139.76	96.66	Chert Flake	3	244	138
244.3	139.66	96.68	Broken Quartz.	4	244	138
244.15	139.63	96.665	Chert Flake	5	244	138
244.17	139.93	96	Chert Flake	6	244	138
244.15	139.95	96.66	Core Fragment	7	244	138
244.21	139.93	96.6	Core Fragment	9	244	138
244.29	139.91	96.62	Chert Flake	3	244	138
244.32	139.46		Chert Flake	4	244	138
244.42	139.42	96.63	Chert Debris	5	244	138
244.2	139.74	96.62	Chert Core	2	244	138
244	139	95.62	Core Fragment	2	244	138
244.29	139.82	96.62	Chert Core Fragment	1	244	138
244.51	139.58	96.56	Chert Flake/Debris	1	244	138
244.69	139.31	96.58	Chert Debris	2	244	138
244.7	139.34	96.58	Broken Quartz. Pebble	3	244	138
244.71	139.42	96.55	Cortical Chert Cobble	4	244	138
244.29	139.99	96.67	Core Fragment	8	244	138

Table A15-20 J continued

2007 N	E	Depth	Type	Art#	N	E
242.67	140.8	95.75	Bend Break	1	242	140
242.44	141.78	95.84	Chert Flake	10	242	140
242.85	141.72	95.74	Chert Flake	12	242	140
242.7	140.85	95.49	Chert Flake	9	242	140
242.76	141.82	95.51	Cortical Chert Flake	6	242	140
242.98	141.96	95.52	Flake	3	242	140
244.32	139.48	96.79	Bend Break	3	244	138
244.46	139.29	96.99	Bend Break	4	244	138
244.3	139.7	97.03	Bend Break	5	244	138
244.67	139.44	96.6	Broken Quartz.	6	244	138
244.58	139.43	96.785	Chert	4	244	138
244.71	139.31	96.785	Chert Flake	1	244	138
244	139		Chert Flake	6	244	138
244.47	139.88	96.76	Chert Debris	2	244	138

Table A15-20 K
Mapped Artifacts from 2008 Excavations at the Topper Site (38AL23).

2008 N	E	Depth	Type	Art#	N	E
243.52	139.16	96.97	Chert Debris	1	242	138
243.81	139.56	96.92	Broken Quartz Pebble	1	242	138
243.01	139.16	96.92	Broken Cortical Chert	1	242	138
243.76	139.335	96.865	Chert Flake	2	242	138
243.06	139.31	96.81	Thermal Debris	1	242	138
243.29	139.395	96.82	Cortical Chert	2	242	138
243.36	139.5	96.8	Smashed Chert Flake	3	242	138
243.68	139.26	96.8	Chert Flake Debris	4	242	138
243.87	139.4	96.815	Broken Quartz Pebble	5	242	138
243.2	139.67	96.765	Bend Break/Debris Flake	1	242	138
242	139.565	96.65	Chert Flake	2	242	138
243	139.625	96.825	Broken Quartz	2	242	138
243.95	139.68	96.74	Cortical Chert Pebble	4	242	138
243.85	139.355	96.78	Cortical Chert Debris	5	242	138
243.885	139.16	96.775	Smashed Chert Flake	7	242	138
243.825	139.12	96.75	Smashed Chert Flake	8	242	138
243.94	139.25	96.78	Chert Flake	6	242	138
242.215	139.89	96.705	Broken Quartz Pebble	1	242	138
242.085	139.68	96.695	Thermal Pot Lid/Flake	2	242	138
242.38	139.365	96.735	Chert Debris	4	242	138
242.47	139.375	96.725	Broken Quartz	5	242	138
242.475	139.345	96.71	Chert Flake/Debris	6	242	138
242.055	139.63	96.73	Broken Quartz Pebble	3	242	138
243.95	139.49	96.65	Smashed Chert Flake	1	242	138
243.655	139.405	96.65	Smashed Chert Flake	2	242	138
243.685	139.395	96.68	Broken Quartz Pebble	3	242	138
243.66	139.295	96.65	TA Chert Flake/Debris	4	242	138
243.025	139.665	96.685	Broken Quartz Pebble	5	242	138
243.225	139.085	96.6575	TA Chert Flake	6	242	138
242.85	139.17	96.61	Chert Flake	1	242	138
242	139.565	96.65	Chert Flake	2	242	138
243.105	139.595	96.5625	Chert Debris	3	242	138
243.895	139.902	96.59	Chert Flake	1	242	138
243.865	139.37	96.56	Quartz Pebble	2	242	138
243.215	139.29	96.54	Chert Flake	4	242	138
243.15	139.1	96.58	Smash Chert Flake	5	242	138
243.6	139.17	96.55	Smash Chert Pebble	1	242	138
243.6	139.17	96.55	Smash Chert Pebble	1	242	138
243.855	139.075	96.535	Smash Chert Flake	2	242	138
243.13	139.295	96.505	Chert Flake	3	242	138
243.79	139.35	96.515	Quartz Pebble	4	242	138
243.86	139.385	96.515	Bend Break	5	242	138

Table A15-20 K continued

2008 N	E	Depth	Type	Art#	N	E
243.315	139.615	96.53	Broken Quartz Pebble	6	242	138
243.345	139.67	96.53	Bend Break	7	242	138
243.6	139.17	96.53	Chert Smash Flake Core	8	242	138
243.95	139.88	96.47	Chert	1	242	138
243.16	139.74	96.48	Chert Cobble	2	242	138
243.76	139.46	96.465	Angular Quartz Pebble	3	242	138
243.78	139.36	96.48	Bend Break	4	242	138
243.59	139.235	96.455		5	242	138
243.725	139.86	96.4	Angular Quartz Pebble	1	242	138
243.7	139.82	96.4	Chert Debris	2	242	138
243.545	139.83	96.4	Cortical Chert	3	242	138
243.57	139.7	96.37	Chert Flake	4	242	138
243.45	139.63	96.4	Chert Debris/Flake	5	242	138
243.15	139.59	96.41	Quartz Pebble	6	242	138
243.72	139.25	96.42	Chert Pebble	7	242	138
243.145	139.93	96.36	Broken Quartz Pebble	1	242	138
243.15	139.905	96.385	Chert Flake	2	242	138
243.13	139.295	96.505	Chert Flake	3	242	138
243.17	139.86	96.355	Cortical Chert Flake	4	242	138
243.71	139.82	96.42	Cortical Chert Pebble	5	242	138
243.945	139.81	96.365	Cortical Chert Pebble	6	242	138
243.49	139.65	96.355	Cortical Chert Pebble	7	242	138
243.89	139.56	96.35	Cortical Chert Debris	8	242	138
243.73	139.47	96.355	Chert Debris	9	242	138
243.485	139.5	96.36	Cortical Chert Debris	10	242	138
243.41	139.46	96.41	Chert Flake	11	242	138
243.55	139.325	96.385	Chert Pebble	12	242	138
243.505	139.175	96.35	Cortical Chert Flake	13	242	138
243.2	139.97	96.4	Chert Flake	17	242	138
243.51	139.15	96.36	Cortical Chert Flake	14	242	138
242.16	141.28	95.48	Hammerstone	1	242	140
242.17	141.38	95.46	Possible Debris	3	242	140
242.18	141.47	95.45	Debris	4	242	140
242.18	141.46	95.45	Cortical Rock	6	242	140
242.74	141.48	95.455	Cortex Debris	8	242	140
242.76	141.46	95.44	Cortex Debris	9	242	140
242.88	141.49	95.47	Quartz Pebble	10	242	140
242.104	141.34	95.475	Fossil	11	242	140
242.105	141.88	95.485	Bend Break	12	242	140
242.05	141.31	95.4	Chert Pebble /Cobble	1	242	140
242.04	141.74	95.402	Broken Quartz	2	242	140
242.115	141.78	95.43	Flake	3	242	140
242.46	141.13	95.42	Broken Chert Debris	4	242	140

Table A15-20 K continued

2008 N	E	Depth	Type	Art#	N	E
242.53	141.12	95.4	Cortical Chert	5	242	140
242.58	141.77	95.43	Chert Flake	6	242	140
242.88	141.69	95.41	Cortical Chert Debris	7	242	140
242.95	141.51	95.43	Cortical Chert Debris	8	242	140
242.93	141.62	95.41	Broken Quartz	9	242	140
242.83	141.52	95.995	Cortex	10	242	140
242.85	141.47	95.42	Cortical Chert Debris	11	242	140
242.91	141.47	95.425	Cortical Chert Debris	12	242	140
242.83	141.42	95.415	Cortical Chert	13	242	140
242.82	141.5	95.405	Broken Quartz Pebble	14	242	140
242.9	141.6	95.41	Cortical Chert	15	242	140
242.65	141.89	95.405	Debris Chert	2	242	140
242.56	141.78	95.36	Debris Cortical Chert	3	242	140
242.95	141.73	95.38	Debris Chert	4	242	140
242.87	141.72	95.4	Debris Cortical Chert	5	242	140
242.65	141.61	95.395	Cortical	7	242	140
242.67	141.67	95.38	Cortical	8	242	140
242.8	141.53	95.37	Cortical	9	242	140
242.84	141.38	95.36	Cortical Chert	11	242	140
242.7	141.37	95.365	Cortical Chert	12	242	140
242.91	141.17	95.36	Chert Flake	13	242	140
242.76	141.13	95.39	Cortical Chert Pebble	14	242	140
242.88	141.23	95.38	Cortical Chert Pebble	15	242	140
242.37	141.56	95.37	Chert Debris	16	242	140
242.31	141.24	95.35	Chert Debris/Bend Break	17	242	140
242.65	141.82	95.35	Chert Cortical	19	242	140
242.96	141.64	95.34	Chert Cobble	6	242	140
242.76	141.45	95.39	Cortical Chert	10	242	140
242.76	141.34	95.34	Chert Debris	2	242	140
242.49	140.14	95.365	Cortical	17	242	140
242.527	140.925	95.404	Quartz Cobble	1	242	140
242.808	140.94	95.41	Quartz Cobble	2	242	140
242.779	140.915	95.412	Cortical Rock	3	242	140
242.752	140.796	95.417	Cortical Rock	4	242	140
242.766	140.865	95.417	Quartz Rock	5	242	140
242.78	140.882	95.406	Angular Quartz	6	242	140
242.688	140.582	95.406	Broken Quartz	7	242	140
242.834	140.636	95.404	Debris Quartz	8	242	140
242.68	140.83	95.38	Cortical Chert	1	242	140
242.576	140.828	95.382	Broken Quartz Pebble	2	242	140
242.692	140.298	95.388	Broken Quartz Pebble	3	242	140
242.654	140.792	95.394	Broken Quartz Pebble	4	242	140
242.637	140.464	95.378	Bend Break	5	242	140

Table A15-20 K continued

2008 N	E	Depth	Type	Art#	N	E
242.656	140.76	95.365	Cortical Chert	6	242	140
242.748	140.742	95.39	Cortical	7	242	140
242.732	140.705	95.39	Cortical	8	242	140
242.806	140.592	95.39	Cortical	11	242	140
242.726	140.948	95.382	Cortical Pebble	13	242	140
242.632	140.405	95.354	Cortical Chert	14	242	140
242.882	140.1	95.384	Cortical Chert	15	242	140
242.47	140.03	95.375	Chert Debris	16	242	140
242.64	140.1	95.37	Battered Broken Quartz	18	242	140
242.52	140.45	95.35	Debris Chert	19	242	140
242.66	140.57	95.35	Chert Debris	20	242	140
242.654	140.585	95.392	Chert Debris	10	242	140
242.743	140.454	95.393	Chert Cortical	12	242	140
242.646	140.205	95.351	Chert Debris	1	242	140
242.35	140.416	95.341	Chert	2	242	140
242.754	140.416	95.33	Chert	3	242	140
242.542	140.529	95.342	Broken Quartz	4	242	140
242.593	140.762	95.338	Chert	5	242	140
242.662	140.862	95.342	Chert	6	242	140
243.99	140	95.8		2	242	140
243.99	140	95.8		1	242	140
243.37	142.36	96.71	Cortical Chert Pebble	1	242	142
243.37	142.36	96.71	Chert Debris	2	242	142
243.09	142.21	96.72	Chert Flake	3	242	142
243.395	142.25	96.7	Chert Debris	4	242	142
243.38	142.22	96.7	Chert Debris	5	242	142
243.68	142.9	96.7	Chert Pebble	6	242	142
243.245	142.38	96.67	Chert Flake/Bend Break	1	242	142
243.74	142.26	96.63	Chert	2	242	142
242.77	142.355	96.63	Chert Pebble	3	242	142
242.9	142.79	96.63	Chert	4	242	142
243.89	142.97	96.6	Debris Chert, Poss. Tool	1	242	142
243.28	142.7	96.54	Chert Debris	1	242	142
243.59	142.01	96.54	Chert Smashed Flake	2	242	142
243.12	142.325	96.57	Chert Cobble	3	242	142
243.21	142.2	96.57	Chert Pebble	4	242	142
243.37	142.275	96.555	Chert Debris	5	242	142
243.71	142.29	96.555	Chert Pebble	6	242	142
243.69	142.02	96.53	Chert Pebble	7	242	142
243.5	142.165	96.54	Chert Debris	8	242	142
243.05	142.04	96.51	Chert Pebble	1	242	142
243.9	142	96.5	Chert Pebble	2	242	142
243.62	142.03	96.53	Chert Pebble	3	242	142

Table A15-20 K continued

2008 N	E	Depth	Type	Art#	N	E
243.605	142.01	96.52	Smashed Chert Flake	4	242	142
243.11	142.24	96.5	Quartz Pebble	5	242	142
243.93	142.44	96.47	Broken Cortex	1	242	142
243.91	142.36	96.435	Quartz Pebble	2	242	142
243.86	142.28	96.455	Cortex Chert	3	242	142
243.48	142.14	96.46	Cortex	4	242	142
243.59	142.62	96.38	Chert Pebble Broken	1	242	142
243.085	142.71	96.39	Split Quartz Pebble	2	242	142
243.05	142.52	96.4	Chert Cobble	3	242	142
243.07	142.445	96.42	Smashed Chert Flake	4	242	142
243.07	142.42	96.425	Smashed Chert Flake	5	242	142
243.345	142.55	96.41	Smashed Chert Flake	6	242	142
243.6	142.135	96.39	Chert Debris/	7	242	142
243.43	142.79	96.33	Chert Flake/Smash	1	242	142
243.47	142.79	96.35	Quartz Pebble	2	242	142
243.27	142.265	96.34	Chert Flake	3	242	142
243.1	142.93	96.32	Chert Debris	1	242	142
243.63	142.84	96.29	Chert Debris	2	242	142
243.635	142.77	96.28	Chert Debris	3	242	142
243.1	142.94	96.32	Chert Debris	4	242	142
243.66	142.955	96.26	Chert Flake	1	242	142
243.63	142.87	96.26	Chert Core Smash Flake	2	242	142
243.53	142.94	96.25	Chert Debris	3	242	142
243.69	142.71	96.25	Chert Pebble	5	242	142
243.68	142.675	96.24	Chert Flake/Bend Break	6	242	142
243.44	142.725	96.25	Chert Flake/Debris	7	242	142
243.345	142.93	96.18	Smash Chert Core Flake	1	242	142
243.26	142.35	96.19	Smash Chert Flake	2	242	142
243.05	142.03	96.225	Chert Flake/Bend Break	3	242	142
243.61	142.635	96.13	Chert Flake	1	242	142
243.26	142.67	96.13	Chert Debris	2	242	142
243.27	142.69	96.13	Chert Flake	3	242	142
243.03	142.07	96.13	Angular Chert Debris	4	242	142
243.02	142.79	95.085	Chert Flake	1	242	142
243.04	142.44	95.1	Smash Core Flake	2	242	142
243.27	142.7	95.11	TA Chert Debris/Flake	3	242	142
243.27	142.71	95.085	Chert Debris/	4	242	142
243.99	142.87	95.2	Chert	5	242	142
243.24	142.28	96.04	Split Quartz Pebble	2	242	142
243.32	142.42	96.05	Chert Flake	3	242	142
243.29	142.49	96.045		4	242	142
243.1	142.61	96.035	Quartz Flake	5	242	142
243.11	142.7	96.03	Chert Debris/Flake	6	242	142

Table A15-20 K continued

2008 N	E	Depth	Type	Art#	N	E
243.29	142.76	96.025	Cortical Chert Flake	7	242	142
243.34	142.7	96.04	Quartz Pebble	8	242	142
243.48	142.69	96.02	Cortical Chert Flake	9	242	142
243.71	142.65	96.04	Chert Pebble	10	242	142
243.42	142.52	96.05	Chert Flake	11	242	142
243.68	142.73	96.245	Smash Core Flake	4	242	142
242.37	142.38	96.23	Cortical Chert Debris	7	242	142
242.18	142.05	96.3	Chert Debris	1	242	142
242.61	142.31	96.34	Cortical Chert Debris	2	242	142
243.05	142.99	96.345	Chert Debris	3	242	142
242.08	142.96	96.32	Chert Debris	4	242	142
243.81	139.56	96.96	Quartz Pebble	1	242	142
242.6	142.4	96.265	Chert Debris	1	242	142
242.55	142.41	96.255	Cortical Chert Debris	2	242	142
242.53	142.57	96.265	Chert Debris	3	242	142
242.34	142.74	96.285	Chert Debris	4	242	142
242.06	142.69	96.26	Cortical Chert Debris	5	242	142
242.29	142.94	96.29	Chert Flake/Debris	6	242	142
242.17	142.99	96.29	Quartz Pebble	7	242	142
242.65	142.91	96.27	Chert Debris	8	242	142
242.81	142.13	96.23	Chert Debris	1	242	142
242.94	142.26	96.24	Smashed Cortical Chert	2	242	142
242.94	142.32	96.21	Smashed Chert Flake	3	242	142
242.72	142.35	96.23	Chert Debris	4	242	142
242.62	142.35	96.22	Chert Debris/Blade Like	5	242	142
242.62	142.4	96.21	Smashed Chert Flake	6	242	142
242.29	142.47	96.2	Cortical Chert Debris	8	242	142
242.19	142.5	96.21	Broken Quartz	9	242	142
242.16	142.56	96.225	Chert/Cortical Pebble	10	242	142
242.15	142.62	96.235	Quartz /Round Pebble	11	242	142
242.08	142.72	96.23	Broken Quartz Pebble	12	242	142
242.11	142.71	96.2	Chert Flake	13	242	142
242.73	142.73	96.24	Smashed Quartz Pebble	14	242	142
242.18	142.55	96.205	Broken Quartz	16	242	142
242.19	142.49	96.2	Broken Quartz	17	242	142
242.11	142.72	96.2	Broken Quartz Pebble	18	242	142
242.44	142.81	96.235	Chert Debris	19	242	142
242.43	142.85	96.21	Chert Debris	20	242	142
242.25	142.87	96.235	Quartz Pebble	21	242	142
242.662	142.99	96.21	Chert Debris	22	242	142
242.38	142.99	96.245	Chert Debris/Flake	23	242	142
242.22	142.96	96.23	Chert Debris	24	242	142
242.27	142.1	96.2	Chert Debris/Flake	25	242	142

Table A15-20 K continued

2008 N	E	Depth	Type	Art#	N	E
242.02	142.48	96.21	Chert Debris/Flake	26	242	142
242.22	142.97	96.23	Chert Debris/Flake	27	242	142
242.25	142.54	96.169	Broken Quartz	30	242	142
242.25	142.54	96.15	Broken Quartz	32	242	142
242.89	142.67	96.17	Broken Quartz	37	242	142
242.25	142.51	96.15	Broken Quartz	71	242	142
242.24	142.55	96.15	Broken Quartz	73	242	142
242.62	142.27	96.15	Broken Quartz Pebble	9	242	142
242.68	142.37	96.155	Broken Quartz Pebble	12	242	142
242.31	142.37	96.115	Broken Quartz Pebble	13	242	142
242.29	142.41	96.17	Broken Quartz Pebble	22	242	142
242.47	142.54	96.15	Broken Quartz Pebble	27	242	142
242.27	142.54	96.169	Broken Quartz Pebble	29	242	142
242.09	142.59	96.15	Broken Quartz Pebble	36	242	142
242.15	142.66	96.15	Broken Quartz Pebble	49	242	142
242.06	142.78	96.19	Broken Quartz Pebble	54	242	142
242.77	142.99	96.16	Broken Quartz Pebble	64	242	142
242.4	142.45	96.16	Broken Quartz Pebble	69	242	142
242.13	142.68	96.175	Broken Quartz Pebble	75	242	142
242.44	142.11	96.14	Chert Cortical Debris	5	242	142
242.75	142.11	96.15	Chert Flake	3	242	142
242.2	142.55	96.15	Chert Flake	34	242	142
242.07	142.79	96.17	Chert Flake	55	242	142
242.22	142.87	96.14	Chert Flake	62	242	142
242.15	142.82	96.15	Chert Pebble /Debris	53	242	142
242.61	142.06	96.15	Chert Debris	4	242	142
242.09	142.35	96.165	Chert Debris	16	242	142
242.07	142.57	96.15	Chert Debris	35	242	142
242.56	142.75	96.14	Chert Debris	41	242	142
242.18	142.67	96.17	Chert Debris	46	242	142
242.45	142.37	96.16	Chert Debris	68	242	142
242.14	142.64	96.15	Chert Debris	74	242	142
242.87	142.76	96.15	Chert Debris	77	242	142
242.38	142.9	96.17	Chert Debris/Bend Break	59	242	142
242.12	142.72	96.15	Chert Debris/Flake	51	242	142
242.77	142.27	96.18	Cortical Bend Break	8	242	142
242.89	142	96.2	Cortical Chert	2	242	142
242.92	142.2	96.15	Cortical Chert	6	242	142
242.3	142.5	96.15	Cortical Chert	26	242	142
242.56	142.8	96.15	Cortical Chert Flake	1	242	142
242.46	142.35	96.18	Cortical Chert Flake	11	242	142
242.77	142.43	96.15	Cortical Chert Pebble	18	242	142
242.36	142.41	96.15	Cortical Chert Pebble	21	242	142

Table A15-20 K continued

2008 N	E	Depth	Type	Art#	N	E
242.39	142.48	96.19	Cortical Chert Pebble	24	242	142
242.26	142.55	96.18	Cortical Chert Pebble	28	242	142
242.2	142.52	96.15	Cortical Chert Pebble	33	242	142
242.75	142.66	96.155	Cortical Chert Pebble	39	242	142
242.47	142.72	96.18	Cortical Chert Pebble	42	242	142
242.22	142.59	96.18	Cortical Chert Pebble	44	242	142
242.75	142.93	96.18	Cortical Chert Pebble	56	242	142
242.16	142.9	96.17	Cortical Chert Pebble	63	242	142
242.39	142.46	96.17	Cortical Chert Pebble	70	242	142
242.55	142.3	96.15	Cortical Chert Piece	67	242	142
242.42	142.41	96.19	Cortical Chert Debris	19	242	142
242.41	140.43	96.155	Cortical Chert Debris	20	242	142
242.42	142.89	96.19	Cortical Chert Debris	58	242	142
243.27	142.89	96.15	Cortical Piece	60	242	142
242.25	142.55	96.17	Cortical /Pebble	31	242	142
242.05	142.77	96.16	Cortical Flake	76	242	142
242.75	142.23	96.18	Blade Segment	7	242	142
242.13	142.35	96.15	Cortical Pebble	15	242	142
242.06	142.33	96.18	Cortical Pebble	17	242	142
242.64	142.61	96.19	Cortical Pebble	40	242	142
242.56	142.81	96.15	Cortical Pebble	52	242	142
242.24	142.53	96.16	Cortical Pebble	72	242	142
242.37	142.69	96.15	Cortical Smashed Chert	43	242	142
242.21	142.36	96.175	Cortical Smashed Flake	14	242	142
242.58	142.99	96.19	Degraded Chert Cortical	66	242	142
242.16	142.72	96.16	Pebble	50	242	142
242.31	142.46	96.17	Possible Bend Break	25	242	142
242.67	142.99	96.19	Possible Bend Break	65	242	142
242.82	142.69	96.15	Quartz Broken Pebble	38	242	142
242.19	142.62	96.165	Quartz Broken Pebble	45	242	142
242.56	142.3	96.18	Quartz Pebble	10	242	142
242.48	142.72	96.165	Bend Break Flake	74	242	142
242.54	142.93	96.185	Round Cortical Pebble	57	242	142
242.24	142.42	96.17	Smashed Chert Debris	23	242	142
242.19	142.64	96.17	Chert Flake	47	242	142
242.24	142.93	96.15	Smashed/Debris Chert	61	242	142
242.43	142.38	96.15	Chert Flake	78	242	142
242.77	142.015	96.14	Chert Smash Flake Core	1	242	142
242.32	142.01	96.1	Chert Debris	2	242	142
242.73	142.14	96.11	Broken Quartz Pebble	3	242	142
242.58	142.095	96.12	Cortical Chert Flake	4	242	142
242.33	142.14	96.13	Bend Break	5	242	142
242.82	142.29	96.11	Chert Smash Flake	6	242	142

Table A15-20 K continued

2008 N	E	Depth	Type	Art#	N	E
242.65	142.31	96.13	Chert Flake	7	242	142
242.55	142.3	96.165	Broken Quartz	8	242	142
242.49	142.36	96.13	Chert Flake	9	242	142
242.17	142.59	96.11	Chert Flake	10	242	142
242.69	142.71	96.115	Flake/Bend Break	11	242	142
242.28	142.68	96.1	Cortical Chert Flake	12	242	142
242.17	142.67	96.13	Flake/Bend Break	13	242	142
242.75	142.78	96.13	Chert Debris	14	242	142
242.69	142.91	96.13	Chert Debris	15	242	142
242.48	142.84	96.1	Chert Debris	16	242	142
242.28	142.87	96.11	Quartz /Broken Tool	17	242	142
242.25	142.94	96.13	Chert Bend Break	18	242	142
242.8	142	96.08	Chert Debris	1	242	142
242.79	142.02	96.09	Chert Debris	2	242	142
242.3	142.11	96.055	Chert Flake	3	242	142
242.66	142.24	96.085	Chert Debris/Bend Break	4	242	142
242.67	142.27	96.05	Chert Debris	5	242	142
242.15	142.43	96.08	Chert Flake	6	242	142
242.73	End	96.08	Cortical Chert	7	242	142
242.1	142.625	96.05	Smashing Core Flake	8	242	142
242.82	142.89	96.08	Chert Flake Core	9	242	142
242.58	142.91	96.06	Chert Flake	10	242	142
242.19	142.96	96.08	Smashed Core Flake	11	242	142
242.73	142.84	96.22	Smashed Chert		242	142
242.02	142.01	96.05	Chert Flake	1	242	142
242.48	142.17	96.035	Cortical	2	242	142
242.21	142.13	96.01	Cortical	3	242	142
242.74	142.29	96.02	Cortical	4	242	142
242.36	142.33	96.025	Core Smash Flake	5	242	142
242.34	142.3	96.03	Cortical Flake	6	242	142
242.4	142.53	96.025	Core Smash Flake	7	242	142
242.12	142.55	96.035	Cortical	8	242	142
242.08	142.53	96	Chert Flake	9	242	142
242.59	142.67	96.02	Core Smash Flake	10	242	142
242.59	142.65	96.02	Cortical Flake	11	242	142
242.29	142.65	96.045	Chert Debris	12	242	142
242.79	142.99	96	Cortical Chert Flake	13	242	142
242.22	142.98	96.065	Core Smash Flake	15	242	142
242.95	142.79	96.04	Chert Smash Flake	16	242	142
242.48	142.21	96.025	Chert Flake	17	242	142
242.38	142.02	95.95	Smash Core Flake	1	242	142
242.76	142.46	95.965	Smash Core Flake	2	242	142
242.3	142.5	95.965	Chert Flake	3	242	142

Table A15-20 K continued

2008 N	E	Depth	Type	Art#	N	E
242.23	142.49	95.97	Broken Quartz	4	242	142
242.56	142.62	95.97	Core Smash Flake	5	242	142
242.18	142.6	95.97	Smash Core Flake	6	242	142
242.55	142.69	95.95	Smash Core Flake	7	242	142
242.37	142.67	95.96	Cortical Chert Pebble	8	242	142
242.9	142.99	95.975	Smash Core Flake	9	242	142
242.53	142.37	95.91	Smash Core Flake	1	242	142
242.72	142.49	95.925	Chert Debris	2	242	142
242.03	142.42	95.91	Broken Quartz Pebble	4	242	142
242.8	142.67	95.92	Flake/Bend Break	5	242	142
242.65	142.72	95.94	Chert Cortical	6	242	142
242.62	142.93	95.94	Cortical Chert Flake	7	242	142
242.37	142.99	95.93	Smash Core Chert Flake	8	242	142
242.32	142.99	95.9	Chert Flake Bend Break	9	242	142
242.17	142.49	95.9	Chert Cobble	3	242	142
242.67	142.05	95.85	Chert Smash Core Flake	1	242	142
242.75	142.36	95.85	Chert Smash Core Flake	2	242	142
242.15	142.3	95.885	Poss. Util. Chert Flake	3	242	142
242.52	142.63	95.865	Smash Core Flake	4	242	142
242.9	142.72	95.88	Poss. Util. Chert Flake	6	242	142
242.66	142.88	95.87	Broken Quartz Pebble	7	242	142
242.66	142.99	95.85	Core Smash Flake	8	242	142
242.47	142.02	95.83	Quartz Poss. Tool	1	242	142
242.71	142.08	95.8	Cortical Chert	2	242	142
242.49	142.24	95.8	Core Smash Flake	3	242	142
242.34	142.31	95.825	Bend Break Burin	4	242	142
242.18	142.23	95.82	Core Smash Flake	5	242	142
242.06	142.25	95.81	Cortical Chert Flake	6	242	142
242.26	142.36	95.81	Cortical Smash F	7	242	142
242.1	142.4	95.8	Chert Core Smash Flake	8	242	142
242.15	142.5	95.83	Chert Core Smash Flake	9	242	142
242.22	142.55	95.83	Chert Smash Core Flake	10	242	142
242.9	142.8	95.8	Poss. Util. Chert Flake	11	242	142
242.64	142.8	95.805	Core Smash Flake	12	242	142
242.96	142.93	95.84	Cortical Chert Pebble	13	242	142
242.41	142.32	95.75	Broken Quartz Pebble	7	242	142
242.89	142.65	95.76	Bend Break	15	242	142
242.55	142.06	95.77	Broken Quartz Pebble	1	242	142
242.55	142.06	95.77	Broken Quartz Pebble	1	242	142
242.51	142.13	95.77	Broken Quartz Pebble	3	242	142
242.56	142.17	95.17	Broken Quartz Pebble	5	242	142
242.41	141.32	95.75	Broken Quartz Pebble	7	242	142
242.15	142.45	95.75	Broken Quartz Pebble	12	242	142

Table A15-20 K continued

2008 N	E	Depth	Type	Art#	N	E
242.22	142.78	95.75	Broken Quartz Pebble	16	242	142
242.04	142.79	95.78	Broken Quartz Pebble	17	242	142
242.04	142.79	95.78	Broken Quartz Pebble	17	242	142
242.15	142.09	95.775	Chert	4	242	142
242.53	142.09	95.75	Chert /Pebble	2	242	142
242.33	142.34	95.75	Chert Flake	8	242	142
242.33	142.34	95.75	Chert Flake	8	242	142
242.67	142.59	95.76	Chert Flake	13	242	142
242.67	142.59	95.76	Chert Flake	13	242	142
242.81	142.43	95.785	Chert Pebble	11	242	142
242.53	142.09	95.75	Chert Debris	2	242	142
242.14	142.25	95.75	Chert Debris	14	242	142
242.14	142.25	95.75	Chert Debris Smash	10	242	142
242.68	142.29	95.75	Chert Tool	6	242	142
242.15	142.09	95.775	Cortical Chert Pebble	4	242	142
242.93	142.68	95.77	Cortical Chert Debris	14	242	142
242.89	142.65	95.76	Cortical Chert Debris	15	242	142
242.27	142.34	95.75	Decor. Flake Chert	9	242	142
242.22	142.28	95.75	Quartz Pebble	16	242	142
242.81	142.93	95.785	Smash Chert Flake	11	242	142
242.68	142.29	95.75	Smash Chert Tool	6	242	142
242.79	142.69	96.69	Chert Cobble	18	242	142
242.91	142.9	95.71	Bend Break	28	242	142
242.71	142.52	95.7	Broken Quartz	35	242	142
242.25	142.12	95.72	Broken Quartz Pebble	9	242	142
242.64	142.725	95.71	Broken Quartz Pebble	25	242	142
242.34	142.97	95.7	Broken Quartz Pebble	31	242	142
242.22	142.09	95.71	Broken Quartz Pebble	32	242	142
242.38	142.31	95.74	Chert Bend Break	17	242	142
242.14	142.23	95.705	Chert Bend Break	18	242	142
242.72	142.55	95.7	Chert Bend Break	22	242	142
242.44	142.98	95.705	Chert Bend Break Flake	30	242	142
242.16	142.055	95.705	Chert Flake	12	242	142
242.74	142.43	95.72	Chert Flake	20	242	142
242.22	142.59	95.7	Chert Flake	33	242	142
242.24	142.11	95.71	Chert Flake	34	242	142
242.89	142.78	95.7	Chert Flake	36	242	142
242.77	142.28	95.73	Chert Flake/Bend Break	14	242	142
242.57	142.32	95.73	Chert Flake/Bend Break	16	242	142
242.71	142.095	95.715	Chert Smash Flake	5	242	142
242.78	142.205	95.7	Core Smash Flake	4	242	142
242.88	142.22	95.71	Cortical Chert	2	242	142
242.54	142.99	95.73	Cortical Chert Debitage	29	242	142

Table A15-20 K continued

2008 N	E	Depth	Type	Art#	N	E
242.31	142.08	95.73	Cortical Chert Flake	8	242	142
242.07	142.01	95.705	Cortical Chert Flake	13	242	142
242.72	142.52	95.72	Cortical Chert Flake	21	242	142
242.14	142.53	95.7	Cortical Chert Flake	23	242	142
242.82	142.72	95.7	Cortical Chert Flake	24	242	142
242.63	142.81	95.72	Cortical Chert Flake	26	242	142
242.22	142.07	95.72	Cortical Chert Flake	10	242	142
242.22	142.05	95.71	Cortical Chert Flake	11	242	142
242.77	142.32	95.725	Cortical Chert Flake	15	242	142
242.05	142.195	95.7	Cortical	19	242	142
242.78	142.17	95.7	Cortical	3	242	142
242.21	142.69	95.72	Quartz Pebble	27	242	142
242.89	142.125	95.75	Core Flake	1	242	142
242.57	142.1	95.71	Flake	6	242	142
242.3	142.03	95.75	Quartz Flake	7	242	142
243.48	142.1	96.46	Cortex	5	242	142
242.772	140.77	95.398	Chert Debris	9	242	140
242.27	141.26	95.47	Cortical Boulder	2	242	140
242.23	141.42	95.47	Cortical Rock	5	242	140
242.32	141.71	95.495	Microblade	7	242	140
242.64	141.86	95.385	Debris Chert	1	242	140
242.725	141.26	95.282	Chert	1	242	140
243.18	142.61	96.27	Chert Flake	8	242	142
244.45	139.425	96.575	Quartz Broken/Battered	2	244	138
244.63	139.235	96.59	Thermally Altered Chert	3	244	138
244.46	139.655	96.57	Cortex	4	244	138
244.585	139.49	96.595	Cortex Rock	5	244	138
244.53	139.37	96.58	Quartz Pebble	6	244	138
244.185	139.32	96.575	Cortex Rock	7	244	138
244.11	139.245	96.605	Quartz Chip	8	244	138
244.055	139.2	96.57	Cortex Rock	9	244	138
244.97	139.42	96.603	Broken Chert	10	244	138
244.775	139.545	96.63	Cortex Rock	11	244	138
244.79	139.5	96.592	Cortex Rock	12	244	138
244.59	139.27	96.595	Cortex Rock	13	244	138
244.62	139.265	96.57	Quartz Pebble	14	244	138
244.66	139.26	96.575	Chert Pebble	15	244	138
244.53	139.24	96.57	Chert Chip	16	244	138
244.365	139.095	96.575	Chert Pebble	17	244	138
244.605	139.21	96.593	Cortex	18	244	138
244.63	139.225	96.58	Cortex	19	244	138
244.77	139.245	96.585	Chert Chip	20	244	138
244.77	139.205	96.57	Large Cortex Pebble	21	244	138

Table A15-20 K continued

2008 N	E	Depth	Type	Art#	N	E
244.92	139.185	96.565	Bend Break Flake	22	244	138
244.29	139.035	96.58	Quartz Pebble	23	244	138
244.64	139.22	96.563	Chert Flake	24	244	138
244.36	139.1	96.56	Chert Flake	26	244	138
244.44	139.7	96.515	Cortical Rock	2	244	138
244.56	139.585	96.56	Quartz Flake	3	244	138
244.695	139.44	96.54	Chert Flake	4	244	138
244.465	139.34	96.53	Circular Quartz	5	244	138
244.61	139.25	96.545	Cortical Rock	6	244	138
244.52	139.21	96.525	Battered Quartz Pebble	7	244	138
244.61	139.19	96.55	Chert Flake	8	244	138
244.67	139.2	96.52	Cortical Rock	9	244	138
244.295	139.12	96.525	Cortical Rock	10	244	138
244.4	139.09	96.51	Split Quartz Pebble	12	244	138
244.62	139.2	96.51	Cortical Rock	13	244	138
244.26	139.12	96.5	Chert, Large Block	11	244	138
244.46	139.63	96.5	Chert Debris	1	244	138
244.73	139.635	96.47	Chert Debris	2	244	138
244.86	139.55	96.47	Chert Debris	3	244	138
244.73	139.44	96.49	Chert	4	244	138
244.4	139.16	96.475	Broken Quartz	5	244	138
244.375	139.15	96.48	Cortical Pebble	6	244	138
244.35	139.14	96.47	Broken Quartz Pebble	7	244	138
244.31	139.12	96.47	Chert Debris	8	244	138
244.38	139.11	96.48	Broken Quartz	9	244	138
244.34	139.06	96.51	Chert Debris	10	244	138
244.31	139.03	96.49	Cobble	11	244	138
244.29	139.055	96.47	Pebble	12	244	138
244.7	139.44	96.45	Chert Debris	1	244	138
244.545	139.31	96.455	Quartz Pebble	2	244	138
244.495	139.24	96.43	Chert Debris	3	244	138
244.42	139.19	95.45	Chert Debris	4	244	138
244.125	139.31	96.43	Chert Debris	5	244	138
244.405	139.22	96.42	Quartz Pebble /Battered	6	244	138
244.22	139.13	96.44	Chert Debris/Core	7	244	138
244.5	139.19	96.43	Chert Debris	8	244	138
244.365	139.13	96.455	Bend Break Flake	9	244	138
244.535	139.66	96.445	Cortical	10	244	138
244.54	139.695	96.45	Cortical Chert	11	244	138
244.665	139.78	96.42	Quartz Pebble	12	244	138
244.785	139.805	96.41	Possible Thermal Debris	14	244	138
244.11	139.63	96.4	Battered Quartz Pebble	15	244	138
244.83	139.33	96.42	Battered/Broken Quartz	16	244	138

Table A15-20 K continued

2008 N	E	Depth	Type	Art#	N	E
244.32	139.11	96.405	Broken/Battered Quartz	17	244	138
244.17	139.75	96.41	Quartz Pebble	18	244	138
244.18	139.25	96.46	Broken Quartz	19	244	138
244.385	139.097	96.44	Flake/Bend Break	20	244	138
244.15	139.047	96.145	Chert	21	244	138
244.26	139.03	96.48	Chert Debris	22	244	138
244.405	139.08	96.47	Chert	23	244	138
244.6	139.38	96.43	Chert Thinning Flake	13	244	138
244.355	139.44	96.39	Quartz Pebble	1	244	138
244.375	139.12	96.385	Broken Quartz	2	244	138
244.145	139.02	96.405	Broken Chert Debris	3	244	138
244.83	139.365	96.38	Chert Debris/Bend Break	4	244	138
244.9	139.51	96.36	Chert Debris	1	244	138
244.97	139.26	96.34	Broken Quartz	2	244	138
244.21	139.64	96.252	Chert Flake	1	244	138
244.3	139.33	96.257	Cortex	2	244	138
244.37	139.35	96.26	Cortical	3	244	138
244.365	139.3	96.301	Chert Debris	4	244	138
244.032	139.255	96.262	Broken Quartz	5	244	138
244.165	139.125	96.255	Cortex	6	244	138
244.2	139.11	96.25	Cortex	7	244	138
244.175	139.055	96.255	Cortex	8	244	138
244.185	139.41	96.22	Cortical Pebble	9	244	138
244.4	139.325	96.1775	Chert Debris	1	244	138
244.3	139.3	96.1775	Quartz Pebble	2	244	138
244.045	139.455	96.26	Cortex	3	244	138
244.61	139	96.17	Chert Debris	4	244	138
244.35	139.145	96.16	Chert Debris	5	244	138
244.2025	139.65	96.21	Possible Utilized Flake	6	244	138
244.02	139.765	96.15	Chert Debris	1	244	138
244.145	139.665	96.1	Broken Quartz Pebble	2	244	138
244.03	139.625	96.12	Cortical Chert Flake	3	244	138
244.545	139.125	96.05	Chert Debris/Flake	1	244	138
244.05	139.225	96.085	Chert Flake	2	244	138
244.035	139.56	96.09	Thermal Pop/Debris	3	244	138
244.155	139.655	96	Chert Debris	4	244	138
244.455	139.845	95.985	Chert Flake/Debris	1	244	138
244.585	139.815	95.91	Chert Debris	1	244	138
244.625	139.725	95.945	Chert Debris	2	244	138
244.1	139.635	95.95	Chert Smash Flake	5	244	138
244.58	139.63	96.15	Chert Debris	3	244	138
244.32	139.775	95.845	Broken Quartz Pebble	1	244	138
244.25	139.24	95.85	Core Smash Flake	2	244	138

Table A15-20 K continued

2008 N	E	Depth	Type	Art#	N	E
244.245	139.35	95.86	Broken Quartz Pebble	3	244	138
244.09	139.655	95.82	Chert Flake	1	244	138
244.73	139.795	95.75	TA Chert Debris	1	244	138
244.46	139.615	95.67	Chert Debris	1	244	138
244.49	139.19	95.67	Chert Flake/Debris	2	244	138
244.435	139.735	95.625	Quartz Pebble	1	244	138
244.32	139.3	95.61	Broken Quart Pebble	2	244	138
244.01	139.14	95.645	Core Smash Flake	3	244	138
244.01	139.16	95.6	Cortical Chert	4	244	138
243.9	139.6	96.395	Battered Boulder Core	8	242	138
243.25	139.9	96.37	Battered Chert Boulder	15	242	138
243.675	139.47	96.375	Chert Cobble/Boulder	16	242	138
243.69	143.99	96.44		1	242	138
243.03	139.77	95.67	Chert Flake	1	242	138
243.265	139.565	96.78	Broken Quartz	3	242	138
243.13	139.905	96.37	Quartz Pebble	3	242	138
242.1	141.84	95.35	Chert Debris/Bend Break	18	242	140
243.24	142.8	96.04	Chert Boulder Core	1	242	142
243.55	142.57	96.715	Chert Debris	2	242	142
242.09	142.99	96.345	Chert Debris	3	242	142
242.24	142.64	95.85	Chert Cort.	5	242	142
242.21	142.93	96.025	Core Smash Flake	14	242	142
242.79	142.69	95.75	Chert Cobble	18	242	142
242.14	142.64	96.15	Chert Debris/Cortical	48	242	142
244.66	139.72	96.52	Utilized Bend Break	1	244	138
244.705	139.49	95.95	Chert Bend Break	4	244	138
244.665	139.27	96.563	Quartz Pebble	25	244	138
242.03	139.77	95.67	Chert Debris	1	242	138
243.53	139.56	95.75	Chert Flake	6	242	138
243.69	139.68	96.11	Cortical Chert Pebble	2	242	138
243.45	139.78	96.3	Cortical	1	242	138
243.84	139.53	96.32	Cortical Pebble	4	242	138
243.44	139.55	96.35	Cortical Chert Pebble	3	242	138
243.23	139.15	96.235	Cortical Pebble	3	242	138
243.73	139.17	96.26	Cortical Chert Debris	2	242	138
243.85	1339.43	96.26	Chert	1	242	138
243.85	139.035	96.265	Cortical Chert Pebble	4	242	138
243.59	139.825	96.2	Chert Debris	6	242	138
243.7	139.37	96.2	Chert Flake	4	242	138
243.03	139.03	96.2	Cortical Bend Break	5	242	138
243.41	139.775	96.2	Chert Cobble	7	242	138
243.75	139.66	96.205	Chert Debris	2	242	138
243.78	139.64	96.225	Cortical Chert	3	242	138

Table A15-20 K continued

2008 N	E	Depth	Type	Art#	N	E
243.69	139.91	96.25	Chert Debris	1	242	138
243.72	139.36	95.91	Chert Flake	1	242	138
243.14	139.08	95.91	Cortical Chert Debris	2	242	138
243.08	139.56	95.51	Angular Chert Debris	22	242	138
243.36	139.59	95.865	Chert	4	242	138
243.64	139.78	95.87	Chert Flake	2	242	138
243.25	139.87	95.88	Broken Quart	1	242	138
243.01	139.16	95.885	Cortical	5	242	138
243.11	139.01	95.89	Cortical Sherd	6	242	138
243.64	139.79	95.815	Chert Flake	2	242	138
243.11	139.08	95.83	Chert Cobble	3	242	138
243.91	139.81	95.85	Cortical Of Chert	1	242	138
243.42	139.87	95.76	Chert Debris	4	242	138
243.38	139.73	95.76	Cortical Chert	3	242	138
243.61	139.77	95.77	Chert Debris	5	242	138
243.73	139.13	95.775	Chert Debris	7	242	138
243.3	139.73	95.78	Chert Debris	2	242	138
243.21	139.79	95.78	Broken Quartz	1	242	138
243.61	139.76	95.7	Quartz Pebble	1	242	138
243.86	139.52	95.7	Chert	2	242	138
243.58	139.77	95.66	Chert Sherd	2	242	138
243.6	139.58	95.66	Broken Quartz	3	242	138
243.1	139.6	95.62	Chert Flake	2	242	138
243.27	139.375	95.62	Chert Flake	4	242	138
243.17	139.5	95.62	Cortex Chert	3	242	138
243.21	139.27	95.63	Chert Flake	5	242	138
243.6	139.76	95.645	Utilized Chert Tool	1	242	138
243.39	139.77	95.55	Possible Bend Break	4	242	138
243.62	139.67	95.55	Weathered Chert Flake	7	242	138
243.42	139.72	95.55	Quartz Debris	5	242	138
243.9	139.31	95.55	Bend Break	20	242	138
243.57	139.65	95.55	Chert Flake Weathered	6	242	138
243.26	139.56	95.56	Chert Debris	10	242	138
243.3	139.23	95.57	Quartz Pebble	17	242	138
243.65	139.74	95.575	Weathered Chert Cobble	1	242	138
243.33	139.52	95.58	Cortical Chert Debris	11	242	138
243.2	139.6	95.59	Chert Debris	9	242	138
243.96	139.3	95.595	Blade Like Flake	16	242	138
243.65	139.67	95.55	Chert Flake	8	242	138
243.69	139.56	95.55	Bend Break	13	242	138
243.94	139.14	95.565	Bend Break	18	242	138
243.9	139.58	95.57	Possible Chert Tool	14	242	138
243.21	139.91	95.58	Weathered Chert Flake	2	242	138

Table A15-20 K continued

2008 N	E	Depth	Type	Art#	N	E
243.66	139.53	95.58	Cortical Debris	12	242	138
243.93	139.38	95.58	Prismatic Chert Debris	15	242	138
243.96	139.17	95.58	Blade-Like Flake	19	242	138
243.11	139.58	95.52	Angular Chert Flake	21	242	138
243.46	139.66	95.495	Bend Break	4	242	138
243.25	139.84	95.5	Bend Break Chert	10	242	138
243.25	139.66	95.47	Biface	2	242	138
243.22	139.79	95.52	Blade-Like Chert Flake	11	242	138
243.18	139.08	95.5	Broken Quartz	27	242	138
243.78	139.47	95.53	Broken Quartz	17	242	138
243.23	139.11	95.55	Broken Quartz	26	242	138
243.46	139.63	95.5	Broken Quartz Pebble	14	242	138
243.56	139.63	95.52	Chert Flake	13	242	138
243.11	139.71	95.53	Chert Flake	16	242	138
243.75	139.16	95.5	Chert Debris	23	242	138
243.32	139.59	95.505	Chert Sherd	20	242	138
243.28	139.68	95.5	Cortical Chert	15	242	138
243.93	139.86	95.51	Cortical Chert	6	242	138
243.44	139.55	95.51	Cortical Chert Flake	19	242	138
243.6	139.105	95.52	Degraded Chert	25	242	138
243.76	139.62	95.53	Degraded Chert	12	242	138
243.77	139.75	95.52	Chert Bend Break	9	242	138
243.55	139.53	95.52	Degraded Chert Flake	18	242	138
243.99	139.735	95.51	Flake	5	242	138
243.39	139.73	95.5	Graver Spur	3	242	138
243.92	139.8	95.51	Large Bend Break Chert	7	242	138
243.21	139	95.54	Large Chert Debris	28	242	138
243.23	139.56	95.45	Large Cortex Flake	24	242	138
243.79	139.72	95.53	Chert	8	242	138
243.41	139.79	95.53		1	242	138
243.9	139.2	95.48	Angular Chert Debris	31	242	138
243.54	139.61	95.48	Angular Chert Debris	14	242	138
243.015	139.47	95.48	Angular Chert Debris	30	242	138
243.58	139.62	95.49	Angular Chert Debris	15	242	138
243.22	139.12	95.455	Bend Break	37	242	138
243.89	139.78	95.5	Broken Quartz Pebble	4	242	138
243.79	139.5	95.48	Chert Bend Break	20	242	138
243.04	139.93	95.465	Chert Flake	8	242	138
243.2	139.48	95.47	Chert Flake	28	242	138
243.1	139.37	95.48	Chert Debris	29	242	138
243.7	139.53	95.45	Cortical Chert Debris	18	242	138
243.95	139.85	95.49	Cortical Chert Debris	3	242	138
243.3	139.34	95.45	Cortical Debris	26	242	138

Table A15-20 K continued

2008 N	E	Depth	Type	Art#	N	E
243.52	139.33	95.47	Cortical Debris	25	242	138
243.34	139.72	95.49	Cortical Debris	9	242	138
243.25	139.55	95.49	Degraded Chert	12	242	138
243.15	139.82	95.5	Degraded Chert	7	242	138
243.1	139.62	95.47	Degraded Chert Flake	11	242	138
243.3	139.64	95.475	Degraded Chert Flake	10	242	138
243.6	139.03	95.455	Degraded Chert Debris	35	242	138
243.14	139.9	95.5	Degraded Chert Debris	6	242	138
243.85	139.22	95.45	Degraded Cortical Chert	39	242	138
243.32	139.01	95.45	Cortical Debris	36	242	138
243.86	139.84	95.47	Bend Break	5	242	138
243.52	139.49	95.48	Large Broken Quartz	17	242	138
243.74	139.49	95.46	Large Chert Smash	19	242	138
243.6	139.61	95.45	Large Cortex Flake	23	242	138
243.23	139.56	95.45	Large Cortex Flake	24	242	138
243.92	139.79	95.435	Large Cortical	38	242	138
243.68	139.36	95.46	Large Cortical	21	242	138
243.6	139.38	95.465	Large Cortical	22	242	138
243.25	139.43	95.45	Large Cortical Debris	27	242	138
243.69	139.05	95.46	Large Degraded Chert	34	242	138
243.61	139.01	95.445	Possible Chert Tool	40	242	138
243.62	139.56	95.49	Utilized Chert Flake	16	242	138
243.5	139.62	95.48	Cortical Debris	13	242	138
243.57	139.03	95.45	Small Chert Bend Break	41	242	138
243.92	139.04	95.48	Small Chert Flake	33	242	138
243.86	139.18	95.49	Chert Flake	32	242	138
243.63	139.14	95.51	Chert Flake	24	242	138
243.21	139.82	95.55	Cortical Chert Debris	3	242	138
243.08	139.56	95.51	Angular Chert Debris	22	242	142
243.77	142.7	96.01	Quartz Pebble	1	242	142
243.18	142.06	96.03	Chert Debris	2	242	142
243.22	142.33	95.95		3	242	142
243.44	142.31	95.95	Chert Debris	4	242	142
243.58	142.08	95.96	Chert Debris, Cortical	2	242	142
243.85	142	95.97	Blade Like Flake	1	242	142
243.57	142.56	95.97	Chert Flake	5	242	142
243.675	142.725	95.97		6	242	142
243.39	142.39	95.97	Chert	7	242	142
243.445	142.14	95.045	Bend Break	2	242	142
243.22	142.62	95.9	Chert Debris	4	242	142
243.09	142.82	95.915	Chert Debris	6	242	142
243.28	142.22	95.92	Cortical Chert Debris	3	242	142
243.37	142.82	95.93	Chert Debris	5	242	142

Table A15-20 K continued

2008 N	E	Depth	Type	Art#	N	E
243.36	142.15	95.94	Chert Debris	1	242	142
243.33	142.23	95.86	Chert Pebble	2	242	142
243.825	142.43	95.86	Chert Flake	3	242	142
243.61	142.15	95.88	Chert Debris	1	242	142
243.84	142.87	95.88	Chert Flake	5	242	142
243.8	142.39	95.89	Cortical Chert Debris	4	242	142
243.51	142.23	95.89	Chert Boulder	6	242	142
243.69	142.1	95.81	Chert Debris	3	242	142
243.83	242.34	95.82	Chert Core	1	242	142
243.38	142.34	95.83	Chert Debris	7	242	142
243.17	142.32	95.83	Chert Debris	5	242	142
243.3	142.37	95.84	Chert Debris	6	242	142
243.56	142.14	95.84	Chert Debris	4	242	142
243.875	142.1	95.84	Chert	2	242	142
243.25	142.125	95.75	Chert Pebble	3	242	142
243.85	142.65	95.75	Chert Debris	5	242	142
243.05	142.89	95.78	Chert Debris, Cortical	4	242	142
243.82	242.12	95.79	Chert Core	1	242	142
243.04	142.27	95.79	Chert Debris	2	242	142
243.45	142.92	95.7	Broken Quartz	11	242	142
243.42	142.07	95.72	Broken Quartz	10	242	142
243.43	142.68	95.745	Chert Flake	12	242	142
243.76	142.76	95.73	Chert Pebble	14	242	142
243.27	142.655	95.71	Chert Debris	7	242	142
243.19	142.69	95.71	Chert Debris	8	242	142
243.87	142.95	95.71	Chert Debris	13	242	142
243.71	142.63	95.71	Chert Debris	15	242	142
243.09	142.16	95.71	Chert Debris	18	242	142
243.05	142.76	95.72	Chert Debris	6	242	142
243.64	142.47	95.72	Chert Debris	17	242	142
243.34	142.8	95.73	Chert Debris	9	242	142
243.62	142.52	95.73	Chert Debris	16	242	142
243.01	142.145	95.74	Chert Debris	1	242	142
243.32	142.29	95.74	Chert Debris	3	242	142
243.53	142.37	95.7	Cortical Chert Pebble	5	242	142
243.49	142.37	95.73	Cortical Core	4	242	142
243.4	142.05	95.75	Cortical Pebble	2	242	142
243.11	142.82	95.71	Quartz Flake/Debris	19	242	142
243.72	142.69	95.66	Broken Quartz	14	242	142
243.34	142.81	95.67	Broken Quartz	16	242	142
243.47	142.915	95.67	Chert Flake	11	242	142
243.46	142.98	95.67	Chert Flake	12	242	142
243.79	142.08	95.69	Chert Flake	1	242	142

Table A15-20 K continued

2008 N	E	Depth	Type	Art#	N	E
243.5	142.87	95.69	Chert Pebble	10	242	142
243.54	142.75	95.66	Chert Debris	15	242	142
243.71	142.44	95.67	Chert Debris	13	242	142
243.83	142.67	95.67	Chert Debris	16	242	142
243.13	142.66	95.69	Chert Debris	7	242	142
243.27	142.85	95.69	Chert Debris	8	242	142
243.05	142.09	95.66	Cortical Chert Debris	2	242	142
243.12	142.32	95.66	Cortical Chert Debris	5	242	142
243.295	142.12	95.68	Cortical Chert Debris	4	242	142
243.08	142.395	95.65	Decortication Chert	6	242	142
243.22	142.1	95.66	Quartz Pebble	3	242	142
243.38	142.89	95.69	Quartz Pebble	9	242	142
243.06	142.75	95.6	Chert	25	242	142
243.33	142.18	95.62	Chert	4	242	142
243.15	142.15	95.63	Chert	3	242	142
243.32	142.54	95.63	Chert	13	242	142
243.06	142.96	95.63	Chert	18	242	142
243.49	142.56	95.64	Chert	15	242	142
243.03	142.48	95.65	Chert	16	242	142
243.71	142.69	95.63	Chert (Cortex)	21	242	142
243.09	142.035	95.62	Chert Cobble	1	242	142
243.21	142.5	95.61	Chert Flake	12	242	142
243.64	142.945	95.68	Chert Flake	22	242	142
243.19	142.71	95.6	Chert Shard	24	242	142
243.51	142.1	95.6	Chert Spall	2	242	142
243.63	142.89	95.64	Cortex Boulder	23	242	142
243.29	142.34	95.6	Cortex Chert	8	242	142
243.32	142.27	95.62	Cortex Chert	7	242	142
243.09	142.38	95.62	Cortex Chert	9	242	142
243.255	142.48	95.64	Cortex Chert	11	242	142
243.39	142.19	95.6	Large Chert Boulder	10	242	142
243.21	142.79	95.63	Large Quartz Pebble	17	242	142
243.27	142.28	95.62	Quart	6	242	142
243.33	142.225	95.61	Quartz	5	242	142
243.36	142.575	95.61	Quartz	14	242	142
243.16	142.92	95.61	Quartz	19	242	142
243.49	142.79	95.64	Quartz	20	242	142
243.42	142.95	95.56	Angular Chert	28	242	142
243.16	142.93	95.57	Angular Chert	40	242	142
243.06	142.36	95.58	Angular Chert	8	242	142
243.03	142.455	95.58	Angular Chert	10	242	142
243.12	142.88	95.59	Angular Chert	26	242	142
243.13	142.96	95.59	Weathered Chert	27	242	142

Table A15-20 K continued

2008 N	E	Depth	Type	Art#	N	E
243.35	142.75	95.57	Broken Quartz	34	242	142
243.05	142.43	95.58	Broken Quartz	7	242	142
243.1	142.33	95.59	Broken Quartz	6	242	142
243.38	142.65	95.59	Broken Quartz	31	242	142
243.01	142.92	95.59	Broken Quartz	25	242	142
243.13	142.75	95.59	Broken Quartz	35	242	142
243.18	142.73	95.595	Broken Quartz	29	242	142
243.24	142.27	95.56	Chert	12	242	142
243.17	142.185	95.57	Chert	1	242	142
243.44	142.44	95.57	Chert	18	242	142
243.07	142.9	95.57	Chert	38	242	142
243.285	142.38	95.58	Chert	14	242	142
243.6	142.48	95.58	Chert	19	242	142
243.17	142.64	95.59	Chert	22	242	142
243.02	142.6	95.59	Chert	17	242	142
243.14	142.64	95.59	Chert	21	242	142
243.06	142.8	95.59	Chert	24	242	142
243.28	142.71	95.595	Chert	33	242	142
243.65	142.52	95.59	Chert Boulder	20	242	142
243.22	142.33	95.56	Chert Flake	15	242	142
243.36	142.175	95.56	Chert Flake	2	242	142
243.52	142.17	95.59	Chert Flake	3	242	142
243.035	142.32	95.59	Chert Flake	5	242	142
243.22	142.71	95.59	Chert Flake	30	242	142
243.27	142.68	95.595	Chert Flake Weathered	32	242	142
243.02	142.74	95.56	Chert Pebble	36	242	142
243.21	142.39	95.59	Cortex Chert	13	242	142
243.22	142.28	95.57	Large Chert Flake	11	242	142
243.1	142,35	95.58	Quartz Pebble	16	242	142
243.1	142.74	95.59	Weathered Chert	23	242	142
243.03	142.27	95.58	Weathered Chert Flake	4	242	142
243.82	142.625	95.5	Chert	12	242	142
243.59	142.235	95.51	Chert	4	242	142
243.54	142.52	95.51	Angular Chert	9	242	142
243.79	142.92	95.51	Chert	13	242	142
243.3	142.08	95.52	Chert Boulder	2	242	142
243.41	142.145	95.52	Angular Chert	3	242	142
243.3	142.5	95.52	Chert Cobble	7	242	142
243.54	142.44	95.52	Angular Chert	8	242	142
243.52	142.59	95.52	Chert	10	242	142
243.462	142.71	95.52	Angular Chert	11	242	142
243.21	142.1	95.53	Chert Boulder	1	242	142
243.05	142.57	95.53	Angular Chert	5	242	142

Table A15-20 K continued

2008 N	E	Depth	Type	Art#	N	E
243.01	142.49	95.54	Broken Quartz	6	242	142
243.64	142.31	95.445	Chert Pebble	12	242	142
243.29	142.165	95.45	Chert	2	242	142
243.155	142.22	95.45	Chert	6	242	142
243.67	142.32	95.45	Chert Flake	13	242	142
243.62	142.46	95.45	Chert	16	242	142
243.69	142.455	95.45	Chert	17	242	142
243.275	142.17	95.46	Chert	1	242	142
243.55	142.36	95.46	Broken Quartz	10	242	142
243.73	142.3	95.46	Chert Flake	14	242	142
243.825	142.34	95.46	Chert	15	242	142
243.34	142.12	95.47	Chert	3	242	142
243.75	142.06	95.47	Chert	7	242	142
243.59	142.275	95.47	Chert	9	242	142
243.56	142.4	95.47	Weathered Chert Flake	11	242	142
243.41	142.16	95.48	Chert	5	242	142
243.37	142.1	95.49	Chert	4	242	142
243.43	142.095	95.49	Chert Flake	8	242	142
243.02	142.92	95.58	Broken Quartz	37	242	142
243.11	142.88	95.57	Broken Quartz	39	242	142
242.54	142.42	95	Possible Tool	10	242	142
242.92	142.52	95.655	Cortical Debris	7	242	142
242.12	142.24	95.66	Bend Break	5	242	142
242.64	142.41	95.66	Cortical Bend Break	6	242	142
242.105	142.17	95.665	Chert Debris	4	242	142
242.33	142.86	95.665	Chert Debris	12	242	142
242.07	142.74	95.665	Chert Debris	14	242	142
242.1	142.075	95.67	Chert Debris	3	242	142
242.55	142.49	95.67	Chert Debris	8	242	142
242.39	142.52	95.68	Retouched Flake	9	242	142
242.49	142.65	95.68		11	242	142
242.38	142.35	95.68	Chert Cobble	13	242	142
242.35	142.12	95.7	Chert Flake	2	242	142
242.88	142.13		Chert Blade-Like-Flake	1	242	142
242.85	142.11	95.6	Broken Quartz Pebble	2	242	142
242.39	142.11	95.6	Possible Bend Break	4	242	142
242.32	142.04	95.6	Chert Debris	5	242	142
242.23	142.05	95.6	Chert Flake	6	242	142
242.62	142.95	95.6	Chert Cobble	9	242	142
242.47	142.43	95.6	Chert Debris	10	242	142
242.34	142.62	95.6	Broken Quartz Pebble	15	242	142
242.74	142.86	95.6	Chert Bend Break	18	242	142
242.86	142.15	95.61	Quartz Pebble	3	242	142

Table A15-20 K continued

2008 N	E	Depth	Type	Art#	N	E
242.56	142.29	95.61	Chert Debris	8	242	142
242.26	142.5	95.61	Chert Debris	11	242	142
242.11	142.54	95.62	Cortical Chert Pebble	16	242	142
242.87	142	95.63	Bend Break	1	242	142
242.77	142.36	95.63	Chert Graver Tool	7	242	142
242.9	142.57	95.63	Chert Pebble	12	242	142
242.58	142.31	95.63	Bend Break	14	242	142
242.85	142.72	95.63		17	242	142
242.29	142.99	95.65	Chert Flake	19	242	142
242.79	142.01	95.55	Cortical Chert Flake	3	242	142
242.77	142.02	95.55	Broken Quartz Pebble	5	242	142
242.7	142.01	95.55	Broken Quartz Pebble	6	242	142
242.2	142.41	95.55	Broken Quartz Pebble	19	242	142
242.86	142.58	95.55	Broken Quartz Pebble	24	242	142
242.85	142.23	95.56	Broken Quartz Pebble	8	242	142
242.71	142.61	95.57	Broken Quartz Pebble	26	242	142
242.69	142.8	95.57	Broken Quartz Pebble	32	242	142
242.7	142.01	95.58	Broken Quartz Pebble	6	242	142
242.63	142.65	95.58	Broken Quartz Pebble		242	142
242.28	142.38	95.55	Chert Blade Like Flake	17	242	142
242.58	142.19	95.57	Chert Flake	10	242	142
242.23	142.26	95.57	Chert Flake	13	242	142
242.85	142.75	95.57	Chert Pebble	30	242	142
242.86	142.78	95.58	Chert Pebble	31	242	142
242.59	142.34	95.56	Chert Debris	14	242	142
242.4	142.75	95.57	Chert Debris	34	242	142
242.04	142.97	95.57	Chert Debris	36	242	142
242.88	142.55	95.55	Cortical Chert	23	242	142
242.65	142.59	95.58	Cortical Chert	27	242	142
242.63	142.59	95.59	Cortical Chert Flake	25	242	142
242.23	142.51	95.55	Cortical Chert Pebble	22	242	142
242.41	142.31	95.575	Cortical Chert Pebble	16	242	142
242.45	142.53	95.575	Cortical Chert Pebble	21	242	142
242.66	142.87	95.55	Cortical Chert Debris		242	142
242.79	142.06	95.56	Cortical Chert Debris	4	242	142
242.64	142.14	95.56	Cortical Chert Debris	9	242	142
242.18	142.2	95.56	Cortical Chert Debris	11	242	142
242.54	142.07	95.57	Cortical Chert Debris	7	242	142
242.09	142.7	95.57	Cortical Chert Debris	33	242	142
242.78	142.01	95.58	Cortical Chert Debris	2	242	142
242.48	142.37	95.58	Cortical Chert Debris	15	242	142
242.87	142.05	95.59	Cortical Chert Debris	1	242	142
242.54	142.51	95.59	Cortical Chert Debris	20	242	142

Table A15-20 K continued

2008 N	E	Depth	Type	Art#	N	E
242.35	142.14	95.57	Quartz Flake/Debris	12	242	142
242.77	142.43	95.56	Quartz Pebble	18	242	142
242.59	142.6			29	242	142
242.49	142.23	95.5	Chert Debris	3	242	142
242.5	142.52	95.5	Cortical Pebble	5	242	142
242.57	142.39	95.51	Chert Debris	4	242	142
242.69	142.51	95.51	Cortical Chert	7	242	142
242.62	142.72	95.51	Cortical Chert Pebble	11	242	142
242.49	142.11	95.52	Chert Flake	2	242	142
242.3	142.67	95.52	Cortical Chert Debris	6	242	142
242.56	142.72	95.52	Chert Debris	12	242	142
242.7	142.8	95.52	Chert Flake Medial	14	242	142
242.83	142.91	95.52	Cortical Chert Debris	17	242	142
242.82	142.2	95.53	Cortical Chert	1	242	142
242.84	142.71	95.53	Cortical Chert Pebble	9	242	142
242.67	142.76	95.53	Chert Debris	10	242	142
242.68	142.81	95.53	Chert Pebble	13	242	142
242.79	142.83	95.53	Quartz Pebble	15	242	142
242.85	142.81	95.53		16	242	142
242.72	142.62	95.54	Chert Debris	8	242	142
242.53	142.65	95.47	Cortical	2	242	142
242.77	142.07	95.485	Ut. Chert Flake	4	242	142
242.68	142.8	95.49	Ut Chert Blade	1	242	142
242.56	142.81	95.495	Cortical Chert Debris	3	242	142
242.85	143.36	95.37	Chert Debris	2	242	142
242.86	142.8	95.375	Chert Flake	4	242	142
243.01	142.45		Small Chert Flake	9	242	142
242.65	142.67	95.62				
246.54	138.86	97.65	Thinning Flake	1	246	138
246.91	138.99	97.56	Chert Cobble	1	246	138
246.58	138.68	97.56	Microblade	1	246	138
246.4	138.7	97.56	Thinning Flake	2	246	138
246.39	138.87	97.49	Hammerstone	1	246	138
246.7	138.92	97.55	Reworked Flake	1	246	138
246.37	138.82	97.5	Debris-Broken Flake	2	246	138
246.4	138.55	97.53	Thinning Flake	2	246	138
246.42	138.5	97.52	Cortical	3	246	138
246.39	138.34	97.53	Tertiary Flake	3	246	138
246.95	138.9	97.52	Cortical	4	246	138
246.39	138.1	97.53	Large Old Cortex	4	246	138
246.71	138.16	97.52	Cortical Chert	5	246	138
246.94	138.1	97.55	Cortical Chert	6	246	138
246.82	138.36	97.54	Blade Core	7	246	138

Table A15-20 K continued

2008 N	E	Depth	Type	Art#	N	E
246.96	138.77	97.5	Chert	1	246	138
246.97	139.05	97.47	Modified Flake	1	246	138
246.34	138.55	97.5	Tertiary Flake	1	246	138
246.47	139.53	97.43	Chert	1	246	138
246.54	139.53	97.42	Chert	2	246	138
246.26	139.13	97.35	Chopper	1	246	138
246.7	138.28	97.42	Cortex	1	246	138
246.6	139.38	97.35	Cortex	2	246	138
246.9	138.76	97.34	Cortex	2	246	138
246.67	139.62	97.32	Cortex	1	246	138
246.97	139.36	97.32	Cortex	2	246	138
246.92	139.55	97.32	Cortex	1	246	138
246.45	138.83	97.3	Scraper	1	246	138
246.83	139.36	97.29	Anvil Debris	2	246	138
246.37	138.47	97.29	Possible Utilized Flake	2	246	138
246.83	139.36	97.22	Cortex	1	246	138
246.79	139.1	97.2	Cortex	2	246	138
246.13	139.88	97.16	Cortex	1	246	138
247	139.86	97.1	Cortex	1	246	138
246.16	138.52	97.15	Flake	1	246	138
246.89	138.14	97.07	Bend Break	1	246	138
247.55	141.66	97.44	Chert Debris	1	246	140
247.65	141.5	97.48	Chert Cobble	2	246	140
247.67	141.76	97.43	Chert Debris	3	246	140
247.36	141.1	97.4	Chert Debris	4	246	140
247.9	141.65	97.4	Chert Pebble	5	246	140
247.95	141.63	97.4	Chert Tool. Chopper	6	246	140
247.96	141.76	97.46	Chert Debris	7	246	140
247.98	141.74	97.45	Chert Pebble	8	246	140
247.55	140.4	97.49	Chert Boulder	1	246	140
247.12	140.58	97.39	Debitage (Chert)	2	246	140
247.12	140.76	97.39	Cortical Chert Pebble	3	246	140
247.52	140.99	97.39	Chert Cobble	4	246	140
247.9	140.68	97.43	Cortical Chert Pebble	5	246	140
247.74	141.98	97.4	Chert Debris	1	246	140
247.88	141.8	97.4	Chert Debris	2	246	140
247.61	141.79	97.47	Broken Quartz Pebble	3	246	140
247.37	141.81	97.39	Blade Like Flake	4	246	140
247.22	141.69	97.36	Chert Debris	5	246	140
247.17	141.08	97.4	Chert Cobble	6	246	140
246.68	141.24	97.4	Cortical Chert Flake	1	246	140
246.8	141.05	97.37	Chert	2	246	140
246.63	141.16	97.4	Chert Pebble	3	246	140

Table A15-20 K continued

2008 N	E	Depth	Type	Art#	N	E
246.42	141.31	97.39	Chert Flake/Debris	4	246	140
246.24	141.64	97.38	Cortical Chert Debris	5	246	140
246.33	141.61	97.39	Cortical Chert Debris	6	246	140
246.36	141.61	97.37	Chert	7	246	140
247.27	141.77	97.34	Chert Cobble/Core	1	246	140
246.7	140.77	97.35	Possible Bend Break	1	246	140
245.43	140.97	97.35	Possible Utilized Flake	2	246	140
246.3	142.6	97.33	Possible Hammerstone	3	246	140
246.42	140.64	97.3	Cortex	1	246	140
246.56	141.34	97.4	Chert Pebble	1	246	140
246.79	141.46	97.215	Chert Debris	2	246	140
246.65	141.645	97.247	Chert Pebble	3	246	140
246.58	141.68	97.275	Chert Pebble	4	246	140
246.38	141.52	97.278	Quartz Pebble	5	246	140
246.27	141.64	97.26	Chert Pebble	6	246	140
246.3	141.56	97.22	Chert Cobble	7	246	140
246.53	141.745	97.212	Chert Pebble	8	246	140
246.92	141.505	97.275	Chert Cobble	9	246	140
246.455	141.4	97.202	Chert Cobble	10	246	140
246.625	141.48	97.155	Chert Boulder	11	246	140
246.33	141.31	97.47	Chert Debris	1	246	140
246.31	141.41	97.46	Chert Debris	2	246	140
246.27	141.24	97.33	Chert Debris	3	246	140
246.92	141.06	97.46	Chert Cobble	4	246	140
246.66	141.43	97.36	Chert Debris	5	246	140
246.2	141.3	97.5	Chert Cobble	6	246	140
246.2	141.45	97.49	Chert Debris	7	246	140
244.406	141.31	97.48	Chert Flake	8	246	140
246.56	141.1	97.44	Chert Debris	9	246	140
246.45	141.45	97.45	Chert Boulder	10	246	140
246.2	141.57	97.43	Chert Spall, Cobble	11	246	140
246.48	141.18	97.44	Chert Cobble	12	246	140
246.405	141.14	97.47	Chert Pebble	13	246	140
246.48	141.3	97.435	Chert Debris	14	246	140
246.295	141.29	97.46	Broken Quartz Pebble	15	246	140
246.445	141.245	97.47	Chert Debris	16	246	140
246.4	141.3	97.44	Chert Debris	17	246	140
246.33	141.33	97.44	Quartz Pebble	18	246	140
246.58	141.235	97.395	Chert Pebble	19	246	140
246.65	141.305	97.395	Chert	20	246	140
246.68	141.27	97.38	Chert Cobble	21	246	140
246.Xx	140.Xx	97.3	Chert Debris		246	140
246.2	142.97	97.45	Chert Flake	1	246	142

Table A15-20 K continued

2008 N	E	Depth	Type	Art#	N	E
246.55	142.91	97.36	Chert Flake	2	246	142
248.16	141.35	97.36	Cortical	1	248	140
248.56	140.8	128cmbs	Chert	1	248	140
248.73	140.88	97.59	Chert	1	248	140
248.3	140.82	97.64	Large Chert Cobble	2	248	140
248.55	140.26	97.59	Chert Cobble	3	248	140
248.35	140.24	97.6	Giant Flake	4	248	140
248.27	140.78	97.6	Chert	5	248	140
248.34	140.64	97.59	Chert	6	248	140
248.93	140.8	97.56	Chert	7	248	140
248.17	140.34	97.6	Chert	8	248	140
248.18	141.13	97.51	Chert Debris	1	248	140
248.45	141.01	97.67	Cortical	2	248	140
248.27	141.7	97.55	Chert Cobble	2	248	140
248.62	141.02	97.52	Multidimensional Core	3	248	140
248.87	141.01	97.51	Battered Chert Core	4	248	140
248.38	141.75	129cmbd	Cortical	5	248	140
248.71	141.59	97.52	Cortical	5	248	140
248.44	141.59	133cmbd	Cortical	6	248	140
248.88	141.6	97.51	Cortical	6	248	140
248.44	141.77	131cmbd	Cortical	7	248	140
248.12	141.68	135cmbd	Cortical	8	248	140
248.1	141.74	134cmbd	Cortical	9	248	140
248.17	141.99	139cmbd	Core	10	248	140
248.57	141.6	135cmbd	Cortical	12	248	140
248.07	140.78	97.5	Chert	1	248	140
248.55	140.09	97.53	Cortical	1	248	140
248.82	140.06	97.52	Cortical	2	248	140
248.89	140.22	97.41	Core	3	248	140
248.01	141.86	97.49	Chert Debris/Blade-Like	1	248	140
248.05	140.47	97.48	Quartz Cobble	1	248	140
248.49	140.84		Cortical Chert Pebble	2	248	140
248.81	140.84	97.49	Chert	3	248	140
248.6	141.38	97.39	Cortical	1	248	140
248.98	141.41	97.46	Retouched Flake	2	248	140
248.57	140.92	97.5	Cortical	1	248	140
248.3	140.24	97.44	Cortical	2	248	140
248.77	140.89	97.4	Cortical	3	248	140
248.58	140.63	97.42	Cortical	4	248	140
248.91	140.28	97.48	Cortical	5	248	140
248.12	140.57	97.44	Possible Core Fragment.	6	248	140
248.39	140.41	97.41	Possible Core Fragment.	7	248	140
248.06	141.67	97.52	Multidimensional Core	3	248	140

Table A15-20 K continued

2008 N	E	Depth	Type	Art#	N	E
248.58	141.6	140cmbd	Chert	11	248	140
247.32	141.875	97.324	Chert Debris	1	246	140
247.1	141.42	97.21	Chert Debris	2	246	140
247.54	141.71	97.2	Bend Break	1	246	140
247.02	141.48	97.2	Chert Cobble	3	246	140
246.18	141.18	97.24	Chert Flake	1	246	140
246.18	141.18	97.24	Chert Debris	1	246	140
246.35	141.19	97.31	Chert Debris	2	246	140
247.06	141.12	97.17	Cortical Chert Pebble	1	246	140
247	141.47	97.2	Chert Debris	1	246	140
246.465	141.43	97.15	Chert Flake	6	246	140
246.15	141.43	97.195	Blade-Like-Flake	3	246	140
246.978	141.27	97.19	Chert Debris/Flake	9	246	140
246.505	141.855	97.18	Bend Break	1	246	140
246.235	141.05	97.197	Chert Debris	5	246	140
246.13	141.42	97.185	Chert Flake	4	246	140
246.05	141.55	97.185	Flake, Chert	2	246	140
246.935	141.35	97.16	Chert Flake	8	246	140
246.4	141.31	97.155	Chert	7	246	140
246.19	141.38	97.1	Broken Quartz	1	246	140
246.07	141.26	97.1	Chert Debris	2	246	140
246.92	141.8	97.135	Chert Debris	9	246	140
246.532	141.12	97.14	Cortical Chert Pebble	4	246	140
246.37	141.39	97.1	Chert Debris	5	246	140
246.06	141.8	97.15	Chert Debris	7	246	140
246.995	141.86	97.115	Cortical Chert Debris	10	246	140
246.4	141.63	97.15	Chert Pebble /Debris	8	246	140
246.15	141.665	97.125	Chert Debris	6	246	140
246.515	141.03	97.15	Chert Pebble	1	246	140
246.673	141.12	97.11	Chert Pebble	3	246	140
246.655	141.0325	97.15	Chert Debris/Flake	2	246	140
246.28	141.86	97.08	Chert Blade-Like-Flake	3	246	140
246.11	141.83	97.08	Chert Debris	2	246	140
246.85	141.27	97.07	Chert Debris	5	246	140
246.82	141.15	97.07	Chert Tool/Flake	6	246	140
246.77	141.43	97.08	Chert Debris	4	246	140
247.92	141.26	97.03	Cortical Debitage	2	246	140
247.88	141.73	96.99	Quartz Broken Pebble	3	246	140
247.73	141.73	97	Chert Boulder	1	246	140
247.07	141.205	97.04	Cortical Chert Pebble	4	246	140
246.835	141.44	97.04	Chert Debris	9	246	140
246.05	141.16	97.04	Chert Debris	1	246	140
246.27	141.8	97.04	Chert Debris	11	246	140

Table A15-20 K continued

2008 N	E	Depth	Type	Art#	N	E
246.37	141.19	97.03	Chert Debris	4	246	140
246.63	141.13	97.01	Chert Debris	6	246	140
246.8	141.43	97	Utilized Flake	10	246	140
246.67	141.4	97.01	Bend Break	8	246	140
246.5	141.33	97.01	Cortical Chert Debris	5	246	140
246.7	141.235	97.03	Broken Quartz	7	246	140
246.14	141.22	97	Cortical Chert Debris	2	246	140
246.2	141.74	97	Cortical Chert Debris	12	246	140
246.34	141.06	97.02	Possible Quartz Tool	3	246	140
246.87	141.05	96.965	Chert Debris	6	246	140
246.74	141.58	96.96	Chert Debris	10	246	140
246.91	141.35	96.98	Chert Debris	9	246	140
246.26	141.02	97	Chert Debris	1	246	140
246.88	141.06	96.97	Blade-Like-Flake	5	246	140
246.59	141.91	96.96	Chert Debris	11	246	140
246.13	141.87	96.98	Chert Debris	7	246	140
246.13	141.28	96.98	Quartz , Broken	3	246	140
246.21	141.17	97	Cortical Chert Debris	2	246	140
246.83	141.37	96.95	Chert Debris	8	246	140
246.59	141.27	96.91	Debris, Chert	9	246	140
246.05	141.91	96.91	Chert Bend Break	1	246	140
246.88	141.38	96.92	Chert Debris	10	246	140
246.15	141.71	96.91	Debris, Chert	4	246	140
246.15	141.39	96.98	Cortical Chert Debris	4	246	140
246.4	141.91	96.92	Chert Debris	2	246	140
246.31	141.6	96.92	Broken Quartz	5	246	140
246.35	141.4	96.92	Broken Quartz	7	246	140
246.72	141.75	96.92	Broken Quartz	6	246	140
246.15	141.76	96.9	Broken Quartz	3	246	140
246.63	141.1	96.94	Broken Quartz	11	246	140
246.07	141.45	96.9	Pebble , Cortical Chert	8	246	140
246.34	141.01	96.87	Bend Break	1	246	140
246.56	141.14	96.895	Debris, Chert	2	246	140
246.48	141.2	96.86	Chert Debris	3	246	140
246.64	141.385	96.88	Chert Debris	5	246	140
246.52	141.48	96.89	Broken Quartz Pebble	6	246	140
246.46	141.36	96.88	Cortical Chert Pebble	4	246	140
246.11	141.69	96.89	Chert Debris	8	246	140
246.68	141.58	96.86	Pebble , Quartz , Broken	7	246	140
246.74	142	97.38	Chert Flake	1	246	142
246.37	142.1	97.41	Flake, Chert, Large	1	246	142
246.717	142.76	97.35	Bend Break Flake	6	246	142
246.21	142.59	97.315	Broken Chert Pebble	3	246	142

Table A15-20 K continued

2008 N	E	Depth	Type	Art#	N	E
246.27	142.9	97.32	Chert Debris	4	246	142
246.045	142.19	97.32	Cortical Pebble	1	246	142
246.58	142.45	97.302	Chert Cobble	5	246	142
246.19	142.4	97.3	Broken Quartz	2	246	142
246.83	142.2	97.32	Chert Debris	7	246	142
246.59	142.215	97.282	Cobble, Chert	5	246	142
246.288	142.93	97.27	Chert Flake	9	246	142
246.305	142.9	97.283	Angular Chert Flake	8	246	142
246.26	142.92	97.257	Bend Break	10	246	142
246.457	142.18	97.3	Bend Break, 4 Sided	1	246	142
246.79	142.46	97.3	Angular Chert Smash	3	246	142
246.1	142.63	97.261	Broken Quartz Pebble	7	246	142
246.142	142.6	97.296	Chert Flake	6	246	142
246.8	142.392	97.26	Flake, Chert	4	246	142
246.427	142.573	97.26	Bend Break	3	246	142
248.32	140.76	97.32	Retouched Flake	1	248	140
248.39	140.1	97.33	Hammerstone	2	248	140
248.2	140.26	97.25	Flake, Fresh	1	248	140
248.65	140.89	97.29	Cortical	4	248	140
248.94	140.13	97.3	Cortical	3	248	140
248.28	140.14	97.3	Chert Cobble	2	248	140
248.48	140.82	97.22	Chert Debris	2	248	140
248.46	140.82	97.22	Chert Debris	1	248	140
246.45	141.08	97.25	Chert Flake	1	248	140
248.24	140.4	97.15	Chert Debris	1	248	140
248.1	140.12	97.15	Cortical Chert Debris	2	248	140
248.03	141.08	97.2	Chert Debris	1	248	140
248.68	141.88	97.2	Chert Debris	2	248	140
248.565	140.36	97.145	Chert Debris	1	248	140
248.74	140.235	97.155	Cortical	2	248	140
248.835	141.8	97.21	Chert Debris	2	248	140
248.83	141.18	97.175	Chert Debris	1	248	140
248.67	140.335	97.09	Utilized Flake	1	248	140
248.92	141.11	97.16	Chert Blade-Like-Flake	2	248	140
248.233	141.255	97.135	Chert Debris	1	248	140
248.945	141.13	97.16	Chert Pebble	3	248	140
248.67	141.555	97.12	Chert Debris	4	248	140
248.615	141.615	97.1	Chert Pebble	5	248	140
248.42	140.75	97.01	Chert Tool Flake	1	248	140
248.46	141.44	97.1	Chert Debris	2	248	140
248.215	141.11	97.1	Chert Flake	1	248	140
248.67	141.67	97.07	Chert Debris	4	248	140
248.75	141.57	97.06	Chert Cobble	3	248	140

Table A15-20 K continued

2008 N	E	Depth	Type	Art#	N	E
248.18	140.05	96.95	Chert Blade-Like-Flake	1	248	140
248.41	140.08	96.95	Chert Debris	7	248	140
248.49	140.3	96.95	Cortical Chert Pebble	4	248	140
248.26	140.36	96.97	Chert Debris, Bend	6	248	140
248.175	140.235	96.96	Quartz , Utilized	3	248	140
248.41	140.19	96.99	Chert Debris	2	248	140
248.665	141.13	97.05	Chert Bend Break	4	248	140
248.55	141.645	97.03	Blade-Like Flake	5	248	140
248.86	141.22	97.05	Cortical Chert Debris	3	248	140
248.95	141.21	97.04	Possible Chert Core	2	248	140
248.435	141.29	97.015	Chert Boulder/Anvil	1	248	140
248.3	140.11	96.9	Chert Flake	2	248	140
248.15	140.245	96.94	Chert Debris	4	248	140
248.54	140.19	96.92	Blade Like Flake	3	248	140
248.23	140.3	96.92	Debris, Chert	5	248	140
248.26	140.05	96.9	Chert Debris	6	248	140
24826	140.33	96.9	Chert Debris	1	248	140
248.5	141.115	96.99	Chert Debris	1	248	140
248.89	141.3	97	Chert Debris	3	248	140
248.69	141.23	96.97	Bend Break	2	248	140
248.46	141.545	97	Cortical Chert Pebble	4	248	140
248.19	141.735	96.93	Chert Flake	3	248	140
248.27	141.1	96.91	Cortical Chert Debris	2	248	140
248.26	141.16	96.915	Chert Boulder	1	248	140
246.57	142.43	97.26	Chert Bend Break	2	246	142
248.115	140.32	96.95	Chert Flake	5	248	140
243.08	139.71	95.88	Broken Cortical Chert	3	242	138
243.78	139.27	95.45	Large Degraded Chert	1	242	138
243.54	139.08	95.46	Large Degraded Chert	2	242	138
244.9	138.7	97.17	Chert Bend Break		244	138

Table A15-20 L
Mapped Artifacts from 2009 Excavations at the Topper Site (38AL23).

2009 N	E	Depth	Type	Art#	N	E
242.03	139.77	95.67	Chert Debris	1	242	138
243.53	139.56	95.75	Chert Flake	6	242	138
243.69	139.68	96.11	Cortical Chert Pebble	2	242	138
243.45	139.78	96.3	Cortical	1	242	138
243.84	139.53	96.32	Cortical Pebble	4	242	138
243.44	139.55	96.35	Cortical Chert Pebble	3	242	138
243.23	139.15	96.235	Cortical Pebble	3	242	138
243.73	139.17	96.26	Cortical Chert Debris	2	242	138
243.85	1339.43	96.26	Chert	1	242	138
243.85	139.035	96.265	Cortical Chert Pebble	4	242	138
243.59	139.825	96.2	Chert Debris	6	242	138
243.7	139.37	96.2	Chert Flake	4	242	138
243.03	139.03	96.2	Cortical Bend Break	5	242	138
243.41	139.775	96.2	Chert Cobble	7	242	138
243.75	139.66	96.205	Chert Debris	2	242	138
243.78	139.64	96.225	Cortical Chert	3	242	138
243.69	139.91	96.25	Chert Debris	1	242	138
243.72	139.36	95.91	Chert Flake	1	242	138
243.14	139.08	95.91	Cortical Chert Debris	2	242	138
243.08	139.56	95.51	Angular Chert Debris	22	242	138
243.36	139.59	95.865	Chert	4	242	138
243.64	139.78	95.87	Chert Flake	2	242	138
243.25	139.87	95.88	Broken Quart	1	242	138
243.01	139.16	95.885	Cortical	5	242	138
243.11	139.01	95.89	Cortical Sherd	6	242	138
243.64	139.79	95.815	Chert Flake	2	242	138
243.11	139.08	95.83	Chert Cobble	3	242	138
243.91	139.81	95.85	Cortical Of Chert	1	242	138
243.42	139.87	95.76	Chert Debris	4	242	138
243.38	139.73	95.76	Cortical Chert	3	242	138
243.61	139.77	95.77	Chert Debris	5	242	138
243.73	139.13	95.775	Chert Debris	7	242	138
243.3	139.73	95.78	Chert Debris	2	242	138
243.21	139.79	95.78	Broken Quartz	1	242	138
243.61	139.76	95.7	Quartz Pebble	1	242	138
243.86	139.52	95.7	Chert	2	242	138
243.58	139.77	95.66	Chert Sherd	2	242	138
243.6	139.58	95.66	Broken Quartz	3	242	138
243.1	139.6	95.62	Chert Flake	2	242	138
243.27	139.375	95.62	Chert Flake	4	242	138
243.17	139.5	95.62	Cortex Chert	3	242	138
243.21	139.27	95.63	Chert Flake	5	242	138

Table A15-20 L continued

2009 N	E	Depth	Type	Art#	N	E
243.6	139.76	95.645	Possible Utilized Chert	1	242	138
243.39	139.77	95.55	Possible Bend Break	4	242	138
243.62	139.67	95.55	Weathered Chert Flake	7	242	138
243.42	139.72	95.55	Quartz Debris	5	242	138
243.9	139.31	95.55	Bend Break	20	242	138
243.57	139.65	95.55	Chert Flake Weathered	6	242	138
243.26	139.56	95.56	Chert Debris	10	242	138
243.3	139.23	95.57	Quartz Pebble	17	242	138
243.65	139.74	95.575	Weathered Cobble	1	242	138
243.33	139.52	95.58	Cortical Chert Debris	11	242	138
243.2	139.6	95.59	Chert Debris	9	242	138
243.96	139.3	95.595	Blade Like Flake	16	242	138
243.65	139.67	95.55	Chert Flake	8	242	138
243.69	139.56	95.55	Bend Break	13	242	138
243.94	139.14	95.565	Bend Break	18	242	138
243.9	139.58	95.57	Possible Chert Tool	14	242	138
243.21	139.91	95.58	Weathered Chert Flake	2	242	138
243.66	139.53	95.58	Cortical Debris	12	242	138
243.93	139.38	95.58	Prismatic Chert Debris	15	242	138
243.96	139.17	95.58	Blade-Like Flake	19	242	138
243.11	139.58	95.52	Angular Chert Flake	21	242	138
243.46	139.66	95.495	Bend Break	4	242	138
243.25	139.84	95.5	Bend Break Chert	10	242	138
243.25	139.66	95.47	Biface	2	242	138
243.22	139.79	95.52	Blade-Like Chert Flake	11	242	138
243.18	139.08	95.5	Broken Quartz	27	242	138
243.78	139.47	95.53	Broken Quartz	17	242	138
243.23	139.11	95.55	Broken Quartz	26	242	138
243.46	139.63	95.5	Broken Quartz Pebble	14	242	138
243.56	139.63	95.52	Chert Flake	13	242	138
243.11	139.71	95.53	Chert Flake	16	242	138
243.75	139.16	95.5	Chert Debris	23	242	138
243.32	139.59	95.505	Chert Sherd	20	242	138
243.28	139.68	95.5	Cortical Chert	15	242	138
243.93	139.86	95.51	Cortical Chert	6	242	138
243.44	139.55	95.51	Cortical Chert Flake	19	242	138
243.6	139.105	95.52	Degraded Chert	25	242	138
243.76	139.62	95.53	Degraded Chert	12	242	138
243.77	139.75	95.52	Chert Bend Break	9	242	138
243.55	139.53	95.52	Degraded Chert Flake	18	242	138
243.99	139.735	95.51	Flake	5	242	138
243.39	139.73	95.5	Graver Spur	3	242	138
243.92	139.8	95.51	Large Bend Break	7	242	138

Table A15-20 L continued

2009 N	E	Depth	Type	Art#	N	E
243.21	139	95.54	Large Chert Debris	28	242	138
243.23	139.56	95.45	Large Cortex Flake	24	242	138
243.79	139.72	95.53	Chert	8	242	138
243.41	139.79	95.53		1	242	138
243.9	139.2	95.48	Angular Chert Debris	31	242	138
243.54	139.61	95.48	Angular Chert Debris	14	242	138
243.015	139.47	95.48	Angular Chert Debris	30	242	138
243.58	139.62	95.49	Angular Chert Debris	15	242	138
243.22	139.12	95.455	Bend Break	37	242	138
243.89	139.78	95.5	Broken Quartz Pebble	4	242	138
243.79	139.5	95.48	Chert Bend Break	20	242	138
243.04	139.93	95.465	Chert Flake	8	242	138
243.2	139.48	95.47	Chert Flake	28	242	138
243.1	139.37	95.48	Chert Debris	29	242	138
243.7	139.53	95.45	Cortical Chert Debris	18	242	138
243.95	139.85	95.49	Cortical Chert Debris	3	242	138
243.3	139.34	95.45	Cortical Debris	26	242	138
243.52	139.33	95.47	Cortical Debris	25	242	138
243.34	139.72	95.49	Cortical Debris	9	242	138
243.25	139.55	95.49	Degraded Chert	12	242	138
243.15	139.82	95.5	Degraded Chert	7	242	138
243.1	139.62	95.47	Degraded Chert Flake	11	242	138
243.3	139.64	95.475	Degraded Chert Flake	10	242	138
243.6	139.03	95.455	Degraded Chert Debris	35	242	138
243.14	139.9	95.5	Degraded Chert Debris	6	242	138
243.85	139.22	95.45	Cortical Chert	39	242	138
243.32	139.01	95.45	Cortical Debris	36	242	138
243.86	139.84	95.47	Bend Break	5	242	138
243.52	139.49	95.48	Large Broken Quartz	17	242	138
243.74	139.49	95.46	Large Chert Smash	19	242	138
243.6	139.61	95.45	Large Cortex Flake	23	242	138
243.23	139.56	95.45	Large Cortex Flake	24	242	138
243.92	139.79	95.435	Large Cortical	38	242	138
243.68	139.36	95.46	Large Cortical	21	242	138
243.6	139.38	95.465	Large Cortical	22	242	138
243.25	139.43	95.45	Large Cortical Debris	27	242	138
243.69	139.05	95.46	Large Degraded Chert	34	242	138
243.61	139.01	95.445	Possible Chert Tool	40	242	138
243.62	139.56	95.49	Chert Flake	16	242	138
243.5	139.62	95.48	Cortical Debris	13	242	138
243.57	139.03	95.45	Chert Bend Break	41	242	138
243.92	139.04	95.48	Small Chert Flake	33	242	138
243.86	139.18	95.49	Chert Flake	32	242	138

Table A15-20 L continued

2009 N	E	Depth	Type	Art#	N	E
243.63	139.14	95.51	Chert Flake	24	242	138
243.21	139.82	95.55	Cortical Chert Debris	3	242	138
243.08	139.56	95.51	Angular Chert Debris	22	242	142
243.77	142.7	96.01	Quartz Pebble	1	242	142
243.18	142.06	96.03	Chert Debris	2	242	142
243.22	142.33	95.95		3	242	142
243.44	142.31	95.95	Chert Debris	4	242	142
243.58	142.08	95.96	Chert Debris, Cortical	2	242	142
243.85	142	95.97	Blade Like Flake	1	242	142
243.57	142.56	95.97	Chert Flake	5	242	142
243.675	142.725	95.97		6	242	142
243.39	142.39	95.97	Chert	7	242	142
243.445	142.14	95.045	Bend Break	2	242	142
243.22	142.62	95.9	Chert Debris	4	242	142
243.09	142.82	95.915	Chert Debris	6	242	142
243.28	142.22	95.92	Cortical Chert Debris	3	242	142
243.37	142.82	95.93	Chert Debris	5	242	142
243.36	142.15	95.94	Chert Debris	1	242	142
243.33	142.23	95.86	Chert Pebble	2	242	142
243.825	142.43	95.86	Chert Flake	3	242	142
243.61	142.15	95.88	Chert Debris	1	242	142
243.84	142.87	95.88	Chert Flake	5	242	142
243.8	142.39	95.89	Cortical Chert Debris	4	242	142
243.51	142.23	95.89	Chert Boulder	6	242	142
243.69	142.1	95.81	Chert Debris	3	242	142
243.83	242.34	95.82	Chert Core	1	242	142
243.38	142.34	95.83	Chert Debris	7	242	142
243.17	142.32	95.83	Chert Debris	5	242	142
243.3	142.37	95.84	Chert Debris	6	242	142
243.56	142.14	95.84	Chert Debris	4	242	142
243.875	142.1	95.84	Chert	2	242	142
243.25	142.125	95.75	Chert Pebble	3	242	142
243.85	142.65	95.75	Chert Debris	5	242	142
243.05	142.89	95.78	Chert Debris, Cortical	4	242	142
243.82	242.12	95.79	Chert Core	1	242	142
243.04	142.27	95.79	Chert Debris	2	242	142
243.45	142.92	95.7	Broken Quartz	11	242	142
243.42	142.07	95.72	Broken Quartz	10	242	142
243.43	142.68	95.745	Chert Flake	12	242	142
243.76	142.76	95.73	Chert Pebble	14	242	142
243.27	142.655	95.71	Chert Debris	7	242	142
243.19	142.69	95.71	Chert Debris	8	242	142
243.87	142.95	95.71	Chert Debris	13	242	142

Table A15-20 L continued

2009 N	E	Depth	Type	Art#	N	E
243.71	142.63	95.71	Chert Debris	15	242	142
243.09	142.16	95.71	Chert Debris	18	242	142
243.05	142.76	95.72	Chert Debris	6	242	142
243.64	142.47	95.72	Chert Debris	17	242	142
243.34	142.8	95.73	Chert Debris	9	242	142
243.62	142.52	95.73	Chert Debris	16	242	142
243.01	142.145	95.74	Chert Debris	1	242	142
243.32	142.29	95.74	Chert Debris	3	242	142
243.53	142.37	95.7	Cortical Chert Pebble	5	242	142
243.49	142.37	95.73	Cortical Core	4	242	142
243.4	142.05	95.75	Cortical Pebble	2	242	142
243.11	142.82	95.71	Quartz Flake/Debris	19	242	142
243.72	142.69	95.66	Broken Quartz	14	242	142
243.34	142.81	95.67	Broken Quartz	16	242	142
243.47	142.915	95.67	Chert Flake	11	242	142
243.46	142.98	95.67	Chert Flake	12	242	142
243.79	142.08	95.69	Chert Flake	1	242	142
243.5	142.87	95.69	Chert Pebble	10	242	142
243.54	142.75	95.66	Chert Debris	15	242	142
243.71	142.44	95.67	Chert Debris	13	242	142
243.83	142.67	95.67	Chert Debris	16	242	142
243.13	142.66	95.69	Chert Debris	7	242	142
243.27	142.85	95.69	Chert Debris	8	242	142
243.05	142.09	95.66	Cortical Chert Debris	2	242	142
243.12	142.32	95.66	Cortical Chert Debris	5	242	142
243.295	142.12	95.68	Cortical Chert Debris	4	242	142
243.08	142.395	95.65	Chert Debris	6	242	142
243.22	142.1	95.66	Quartz Pebble	3	242	142
243.38	142.89	95.69	Quartz Pebble	9	242	142
243.06	142.75	95.6	Chert	25	242	142
243.33	142.18	95.62	Chert	4	242	142
243.15	142.15	95.63	Chert	3	242	142
243.32	142.54	95.63	Chert	13	242	142
243.06	142.96	95.63	Chert	18	242	142
243.49	142.56	95.64	Chert	15	242	142
243.03	142.48	95.65	Chert	16	242	142
243.71	142.69	95.63	Chert (Cortex)	21	242	142
243.09	142.035	95.62	Chert Cobble	1	242	142
243.21	142.5	95.61	Chert Flake	12	242	142
243.64	142.945	95.68	Chert Flake	22	242	142
243.19	142.71	95.6	Chert Shard	24	242	142
243.51	142.1	95.6	Chert Spall	2	242	142
243.63	142.89	95.64	Cortex Boulder	23	242	142

Table A15-20 L continued

2009 N	E	Depth	Type	Art#	N	E
243.29	142.34	95.6	Cortex Chert	8	242	142
243.32	142.27	95.62	Cortex Chert	7	242	142
243.09	142.38	95.62	Cortex Chert	9	242	142
243.255	142.48	95.64	Cortex Chert	11	242	142
243.39	142.19	95.6	Large Chert Boulder	10	242	142
243.21	142.79	95.63	Large Quartz Pebble	17	242	142
243.27	142.28	95.62	Quart	6	242	142
243.33	142.225	95.61	Quartz	5	242	142
243.36	142.575	95.61	Quartz	14	242	142
243.16	142.92	95.61	Quartz	19	242	142
243.49	142.79	95.64	Quartz	20	242	142
243.42	142.95	95.56	Angular Chert	28	242	142
243.16	142.93	95.57	Angular Chert	40	242	142
243.06	142.36	95.58	Angular Chert	8	242	142
243.03	142.455	95.58	Angular Chert	10	242	142
243.12	142.88	95.59	Angular Chert	26	242	142
243.13	142.96	95.59	Weathered Chert	27	242	142
243.35	142.75	95.57	Broken Quartz	34	242	142
243.05	142.43	95.58	Broken Quartz	7	242	142
243.1	142.33	95.59	Broken Quartz	6	242	142
243.38	142.65	95.59	Broken Quartz	31	242	142
243.01	142.92	95.59	Broken Quartz	25	242	142
243.13	142.75	95.59	Broken Quartz	35	242	142
243.18	142.73	95.595	Broken Quartz	29	242	142
243.24	142.27	95.56	Chert	12	242	142
243.17	142.185	95.57	Chert	1	242	142
243.44	142.44	95.57	Chert	18	242	142
243.07	142.9	95.57	Chert	38	242	142
243.285	142.38	95.58	Chert	14	242	142
243.6	142.48	95.58	Chert	19	242	142
243.17	142.64	95.59	Chert	22	242	142
243.02	142.6	95.59	Chert	17	242	142
243.14	142.64	95.59	Chert	21	242	142
243.06	142.8	95.59	Chert	24	242	142
243.28	142.71	95.595	Chert	33	242	142
243.65	142.52	95.59	Chert Boulder	20	242	142
243.22	142.33	95.56	Chert Flake	15	242	142
243.36	142.175	95.56	Chert Flake	2	242	142
243.52	142.17	95.59	Chert Flake	3	242	142
243.035	142.32	95.59	Chert Flake	5	242	142
243.22	142.71	95.59	Chert Flake	30	242	142
243.27	142.68	95.595	Chert Flake Weathered	32	242	142
243.02	142.74	95.56	Chert Pebble	36	242	142

Table A15-20 L continued

2009 N	E	Depth	Type	Art#	N	E
243.21	142.39	95.59	Cortex Chert	13	242	142
243.22	142.28	95.57	Large Chert Flake	11	242	142
243.1	142,35	95.58	Quartz Pebble	16	242	142
243.1	142.74	95.59	Weathered Chert	23	242	142
243.03	142.27	95.58	Weathered Chert Flake	4	242	142
243.82	142.625	95.5	Chert	12	242	142
243.59	142.235	95.51	Chert	4	242	142
243.54	142.52	95.51	Angular Chert	9	242	142
243.79	142.92	95.51	Chert	13	242	142
243.3	142.08	95.52	Chert Boulder	2	242	142
243.41	142.145	95.52	Angular Chert	3	242	142
243.3	142.5	95.52	Chert Cobble	7	242	142
243.54	142.44	95.52	Angular Chert	8	242	142
243.52	142.59	95.52	Chert	10	242	142
243.462	142.71	95.52	Angular Chert	11	242	142
243.21	142.1	95.53	Chert Boulder	1	242	142
243.05	142.57	95.53	Angular Chert	5	242	142
243.01	142.49	95.54	Broken Quartz	6	242	142
243.64	142.31	95.445	Chert Pebble	12	242	142
243.29	142.165	95.45	Chert	2	242	142
243.155	142.22	95.45	Chert	6	242	142
243.67	142.32	95.45	Chert Flake	13	242	142
243.62	142.46	95.45	Chert	16	242	142
243.69	142.455	95.45	Chert	17	242	142
243.275	142.17	95.46	Chert	1	242	142
243.55	142.36	95.46	Broken Quartz	10	242	142
243.73	142.3	95.46	Chert Flake	14	242	142
243.825	142.34	95.46	Chert	15	242	142
243.34	142.12	95.47	Chert	3	242	142
243.75	142.06	95.47	Chert	7	242	142
243.59	142.275	95.47	Chert	9	242	142
243.56	142.4	95.47	Weathered Chert Flake	11	242	142
243.41	142.16	95.48	Chert	5	242	142
243.37	142.1	95.49	Chert	4	242	142
243.43	142.095	95.49	Chert Flake	8	242	142
243.02	142.92	95.58	Broken Quartz	37	242	142
243.11	142.88	95.57	Broken Quartz	39	242	142
242.54	142.42	95	Possible Tool	10	242	142
242.92	142.52	95.655	Cortical Debris	7	242	142
242.12	142.24	95.66	Bend Break	5	242	142
242.64	142.41	95.66	Cortical Bend Break	6	242	142
242.105	142.17	95.665	Chert Debris	4	242	142
242.33	142.86	95.665	Chert Debris Flake	12	242	142

Table A15-20 L continued

2009 N	E	Depth	Type	Art#	N	E
242.07	142.74	95.665	Chert Debris	14	242	142
242.1	142.075	95.67	Chert Debris	3	242	142
242.55	142.49	95.67	Chert Debris	8	242	142
242.39	142.52	95.68	Retouched Flake	9	242	142
242.49	142.65	95.68		11	242	142
242.38	142.35	95.68	Chert Cobble	13	242	142
242.35	142.12	95.7	Chert Flake	2	242	142
242.88	142.13		Chert Blade-Like-Flake	1	242	142
242.85	142.11	95.6	Broken Quartz Pebble	2	242	142
242.39	142.11	95.6	Possible Bend Break	4	242	142
242.32	142.04	95.6	Chert Debris	5	242	142
242.23	142.05	95.6	Chert Flake	6	242	142
242.62	142.95	95.6	Chert Cobble	9	242	142
242.47	142.43	95.6	Chert Debris	10	242	142
242.34	142.62	95.6	Broken Quartz Pebble	15	242	142
242.74	142.86	95.6	Chert Bend Break	18	242	142
242.86	142.15	95.61	Quartz Pebble	3	242	142
242.56	142.29	95.61	Chert Debris	8	242	142
242.26	142.5	95.61	Chert Debris	11	242	142
242.11	142.54	95.62	Cortical Chert Pebble	16	242	142
242.87	142	95.63	Bend Break	1	242	142
242.77	142.36	95.63	Chert Graver Tool	7	242	142
242.9	142.57	95.63	Chert Pebble	12	242	142
242.58	142.31	95.63	Bend Break	14	242	142
242.85	142.72	95.63		17	242	142
242.29	142.99	95.65	Chert Flake	19	242	142
242.79	142.01	95.55	Cortical Chert Flake	3	242	142
242.77	142.02	95.55	Broken Quartz Pebble	5	242	142
242.7	142.01	95.55	Broken Quartz Pebble	6	242	142
242.2	142.41	95.55	Broken Quartz Pebble	19	242	142
242.86	142.58	95.55	Broken Quartz Pebble	24	242	142
242.85	142.23	95.56	Broken Quartz Pebble	8	242	142
242.71	142.61	95.57	Broken Quartz Pebble	26	242	142
242.69	142.8	95.57	Broken Quartz Pebble	32	242	142
242.7	142.01	95.58	Broken Quartz Pebble	6	242	142
242.63	142.65	95.58	Broken Quartz Pebble		242	142
242.28	142.38	95.55	Chert Blade Like Flake	17	242	142
242.58	142.19	95.57	Chert Flake	10	242	142
242.23	142.26	95.57	Chert Flake	13	242	142
242.85	142.75	95.57	Chert Pebble	30	242	142
242.86	142.78	95.58	Chert Pebble	31	242	142
242.59	142.34	95.56	Chert Debris	14	242	142
242.4	142.75	95.57	Chert Debris	34	242	142

Table A15-20 L continued

2009 N	E	Depth	Type	Art#	N	E
242.04	142.97	95.57	Chert Debris	36	242	142
242.88	142.55	95.55	Cortical Chert	23	242	142
242.65	142.59	95.58	Cortical Chert	27	242	142
242.63	142.59	95.59	Cortical Chert Flake	25	242	142
242.23	142.51	95.55	Cortical Chert Pebble	22	242	142
242.41	142.31	95.575	Cortical Chert Pebble	16	242	142
242.45	142.53	95.575	Cortical Chert Pebble	21	242	142
242.66	142.87	95.55	Cortical Chert Debris		242	142
242.79	142.06	95.56	Cortical Chert Debris	4	242	142
242.64	142.14	95.56	Cortical Chert Debris	9	242	142
242.18	142.2	95.56	Cortical Chert Debris	11	242	142
242.54	142.07	95.57	Cortical Chert Debris	7	242	142
242.09	142.7	95.57	Cortical Chert Debris	33	242	142
242.78	142.01	95.58	Cortical Chert Debris	2	242	142
242.48	142.37	95.58	Cortical Chert Debris	15	242	142
242.87	142.05	95.59	Cortical Chert Debris	1	242	142
242.54	142.51	95.59	Cortical Chert Debris	20	242	142
242.35	142.14	95.57	Quartz Flake/Debris	12	242	142
242.77	142.43	95.56	Quartz Pebble	18	242	142
242.59	142.6			29	242	142
242.49	142.23	95.5	Chert Debris	3	242	142
242.5	142.52	95.5	Cortical Pebble	5	242	142
242.57	142.39	95.51	Chert Debris	4	242	142
242.69	142.51	95.51	Cortical Chert	7	242	142
242.62	142.72	95.51	Cortical Chert Pebble	11	242	142
242.49	142.11	95.52	Chert Flake	2	242	142
242.3	142.67	95.52	Cortical Chert Debris	6	242	142
242.56	142.72	95.52	Chert Debris	12	242	142
242.7	142.8	95.52	Chert Flake Medial	14	242	142
242.83	142.91	95.52	Cortical Chert Debris	17	242	142
242.82	142.2	95.53	Cortical Chert	1	242	142
242.84	142.71	95.53	Cortical Chert Pebble	9	242	142
242.67	142.76	95.53	Chert Debris	10	242	142
242.68	142.81	95.53	Chert Pebble	13	242	142
242.79	142.83	95.53	Quartz Pebble	15	242	142
242.85	142.81	95.53		16	242	142
242.72	142.62	95.54	Chert Debris	8	242	142
242.53	142.65	95.47	Cortical	2	242	142
242.77	142.07	95.485	Ut. Chert Flake	4	242	142
242.68	142.8	95.49	Ut Chert Blade	1	242	142
242.56	142.81	95.495	Cortical Chert Debris	3	242	142
242.85	143.36	95.37	Chert Debris	2	242	142
242.86	142.8	95.375	Chert Flake	4	242	142

Table A15-20 L continued

2009 N	E	Depth	Type	Art#	N	E
243.01	142.45		Small Chert Flake	9	242	142
242.65	142.67	95.62				
246.54	138.86	97.65	Thinning Flake	1	246	138
246.91	138.99	97.56	Chert Cobble	1	246	138
246.58	138.68	97.56	Microblade	1	246	138
246.4	138.7	97.56	Thinning Flake	2	246	138
246.39	138.87	97.49	Hammerstone	1	246	138
246.7	138.92	97.55	Reworked Flake	1	246	138
246.37	138.82	97.5	Debris-Broken Flake	2	246	138
246.4	138.55	97.53	Thinning Flake	2	246	138
246.42	138.5	97.52	Cortical	3	246	138
246.39	138.34	97.53	Tertiary Flake	3	246	138
246.95	138.9	97.52	Cortical	4	246	138
246.39	138.1	97.53	Large Old Cortex	4	246	138
246.71	138.16	97.52	Cortical Chert	5	246	138
246.94	138.1	97.55	Cortical Chert	6	246	138
246.82	138.36	97.54	Blade Core	7	246	138
246.96	138.77	97.5	Chert	1	246	138
246.97	139.05	97.47	Modified Flake	1	246	138
246.34	138.55	97.5	Tertiary Flake	1	246	138
246.47	139.53	97.43	Chert	1	246	138
246.54	139.53	97.42	Chert	2	246	138
246.26	139.13	97.35	Chopper	1	246	138
246.7	138.28	97.42	Cortex	1	246	138
246.6	139.38	97.35	Cortex	2	246	138
246.9	138.76	97.34	Cortex	2	246	138
246.67	139.62	97.32	Cortex	1	246	138
246.97	139.36	97.32	Cortex	2	246	138
246.92	139.55	97.32	Cortex	1	246	138
246.45	138.83	97.3	Scraper	1	246	138
246.83	139.36	97.29	Anvil Debris	2	246	138
246.37	138.47	97.29	Possible Utilized Flake	2	246	138
246.83	139.36	97.22	Cortex	1	246	138
246.79	139.1	97.2	Cortex	2	246	138
246.13	139.88	97.16	Cortex	1	246	138
247	139.86	97.1	Cortex	1	246	138
246.16	138.52	97.15	Flake	1	246	138
246.89	138.14	97.07	Bend Break	1	246	138
247.55	141.66	97.44	Chert Debris	1	246	140
247.65	141.5	97.48	Chert Cobble	2	246	140
247.67	141.76	97.43	Chert Debris	3	246	140
247.36	141.1	97.4	Chert Debris	4	246	140
247.9	141.65	97.4	Chert Pebble	5	246	140

Table A15-20 L continued

2009 N	E	Depth	Type	Art#	N	E
247.95	141.63	97.4	Chert Tool. Chopper	6	246	140
247.96	141.76	97.46	Chert Debris	7	246	140
247.98	141.74	97.45	Chert Pebble	8	246	140
247.55	140.4	97.49	Chert Boulder	1	246	140
247.12	140.58	97.39	Debitage (Chert)	2	246	140
247.12	140.76	97.39	Cortical Chert Pebble	3	246	140
247.52	140.99	97.39	Chert Cobble	4	246	140
247.9	140.68	97.43	Cortical Chert Pebble	5	246	140
247.74	141.98	97.4	Chert Debris	1	246	140
247.88	141.8	97.4	Chert Debris	2	246	140
247.61	141.79	97.47	Broken Quartz Pebble	3	246	140
247.37	141.81	97.39	Blade Like Flake	4	246	140
247.22	141.69	97.36	Chert Debris	5	246	140
247.17	141.08	97.4	Chert Cobble	6	246	140
246.68	141.24	97.4	Cortical Chert	1	246	140
246.8	141.05	97.37	Chert	2	246	140
246.63	141.16	97.4	Chert Pebble	3	246	140
246.42	141.31	97.39	Chert Flake/Debris	4	246	140
246.24	141.64	97.38	Cortical Chert Debris	5	246	140
246.33	141.61	97.39	Cortical Chert Debris	6	246	140
246.36	141.61	97.37	Chert	7	246	140
247.27	141.77	97.34	Chert Cobble/Core	1	246	140
246.7	140.77	97.35	Possible Bend Break	1	246	140
245.43	140.97	97.35	Possible Utilized Flake	2	246	140
246.3	142.6	97.33	Possible Hammerstone	3	246	140
246.42	140.64	97.3	Cortex	1	246	140
246.56	141.34	97.4	Chert Pebble	1	246	140
246.79	141.46	97.215	Chert Debris	2	246	140
246.65	141.645	97.247	Chert Pebble	3	246	140
246.58	141.68	97.275	Chert Pebble	4	246	140
246.38	141.52	97.278	Quartz Pebble	5	246	140
246.27	141.64	97.26	Chert Pebble	6	246	140
246.3	141.56	97.22	Chert Cobble	7	246	140
246.53	141.745	97.212	Chert Pebble	8	246	140
246.92	141.505	97.275	Chert Cobble	9	246	140
246.455	141.4	97.202	Chert Cobble	10	246	140
246.625	141.48	97.155	Chert Boulder	11	246	140
246.33	141.31	97.47	Chert Debris	1	246	140
246.31	141.41	97.46	Chert Debris	2	246	140
246.27	141.24	97.33	Chert Debris	3	246	140
246.92	141.06	97.46	Chert Cobble	4	246	140
246.66	141.43	97.36	Chert Debris	5	246	140
246.2	141.3	97.5	Chert Cobble	6	246	140

Table A15-20 L continued

2009 N	E	Depth	Type	Art#	N	E
246.2	141.45	97.49	Chert Debris	7	246	140
244.406	141.31	97.48	Chert Flake	8	246	140
246.56	141.1	97.44	Chert Debris	9	246	140
246.45	141.45	97.45	Chert Boulder	10	246	140
246.2	141.57	97.43	Chert Spall, Cobble	11	246	140
246.48	141.18	97.44	Chert Cobble	12	246	140
246.405	141.14	97.47	Chert Pebble	13	246	140
246.48	141.3	97.435	Chert Debris	14	246	140
246.295	141.29	97.46	Broken Quartz Pebble	15	246	140
246.445	141.245	97.47	Chert Debris	16	246	140
246.4	141.3	97.44	Chert Debris	17	246	140
246.33	141.33	97.44	Quartz Pebble	18	246	140
246.58	141.235	97.395	Chert Pebble	19	246	140
246.65	141.305	97.395	Chert	20	246	140
246.68	141.27	97.38	Chert Cobble	21	246	140
246.Xx	140.Xx	97.3	Chert Debris		246	140
246.2	142.97	97.45	Chert Flake	1	246	142
246.55	142.91	97.36	Chert Flake	2	246	142
248.16	141.35	97.36	Cortical	1	248	140
248.56	140.8	128cmbs	Chert	1	248	140
248.73	140.88	97.59	Chert	1	248	140
248.3	140.82	97.64	Large Chert Cobble	2	248	140
248.55	140.26	97.59	Chert Cobble	3	248	140
248.35	140.24	97.6	Giant Flake	4	248	140
248.27	140.78	97.6	Chert	5	248	140
248.34	140.64	97.59	Chert	6	248	140
248.93	140.8	97.56	Chert	7	248	140
248.17	140.34	97.6	Chert	8	248	140
248.18	141.13	97.51	Chert Debris	1	248	140
248.45	141.01	97.67	Cortical	2	248	140
248.27	141.7	97.55	Chert Cobble	2	248	140
248.62	141.02	97.52	Multidimensional Core	3	248	140
248.87	141.01	97.51	Battered Chert Core	4	248	140
248.38	141.75	129cmbd	Cortical	5	248	140
248.71	141.59	97.52	Cortical	5	248	140
248.44	141.59	133cmbd	Cortical	6	248	140
248.88	141.6	97.51	Cortical	6	248	140
248.44	141.77	131cmbd	Cortical	7	248	140
248.12	141.68	135cmbd	Cortical	8	248	140
248.1	141.74	134cmbd	Cortical	9	248	140
248.17	141.99	139cmbd	Core	10	248	140
248.57	141.6	135cmbd	Cortical	12	248	140
248.07	140.78	97.5	Chert	1	248	140

Table A15-20 L continued

2009 N	E	Depth	Type	Art#	N	E
248.55	140.09	97.53	Cortical	1	248	140
248.82	140.06	97.52	Cortical	2	248	140
248.89	140.22	97.41	Core	3	248	140
248.01	141.86	97.49	Chert Debris	1	248	140
248.05	140.47	97.48	Quartz Cobble	1	248	140
248.49	140.84		Cortical Chert Pebble	2	248	140
248.81	140.84	97.49	Chert	3	248	140
248.6	141.38	97.39	Cortical	1	248	140
248.98	141.41	97.46	Retouched Flake	2	248	140
248.57	140.92	97.5	Cortical	1	248	140
248.3	140.24	97.44	Cortical	2	248	140
248.77	140.89	97.4	Cortical	3	248	140
248.58	140.63	97.42	Cortical	4	248	140
248.91	140.28	97.48	Cortical	5	248	140
248.12	140.57	97.44	Core Fragment.	6	248	140
248.39	140.41	97.41	Core Fragment.	7	248	140
248.06	141.67	97.52	Multidimensional Core	3	248	140
248.58	141.6	140cmbd	Chert	11	248	140
247.32	141.875	97.324	Chert Debris	1	246	140
247.1	141.42	97.21	Chert Debris	2	246	140
247.54	141.71	97.2	Bend Break	1	246	140
247.02	141.48	97.2	Chert Cobble	3	246	140
246.18	141.18	97.24	Chert Flake	1	246	140
246.18	141.18	97.24	Chert Debris	1	246	140
246.35	141.19	97.31	Chert Debris	2	246	140
247.06	141.12	97.17	Cortical Chert Pebble	1	246	140
247	141.47	97.2	Chert Debris	1	246	140
246.465	141.43	97.15	Chert Flake	6	246	140
246.15	141.43	97.195	Blade-Like-Flake	3	246	140
246.978	141.27	97.19	Chert Debris/Flake	9	246	140
246.505	141.855	97.18	Bend Break	1	246	140
246.235	141.05	97.197	Chert Debris	5	246	140
246.13	141.42	97.185	Chert Flake	4	246	140
246.05	141.55	97.185	Flake, Chert	2	246	140
246.935	141.35	97.16	Chert Flake	8	246	140
246.4	141.31	97.155	Chert	7	246	140
246.19	141.38	97.1	Broken Quartz	1	246	140
246.07	141.26	97.1	Chert Debris	2	246	140
246.92	141.8	97.135	Chert Debris	9	246	140
246.532	141.12	97.14	Cortical Chert Pebble	4	246	140
246.37	141.39	97.1	Chert Debris	5	246	140
246.06	141.8	97.15	Chert Debris	7	246	140
246.995	141.86	97.115	Cortical Chert Debris	10	246	140

Table A15-20 L continued

2009 N	E	Depth	Type	Art#	N	E
246.4	141.63	97.15	Chert Pebble /Debris	8	246	140
246.15	141.665	97.125	Chert Debris	6	246	140
246.515	141.03	97.15	Chert Pebble	1	246	140
246.673	141.12	97.11	Chert Pebble	3	246	140
246.655	141.0325	97.15	Chert Debris/Flake	2	246	140
246.28	141.86	97.08	Chert Blade-Like-Flake	3	246	140
246.11	141.83	97.08	Chert Debris	2	246	140
246.85	141.27	97.07	Chert Debris	5	246	140
246.82	141.15	97.07	Chert Tool/Flake	6	246	140
246.77	141.43	97.08	Chert Debris	4	246	140
247.92	141.26	97.03	Cortical Debitage	2	246	140
247.88	141.73	96.99	Quartz Broken Pebble	3	246	140
247.73	141.73	97	Chert Boulder	1	246	140
247.07	141.205	97.04	Cortical Chert Pebble	4	246	140
246.835	141.44	97.04	Chert Debris	9	246	140
246.05	141.16	97.04	Chert Debris	1	246	140
246.27	141.8	97.04	Chert Debris	11	246	140
246.37	141.19	97.03	Chert Debris	4	246	140
246.63	141.13	97.01	Chert Debris	6	246	140
246.8	141.43	97	Utilized Flake	10	246	140
246.67	141.4	97.01	Bend Break	8	246	140
246.5	141.33	97.01	Cortical Chert Debris	5	246	140
246.7	141.235	97.03	Broken Quartz	7	246	140
246.14	141.22	97	Cortical Chert Debris	2	246	140
246.2	141.74	97	Cortical Chert Debris	12	246	140
246.34	141.06	97.02	Possible Quartz Tool	3	246	140
246.87	141.05	96.965	Chert Debris	6	246	140
246.74	141.58	96.96	Chert Debris	10	246	140
246.91	141.35	96.98	Chert Debris	9	246	140
246.26	141.02	97	Chert Debris	1	246	140
246.88	141.06	96.97	Blade-Like-Flake	5	246	140
246.59	141.91	96.96	Chert Debris	11	246	140
246.13	141.87	96.98	Chert Debris	7	246	140
246.13	141.28	96.98	Quartz , Broken	3	246	140
246.21	141.17	97	Cortical Chert Debris	2	246	140
246.83	141.37	96.95	Chert Debris	8	246	140
246.59	141.27	96.91	Debris, Chert	9	246	140
246.05	141.91	96.91	Chert Bend Break	1	246	140
246.88	141.38	96.92	Chert Debris	10	246	140
246.15	141.71	96.91	Debris, Chert	4	246	140
246.15	141.39	96.98	Cortical Chert Debris	4	246	140
246.4	141.91	96.92	Chert Debris	2	246	140
246.31	141.6	96.92	Broken Quartz	5	246	140

Table A15-20 L continued

2009 N	E	Depth	Type	Art#	N	E
246.35	141.4	96.92	Broken Quartz	7	246	140
246.72	141.75	96.92	Broken Quartz	6	246	140
246.15	141.76	96.9	Broken Quartz	3	246	140
246.63	141.1	96.94	Broken Quartz	11	246	140
246.07	141.45	96.9	Pebble , Cortical Chert	8	246	140
246.34	141.01	96.87	Bend Break	1	246	140
246.56	141.14	96.895	Debris, Chert	2	246	140
246.48	141.2	96.86	Chert Debris	3	246	140
246.64	141.385	96.88	Chert Debris	5	246	140
246.52	141.48	96.89	Broken Quartz Pebble	6	246	140
246.46	141.36	96.88	Cortical Chert Pebble	4	246	140
246.11	141.69	96.89	Chert Debris	8	246	140
246.68	141.58	96.86	Broken Quartz Pebble	7	246	140
246.74	142	97.38	Chert Flake	1	246	142
246.37	142.1	97.41	Flake, Chert, Large	1	246	142
246.717	142.76	97.35	Bend Break Flake	6	246	142
246.21	142.59	97.315	Broken Chert Pebble	3	246	142
246.27	142.9	97.32	Chert Debris	4	246	142
246.045	142.19	97.32	Cortical Pebble	1	246	142
246.58	142.45	97.302	Chert Cobble	5	246	142
246.19	142.4	97.3	Broken Quartz	2	246	142
246.83	142.2	97.32	Chert Debris	7	246	142
246.59	142.215	97.282	Cobble, Chert	5	246	142
246.288	142.93	97.27	Chert Flake	9	246	142
246.305	142.9	97.283	Angular Chert Flake	8	246	142
246.26	142.92	97.257	Bend Break	10	246	142
246.457	142.18	97.3	Bend Break, 4 Sided	1	246	142
246.79	142.46	97.3	Angular Chert Smash	3	246	142
246.1	142.63	97.261	Broken Quartz Pebble	7	246	142
246.142	142.6	97.296	Chert Flake	6	246	142
246.8	142.392	97.26	Flake, Chert	4	246	142
246.427	142.573	97.26	Bend Break	3	246	142
248.32	140.76	97.32	Retouched Flake	1	248	140
248.39	140.1	97.33	Hammerstone	2	248	140
248.2	140.26	97.25	Flake, Fresh	1	248	140
248.65	140.89	97.29	Cortical	4	248	140
248.94	140.13	97.3	Cortical	3	248	140
248.28	140.14	97.3	Chert Cobble	2	248	140
248.48	140.82	97.22	Chert Debris	2	248	140
248.46	140.82	97.22	Chert Debris	1	248	140
246.45	141.08	97.25	Chert Flake	1	248	140
248.24	140.4	97.15	Chert Debris	1	248	140
248.1	140.12	97.15	Cortical Chert Debris	2	248	140

Table A15-20 L continued

2009 N	E	Depth	Type	Art#	N	E
248.03	141.08	97.2	Chert Debris	1	248	140
248.68	141.88	97.2	Chert Debris	2	248	140
248.565	140.36	97.145	Chert Debris	1	248	140
248.74	140.235	97.155	Cortical	2	248	140
248.835	141.8	97.21	Chert Debris	2	248	140
248.83	141.18	97.175	Chert Debris	1	248	140
248.67	140.335	97.09	Utilized Flake	1	248	140
248.92	141.11	97.16	Chert Blade-Like-Flake	2	248	140
248.233	141.255	97.135	Chert Debris	1	248	140
248.945	141.13	97.16	Chert Pebble	3	248	140
248.67	141.555	97.12	Chert Debris	4	248	140
248.615	141.615	97.1	Chert Pebble	5	248	140
248.42	140.75	97.01	Chert Tool Flake	1	248	140
248.46	141.44	97.1	Chert Debris	2	248	140
248.215	141.11	97.1	Chert Flake	1	248	140
248.67	141.67	97.07	Chert Debris	4	248	140
248.75	141.57	97.06	Chert Cobble	3	248	140
248.18	140.05	96.95	Chert Blade-Like-Flake	1	248	140
248.41	140.08	96.95	Chert Debris	7	248	140
248.49	140.3	96.95	Cortical Chert Pebble	4	248	140
248.26	140.36	96.97	Chert Debris	6	248	140
248.175	140.235	96.96	Quartz , Utilized	3	248	140
248.41	140.19	96.99	Chert Debris	2	248	140
248.665	141.13	97.05	Chert Bend Break	4	248	140
248.55	141.645	97.03	Blade-Like Flake	5	248	140
248.86	141.22	97.05	Cortical Chert Debris	3	248	140
248.95	141.21	97.04	Possible Chert Core	2	248	140
248.435	141.29	97.015	Chert Boulder/Anvil	1	248	140
248.3	140.11	96.9	Chert Flake	2	248	140
248.15	140.245	96.94	Chert Debris	4	248	140
248.54	140.19	96.92	Blade Like Flake	3	248	140
248.23	140.3	96.92	Debris, Chert	5	248	140
248.26	140.05	96.9	Chert Debris	6	248	140
24826	140.33	96.9	Chert Debris	1	248	140
248.5	141.115	96.99	Chert Debris	1	248	140
248.89	141.3	97	Chert Debris	3	248	140
248.69	141.23	96.97	Bend Break	2	248	140
248.46	141.545	97	Cortical Chert Pebble	4	248	140
248.19	141.735	96.93	Chert Flake	3	248	140
248.27	141.1	96.91	Cortical Chert Debris	2	248	140
248.26	141.16	96.915	Chert Boulder	1	248	140
246.57	142.43	97.26	Chert Bend Break	2	246	142
248.115	140.32	96.95	Chert Flake	5	248	140

Table A15-20 L continued

2009 N	E	Depth	Type	Art#	N	E
243.08	139.71	95.88	Broken Cortical Chert	3	242	138
243.78	139.27	95.45	Large Degraded Chert	1	242	138
243.54	139.08	95.46	Large Degraded Chert	2	242	138
244.9	138.7	97.17	Chert Bend Break		244	138

Table A15-20 M
Mapped Artifacts from 2010 Excavations at the Topper Site (38AL23).

2010 N	E	Depth	Type	Art#	North	East
247.28	136.89	98.37	Biface Broken Point	1	246	136
247.92	246.25	98.44	Corded Rim	1	246	136
248.33	136.85	98.59	Ceramic	1	246	136
247.49	136.99	98.35	Biface Broken Piece	2	246	136
248.26	136.77	98.55	Ceramic	2	246	136
247.62	136.98	98.35	Proximal Biface	3	246	136
248.15	136.65	98.52	Ceramic	3	246	136
247.68	136.99	98.35	Distal Biface	4	246	136
263.47	144.54	97.88	Flake	1	262	144
263.87	144.1	97.95	Core	1	262	144
262.32	144.97	98.03	Flake	1	262	144
262.07	144.75	98.09	Flake	1	262	144
263.04	144.47	98.14	Flake	1	262	144
263.11	144.56	98.15	Flake	1	262	144
262.21	145.78	98.25	Lamace	1	262	144
262	144.25	98.35	Cortex	1	262	144
263.37	144.97	98.38	Cortex	1	262	144
263.36	144.67	98.49	Blade/Blade Like	1	262	144
263.13	144.13	98.5	Preform Bf Prox TA	1	262	144
262.31	145.44	98.62	Brier Creek Pp	1	262	144
263.07	144.6	97.9	Hammerstone	2	262	144
263.74	144.23	97.92	Cortex	2	262	144
262.45	144.98	98.05	Flake	2	262	144
262.58	144.84	98.09	Flake	2	262	144
263.23	144.74	98.12	Flake	2	262	144
262.83	144.44	98.16	Blade Proximal	2	262	144
263.3	144.99	98.4	Cortex	2	262	144
262.07	144.62	98.5	Preform Fragment	2	262	144
262.14	145.1	98.63	Preform Fragment	2	262	144
263.42	145.7	97.95	Quartz Pebble	3	262	144
262.29	144.79	98.03	Flake	3	262	144
262.29	144.15	98.1	Flake	3	262	144
263.31	144.88	98.12	Poss. Overshot	3	262	144
262.47	144.8	98.17	Bladelet	3	262	144
262.08	144.28	98.52	Bf Fragment	3	262	144
262.03	144.44	98.55	Preform Fragment	3	262	144
262.08	145.87	97.97	Flake	4	262	144
262.53	144.75	98.05	Flake	4	262	144
262.88	144.74	98.09	Debris	4	262	144
263.31	144.85	98.15	Flake	4	262	144

Table A15-20 M continued

2010 N	E	Depth	Type	Art#	North	East
262.21	144.76	98.18	Flake	4	262	144
262.96	144.94	98.03	Flake	5	262	144
263.09	144.77	98.06	Cortex/Chert	5	262	144
262.3	144.87	98.15	Blade Like	5	262	144
263.38	144.81	98.15	Flake	5	262	144
262.04	144.66	98.04	Flake	6	262	144
262.85	144.86	98.08		6	262	144
262.89	144.52	98.14	Debris	6	262	144
262.2	144.87	98.17	TA	6	262	144
262.3	144.6	98.03	Flake	7	262	144
263.04	144.65	98.08	Biface Fragment	7	262	144
262.84	144.21	98.13	Flake	7	262	144
262.17	144.98	98.15	Debris	7	262	144
262.69	144.63	98.04	TA Flake	8	262	144
263.25	144.58	98.07	Cortex/Chert	8	262	144
262.87	144.23	98.13	Flake	8	262	144
262.02	144.68	98.14	Flake	8	262	144
262.69	144.54	98.03	Flake	9	262	144
263.61	144.69	98.09	Sandstone Abrader	9	262	144
262.83	144.64	98.12	Flake	9	262	144
262.65	145.01	98.18	Bladelet	9	262	144
262.32	144.44	98.06	Flake	10	262	144
263.73	144.84	98.09	Flake	10	262	144
262.79	144.58	98.12	Flake	10	262	144
263.03	145.03	98.18	Flake	10	262	144
262.33	144.25	98.07	Flake	11	262	144
263.16	144.5	98.08	Flake	11	262	144
262.79	144.87	98.13	Flake	11	262	144
262.75	145.15	98.16	TA	11	262	144
262.49	144.33	98.04	Flake	12	262	144
263.24	144.48	98.08	Flake	12	262	144
262.75	144.82	98.11	Flake	12	262	144
262.57	145.08	98.16	Flake	12	262	144
262.78	144.36	98.06	Flake	13	262	144
262.008	144.49	98.08	Flake	13	262	144
262.61	144.84	98.14	Flake	13	262	144
262.5	145.1	98.17	Flake	13	262	144
262.76	144.3	98.03	Flake	14	262	144
262.13	144.45	98.08	Flake	14	262	144
262.6	144.57	98.15	TA Flake	14	262	144
262.49	145.14	98.16	Flake	14	262	144

Table A15-20 M continued

2010 N	E	Depth	Type	Art#	North	East
262.95	144.26	98.05	Flake	15	262	144
262.13	144.21	98.07	Flake	15	262	144
262.63	144.66	98.11	Blade Core	15	262	144
262.49	145.23	98.17	Flake	15	262	144
262.9	144.19	98.05	Flake	16	262	144
262.21	144.15	98.06	Flake	16	262	144
262.61	144.22	98.11	Pebble	16	262	144
262.55	145.19	98.16	Flake	16	262	144
262.86	144.07	98.05	Flake	17	262	144
262.18	144.95	98.08	Flake	17	262	144
262.54	144.17	98.15	TA Flake	17	262	144
262.1	145.54	98.17	Preform Bf Prox TA	17	262	144
262.83	144.07	98.04	Flake	18	262	144
262.27	144.97	98.08	Flake	18	262	144
262.54	144.32	98.14	Flake	18	262	144
262.67	145.31	98.18	RC Flake	18	262	144
262.69	144.1	98.05	Flake	19	262	144
262.41	144.96	98.09	Flake	19	262	144
262.53	144.41	98.13	Blade-Like Flake	19	262	144
262.77	145.26	98.16	Flake	19	262	144
262.66	144.1	98.05	Modified Flake	20	262	144
262.22	144.9	98.06	Flake	20	262	144
262.52	144.09	98.1	Flake	20	262	144
262.89	145.47	98.16	Flake	20	262	144
262.48	144.15	98.01	Flake	21	262	144
262.38	144.84	98.08	Flake	21	262	144
262.69	144.09	98.1	Flake	21	262	144
262.9	145.43	98.18	Flake	21	262	144
262.49	144.08	98.05	Flake	22	262	144
262.43	144.85	98.06	Flake	22	262	144
262.44	144.13	98.12	Winged Flake	22	262	144
262.45	145.35	98.17	Debris	22	262	144
262.29	144.13	98.04	Flake Spall	23	262	144
262.35	144.73	98.08	Flake	23	262	144
262.23	144.22	98.12	TA	23	262	144
262.42	145.34	98.15	Cortical	23	262	144
262.24	144.19	98.05	Biface Flake	24	262	144
262.3	144.75	98.07	Flake	24	262	144
262.29	144.66	98.1	Blade Proximal	24	262	144
262.29	145.21	98.17	Blade Prox	24	262	144
262.4	144.2	98.01	Flake	25	262	144

Table A15-20 M continued

2010 N	E	Depth	Type	Art#	North	East
262.27	144.64	98.11	Thinning Flake	25	262	144
262.47	144.9	98.14	Cortex	25	262	144
262.29	145.25	98.15	Broken Flake	25	262	144
262.38	145.06	98.04	Flake	26	262	144
262.43	144.58	98.06	Hammerstone	26	262	144
262.39	144.92	98.14	Flake	26	262	144
262.23	145.16	98.17	Flake	26	262	144
262.09	145.02	98.03	Flake	27	262	144
262.29	144.27	98.09	Flake	27	262	144
262.34	145.26	98.15	Flake	27	262	144
262.45	144.93	98.16	Flake	27	262	144
262.29	144.08	98.05	TA Flake	28	262	144
262.06	145.11	98.05	Flake	28	262	144
262.39	144.95	98.12	Flake	28	262	144
262.17	145.17	98.19	Flake	28	262	144
263.1	144.93	98.02	Flake	29	262	144
262.45	144.09	98.09	Flake	29	262	144
262.29	144.87	98.14	Flake	29	262	144
262.17	145.3	98.16	Flake	29	262	144
262.51	144.81	98.05	Flake	30	262	144
263.17	144.88	98.05	Flake	30	262	144
262.21	144.95	98.13	Flake	30	262	144
262.06	145.19	98.15	Debris	30	262	144
263.02	144.78	98.01	Cortex	31	262	144
262.49	144.74	98.06	Flake	31	262	144
262.04	144.86	98.12	Flake	31	262	144
262.19	145.33	98.18	Flake	31	262	144
263.65	144.23	98.03	Core	32	262	144
262.55	144.75	98.11	Flake	32	262	144
262.02	144.9	98.13	RC	32	262	144
262.2	145.36	98.17	Flake	32	262	144
263.42	144.18	98.02	Cortex Nodule	33	262	144
262.4	144.84	98.11	Bladelet	33	262	144
262.73	144.76	98.11	Flake	33	262	144
262.05	145.34	98.17	End Shock …	33	262	144
263.23	144.18	98.05	Flake	34	262	144
262.86	144.91	98.07	Flake	34	262	144
262.26	144.88	98.13	TA Flake Prox	34	262	144
262.05	145.33	98.16	Flake	34	262	144
263.06	144.24	98.04	Flake	35	262	144
262.88	144.6	98.11	Flake	35	262	144

Table A15-20 M continued

2010 N	E	Depth	Type	Art#	North	East
262.18	144.97	98.12	TA Wing Flake	35	262	144
262.15	145.33	98.19	Flake	35	262	144
262.87	144.69	98.08	Flake	36	262	144
262.39	145.04	98.13	Core Fragment	36	262	144
262.1	145.38	98.18	Core Rejuvenation	36	262	144
262.85	144.59	98.07	Flake	37	262	144
262.67	145	98.12	Thinning Flake	37	262	144
262.18	145.43	98.15	RC	37	262	144
262.9	144.52	98.07	Flake	38	262	144
262.9	145.07	98.13	Flake Fragment	38	262	144
262.32	145.4	98.18	Core Rejuvenation	38	262	144
262.69	144.58	98.07	Flake	39	262	144
262.77	145.08	98.14		39	262	144
262.01	145.47	98.17	Flake	39	262	144
262.74	144.59	98.06	Flake	40	262	144
262.67	145.02	98.11	TA Thinning Flake	40	262	144
262.04	145.73	98.18	Flake	40	262	144
262.66	144.46	98.07	Double Sidescraper	41	262	144
262.69	144.96	98.11	Bladelet	41	262	144
262.61	145.8	98.18	Prox Blade	41	262	144
262.86	144.42	98.06	Flake	42	262	144
262.57	144.95	98.12	Flake	42	262	144
262.61	145.76	98.16	Prox Blade	42	262	144
263.01	144.35	98.05	Large Spall	43	262	144
262.77	145.19	98.12	TA	43	262	144
263.63	145.04	98.17	Debris	43	262	144
262.6	144.27	98.09	Flake	44	262	144
262.43	145.02	98.11	Blade Prox	44	262	144
263.15	145.52	98.13	Debris RC	44	262	144
262.77	144.19	98.07	Flake	45	262	144
262.43	145.04	98.1	Flake	45	262	144
262.79	145.95	98.19	Core	45	262	144
262.8	144.17	98.07	Flake	46	262	144
262.61	145.2	98.12	Flake	46	262	144
263.73	145.42	98.15	Debris	46	262	144
262.75	144.08	98.07	Flake	47	262	144
262.4	145.31	98.13	Flake	47	262	144
263.48	145.66	98.15	Core	47	262	144
262.97	144.17	98.06	Flake	48	262	144
262.15	145.19	98.13	Flake	48	262	144
263.3	145.59	98.18	Debris	48	262	144

Table A15-20 M continued

2010 N	E	Depth	Type	Art#	North	East
263.19	144.91	98.07	Flake	49	262	144
262.01	145.15	98.14	Debris	49	262	144
263.39	145.64	98.17	Denticulate	49	262	144
263.28	144.72	98.08	Flake	50	262	144
262.19	145.29	98.12	Flake	50	262	144
263.57	145.93	98.19	Flake	50	262	144
263.6	144.69	98.06	Flake	51	262	144
262.02	145.32	98.12	Flake	51	262	144
262	144.89	98.15	Debris	51	262	144
263.66	144.7	98.08	Hafted Endscraper	52	262	144
262.01	145.22	98.11	Flake	52	262	144
262	145.12	98.15	Flake	52	262	144
263.16	144.67	98.07	Flake	53	262	144
262.07	145.6	98.12	Flake	53	262	144
263.13	144.57	98.08	Flake	54	262	144
263.6	145.05	98.14	Broken Biface	54	262	144
263.35	144.52	98.09	Flake River Cobble	55	262	144
263.38	145.15	98.1	Flake Core	55	262	144
263.39	144.31	98.06	Flake/Spall	56	262	144
263.29	145.25	98.11	Core Rejuv. Flake	56	262	144
263.9	144.39	98.09	Flake	57	262	144
263.26	145.33	98.1	Debris	57	262	144
263.89	144.29	98.05	Biface	58	262	144
263.22	145.25	98.11	Blade Prox Hinged	58	262	144
263.08	145.16	98.11	Flake Fragment	59	262	144
263.93	144.06	98.12	River Cobble Cortex	59	262	144
263.96	144.1	98.06	Battered Core	60	262	144
263.16	145.34	98.13	Blade-Like Flake	60	262	144
263.1	145.16	98.05	Flake	61	262	144
262.53	144.87	98.11	Flake	61	262	144
263	145.07	98.08	Flake	62	262	144
262.02	144.77	98.11	TA Flake	62	262	144
262.89	145.06	98.08	Flake	63	262	144
262.3	145.25	98.06	Flake	64	262	144
262.34	145.23	98.07	Flake	65	262	144
262.22	145.05	98.06	Flake	66	262	144
262.35	145.05	98.09	Blade-Like Flake	67	262	144
262.03	146.81	98.05	Flake, Brown	1	262	146
262.47	146.33	98.07	Quartz Pebble	1	262	146
262.52	146.14	98.12	Flake	1	262	146
262.61	147.35	98.15	Flake	1	262	146

Table A15-20 M continued

2010 N	E	Depth	Type	Art#	North	East
262.09	146.18	98.24	Flake	1	262	146
263.63	146.65	98.27	Distal Of Uniface	1	262	146
263.76	147.44	98	Flake	2	262	146
262.82	146.86	98.09	Quartz Pebble	2	262	146
262.67	147.1	98.1	Quartz	2	262	146
262.76	147.25	98.14	Cortical	2	262	146
263.6	146.99	98.23	Proximal Of Uniface	2	262	146
262.26	146.22	98.23	Flake	2	262	146
263.18	146.02	98.05	Quartz Pebble	3	262	146
263.71	147.89	98.09	Flake	3	262	146
262.36	147.03	98.15	Flake	3	262	146
262.94	147.07	98.16	Flake	3	262	146
262.04	146.12	98.24	Flake	3	262	146
262.03	146.49	98.24	Flake	3	262	146
263.24	146.82	98.08	Flake	4	262	146
262.42	147.08	98.15	Flake	4	262	146
262.91	147.07	98.15	Quartz Pebble	4	262	146
262.18	146.24	98.24	Flake	4	262	146
262.07	146.66	98.24	Flake	4	262	146
263.86	146.77	98.06	Flake	5	262	146
262.51	147.39	98.11	Hammerstone	5	262	146
262.53	147.09	98.19	Cortical	5	262	146
262.19	146.33	98.23	Flake	5	262	146
262.15	146.82	98.23	Flake	5	262	146
262.05	147.06	98.14	Hammerstone	6	262	146
262.78	147.07	98.2	Debris	6	262	146
262.52	146.13	98.23	Flake	6	262	146
262.2	146.28	98.24	Debris	6	262	146
262.79	148	98.15	Flake, Brown	7	262	146
262.75	147.15	98.18	Flake	7	262	146
262.59	146.1	98.23	Flake	7	262	146
262.17	146.38	98.28	River Chert Debris	7	262	146
263.41	147.08	98.12	Flake	8	262	146
262.82	147.17	98.19	Flake, RC	8	262	146
262.63	146.15	98.24	Flake	8	262	146
262.33	146.52	98.25	Flake	8	262	146
263.72	146.99	98.11	Thinning Flake	9	262	146
262.78	147.13	98.2	Flake, RC	9	262	146
262.63	146.31	98.23	Flake	9	262	146
262.54	146.31	98.27	Flake (Blade)	9	262	146
263.84	147.09	98.14	Flake, RC	10	262	146

Table A15-20 M continued

2010 N	E	Depth	Type	Art#	North	East
262.84	147.1	98.18	Flake, RC	10	262	146
262.67	146.26	98.23	Flake	10	262	146
262.56	146.34	98.25	Flake	10	262	146
263.24	146.99	98.13	Flake	11	262	146
262.8	147.1	98.15	Flake	11	262	146
262.61	146.56	98.22	Hammerstone	11	262	146
262.54	146.28	98.24	Debris	11	262	146
263.35	146.11	98.12	Flake	12	262	146
262.91	147.17	98.2	Flake, RC	12	262	146
262.91	146.36	98.22	Flake	12	262	146
262.74	146.22	98.25	Thinning Flake	12	262	146
263.5	146.07	98.13	Flake	13	262	146
262.91	147.13	98.18	Flake	13	262	146
262.89	146.98	98.23	Flake	13	262	146
262.68	146.45	98.24	Hammerstone	13	262	146
262.88	147.06	98.16	Flake	14	262	146
262.94	146.94	98.23	Flake, RC	14	262	146
262.95	146.49	98.26	Debris River Chert	14	262	146
262.77	146.96	98.17	Flake	15	262	146
262.98	146.09	98.21	Flake	15	262	146
262.86	146.65	98.24	Flake	15	262	146
263.03	146.29	98.21	Flake	16	262	146
262.89	146.97	98.21	Flake	16	262	146
262.94	146.76	98.25	Flake, RC	16	262	146
262.97	147.08	98.21	Flake	17	262	146
263.09	146.32	98.23	Flake, RC	17	262	146
262.74	146.82	98.26	Thinning Flake	17	262	146
263.23	147.54	98.19	Flake	18	262	146
263.16	146.24	98.21	Hammerstone	18	262	146
262.19	146.71	98.26	Flake	18	262	146
263.46	147.26	98.19	Flake	19	262	146
263.15	146.19	98.21	Flake, RC	19	262	146
262.87	146.9	98.26	Flake, RC	19	262	146
263.88	147.67	98.17	Flake	20	262	146
263.27	146.32	98.22	Hammerstone	20	262	146
262.92	146.96	98.25	Flake Fragment	20	262	146
263.36	147.17	98.19	Flake	21	262	146
263.31	146.27	98.21	Flake	21	262	146
262.84	146.96	98.23	Flake, RC	21	262	146
262.51	146.63	98.15	Flake	22	262	146
263.21	146.49	98.23	Thinning Flake	22	262	146

Table A15-20 M continued

2010 N	E	Depth	Type	Art#	North	East
262.71	147.02	98.28	Thinning Flake	22	262	146
262.04	146.67	98.17	Flake	23	262	146
263.34	146.5	98.22	Endscraper	23	262	146
262.69	147.03	98.24	Debris	23	262	146
262.02	146.43	98.18	Flake	24	262	146
263.36	146.55	98.21	Flake, RC	24	262	146
263.13	146.21	98.25	Thinning	24	262	146
262.02	146.4	98.16	Rework	25	262	146
263.33	146.17	98.23	Flake	25	262	146
263.62	146.2	98.26	TA Thinning Flake	25	262	146
262.06	146.31	98.19	Debris	26	262	146
263.33	146.17	98.23	Thinning Flake	26	262	146
263.92	146.08	98.24	Cortical	26	262	146
263.38	146.23	98.21	Flake, RC	27	262	146
262.21	146.16	98.22	Thinning Flake	27	262	146
263.71	146.3	98.27	Debris	27	262	146
262.34	146.13	98.16	Thinning Flake	28	262	146
263.21	146.07	98.21	Flake, RC	28	262	146
263.49	146.35	98.26	Thinning Flake	28	262	146
263.25	146.1	98.18	Flake Core	29	262	146
262.42	146.39	98.18	Flake	29	262	146
263.21	146.46	98.23	Cortical	29	262	146
263.27	146.12	98.2	Thinning Flake	30	262	146
262.65	146.31	98.2	Thinning Flake	30	262	146
263.24	146.64	98.25	Flake Fragment,	30	262	146
262.74	146.18	98.15	Small Hammerstone	31	262	146
262.7	146.5	98.22	Flake	31	262	146
263.3	146.54	98.26	Thinning Flake	31	262	146
263.46	146.28	98.21	Bifacial Perform	32	262	146
262.78	146.34	98.21	Thinning Flake	32	262	146
263.57	146.46	98.26	Thinning Flake	32	262	146
263.47	146.4	98.19	Flake	33	262	146
262.93	146.52	98.19	Flake	33	262	146
263.64	146.5	98.27	Debris	33	262	146
262.89	146.1	98.17	Flake	34	262	146
263.17	146.74	98.21	Flake	34	262	146
263.69	146.51	98.25	Flake	34	262	146
263.01	146.81	98.21	Thinning Flake	35	262	146
263.37	146.69	98.24	Flake	35	262	146
263.58	146.54	98.26	Thinning Flake, RC	35	262	146
263.25	146.55	98.19	Flake (Blue)	36	262	146

Table A15-20 M continued

2010 N	E	Depth	Type	Art#	North	East
263.36	146.65	98.21	Flake	36	262	146
263.59	146.58	98.25	Flake, RC	36	262	146
263.22	146.97	98.15	Flake	37	262	146
263.44	146.63	98.21	Large Spall	37	262	146
263.75	146.48	98.26	Thinning Flake, RC	37	262	146
263.28	146.85	98.19	Cortical	38	262	146
263.38	146.69	98.22	Flake	38	262	146
263.9	146.37	98.25	Thinning Flake	38	262	146
263.44	146.92	98.15	Flake	39	262	146
263.33	146.69	98.21	Flake	39	262	146
263.91	146.41	98.24	Flake	39	262	146
263.36	146.52	98.19	Flake	40	262	146
263.32	146.72	98.2	Flake	40	262	146
263.89	146.5	98.26	Flake Thinning	40	262	146
263.4	146.27	98.16	Flake	41	262	146
263.32	146.74	98.18	Flake	41	262	146
263.91	146.59	98.25	Debris	41	262	146
263.48	146.16	98.2	Flake	42	262	146
263.4	146.67	98.23	Flake	42	262	146
263.87	147.04	98.28	Side Scraper	42	262	146
263.95	146.5	98.21	Modified Flake	43	262	146
263.45	147.01	98.22	Early Bifacial Blank	43	262	146
263.28	146.84	98.22	Flake, RC	43	262	146
263.48	146.48	98.2	Debris	44	262	146
263.38	147.25	98.23	Cortical Flake	44	262	146
263.36	146.79	98.23	Thinning, RC	44	262	146
263.51	146.53	98.2	Flake, Modified	45	262	146
263.4	146.83	98.22	Flake	45	262	146
263.8	146.59	98.25	Thinning Flake	45	262	146
263.55	146.6	98.21	Flake	46	262	146
263.37	146.78	98.22	Flake	46	262	146
263.59	146.91	98.29	Thinning Flake	46	262	146
263.31	146.76	98.19	Flake	47	262	146
263.53	146.57	98.19	Flake	47	262	146
263.82	146.65	98.26	Flake	47	262	146
263.31	146.79	98.19	Flake	48	262	146
263.64	146.63	98.2	Flake	48	262	146
263.77	146.69	98.26	Flake	48	262	146
263.64	146.64	98.19	Flake	49	262	146
263.42	146.81	98.2	Debris	49	262	146
263.55	146.69	98.26	Thinning Flake	49	262	146

Table A15-20 M continued

2010 N	E	Depth	Type	Art#	North	East
263.61	146.36	98.19	Flake	50	262	146
263.35	146.84	98.2	Flake	50	262	146
263.48	146.57	98.25	Thinning Flake	50	262	146
263.66	146.41	98.2	Debris	51	262	146
263.42	146.77	98.21	Flake	51	262	146
263.44	146.65	98.28	Flake	51	262	146
263.7	146.4	98.17	Cortical	52	262	146
263.48	146.64	98.21	Debris	52	262	146
263.44	146.59	98.26	Debris	52	262	146
263.76	146.43	98.2	Hammerstone	53	262	146
263.44	146.67	98.22	Flake	53	262	146
263.28	146.72	98.27	Debris, RC	53	262	146
263.76	146.47	98.19	Thinning Flake	54	262	146
263.39	146.71	98.2	Flake	54	262	146
263.22	146.74	98.28	Flake, RC	54	262	146
263.53	147.05	98.16	Thinning Flake	55	262	146
263.09	146.85	98.23	Thinning Flake	55	262	146
263.16	146.84	98.27	Flake	55	262	146
263.65	147.03	98.15	Flake	56	262	146
263.01	146.9	98.22	Flake, RC	56	262	146
263.13	146.8	98.26	Flake, RC	56	262	146
263.85	146.19	98.2	Flake	57	262	146
263.63	146	98.22	Flake	57	262	146
263.04	146.88	98.26	Thin Flake, RC	57	262	146
263.96	146.37	98.19	Flake	58	262	146
263.7	146.3	98.23	Flake	58	262	146
263.18	146.83	98.26	Flake, RC	58	262	146
263.94	146.35	98.16	Flake	59	262	146
263.74	146.39	98.23	Flake	59	262	146
263.15	146.66	98.24	Cortical	59	262	146
263.85	146.52	98.19	Flake	60	262	146
263.64	146.48	98.22	Thinning Flake	60	262	146
263.56	146.58	98.24	Debris, RC	60	262	146
263.86	146.78	98.21	Flake	61	262	146
263.81	146.15	98.23	Flake	61	262	146
263.06	147.02	98.25	Flake, RC	61	262	146
263.82	146.77	98.19	Flake	62	262	146
263.9	146.19	98.2	Uniface, RC	62	262	146
263.13	146.97	98.25	Debris, RC	62	262	146
263.82	146.82	98.14	Hammerstone	63	262	146
263.87	146.43	98.21	Flake	63	262	146

Table A15-20 M continued

2010 N	E	Depth	Type	Art#	North	East
263.29	146.89	98.27	Debris	63	262	146
263.94	146.71	98.17	Debris	64	262	146
263.27	146.86	98.24	Flake	64	262	146
263.43	147.36	98.25	Flake	64	262	146
263.89	146.72	98.16	Flake	65	262	146
263.43	147.36	98.22	Thinning Flake	65	262	146
263.28	146.87	98.25	Thinning Flake, RC	65	262	146
263.94	146.66	98.18	Flake	66	262	146
262.26	147.3	98.22	Flake	66	262	146
263.28	146.95	98.25	Debris, RC	66	262	146
263.92	146.74	98.14	Flake	67	262	146
262.27	147.46	98.23	Thinning Flake	67	262	146
263.28	146.82	98.26	Cortical	67	262	146
263.82	146.47	98.21	Flake	68	262	146
263.82	146.97	98.21	Thinning Flake	68	262	146
263.31	146.93	98.22	Flake, RC	68	262	146
263.83	146.92	98.17	Blade-Like Flake	69	262	146
263.79	146.46	98.21	Flake	69	262	146
263.49	146.76	98.26	Thinning Flake, RC	69	262	146
263.91	146.91	98.19	Flake	70	262	146
263.72	146.52	98.23	Flake	70	262	146
263.5	146.83	98.26	Flake, RC	70	262	146
263.95	147.09	98.18	Flake	71	262	146
263.69	146.54	98.24	Flake, RC	71	262	146
263.58	146.82	98.26	Thin Flake, RC	71	262	146
263.6	146.55	98.21	Flake	72	262	146
263.52	146.9	98.28	Thinning Flake, RC	72	262	146
263.54	146.58	98.21	Flake	73	262	146
263.49	146.88	98.23	Thinning Flake, RC	73	262	146
263.6	146.67	98.22	Flake	74	262	146
263.67	146.87	98.29	Flake, RC	74	262	146
263.56	146.64	98.21	Biface (Chopper)	75	262	146
263.7	146.89	98.29	Flake, RC	75	262	146
263.57	146.74	98.24	Flake	76	262	146
263.67	146.95	98.25	Flake	76	262	146
263.57	146.77	98.24	Flake	77	262	146
263.73	146.92	98.25	Flake	77	262	146
263.51	146.77	98.22	Flake	78	262	146
263.17	146.99	98.24	Flake	78	262	146
263.52	146.75	98.21	Flake	79	262	146
263.17	147.03	98.25	Flake, RC	79	262	146

Table A15-20 M continued

2010 N	E	Depth	Type	Art#	North	East
263.49	146.74	98.19	Flake, RC	80	262	146
263.17	147.1	98.25	Flake	80	262	146
263.83	146.57	98.21	Flake	81	262	146
263.22	147.08	98.26	Flake	81	262	146
263.83	146.54	98.21	Flake	82	262	146
263.25	147.07	98.24	Flake, RC	82	262	146
263.85	146.58	98.2	Flake	83	262	146
263.34	146.99	98.25	Flake, RC	83	262	146
263.81	146.63	98.2	Flake	84	262	146
263.3	146.98	98.26	Flake	84	262	146
263.7	146.6	98.21	Flake Core	85	262	146
263.33	147.02	98.26	Flake	85	262	146
263.8	146.7	98.21	Debris	86	262	146
263.33	147.09	98.25	Flake	86	262	146
263.45	147.1	98.24	Flake	87	262	146
263.75	146.79	98.24	Thinning Flake	87	262	146
263.73	146.77	98.23	Flake	88	262	146
263.67	147.05	98.28	Thinning Flake, RC	88	262	146
263.73	146.87	98.22	Flake	89	262	146
263.68	147.13	98.28	Flake	89	262	146
263.91	146.67	98.23	Modified Flake	90	262	146
263.66	147.1	98.25	Flake	90	262	146
263.87	146.68	98.21	Cortical	91	262	146
263.55	146.98	98.24	Thinning Flake	91	262	146
263.68	146.61	98.2	Flake	92	262	146
263.8	147.05	98.25	Debris	92	262	146
263.98	146.71	98.22	Sidescraper	93	262	146
263.88	146.98	98.26	Flake	93	262	146
263.93	146.83	98.22	Flake	94	262	146
263.83	146.98	98.23	Flake	94	262	146
263.5	146.69	98.21	Flake	95	262	146
263.9	147.02	98.24	Flake	95	262	146
263.98	146.94	98.22	Flake	96	262	146
263.15	147.27	98.25	Flake, TA	96	262	146
263.85	146.89	98.23	Flake	97	262	146
263.3	147.23	98.26	Thinning Flake	97	262	146
263.34	147.24	98.24	Flake	98	262	146
263.78	146.92	98.25	Debris	98	262	146
263.68	146.95	98.22	Flake	99	262	146
263.33	147.29	98.28	Flake, RC	99	262	146
263.58	146.89	98.24	Flake, RC	100	262	146

Table A15-20 M continued

2010 N	E	Depth	Type	Art#	North	East
263.37	147.28	98.25	Flake, RC	100	262	146
263.57	146.9	98.21	Modified Flake, RC	101	262	146
263.51	147.26	98.27	Flake, RC	101	262	146
263.42	146.91	98.2	Flake	102	262	146
263.55	147.14	98.25	Flake, TA	102	262	146
263.06	146.95	98.23	Flake, RC	103	262	146
263.79	147.3	98.26	Flake, RC	103	262	146
263.58	146.98	98.22	Thinning Flake	104	262	146
263.11	147.47	98.25	Thinning Flake	104	262	146
263.76	147.09	98.24	Flake, RC	105	262	146
263.2	147.56	98.26	Thinning Flake, RC	105	262	146
263.73	147.06	98.21	Flake	106	262	146
263.08	147.65	98.25	Flake, RC	106	262	146
263.65	146.92	98.2	Flake	107	262	146
263.37	147.56	98.25	Blade-Like Flake,	107	262	146
263.29	147.03	98.23	Flake	108	262	146
263.43	147.45	98.26	Flake, RC	108	262	146
263.22	147.01	98.23	Thinning Flake	109	262	146
263.48	147.4	98.25	Flake, RC	109	262	146
263.14	147.01	98.22	Flake	110	262	146
263.89	147.48	98.27	Flake, RC	110	262	146
263.2	147.07	98.22	Flake, RC	111	262	146
263.95	147.49	98.28	Flake	111	262	146
263.21	147.16	98.25	Flake, RC	112	262	146
263.53	147.74	98.27	Flake, RC	112	262	146
263.03	147.01	98.23	Flake, RC	113	262	146
263.74	147.78	98.28	Flake, RC	113	262	146
263.04	147.13	98.25	Flake, RC	114	262	146
263.89	147.8	98.27	Flake	114	262	146
263.07	147.16	98.24	Flake	115	262	146
263.54	147.95	98.28	Hammerstone	115	262	146
263.47	147.15	98.22	Flake	116	262	146
262.53	147.05	98.26	Thinning Flake	116	262	146
263.41	147.19	98.24	Flake	117	262	146
262.51	147.09	98.26	Thinning Flake, RC	117	262	146
263.1	147.28	98.25	Flake	118	262	146
262.55	147.14	98.26	Flake	118	262	146
263.11	147.27	98.21	Hammerstone	119	262	146
262.66	147.22	98.26	Thinning Flake	119	262	146
263.89	147.46	98.25	Flake	120	262	146
262.73	147.2	98.28	Flake, RC	120	262	146

Table A15-20 M continued

2010 N	E	Depth	Type	Art#	North	East
263.95	147.41	98.22	Thinning Flake	121	262	146
262.7	147.19	98.28	Thinning Flake, RC	121	262	146
263.41	147.36	98.21	Hammerstone	122	262	146
262.76	147.2	98.27	Flake	122	262	146
263.78	147.18	98.2	Flake	123	262	146
262.76	147.13	98.24	Flake, RC	123	262	146
262.83	147.4	98.22	Flake, RC	124	262	146
262.83	147.15	98.29	Flake	124	262	146
262.9	147.37	98.24	Thinning Flake	125	262	146
262.75	147.08	98.25	Flake, RC	125	262	146
262.96	147.42	98.25	Thinning Flake	126	262	146
262.87	147.2	98.27	Flake, RC	126	262	146
262.94	147.33	98.23	Thin Flake	127	262	146
262.85	147.16	98.25	Flake, RC	127	262	146
263	147.3	98.22	Thin Flake	128	262	146
262.86	147.18	98.25	Flake, RC	128	262	146
262.85	147.32	98.21	Flake	129	262	146
262.79	147.17	98.25	Flake, RC	129	262	146
262.79	147.2	98.25	Flake, RC	130	262	146
262.82	147.25	98.25	Flake, RC	130	262	146
262.79	147.11	98.24	Flake	131	262	146
262.97	147.23	98.27	Thinning Flake	131	262	146
262.82	147.15	98.22	Flake	132	262	146
262.94	147.31	98.26	Flake	132	262	146
262.8	147.04	98.22	Flake	133	262	146
262.9	147.22	98.27	Flake, RC	133	262	146
262.86	147.18	98.25	Thin Flake	134	262	146
262.89	147.26	98.28	Flake	134	262	146
262.91	147.18	98.23	Flake	135	262	146
262.8	147.21	98.27	Flake, RC	135	262	146
262.9	147.21	98.23	Thinning Flake	136	262	146
262.87	147.2	98.26	Flake	136	262	146
262.91	147.24	98.22	Flake, RC	137	262	146
262.85	147.21	98.25	Thinning Flake	137	262	146
262.9	147.02	98.23	Flake, RC	138	262	146
262.8	147.13	98.25	Debris	138	262	146
262.93	147.02	98.23	Thinning, RC	139	262	146
262.78	147.16	98.25	Flake, RC	139	262	146
262.56	147.04	98.22	Flake	140	262	146
262.79	147.29	98.26	Flake	140	262	146
262.98	146.95	98.22	Flake, RC	141	262	146

Table A15-20 M continued

2010 N	E	Depth	Type	Art#	North	East
262.68	147.23	98.27	Flake, RC	141	262	146
263.02	147.66	98.2	Flake	142	262	146
262.73	147.33	98.26	Flake (Modified)	142	262	146
262.8	147.39	98.26	Flake, RC	143	262	146
262.98	147.4	98.29	Flake, RC	144	262	146
262.94	147.42	98.26	Thinning, RC	145	262	146
262.66	147.38	98.26	Flake, RC	146	262	146
262.58	147.28	98.27	Debris	147	262	146
262.51	147.25	98.27	Flake	148	262	146
262.45	147.31	98.26	Flake	149	262	146
262.41	147.31	98.25	Flake	150	262	146
262.64	147.73	98.25	Cortical	151	262	146
262.68	147.8	98.29	Flake, RC	152	262	146
262.79	147.93	98.28	Thinning Flake	153	262	146
264.27	144.91	97.92	Quartz Pebble	1	264	144
264.83	144.25	98	Tested Nodule	1	264	144
265.65	145.47	98	Cortical Debris	1	264	144
265.77	144.64	98.08	Cortical Nodule	1	264	144
264.55	144.7	98.12	2° Removal	1	264	144
264.15	145.89	98.16	Biface Core	1	264	144
264.035	145.874	98.232	Cortical Debris	1	264	144
265.34	145.41	98.26	Side-Scraper	1	264	144
265.02	144.35	98.35	Flake	1	264	144
265.028	144.785	98.378	Failed Biface	1	264	144
265.53	145.52	98.64	Point	1	264	144
265.06	145.23	97.93	Flake	2	264	144
264.42	144.58	98	Secondary Flake	2	264	144
265.28	145.89	98	Flake	2	264	144
265.64	144.58	98.09	Cortical Nodule	2	264	144
264.28	144.73	98.13	Large 2° Flake	2	264	144
264.69	145.9	98.19	Flake	2	264	144
264.26	145.502	98.221	Flake	2	264	144
264.73	145.69	98.27	Flake	2	264	144
265.54	145.1	98.34	Biface	2	264	144
264.38	145.45	98.63	Biface , Chert	2	264	144
264.66	145.23	97.95	Cortical Nodule	3	264	144
265.49	144.36	98.06	Flake	3	264	144
264.38	144.12	98.12	Flake	3	264	144
264.73	145.63	98.18	Biface	3	264	144
264.554	145.253	98.216	Flake	3	264	144
264.23	144.93	98.26	Quartz Pebble	3	264	144

Table A15-20 M continued

2010 N	E	Depth	Type	Art#	North	East
264.41	144.11	98.59	Hammerstone	3	264	144
264.38	144.29	98.04	Core Fragment	4	264	144
264.57	145.31	98.13	Flake	4	264	144
264.649	145.811	98.218	Flake	4	264	144
264.28	144.26	98.61	Hammerstone	4	264	144
264.23	145.19	98.15	Debris	5	264	144
264.901	145.499	98.209	Flake	5	264	144
265.95	145.1		MALA Perform	5	264	144
264.14	145.16	98.15	Debris	6	264	144
264.575	144.203	98.218	Cortical Debris	6	264	144
264.16	145.22	98.12	Flake	7	264	144
264.584	144.194	98.221	Cortical Debris	7	264	144
264.99	145.87	98.19	Flake	8	264	144
265.048	144.778	98.205	Flake	8	264	144
265.42	145.17	98.15	Cortex	9	264	144
265.851	145.826	98.193	Debris	9	264	144
264.56	144.95	98.14	Debris	10	264	144
264.5	144.74	98.18	Flake	11	264	144
264.77	144.44	98.16	Flake Broken	12	264	144
265.19	144.55	98.14	Flake	13	264	144
265.33	144.293	98.18	Debris	14	264	144
265.744	144.37	98.17	Blade-Like Flake	15	264	144
265.79	144.17	98.18	Flake	16	264	144
265.96	144.98	98.19	Cortex	17	264	144
265.65	146.27	98.03	Broken Quartz	1	264	146
264.08	146.62	98.07	Blade-Like Flake	1	264	146
264.25	146.21	98.1	Hammerstone	1	264	146
264.91	146.04	98.16	Flake	1	264	146
265.82	147.66	98.21	Flake	1	264	146
264.78	146.16	98.26	Flake	1	264	146
264.21	146.53	98.31	Flake	1	264	146
265.11	147.72	98.36	Tertiary Flake	1	264	146
265.01	146.39	98.05	Quartz Pebble	2	264	146
264.41	146.46	98.13	Blade-Like Flake	2	264	146
264.04	146.15	98.15	Flake	2	264	146
265.55	147.33	98.19	Flake, Utilized	2	264	146
264.68	146.16	98.25	Flake	2	264	146
264.46	146.54	98.32	Flake	2	264	146
265.51	147.85	98.33	Core	2	264	146
265.06	146.18	98.09	Flake	3	264	146
264.6	146.27	98.1	Cortex	3	264	146

Table A15-20 M continued

2010 N	E	Depth	Type	Art#	North	East
264.25	146.32	98.17	Debris – Primary	3	264	146
265.86	146.96	98.23	Biface	3	264	146
264.59	146.17	98.24	Flake, RC	3	264	146
264.44	146.46	98.33	Flake – Overshot	3	264	146
265.38	147.54	98.35	Secondary Flake	3	264	146
265.37	145.99	98.06	Flake	4	264	146
264.79	146.1	98.1	Flake	4	264	146
264.16	146.88	98.19	Flake	4	264	146
265.72	146.9	98.25	Flake	4	264	146
264.45	146.27	98.28	Flake	4	264	146
264.38	146.06	98.28	Flake	4	264	146
265.91	147.81	98.38	Tertiary Flake	4	264	146
265.08	146.38	98.04	Cortex	5	264	146
264.97	146.19	98.12	Biface	5	264	146
264.21	146.88	98.19	Flake	5	264	146
265.51	146.85	98.2	Core	5	264	146
264.5	146.42	98.27	Flake	5	264	146
264.29	146.22	98.33	Flake	5	264	146
265.38	146.92	98.39	Tertiary Flake	5	264	146
265.28	145.99	98.05	Core	6	264	146
265.01	146.83	98.11	Quartz Pebble	6	264	146
264.61	146.61	98.16	Flake	6	264	146
265.87	146.7	98.24	Flake	6	264	146
264.45	146.47	98.26	Flake	6	264	146
264.27	146.15	98.32	Flake	6	264	146
264.97	146.68	98.37	Secondary Flake	6	264	146
265.35	146.02	98.1	Flake	7	264	146
265.1	146.1	98.15	RC	7	264	146
265.92	146.7	98.21	Flake	7	264	146
264.73	146.59	98.24	Flake	7	264	146
264.61	146.64	98.31	Flake	7	264	146
264.78	146.36	98.39	Tertiary Flake	7	264	146
265.69	146.61	98.15	Cortex	8	264	146
264.83	146.9	98.17	Flake	8	264	146
265.67	146.71	98.21	Flake, RC	8	264	146
264.36	146.55	98.29	Flake	8	264	146
264.75	146.51	98.32	Flake	8	264	146

Table A15-20 M continued

2010 N	E	Depth	Type	Art#	North	East
264.62	146.33	98.39	Tertiary Flake	8	264	146
265.75	146.63	98.12	Core	9	264	146
264.89	147.24	98.18	Cortex	9	264	146
265.08	146.65	98.22	Flake	9	264	146
264.71	146.55	98.3	Flake	9	264	146
264.21	146.62	98.3	Flake	9	264	146
264.38	146.36	98.35	Tertiary Flake	9	264	146
265.5	146.29	98.17	Flake	10	264	146
265.75	146.49	98.2	Debris – Primary	10	264	146
264.07	146.34	98.28	Thinning Flake	10	264	146
264.26	146.35	98.35	Secondary – Burned	10	264	146
264.71	146.05	98.35	Flake, RC	10	264	146
265.81	146.72	98.15	Flake	11	264	146
265.23	146.53	98.2	Flake	11	264	146
264.06	146.6	98.29	Flake, RC	11	264	146
264.57	145.99	98.33	Flake	11	264	146
264.2	146.39	98.36	Tertiary Flake	11	264	146
265.22	146.4	98.21	Flake	12	264	146
264.16	146.72	98.32	Thinning Flake	12	264	146
264.15	146.31	98.36	Tertiary Flake	12	264	146
265.36	147.93	98.36	Flake	12	264	146
265.53	146.11	98.19	Modified Flake	13	264	146
264.38	146.55	98.29	Flake	13	264	146
265.53	147.68	98.33	Flake – Terrestrial	13	264	146
265.02	146.78	98.36	Flake	13	264	146
265.42	146.21	98.22	Flake	14	264	146
264.4	146.6	98.27	Flake	14	264	146
265.35	147.53	98.3	Flake – Terrestrial	14	264	146
264.85	146.73	98.37	Flake River Cobble	14	264	146
265.62	146.13	98.2	Flake	15	264	146
264.11	146.61	98.29	Biface	15	264	146
265.75	147.65	98.31	Flake	15	264	146
264.77	146.9	98.38	Flake River Cobble	15	264	146
264.32	147.94	98.45	Flake	15	264	146
265.5	146.02	98.22	Flake	16	264	146
264.07	146.69	98.29	Flake	16	264	146
265.68	147.32	98.3	Flake, RC	16	264	146

Table A15-20 M continued

2010 N	E	Depth	Type	Art#	North	East
264.85	146.73	98.35	Flake	16	264	146
264.55	148	98.4	Flake	16	264	146
265.03	146.4	98.2	Flake	17	264	146
265.12	146.48	98.3	Flake	17	264	146
265.46	147.27	98.32	Flake	17	264	146
264.77	146.95	98.34	Thinning Flake	17	264	146
264.29	147.98	98.42	River Cobble Flake	17	264	146
264.84	146.16	98.2	Flake	18	264	146
265.2	146.49	98.27	Flake	18	264	146
265.41	147.2	98.32	Flake	18	264	146
264.67	146.83	98.38	Flake	18	264	146
264.33	147.88	98.41	Flake	18	264	146
264.72	146.33	98.2	Flake	19	264	146
265.25	146.65	98.27	Flake	19	264	146
265.23	147.29	98.33	Flake (Terrestrial)	19	264	146
264.69	146.82	98.38	River Cobble	19	264	146
264.41	146.28	98.2	Flake	20	264	146
265.8	146.03	98.25	Flake	20	264	146
265.51	147.1	98.35	Flake	20	264	146
264.65	146.73	98.36	Flake	20	264	146
264.91	146.64	98.22	Flake, RC	21	264	146
265.58	147.19	98.28	Flake	21	264	146
265.26	147.02	98.33	Flake	21	264	146
264.42	146.75	98.37	Flake	21	264	146
264.83	146.59	98.22	Taylor Point	22	264	146
265.65	147.3	98.26	Cortex	22	264	146
265.32	146.99	98.31	Hammerstone	22	264	146
264.33	146.88	98.38	Flake	22	264	146
264.82	146.61	98.22	Flake	23	264	146
265.44	147.93	98.25	Large Spall	23	264	146
265.44	147.96	98.34	Flake	23	264	146
264.3	146.92	98.39	Flake River Cobble	23	264	146
264.8	146.58	98.23	Flake	24	264	146
264.79	147.58	98.28	Thinning Flake	24	264	146
265.32	146.77	98.33	Flake, RC	24	264	146
264.14	146.83	98.36	Flake River Cobble	24	264	146
264.64	146.68	98.22	Flake	25	264	146

Table A15-20 M continued

2010 N	E	Depth	Type	Art#	North	East
264.71	147.38	98.27	Flake	25	264	146
265.41	146.69	98.34	Flake	25	264	146
264.93	147.57	98.36	Flake	25	264	146
264.2	146.09	98.21	Flake River Cobble	26	264	146
264.5	147.78	98.26	Cortical	26	264	146
265.31	146.64	98.34	Flake	26	264	146
264.87	147.64	98.36	Flake	26	264	146
264.05	146.01	98.22	Flake	27	264	146
264.41	147.72	98.28	Hammerstone	27	264	146
265.06	146.63	98.32	Flake	27	264	146
264.83	147.47	98.39	Flake	27	264	146
264.11	146.27	98.23	Modified Flake	28	264	146
264.52	147.03	98.24	Modified Flake	28	264	146
265.22	146.54	98.3	Flake	28	264	146
264.95	147.77	98.41	Flake	28	264	146
264.17	146.33	98.2	Flake	29	264	146
264.56	147.26	98.26	Core	29	264	146
265.28	146.68	98.3	Flake	29	264	146
264.94	147.84	98.39	Flake	29	264	146
264.27	146.35	98.19	Flake	30	264	146
264.19	147.5	98.28	Core	30	264	146
265.09	146.65	98.31	Tertiary Flake	30	264	146
264.97	147.95	98.39	Flake	30	264	146
264.21	146.49	98.22	Flake	31	264	146
264.04	147.39	98.26	Flake River Chert	31	264	146
265.28	146.39	98.33	Flake, RC	31	264	146
264.91	147.98	98.37	Flake	31	264	146
264.17	146.54	98.23	Modified	32	264	146
264.15	147.06	98.26	Flake	32	264	146
265.47	146.5	98.33	Flake	32	264	146
264.75	147.94	98.34	Flake	32	264	146
264.11	146.7	98.23	Flake	33	264	146
264.28	147.67	98.29	Blade-Like Flake	33	264	146
265.71	146.44	98.32	Flake	33	264	146
264.69	147.86	98.35	Flake	33	264	146
264	146.94	98.2	Flake	34	264	146
264.11	147.8	98.3	Flake	34	264	146

Table A15-20 M continued

2010 N	E	Depth	Type	Art#	North	East
265.94	146.29	98.35	Flake, RC	34	264	146
264.79	147.76	98.36	Flake	34	264	146
264.1	146.88	98.22	Flake	35	264	146
264.11	147.82	98.26	Quartz	35	264	146
264.04	146.79	98.32	Flake	35	264	146
264.79	147.73	98.36	Flake	35	264	146
264.19	146.95	98.23	Flake	36	264	146
264.58	146.78	98.28	Flake, RC	36	264	146
264.08	146.95	98.34	Flake River Chert	36	264	146
264.69	147.86	98.36	Flake, RC	36	264	146
264.38	146.81	98.24	Cortex	37	264	146
264.59	146.75	98.27	Flake	37	264	146
264.64	147.71	98.35	Cortex	37	264	146
264.36	146.77	98.35	Flake	37	264	146
264.54	146.74	98.24	Bifacial Scraper	38	264	146
264.37	146.93	98.3	Flake	38	264	146
264.73	147.51	98.36	Cortex	38	264	146
264.68	146.88	98.2	Flake	39	264	146
264.42	146.86	98.29	Flake	39	264	146
264.69	147.6	98.37	Flake	39	264	146
264.86	147	98.26	Flake	40	264	146
264.49	146.9	98.31	Flake	40	264	146
264.71	147.47	98.36	Debris – Primary	40	264	146
264.97	146.87	98.19	Flake River Chert	41	264	146
264.65	146.74	98.27	Flake	41	264	146
264.68	147.39	98.37	Flake	41	264	146
265.02	146.97	98.23	Core	42	264	146
264.83	146.97	98.33	Quartz Pebble	42	264	146
265.02	147.03	98.38	Flake	42	264	146
264.04	146.8	98.19	Large Flake Core	43	264	146
264.45	147	98.32	Flake River Chert	43	264	146
264.84	147.07	98.34	Flake	43	264	146
264.1	146.73	98.2	Flake River Chert	44	264	146
264.52	147.01	98.29	Flake	44	264	146
264.69	147	98.35	Flake	44	264	146
264.35	147.26	98.22	Flake	45	264	146
264.12	147.08	98.3	Endscraper	45	264	146

Table A15-20 M continued

2010 N	E	Depth	Type	Art#	North	East
264.89	147.82	98.36	Flake	45	264	146
264.75	147.52	98.21	Pot Lid Flake	46	264	146
264.27	147.13	98.28	Blade-Like Flake	46	264	146
264.72	147.49	98.34	Flake	46	264	146
264.88	147.28	98.26	Flake	47	264	146
264.24	147.21	98.3	Flake	47	264	146
264.56	147.4	98.35	Flake, RC	47	264	146
264.15	147.2	98.18	Large Flake Core	48	264	146
264.23	147.3	98.3	Biface	48	264	146
264.57	147.85	98.35	Flake	48	264	146
264.13	147.27	98.22	Flake	49	264	146
264.08	147.76	98.3	Blade-Like Flake	49	264	146
264.62	148.01	98.35	Flake Core – TC	49	264	146
264.1	147.22	98.21	Flake	50	264	146
264.1	147.81	98.34	Flake	50	264	146
264.42	148.02	98.39	Flake	50	264	146
264.14	147.21	98.2	Flake	51	264	146
264.15	147.85	98.34	River Chert	51	264	146
264.33	147.93	98.37	Core	51	264	146
264.39	147.62	98.3	Flake	52	264	146
264.38	147.7	98.36	Flake	52	264	146
264.38	147.55	98.32	Flake	53	264	146
264.4	147.16	98.37	Cortex	53	264	146
264.47	147.36	98.31	Flake	54	264	146
264.38	147.06	98.36	Flake	54	264	146
264.55	147.28	98.32	Flake	55	264	146
264.19	147.15	98.34	Flake River Cobble	55	264	146
264.35	147.48	98.31	Flake	56	264	146
264.34	147.95	98.36	Flake	56	264	146
264.31	147.3	98.29	Flake	57	264	146
264.18	147.66	98.35	Blade-Like Flake	57	264	146
264.43	147.43	98.31	Core	58	264	146
264.24	147.84	98.35	Flake	58	264	146
264.47	147.52	98.29	Flake	59	264	146
264.03	147.55	98.39	Flake River Cobble	59	264	146
264.66	147.13	98.3	Flake	60	264	146
264.02	147.51	98.36	Flake River Chert	60	264	146

Table A15-20 M continued

2010 N	E	Depth	Type	Art#	North	East
264.83	147.33	98.32	Flake	61	264	146
264.01	147.52	98.35	Blade	61	264	146
264.69	147.37	98.33	Flake River Chert	62	264	146
264.02	147.38	98.39	Flake River Chert	62	264	146
264.79	147.74	98.34	Flake	63	264	146
264.05	147.21	98.36	Flake	63	264	146
265.02	147.99	98.29	Flake River Chert	64	264	146
264.07	147.13	98.35	Flake River Chert	64	264	146
264.73	147.82	98.29	Flake	65	264	146
264.07	147.94	98.39	Flake River Chert	65	264	146
264.54	147.89	98.3	Flake River Chert	66	264	146
264.51	147.98	98.34	Flake	67	264	146
246.15	140.99	97.188	Cortical Chert	1	246	140
246.21	140.915	97.208	Bend Break	1	246	140
246.66	140.8	97.258	Cortex Pebble	1	246	140
246.66	140.925	97.283	Chert Cobble	1	246	140
247.01	140.955	97.378	Broken Quartz	1	246	140
247.45	140.78	97.238	Broken Quartz	1	246	140
247.56	140.785	97.078	Cortical Chert	1	246	140
247.64	141.47	96.92	Chert	1	246	140
247.69	140.77	97.178	Quartz Pebble	1	246	140
247.905	140.965	97.098	Broken Quartz	1	246	140
247.99	141.09	96.85	Chert Debris	1	246	140
246.22	140.99	97.188	Chert Debris	2	246	140
246.46	140.92	97.208	Chert Cobble	2	246	140
246.94	140.63	97.238	Broken Chert Pebble	2	246	140
247.18	140.87	97.208	Chert Debris	2	246	140
247.41	140.75	97.088	Cortical Chert	2	246	140
247.635	140.97	97.108	Chert Debris	2	246	140
247.89	141.08	96.85	Chert Debris	2	246	140
247.945	140.81	97.25	Cortical Pebble	2	246	140
247.98	141.88	96.91	Quartz Pebble	2	246	140
246.17	140.95	97.168	Chert Debris	3	246	140
246.5	140.44	97.238	Chert Debris	3	246	140
246.6	140.61	97.198	Chert Debris	3	246	140
247.05	140.97	97.118	Quartz Pebble	3	246	140
247.315	140.81	97.088	Chert Pebble	3	246	140

Table A15-20 M continued

2010 N	E	Depth	Type	Art#	North	East
247.71	141.3	96.89	Chert Debris	3	246	140
247.745	140.55	97.253	Cortical Pebble	3	246	140
247.84	141.05	96.83	Chert Debris	3	246	140
246.36	140.635	97.258	Chert Debris	4	246	140
246.47	140.99	97.188	Chert Debris	4	246	140
247.045	140.94	97.098	Chert Pebble	4	246	140
247.08	140.88	97.118	Cort Chert Debris	4	246	140
247.65	141.09	96.85	Quartz Pebble	4	246	140
247.71	141.14	96.89	Chert Debris	4	246	140
246.5	140.94	97.178	Chert Pebble	5	246	140
246.91	140.98	97.253	Cortical Cobble	5	246	140
247.07	140.95	97.098	Possible Chert Flake	5	246	140
247.52	141.32	96.89	Chert Debris	5	246	140
247.8	141.31	96.83	Chert Flake	5	246	140
247.81	140.97	97.073	Quartz Pebble	5	246	140
147.55	140.95	97.048	Chert Debris	6	246	140
246.52	140.55	97.243	Chert Debris	6	246	140
246.83	140.88	97.188	Cortical Chert	6	246	140
247.13	140.72	97.068	Quartz Pebble	6	246	140
247.48	141.15	96.89	Chert Debris	6	246	140
247.65	141.35	96.86	Quartz Flat Pebble	6	246	140
147.42	140.93	97.078	Chert Debris	7	246	140
246.16	140.73	97.183	Chert Pebble	7	246	140
247.3	141.46	96.88	Quartz Pebble	7	246	140
247.57	141.33	96.86	Chert Debris	7	246	140
247.659	140.54	97.128	Chert Debris	7	246	140
147.335	140.86	97.058	Quartz Debris	8	246	140
246.29	140.72	97.178	Quartz Pebble	8	246	140
247.26	141.15	96.89	Chert Debris	8	246	140
247.54	141.3	96.83	Chert Debris	8	246	140
247.87	140.57	97.123	Cortical	8	246	140
147.385	140.85	97.043	Cortical Chert	9	246	140
246.42	140.62	97.163	Chert Scraper	9	246	140
247.08	141.37	96.91	Cortical Chert	9	246	140
247.11	140.12	97.108	Chert	9	246	140
247.43	141.3	96.84	Quartz Pebble	9	246	140
246.13	140.51	97.168	Quartz Pebble	10	246	140

Table A15-20 M continued

2010 N	E	Depth	Type	Art#	North	East
247.32	141.22	96.83	Quartz Pebble	10	246	140
247.65	140.78	97.048	Chert Debris	10	246	140
246.56	140.5	97.168	Chert Debris	11	246	140
247.08	141.1	96.86	Cortical Debris	11	246	140
247.98	140.5	97.088	Quartz Pebble	11	246	140
246.93	140.56	97.168	Chert Pebble	12	246	140
247.08	140.73	97.088	Chert Debris	12	246	140
247.12	141.31	96.87	Chert Debris	12	246	140
246.63	140.28	97.138	Chert Pebble	13	246	140
247.14	141.36	96.86	Quartz Pebble	13	246	140
247.18	140.75	97.063	Chert Debris	13	246	140
246.76	140.18	97.168	Chert Tool	14	246	140
247.25	141.47	96.87	Quartz Pebble	14	246	140
247.485	140.61	97.048	Chert Debris	14	246	140
246.6	140.13	97.148	Bend Break	15	246	140
247.12	140.48	97.068	Chert Debris	15	246	140
247.36	141.62	96.87	Chert Flake	15	246	140
247.13	140.64	97.088	Chert Debris	16	246	140
247.42	141.59	96.84	Broken Pebble	16	246	140
247.395	140.59	97.058	Chert Debris	17	246	140
247.66	141.68	96.88	Cortical Chert	17	246	140
247.19	140.1	97.048	Chert Debris	18	246	140
247.8	141.74	96.86	Cortical Chert	18	246	140
247.52	140.8	97.058	Chert Debris	19	246	140
247.88	141.68	96.86	Chert Debris	19	246	140
247.79	141.91	96.84	Chert Flake	20	246	140
247.43	141.76	96.86	Cortical Debris	21	246	140
247.25	141.76	96.84	Cortical Debris	22	246	140
247.2	141.78	96.89	Broken Quartz	23	246	140
247.07	141.65	96.86	Chert Debris	24	246	140
247.99	141.88	96.84	Cortical	25	246	140
248	141.6	96.83	Chert Debris	26	246	140
246.28	142.04	97.2	Cortical Chert	1	246	142
246.52	142.36	97.24	Chert Debris	1	246	142
246.635	142.2	97.023	Chert Pebble	1	246	142
246.775	142.135	97.068	Chert Debris	1	246	142
246.94	142.165	97.138	Chert Debris	1	246	142

Table A15-20 M continued

2010 N	E	Depth	Type	Art#	North	East
246.07	142.38	97.14	Chert Debris	2	246	142
246.225	142.13	97.22	Chert Flake	2	246	142
246.49	142.18	97.013	Chert Debris	2	246	142
246.57	142.24	97.123	Chert Debris	2	246	142
246.68	142.325	97.088	Chert Debris	2	246	142
246.07	142.29	97.043	Chert Debris	3	246	142
246.53	142.17	97.143	Chert Debris	3	246	142
246.59	142.14	97.19	Chert Debris,	3	246	142
246.625	142.265	97.078	Chert Debris	3	246	142
246.87	142.1	97.218	Chert Debris	3	246	142
246.045	142.32	97.24	Chert Debris	4	246	142
246.17	142.11	97.148	Chert Debris	4	246	142
246.245	142.35	97.043	Chert Debris	4	246	142
246.45	142.22	97.123	Chert Debris	4	246	142
246.64	142.22	97.17	Pebble , Chert	4	246	142
246.27	142.4	97.123	Chert Debris	5	246	142
246.65	142.78	97.23	Bend Break Chert	5	246	142
246.71	142.31	97.17	Chert Pebble	5	246	142
246.74	142.645	97.083	Quartz Pebble	5	246	142
246.79	142.43	97.053	Chert Pebble	5	246	142
246.61	142.42	97.143	Bend Break	6	246	142
246.71	142.51	97.038	Chert Pebble	6	246	142
246.71	142.62	97.098	Quartz Pebble	6	246	142
246.89	142.27	97.15	Chert Pebble	6	246	142
246.92	142.85	97.245	Chert Debris	6	246	142
246.295	142.605	97.1055	Cortical Chert	7	246	142
246.61	142.77	97.14	Chert Debris,	7	246	142
246.67	142.92	97.2	Chert Debris/	7	246	142
246.735	142.725	97.033	Chert Debris	7	246	142
246.84	142.44	97.143	Quartz Pebble	7	246	142
246.19	142.54	97.103	Chert Debris	8	246	142
246.49	142.72	97.16	Chert Pebble	8	246	142
246.57	142.51	97.128	Quartz Pebble	8	246	142
246.71	142.715	97.023	Quartz Pebble	8	246	142
246.2	142.89	97.14	Chert Pebble	9	246	142
246.28	142.825	97.133	Chert Bend Break	9	246	142
246.41	142.675	97.013	Chert Debris	9	246	142

Table A15-20 M continued

2010 N	E	Depth	Type	Art#	North	East
246.75	142.725	97.108	Chert Debris	9	246	142
246.1	142.84	97.18	Chert Pebble	10	246	142
246.15	142.7	97.108	Chert Pebble	10	246	142
246.225	142.63	97.013	Chert Debris	10	246	142
246.775	142.81	97.123	Chert Debris	10	246	142
246	142			11	246	142
246.32	142.82	97.053	Quartz Pebble	11	246	142
246.735	142.8925	97.098	Quartz Pebble	12	246	142
246.58	142.93	97.123	Chert Pebble	13	246	142
246.5	142.95	97.135	Chert Pebble	14	246	142
246.17	142.87	97.098	Cortical Debris	15	246	142
246.375	142.23	97.073	Cortical Debris	16	246	142
248.015	141.44	96.828	Cortical Pebble	1	248	140
248.075	141.9	96.788	Bend Break	1	248	140
248.14	141.91	96.868	Cortical Debris	1	248	140
248.04	141.84	96.888	Cortical Debris	2	248	140
248.065	141.05	96.838	Broken Pebble	2	248	140
248.125	141.92	96.788	Chert Debris	2	248	140
248.13	141.73	96.868	Quartz Pebble	3	248	140
248.24	141.61	96.778	Chert Debris	3	248	140
248.35	141.11	96.803	Quartz Pebble	3	248	140
248.46	141.16	96.768	Clay Concretion	4	248	140
248.76	141.64	96.878	Chert Flake	4	248	140
248.82	141.04	96.878	Chert Pebble	4	248	140
248.115	141.65	96.808	Chert Debris	5	248	140
248.14	141.6	96.888	Chert Debris	5	248	140
248.59	141.18	96.758	Cortical Debris	5	248	140
248.15	141.505	96.878	Cortical Debris	6	248	140
248.375	141.55	96.778	Chert Debris	6	248	140
248.45	141.69	96.828	Chert Debris	6	248	140
248.43	141.58	96.788	Quartz Pebble	7	248	140
248.76	141.11	96.895	Chert Debris	7	248	140
248.84	141.85	96.808	Chert Debris	7	248	140
248.24	141.72	96.818	Chert Pebble	8	248	140
248.53	141.66	96.788	Quartz Pebble	8	248	140
248.63	141.155	96.858	Chert Debris	8	248	140
248.09	141.05	96.878	Chert Debris	9	248	140

Table A15-20 M continued

2010 N	E	Depth	Type	Art#	North	East
248.211	141.64	96.8	Chert Cobble Core	9	248	140
248.71	141.94	96.768	Chert Debris	9	248	140
248.27	141.04	96.888	Chert Debris	10	248	140
248.54	141.8	96.793	Chert Debris	10	248	140
248.015	141.23	96.858	Quartz Pebble	11	248	140
248.015	141.58	96.878	Chert Debris	12	248	140
248.02	141.31	96.868	Chert Debris	13	248	140
248.09	141.33	96	Chert Spall	14	248	140

Table A15-20 N
Mapped Artifacts from 2011 Excavations at the Topper Site (38AL23).

2011 N	E	Depth	Type	Art#	North	East
242.29	144.57	97.29	Broken Quartz Pebble	1	242	144
242.39	145.93	98.39	Quartz Pebble	1	242	144
242.44	144.39	97.35	Weathered Chert Pebble	1	242	144
242.44	144.44	97.51	Quartz Pebble	1	242	144
242.44	144.85	97.75	Chert Debris	1	242	144
242.45	144.81	98.863	Chert Debris	1	242	144
242.51	144.66	97.63	Cortical Debris	1	242	144
242.58	144.46	97.47	Cortical Chert Pebble	1	242	144
242.59	144.6	97.7	Broken Quartz Pebble	1	242	144
242.64	144.46	97.58	Quartz Debris	1	242	144
242.67	144.4	97.31	Chert Debris	1	242	144
242.68	145.96	98.27	Chert Flake	1	242	144
242.74	144.72	97.71	Biface Preform	1	242	144
242.82	144.55	97.4	Cortical Chert Pebble	1	242	144
242.83	144.76	98.1	Cortical Pebble	1	242	144
242.86	145.08	98.23	Chert Flake	1	242	144
242.88	144.46	97.8	TA Debris	1	242	144
242.91	145.94	98.31	Chert Flake	1	242	144
242.96	145.11	98.16	Cortical Chert Pebble	1	242	144
243.13	145	98.03	Blade Distal	1	242	144
243.14	145.01	98.24	Retouched Flake	1	242	144
243.14	145.01	98.24	Retouched Flake	1	242	144
243.19	145.75	97.86	Bend Break	1	242	144
243.22	145.09	98.27	Tertiary Chert Flake	1	242	144
243.22	145.09	98.27	Tertiary Chert Flake	1	242	144
243.5	145.01	97.53	Quartz Pebble	1	242	144
243.56	145.06	97.93	Chert Tool	1	242	144
243.72	145	98.12	Broken Chert Flake	1	242	144
243.78	145.06	97.45	Chert Debris	1	242	144
243.86	145.03	97.97	Cortical Flake	1	242	144
243.92	145	97.73	Cortical Chert Debris	1	242	144
243.94	145.01	97.75	Cortical Chert Pebble	1	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
243.94	145.99	98.07	TA Flake Prox	1	242	144
243.96	145.99	98.18	Broken Quartz Pebble	1	242	144
243.97	145	97.44	Broken Quartz Pebble	1	242	144
243.99	145	97.56	Cortical Pebble	1	242	144
243.99	145	97.62	Broken Quartz Pebble	1	242	144
243.99	145	97.64	Quartz Pebble	1	242	144
243.99	145.13	97.8	Chert Flake	1	242	144
242.34	144.59	97.28	Chert Pebble	2	242	144
242.36	144.47	97.56	Chert Debris	2	242	144
242.38	144.48	97.37	Weathered Chert Pebble	2	242	144
242.41	144.71	97.963	Chert Debris	2	242	144
242.42	144.53	97.3	Chert Debris	2	242	144
242.45	145.84	98.35	Chert Flake	2	242	144
242.49	144.65	97.65	Chert Debris	2	242	144
242.54	145.945	98.31	Chert Flake	2	242	144
242.55	145.48	98.19	Chert Flake	2	242	144
242.56	144.47	97.5	Chert Pebble	2	242	144
242.56	144.84	97.76	Quartz Pebble	2	242	144
242.58	144.54	97.64	Cortical Debris	2	242	144
242.63	144.55	97.45	Chert Flake	2	242	144
242.71	144.53	97.4	Broken Quartz Pebble	2	242	144
242.73	145.15	98.26	Chert Core	2	242	144
242.83	144.92	98.1	Cortical Pebble	2	242	144
242.89	144.5	97.82	Cortical Debris	2	242	144
242.9	145.93	98.31	Chert Debris	2	242	144
243.05	145.05	98.2	Hammerstone	2	242	144
243.05	145.05	98.2	Hammerstone	2	242	144
243.22	145.16	98.29	Chert Flake	2	242	144
243.22	145.16	98.29	Chert Flake	2	242	144
243.42	145.01	97.505	Cortical Debris	2	242	144
243.57	145	98.02	Prox Cortical Flake	2	242	144
243.63	145.02	98.13	Chert Bend Break	2	242	144
243.64	145	97.7	Broken Quartz Pebble	2	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
243.69	145.12	98.18	Broken Quartz Pebble	2	242	144
243.71	145.09	97.45	Cortical Pebble	2	242	144
243.76	145	97.86	Flake	2	242	144
243.77	145	97.95	Broken Chert Flake	2	242	144
243.84	145.18	97.76	Weathered Chert Pebble	2	242	144
243.86	145	97.73	Cortical Pebble	2	242	144
243.88	145.05	97.45	Bend Break	2	242	144
243.89	145.18	97.81	Chert Debris	2	242	144
243.95	145.09	97.56	Cortical Pebble	2	242	144
243.97	145	97.63	Cortical Pebble	2	242	144
243.99	145	97.85	Cortical Pebble	2	242	144
243.99	145.83	98.06	Bend Break	2	242	144
242.31	145.99	98.3	Chert Flake	3	242	144
242.37	144.58	97.3	Weathered Chert Flake	3	242	144
242.4	144.73	97.933	Chert Debris	3	242	144
242.43	144.55	97.54	Weathered Chert Pebble	3	242	144
242.44	144.75	97.68	Broken Quartz Pebble	3	242	144
242.44	144.77	97.32	Chert Debris	3	242	144
242.45	144.54	97.56	Chert Debris	3	242	144
242.46	145.61	98.2	Chert Debris	3	242	144
242.53	145.85	98.31	Chert Flake	3	242	144
242.58	144.73	97.6	Weathered Chert Debris	3	242	144
242.63	144.57	97.43	Quartz Pebble	3	242	144
242.72	144.62	97.46	Chert Debris/Tool	3	242	144
242.72	145.22	98.24	Chert Flake Core	3	242	144
242.73	144.55	97.79	Distal Chert Flake	3	242	144
242.76	145.7	98.37	Chert Flake	3	242	144
242.79	144.55	97.77	Cortical Debris	3	242	144
242.86	144.52	97.37	Chert Debris	3	242	144
243.11	145	97.39	Broken Quartz Pebble	3	242	144
243.22	145.16	97.8	Chert Debris	3	242	144
243.32	145	98.19	Chert Debris	3	242	144
243.32	145	98.19	Chert Debris	3	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
243.39	145.01	98.15	Chert Flake	3	242	144
243.5	145.01	97.505	Quartz Pebble	3	242	144
243.5	145.26	98.26	Chert Debris	3	242	144
243.5	145.26	98.26	Chert Debris	3	242	144
243.52	145	97.97	Chert Debris	3	242	144
243.53	145	97.74	Broken Quartz Pebble	3	242	144
243.55	145	97.59	Chert Flake Fragment	3	242	144
243.58	145.16	98.03	Broken Distal Flake	3	242	144
243.59	145.16	97.76	Chert Debris	3	242	144
243.61	145.01	98.16	Broken Quartz Pebble	3	242	144
243.63	145	97.65	Cortical Pebble	3	242	144
243.69	145.19	97.45	Quartz Pebble	3	242	144
243.87	145.05	97.9	Cortical Debris	3	242	144
243.93	145.82	98.06	Chert Flake Fragment	3	242	144
243.96	145	97.6	Chert Debris	3	242	144
243.99	145.01	97.89	Distal Flake	3	242	144
242.37	144.55	97.48	Broken Quartz Pebble	4	242	144
242.38	144.76	97.67	Chert Debris	4	242	144
242.39	144.61	97.31	Quartz Pebble	4	242	144
242.42	144.57	97.58	Chert Debris	4	242	144
242.46	144.74	97.6	Broken Quartz Pebble	4	242	144
242.46	145.04	98.2	Chert Debris	4	242	144
242.49	144.53	97.54	Broken Quartz Pebble	4	242	144
242.5	144.76	97.24	Chert Cobble Core	4	242	144
242.52	144.59	97.35	Weathered Chert Pebble	4	242	144
242.57	144.64	97.91	Chert Debris	4	242	144
242.62	145.64	98.19	Chert Flake	4	242	144
242.63	145.91	98.28	Chert Debris	4	242	144
242.69	144.61	97.41	Chert Flake	4	242	144
242.75	145.64	98.36	Chert Flake	4	242	144
242.79	144.46	97.73	Bladelet/Thinning Flake	4	242	144
242.87	144.72	97.81	TA Chert Flake	4	242	144
242.91	145.77	98.3	Chert Pebble	4	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
243.01	145.1	97.82	Cortical Chert Debris	4	242	144
243.17	145.36	98.28	Chert Flake	4	242	144
243.17	145.36	98.28	Chert Flake	4	242	144
243.21	145.01	98.17	Chert Flake	4	242	144
243.28	145	97.93	Chert Flake	4	242	144
243.29	145.27	98.14	Chert Flake	4	242	144
243.32	145.06	98.22	Chert Flake	4	242	144
243.32	145.06	98.22	Chert Flake	4	242	144
243.35	145	97.45	Weathered Chert Debris	4	242	144
243.37	145.02	97.525	Cortical Chert Pebble	4	242	144
243.39	145	97.95	Broken Quartz Pebble	4	242	144
243.46	145	97.58	Weathered Chert Pebble	4	242	144
243.51	145.07	97.75	Weathered Chert Pebble	4	242	144
243.61	145.08	97.45	Cortical Chert Cobble	4	242	144
243.65	145.31	98.01	Cortical Cobble	4	242	144
243.68	145	97.65	Possible Chert Tool	4	242	144
243.78	145.15	97.74	Broken Hammerstone	4	242	144
243.89	145.87	98.06	Cortical	4	242	144
243.91	145.11	97.85	Weathered Chert Debris	4	242	144
243.95	145.04	97.6	Broken Quartz Pebble	4	242	144
242.37	144.7	97.64	Decor. Flake	5	242	144
242.38	144.55	97.55	Weathered Chert Pebble	5	242	144
242.39	144.85	97.27	Chert Pebble	5	242	144
242.4	144.69	97.3	Broken Quartz Pebble	5	242	144
242.47	145.72	98.25	Chert Debris	5	242	144
242.6	144.57	97.53	Weathered Chert Pebble	5	242	144
242.63	144.93	97.67	Broken Quartz Pebble	5	242	144
242.64	144.68	97.36	Chert Debris	5	242	144
242.64	144.96	97.83	Flake	5	242	144
242.7	144.6	97.89	Possible Bend Break	5	242	144
242.73	144.7	97.42	Chert Debris	5	242	144
242.74	145.78	98.33	Chert Proximal	5	242	144
242.77	144.55	97.73	Chert Debris	5	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
242.87	144.52	97.48	Cortical Chert Pebble	5	242	144
242.87	145.57	98.35	Broken Quartz Pebble	5	242	144
242.94	145.63	98.27	Chert Flake	5	242	144
243.02	145.31	97.81	Cortical Chert Pebble	5	242	144
243.17	145	97.45	Cortical Chert Pebble	5	242	144
243.21	145.06	97.93	Core Rejuvination Flake	5	242	144
243.22	145.15	97.72	Decor. Flake	5	242	144
243.25	145.47	98.25	Chert Flake	5	242	144
243.25	145.47	98.25	Chert Flake	5	242	144
243.37	145	97.52	Cortical Chert Pebble	5	242	144
243.37	145.01	97.75	Cortical Chert Pebble	5	242	144
243.39	145	98.23	Cortical Chert Pebble	5	242	144
243.39	145	98.23	Cortical Chert Pebble	5	242	144
243.48	145.03	97.56	Bend Break	5	242	144
243.54	145	97.67	Quartz Pebble	5	242	144
243.56	145.03	97.46	Scraper	5	242	144
243.58	145.05	97.99	TA Chert Debris	5	242	144
243.74	145.33	98	Broken Quartz Cobble	5	242	144
243.74	145.75	98.06	Tabular Chert Debris	5	242	144
243.75	145.35	98.16	Quartz Pebble	5	242	144
243.78	145.07	97.86	Flake Thinning	5	242	144
243.87	145	97.6	Cortical Pebble	5	242	144
243.99	145.55	98.1	Chert Debris	5	242	144
242.37	144.93	97.27	Cortical Chert Debris	6	242	144
242.38	144.92	97.65	Chert Debris	6	242	144
242.46	144.59	97.56	Chert Debris	6	242	144
242.47	145.77	98.21	Chert Debris	6	242	144
242.57	144.65	97.41	Weathered Chert Pebble	6	242	144
242.61	145.72	98.3	Chert Flake	6	242	144
242.62	144.74	97.46	Broken Quartz Pebble	6	242	144
242.63	144.7	97.3	Weathered Chert Debris	6	242	144
242.72	145.49	98.36	Chert Flake	6	242	144
242.74	144.69	97.36	Bend Break	6	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
242.79	144.87	97.86	Retouch Chert Flake	6	242	144
242.8	144.66	97.53	Broken Quartz Pebble	6	242	144
242.81	144.57	97.83	Quartz Pebble	6	242	144
242.87	144.87	97.64	Chert Debris	6	242	144
242.87	145.63	98.29	Chert Debris	6	242	144
242.88	144.49	97.73	TA Debris	6	242	144
243.1	145.59	98.25	Quartz Hammerstone	6	242	144
243.1	145.59	98.25	Quartz Hammerstone	6	242	144
243.17	145.1	97.7	Chert Debris	6	242	144
243.2	145.07	97.45	Cortical Chert Flake	6	242	144
243.28	145.25	97.81	Cortical Chert Pebble	6	242	144
243.33	145	97.5	Broken Quartz Debris	6	242	144
243.35	145	98.19	Cortical Chert Pebble	6	242	144
243.35	145	98.19	Cortical Chert Pebble	6	242	144
243.37	145	97.66	Cortical Pebble	6	242	144
243.48	145.1	97.58	Cortical Pebble	6	242	144
243.48	145.33	98.16	Cortical Chert Pebble	6	242	144
243.52	145.17	97.46	Broken Quartz Pebble	6	242	144
243.59	145.07	97.99	Chert Debris	6	242	144
243.65	145.94	98.08	TA Chert Flake	6	242	144
243.66	145.12	97.86	Bend Break	6	242	144
243.67	145.01	97.63	Cortical Chert Debris	6	242	144
243.84	145.34	98	Bend Break	6	242	144
243.87	145.47	98.1	Cortical Chert Debris	6	242	144
243.9	145.32	97.79	Flake	6	242	144
243.99	145.2	97.89	Cortical Debris	6	242	144
242.36	145.8	98.2	Chert Debris	7	242	144
242.47	144.6	97.56	Chert Pebble	7	242	144
242.5	144.7	97.43	Chert Debris	7	242	144
242.57	145.79	98.3	Chert Flake	7	242	144
242.6	144.71	97.51	Weathered Chert Debris	7	242	144
242.63	144.79	97.47	Broken Quartz Pebble	7	242	144
242.66	144.81	97.31	Cortical Chert Flake	7	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
242.77	145.69	98.28	Blade-Like Flake	7	242	144
242.81	144.53	97.95	Cortical Debris	7	242	144
242.85	144.52	97.81	TA Debris	7	242	144
243.09	145.01	97.7	Chert Debris	7	242	144
243.19	145.01	97.43	Cortical Chert Pebble	7	242	144
243.24	145	97.59	Chert Debris	7	242	144
243.28	145	97.52	Poss. Blade-Like Flake	7	242	144
243.29	145	97.69	Cortical Pebble	7	242	144
243.35	144.71	97.38	Broken Flake Medial	7	242	144
243.5	145.04	97.45	Broken Quartz Pebble	7	242	144
243.52	145	98.19	Broken Quartz	7	242	144
243.52	145	98.19	Broken Quartz	7	242	144
243.57	145.27	97.8	Chert Flake	7	242	144
243.59	145.41	98.29	Thinning Flake	7	242	144
243.59	145.41	98.29	Thinning Flake	7	242	144
243.6	145	97.6	Broken Quartz Pebble	7	242	144
243.62	145.14	97.99	Cortical Debris	7	242	144
243.65	145.52	97.88	Chert Debris	7	242	144
243.68	145.89	98.08	Chert Debris	7	242	144
243.78	145.42	98.12	Flake	7	242	144
243.84	145.36	97.8	Cortical Chert Debris	7	242	144
243.94	145.32	97.99	Bend Break	7	242	144
243.98	145.44	98.14	Chert Debris	7	242	144
243.99	145.25	97.93	Cortical Debris	7	242	144
242.33	144.61	97.43	Weathered Chert Pebble	8	242	144
242.35	144.76	97.33	Debris/Possible Tool	8	242	144
242.47	146.04	98.25	Chert Blade Like Flake	8	242	144
242.51	145.57	98.3	Chert Debris	8	242	144
242.52	144.66	97.57	Weathered Chert Debris	8	242	144
242.56	144.72	97.51	Quartz Pebble	8	242	144
242.62	144.82	97.99	Chert Debris	8	242	144
242.74	145.71	98.28	Chert Debris/Core	8	242	144
242.81	144.51	97.92	TA Chert Debris	8	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
242.83	144.54	97.81	Quartz Broken Cobble	8	242	144
243.06	145.14	97.7	TA Chert Debris	8	242	144
243.17	145.05	97.4	Chert Debris	8	242	144
243.26	145.04	97.58	Weathered Chert Debris	8	242	144
243.29	145	97.65	Cortical Pebble	8	242	144
243.3	145	97.5	Cortical Chert Pebble	8	242	144
243.55	145.22	97.86	Chert Cobble	8	242	144
243.56	145.31	98.03	Prox Chert Flake	8	242	144
243.56	145.49	98.27	Primary Decor. Flake	8	242	144
243.56	145.49	98.27	Primary Decor. Flake	8	242	144
243.57	145.11	97.46	Cortical Chert Pebble	8	242	144
243.57	145.16	97.96	Cortical Debris	8	242	144
243.62	145.08	97.62	Cortical Debris	8	242	144
243.63	144.91	97.38	Chert Debris	8	242	144
243.65	145.83	98.1	Chert Debris	8	242	144
243.69	145.32	98.1	Chert Flake	8	242	144
243.7	145.42	97.78	Chert Debris	8	242	144
243.75	145.32	97.8	Cortical Chert Pebble	8	242	144
243.88	145.59	98.15	Cortical	8	242	144
243.91	145.02	98.22	Broken Quartz	8	242	144
243.91	145.02	98.22	Broken Quartz	8	242	144
243.95	145.37	97.91	Chert Debris	8	242	144
242.34	144.66	97.43	Chert Tool	9	242	144
242.46	144.67	97.57	Chert Debris	9	242	144
242.52	145.51	98.31	Chert Flake	9	242	144
242.64	144.85	97.46	Chert Debris	9	242	144
242.67	145.79	98.28	Decortication Flake	9	242	144
242.77	145.95	98.25	Chert Flake	9	242	144
242.78	144.8	97.52	Chert Pebble	9	242	144
242.81	144.64	97.92	Broken Quartz Cobble	9	242	144
242.83	144.63	97.81	Cortical Cobble	9	242	144
243.09	145	97.56	Broken Quartz Pebble	9	242	144
243.09	145.31	97.7	Chert Debris	9	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
243.2	145.09	97.4	Cortical Chert Debris	9	242	144
243.25	145.04	97.505	Quartz Pebble	9	242	144
243.25	145.1	97.66	Bend Break	9	242	144
243.35	145.21	97.95	Cortical Pebble	9	242	144
243.45	144.95	97.37	Chopper	9	242	144
243.45	145.07	97.47	Weathered Chert Pebble	9	242	144
243.55	145.09	97.58	Flake/Tool	9	242	144
243.66	145.44	98.02	Cortical Flake	9	242	144
243.68	145.49	98.15	Decor. Flake	9	242	144
243.68	145.51	98.13	Chert Debris	9	242	144
243.68	145.69	98.1	Cortical Debris	9	242	144
243.73	145	98.2	Chert Cobble	9	242	144
243.73	145	98.2	Chert Cobble	9	242	144
243.73	145.32	97.92	Weathered Chert	9	242	144
243.75	145.37	97.79	Chert Debris	9	242	144
243.88	145.35	98.25	Broken Hammerstone	9	242	144
243.88	145.35	98.25	Broken Hammerstone	9	242	144
243.99	145.36	97.86	Weathered Chert Pebble	9	242	144
243.99	145.42	97.79	Cortical Chert Pebble	9	242	144
242.39	144.69	97.55	Broken Quartz Pebble	10	242	144
242.4	144.75	97.43	Weathered Chert Pebble	10	242	144
242.45	145.45	98.34	Chert Flake	10	242	144
242.46	144.76	97.45	Bend Break Graver	10	242	144
242.71	144.88	97.53	Chert Debris	10	242	144
242.73	145.67	98.27	Quartz Hammerstone	10	242	144
242.79	144.58	97.81	Cortical Pebble	10	242	144
242.79	146.1	98.21	Chert Flake	10	242	144
242.8	144.59	97.89	Chert Debris	10	242	144
243.08	145.09	97.67	Cortical Chert Debris	10	242	144
243.18	145.19	98.21	Quartz Debris	10	242	144
243.18	145.19	98.21	Quartz Debris	10	242	144
243.22	145	97.535	Bend Break	10	242	144
243.22	145.37	97.74	Cortical Chert Debris	10	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
243.34	145.09	97.4	Cortical Chert Pebble	10	242	144
243.38	145.05	97.48	Chert Pebble	10	242	144
243.49	145.07	97.6	Chert Debris	10	242	144
243.54	145.57	98	Decor. Flake	10	242	144
243.63	145.68	98.1	Chert Debris	10	242	144
243.67	145.44	98.15	Chert Debris	10	242	144
243.67	145.69	98.06	Cortical Debris	10	242	144
243.72	145.35	97.99	Cortical Debris	10	242	144
243.78	145.47	97.9	Chert Debris	10	242	144
243.85	145.41	98.27	Chert Flake	10	242	144
243.85	145.41	98.27	Chert Flake	10	242	144
243.86	145.34	97.88	Flake, RC	10	242	144
243.89	145.31	97.825	Cortical Chert Debris	10	242	144
243.96	145.29	97.58	Chert Debris Poss. Tool	10	242	144
243.99	145.46	97.77	Chert Debris	10	242	144
242.44	145.78	98.28	Chert Flake	11	242	144
242.46	144.79	97.47	Cortical Chert Pebble	11	242	144
242.49	144.97	97.42	Chert Debris	11	242	144
242.52	144.75	97.55	Weathered Chert Debris	11	242	144
242.79	144.67	97.88	Cortical	11	242	144
242.87	144.59	97.8	Cortical Pebble	11	242	144
242.87	144.91	97.5	Chert Pebble	11	242	144
243.07	145.15	97.66	Bend Break	11	242	144
243.26	145.3	98.19	Cortical Chert Debris	11	242	144
243.26	145.3	98.19	Cortical Chert Debris	11	242	144
243.28	145.01	97.51	Broken Quartz	11	242	144
243.39	145.19	97.45	Debris	11	242	144
243.39	145.33	97.73	Cortical Chert Debris	11	242	144
243.46	145	97.45	Unifacial Tool	11	242	144
243.48	145	97.6	Flake Fragment	11	242	144
243.52	145.39	97.79	Cortical Pebble	11	242	144
243.57	145.64	98.06	Cortical Debris	11	242	144
243.59	145.66	98.12	Flake Distal	11	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
243.62	145.51	98.17	Cortical Debris	11	242	144
243.62	145.57	98.25	Cortical Chert Flake	11	242	144
243.62	145.57	98.25	Cortical Chert Flake	11	242	144
243.63	145.51	97.93	Chert Debris	11	242	144
243.71	145.55	98.03	Cortical Pebble	11	242	144
243.77	145.4	97.75	Cortical Debris	11	242	144
243.81	145.47	97.86	Chert Debris	11	242	144
243.82	145.41	97.59	Cortical Chert Pebble	11	242	144
243.95	145.3	97.825	Bend Break	11	242	144
242.43	145.7	98.29	Chert Flake	12	242	144
242.52	144.82	97.51	Weathered Chert Debris	12	242	144
242.6	144.82	97.55	TA Chert Debris	12	242	144
242.63	144.92	97.47	Chert Debris	12	242	144
242.79	144.7	97.89	Cortical	12	242	144
242.9	144.53	97.81	Chert Debris	12	242	144
243.12	144.99	97.525	Cortical Chert Debris	12	242	144
243.18	145.18	97.7	Cortical Pebble	12	242	144
243.23	145	97.63	Chert Debris	12	242	144
243.29	145.15	97.46	Chert Debris	12	242	144
243.33	145.35	98.19	Flake Proximal	12	242	144
243.33	145.35	98.19	Flake Proximal	12	242	144
243.49	145.69	98.13	Chert Flake	12	242	144
243.5	145.4	97.79	Cortical Pebble	12	242	144
243.61	145.54	98.25	Cortical Chert Flake	12	242	144
243.61	145.54	98.25	Cortical Chert Flake	12	242	144
243.62	145.1	97.45	Chert Debris	12	242	144
243.67	145.37	97.74	Quartz Flake	12	242	144
243.76	145.4	97.59	Cortical Debris	12	242	144
243.79	145.55	97.85	Broken Quartz Pebble	12	242	144
243.8	145.52	98.01	River Flake	12	242	144
243.87	145.48	97.75	Quartz Pebble	12	242	144
243.88	145.65	98.05	Cortical Debris	12	242	144
243.93	145.45	97.795	Blade Pros	12	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
243.96	145.79	98.16	Decor. Flake	12	242	144
243.99	145.62	97.9	Cortical Debris	12	242	144
242.46	145.63	98.25	Chert Debris	13	242	144
242.48	144.12	97.54	Chert Tool	13	242	144
242.69	144.94	97.47	Chert Pebble	13	242	144
242.75	144.61	97.58	Flake Fragment	13	242	144
242.8	144.71	97.92	Cortical	13	242	144
242.85	144.59	97.79	Chert Debris	13	242	144
243	145.69	98.27	Prox Blade	13	242	144
243	145.69	98.27	Prox Blade	13	242	144
243.11	144.99	97.5	Quartz Pebble	13	242	144
243.17	145.12	97.65	Quartz Hammerstone	13	242	144
243.21	145.03	97.63	Cortical Chert Debris	13	242	144
243.21	145.16	97.48	Chert Debris	13	242	144
243.44	145.4	98.18	Chert Debris	13	242	144
243.44	145.4	98.18	Chert Debris	13	242	144
243.49	145.58	98.11	Chert Debris	13	242	144
243.54	145.45	97.78	Cortical Debris	13	242	144
243.59	145.5	97.95	Cortical Pebble	13	242	144
243.71	145.54	97.88	Debris, RC	13	242	144
243.74	145.35	97.58	Chert Debris	13	242	144
243.84	145.51	98.03	Prox Flake	13	242	144
243.84	145.56	97.83	Bend Break	13	242	144
243.87	145.58	97.9	Side Scraper	13	242	144
243.89	145.82	98.18	Broken Fl	13	242	144
243.93	145.29	97.73	Cortical Chert Debris	13	242	144
243.96	145.5	98.09	Cortical	13	242	144
245.68	145.14	97.45	Broken Quartz Pebble	13	242	144
242.39	145.63	98.28	Chert Flake	14	242	144
242.44	144.88	97.47	Cortical Chert Pebble	14	242	144
242.83	144.71	97.59	Chert Flake Fragment	14	242	144
242.85	144.88	97.53	Weathered Chert Debris	14	242	144
242.87	144.69	97.92	Modified Flake	14	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
242.9	144.5	97.8	Cortical Pebble	14	242	144
243.06	144.99	97.51	Cortical Chert Pebble	14	242	144
243.14	145.81	98.25	Chert Cortical Pebble	14	242	144
243.14	145.81	98.25	Cortical Chert Pebble	14	242	144
243.2	145.06	97.48	Chert Pebble	14	242	144
243.23	145	97.63	Chert Debris	14	242	144
243.23	145.26	97.68	Chert Flake	14	242	144
243.61	145.34	98.2	Chert Debris	14	242	144
243.61	145.34	98.2	Chert Debris	14	242	144
243.61	145.59	97.88	Flake	14	242	144
243.63	145.51	97.79	Cortical Pebble	14	242	144
243.64	145.51	97.98	Cortical Debris	14	242	144
243.69	145.82	98.17	Cortical	14	242	144
243.7	145.6	97.8	Cortical Chert Debris	14	242	144
243.71	145.6	98	Broken Cortical Pebble	14	242	144
243.73	145.35	97.59	Chert Debris	14	242	144
243.82	145.455	98.09	Cortical Debris	14	242	144
243.85	145.39	97.7	Chert Tool	14	242	144
243.85	145.84	98.1	Cortical	14	242	144
243.9	145.57	97.9	Prox Flake	14	242	144
243.92	145.14	97.4	Cortical Chert Scraper	14	242	144
242.41	144.8	97.5	Weathered Chert Debris	15	242	144
242.41	145.52	98.28	Chert Flake	15	242	144
242.45	144.88	97.45	Cortical Chert Pebble	15	242	144
242.66	144.76	97.59	Chert Debris	15	242	144
242.81	144.7	97.93	Flake	15	242	144
243.04	144.995	97.535	Broken Quartz Pebble	15	242	144
243.15	145	97.45	Chert Debris	15	242	144
243.18	145.79	98.26	Chert Flake	15	242	144
243.18	145.79	98.26	Chert Flake	15	242	144
243.22	145.24	97.65	Cortical Pebble	15	242	144
243.26	145	97.62	Broken Quartz Pebble	15	242	144
243.34	145.58	97.9	Starter Flake	15	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
243.54	145.81	98.12	Decor. Flake	15	242	144
243.62	145.61	97.78	Broken Quartz Pebble	15	242	144
243.65	145.24	97.805	Broken Quartz Pebble	15	242	144
243.68	145.53	97.88	Cortical Pebble	15	242	144
243.7	145.47	98.22	Chert Pebble	15	242	144
243.7	145.47	98.22	Chert Pebble	15	242	144
243.71	145.57	97.95	Chert Tool	15	242	144
243.74	145.45	97.58	Chert Debris	15	242	144
243.77	145.57	98	Chert Flake Poss.	15	242	144
243.92	145.54	97.72	Chert Debris	15	242	144
243.98	145.27	97.45	Cortical Chert Tool	15	242	144
243.98	145.36	98.09	Cortical	15	242	144
242.4	144.76	97.5	Weathered Chert Debris	16	242	144
242.5	144.93	97.45	Cortical Chert Pebble	16	242	144
242.6	144.85	97.55	Weathered Chert Debris	16	242	144
242.71	145.43	98.27	Chert Flake	16	242	144
242.82	144.68	97.92	Chert Debris Mod.	16	242	144
243.07	145	97.46	Broken Quartz Pebble	16	242	144
243.13	145.82	98.25	Chert Flake	16	242	144
243.13	145.82	98.25	Chert Flake	16	242	144
243.17	145	97.61	Cortical Pebble	16	242	144
243.19	145.86	98.13	Flake	16	242	144
243.2	145.65	97.91	Flake	16	242	144
243.28	145.22	97.65	Chert Debris	16	242	144
243.32	145.71	97.81	RC Chert Flake	16	242	144
243.65	145.43	97.59	Cortical Chert Pebble	16	242	144
243.74	145.38	98.22	Cortical Chert Cobble	16	242	144
243.74	145.38	98.22	Cortical Chert Cobble	16	242	144
243.74	145.55	97.77	Cortical Cobble	16	242	144
243.74	145.69	97.88	Cortical Pebble	16	242	144
243.78	145.65	97.72	Cortical Pebble	16	242	144
243.81	145.31	98.08	Cortical	16	242	144
243.84	145.35	97.41	Broken Quartz Pebble	16	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
243.89	145.59	98.01	Flake	16	242	144
243.91	145.05	97.515	Chert Flake	16	242	144
243.91	145.74	97.95	Chert Flake	16	242	144
242.36	144.81	97.57	Chert Debris	17	242	144
242.4	144.91	97.55	Bend Break	17	242	144
242.43	144.96	97.49	Cortical Chert Pebble	17	242	144
242.78	145.25	98.25	Chert Debris	17	242	144
242.85	144.66	97.93	Quartz Pebble	17	242	144
243	145.74	98.29	Chert Flake	17	242	144
243	145.74	98.29	Chert Flake	17	242	144
243.05	145.08	97.46	Weathered Chert Pebble	17	242	144
243.12	145	97.64	Quartz Pebble	17	242	144
243.23	145.97	98.12	Cortical	17	242	144
243.27	145.81	97.92	Debris, RC	17	242	144
243.35	145.36	97.7	Chert Flake	17	242	144
243.52	145.75	97.81	Bend Break	17	242	144
243.58	145.38	97.57	Bend Break	17	242	144
243.6	145.7	97.85	Cortical Pebble	17	242	144
243.61	145.36	97.44	Cortical Chert Pebble	17	242	144
243.7	145.57	97.74	Flake Chert	17	242	144
243.72	145.38	98.07	Cortical Debris	17	242	144
243.73	145.34	98.21	Quartz Debris	17	242	144
243.73	145.34	98.21	Quartz Debris	17	242	144
243.74	145.63	97.79	Cortical Pebble	17	242	144
243.88	145.09	97.51	Primary Flake	17	242	144
243.88	145.73	97.96	Chert Scraper	17	242	144
243.99	145.57	98	Cortical Debris	17	242	144
242	144	97		18	242	144
242.45	144.96	97.56	Chert Debris	18	242	144
242.78	145.08	98.28	Chert Blade Like Flake	18	242	144
242.85	144.58	97.94	Cortical Debris	18	242	144
243.07	145	97.62	Prox. Blade	18	242	144
243.09	145.42	98.2	TA Flake	18	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
243.09	145.42	98.2	TA Flake	18	242	144
243.19	145.49	98.1	Chert Debris	18	242	144
243.27	145.8	97.91	Chert Flake Distal	18	242	144
243.34	145.41	97.65	Debris, RC	18	242	144
243.51	145.09	97.5	Cortical Chert Pebble	18	242	144
243.6	145.52	97.75	Retouch Side Scraper	18	242	144
243.61	145.385	97.44	Hammerstone	18	242	144
243.62	145.74	97.85	Chert Debris	18	242	144
243.65	145.65	97.75	Flake Chert	18	242	144
243.67	145.76	97.82	Cortical Chert Pebble	18	242	144
243.69	145.26	98.07	Broken Quartz	18	242	144
243.7	145.65	97.98	Cortical Pebble	18	242	144
243.81	145.35	97.57	Chert Debris	18	242	144
243.98	145.33	97.45	Chert Cobble	18	242	144
243.99	145.64	98	Chert Debris	18	242	144
242.38	144.97	97.55	Chert Debris	19	242	144
242.53	145.88	98.27	Chert Flake	19	242	144
242.86	144.63	97.88	Cortical Cobble	19	242	144
243.02	145.31	97.66	Cortical Chert Pebble	19	242	144
243.07	145	97.63	Chert Debris	19	242	144
243.18	145.62	97.7	Chert Debris	19	242	144
243.29	145.54	98.13	Chert Flake	19	242	144
243.37	145.6	98.21	TA Chert Pebble	19	242	144
243.37	145.6	98.21	TA Chert Pebble	19	242	144
243.4	145.9	97.9	Cortical Debris	19	242	144
243.47	145.55	97.75	Cortical Pebble	19	242	144
243.49	145.64	97.85	Chert Debris	19	242	144
243.54	145.41	98.05	TA Chert Debris	19	242	144
243.56	145.16	97.505	Cortical Chert Pebble	19	242	144
243.58	145.36	97.43	Cortical Chert Debris	19	242	144
243.61	145.71	97.98	Cortical Pebble	19	242	144
243.79	145.63	97.79	Cortical Chert Debris	19	242	144
243.8	145.37	97.57	Cortical Chert Debris	19	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
243.9	145.35	97.48	Chert Pebble	19	242	144
243.99	145.77	98.03	Chert Debris	19	242	144
242.83	144.71	97.99	TA Medial Chert Flake	20	242	144
243.08	145	97.61	Broken Quartz Pebble	20	242	144
243.4	145.09	97.5	Cortical Chert Debris	20	242	144
243.44	145.43	97.45	Weathered Chert Pebble	20	242	144
243.47	145.21	97.69	Chert Flake	20	242	144
243.52	145.3	98.05	Cortical Debris	20	242	144
243.52	145.65	97.78	Chert Flake Distal	20	242	144
243.54	145.55	98.22	Cortical Chert Pebble	20	242	144
243.54	145.55	98.22	Cortical Chert Pebble	20	242	144
243.55	145.67	97.88	Weathered Chert Debris	20	242	144
243.55	145.98	97.9	Chert Debris	20	242	144
243.6	145.37	97.58	Flake	20	242	144
243.66	145.75	97.97	Cortical Debris	20	242	144
243.83	145.67	97.8	Cortical Pebble	20	242	144
243.84	145.37	97.45	Quartz Pebble	20	242	144
243.96	145.78	98	Chert Debris	20	242	144
243.99	145.77	97.76	Flake	20	242	144
242.81	144.69	97.88	Cortical Cobble	21	242	144
243.14	145	97.59	Cortical Debris	21	242	144
243.21	145.65	97.77	Bend Break	21	242	144
243.3	145.14	97.5	Cortical Chert Debris	21	242	144
243.37	145.4	97.45	Weathered Chert Debris	21	242	144
243.42	145.27	97.7	Cortical Pebble	21	242	144
243.48	145.7	97.85	Weathered Chert Pebble	21	242	144
243.54	145.66	98	Broken Quartz Cobble	21	242	144
243.57	145.29	98.06	Chert Debris	21	242	144
243.64	145.73	97.91	Weathered Chert Debris	21	242	144
243.66	145.42	97.57	Cortical Chert Debris	21	242	144
243.72	145.74	97.95	Chert Flake	21	242	144
243.74	145.5	98.2	Chert Flake	21	242	144
243.74	145.5	98.2	Chert Flake	21	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
243.79	145.34	97.45	Chert Debris	21	242	144
243.85	145.69	97.8	Broken Quartz Pebble	21	242	144
243.97	145.77	97.74	Cortical Chert Debris	21	242	144
242.82	144.56	97.9	Cortical Pebble	22	242	144
243.17	145.12	97.5	Chert Bend Break	22	242	144
243.24	145.69	98.01	Broken Bend Break	22	242	144
243.29	145.35	97.43	Bend Break	22	242	144
243.32	145.69	97.95	Broken Flake	22	242	144
243.41	145.25	97.65	Cortical Pebble	22	242	144
243.42	145.73	97.88	Cortical Pebble	22	242	144
243.61	145.19	98.06	Cortical Flake	22	242	144
243.69	145.41	97.55	Broken Quartz Pebble	22	242	144
243.72	145.37	98.23	Chert Pebble	22	242	144
243.72	145.37	98.23	Chert Pebble	22	242	144
243.77	145.57	97.45	Cortical Chert Debris	22	242	144
243.78	145.72	97.93	Bend Break	22	242	144
243.82	145.21	97.6	Cortical Chert Debris	22	242	144
243.84	145.99	97.75	Debitage Flake	22	242	144
243.86	145.55	97.76	Quartz Pebble	22	242	144
243.86	145.75	97.79	Cortical Chert Pebble	22	242	144
242.79	144.63	97.86	Cortical Pebble	23	242	144
243.28	145.22	97.49	Utilized Tool	23	242	144
243.33	145.78	97.96	Chert Debris	23	242	144
243.35	145.69	97.88	Chert Debris	23	242	144
243.39	145.34	97.41	Weathered Chert Tool	23	242	144
243.51	145.2	98.08	Cortical	23	242	144
243.63	145.26	97.48	Cortical Pebble	23	242	144
243.66	145.4	97.54	Chert Flake Fragment	23	242	144
243.67	145.99	97.71	Broken Quartz Pebble	23	242	144
243.7	145.24	97.61	Broken Quartz Pebble	23	242	144
243.7	145.59	98.2	Chert Pebble	23	242	144
243.7	14559	98.2	Chert Pebble	23	242	144
243.71	145.29	97.69	Distal Flake Fragment	23	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
243.72	145.74	98.04	Cortical Cobble	23	242	144
243.73	145.89	97.82	Bend Break	23	242	144
243.88	145.62	97.75	Broken Quartz Pebble	23	242	144
243.92	145.73	97.92	Weathered Bend Break	23	242	144
242.85	144.51	97.91	Cortical Pebble	24	242	144
243.16	145.68	97.97	Cortical Debris	24	242	144
243.31	145.67	97.86	Chert Flake	24	242	144
243.35	145.42	97	Chert Tool	24	242	144
243.53	145.95	97.73	Cortical Pebble	24	242	144
243.6	145.28	97.48	Cortical Pebble	24	242	144
243.62	145.71	98.01	Core Fragment	24	242	144
243.69	145.29	97.63	Quartz Pebble	24	242	144
243.71	145.55	98.21	Chert Pebble	24	242	144
243.71	145.55	98.21	Chert Pebble	24	242	144
243.73	145.92	97.81	Chert Debris	24	242	144
243.76	145.23	97.7	Chert Debris	24	242	144
243.93	145.66	97.78	Broken Quartz Pebble	24	242	144
243.94	145.77	97.92	Weathered Flake	24	242	144
243.99	145.16	97.51	Chert Flake	24	242	144
243.99	145.17	98.08	Cortical Debris	24	242	144
243.99	145.5	97.56	Quartz Pebble	24	242	144
242.79	144.57	97.88	Quartz Pebble	25	242	144
243.06	145.89	97.72	Cortical Pebble	25	242	144
243.43	145.7	97.85	Chert Debris	25	242	144
243.51	145.86	97.82	Broken Quartz Pebble	25	242	144
243.53	145.34	97.47	Weathered Chert Flake	25	242	144
243.54	145.79	98	Broken Flake	25	242	144
243.61	145.06	98.06	Cortical Debris	25	242	144
243.75	145.66	98.21	Broken Quartz Pebble	25	242	144
243.75	145.66	98.21	Broken Quartz Pebble	25	242	144
243.76	145.39	97.63	Quartz Pebble	25	242	144
243.83	15.32	97.67	Cortical Chert Debris	25	242	144
243.94	145.55	97.43	Cortical Chert Pebble	25	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
243.96	145.47	97.57	Prox Flake	25	242	144
243.97	145.58	97.81	Cortical Debris	25	242	144
243.97	145.84	97.92	Cortical Debris	25	242	144
243.97	145.95	97.98	Cortical Debris	25	242	144
243.99	145.16	97.5	Broken Quartz	25	242	144
242.85	144.44	97.9	Decor. Flake	26	242	144
243.03	145.76	97.7	Cortical Cobble	26	242	144
243.3	145.29	97.48	Bend Break	26	242	144
243.35	145.86	98.01	Cortical RC Debris	26	242	144
243.37	145.12	98.07	Chert Debris	26	242	144
243.4	145.79	97.85	Quartz Pebble	26	242	144
243.53	145.97	97.81	Cortical Chert Pebble	26	242	144
243.59	145.89	97.91	Cortical Pebble	26	242	144
243.73	145.29	97.65	Cortical Pebble	26	242	144
243.79	145.52	98.21	Broken Quartz	26	242	144
243.79	145.52	98.21	Broken Quartz	26	242	144
243.8	145.36	97.61	Cortical Chert Debris	26	242	144
243.85	145.5	97.4	Chert Bend Break	26	242	144
243.86	145.56	97.58	Weathered Chert Debris	26	242	144
243.93	145.94	97.98	Poss. Bend Break	26	242	144
243.99	145.27	97.5	Lamellae	26	242	144
243.99	145.58	97.81	Cortical Debris	26	242	144
242.79	144.6	97.9	Cortical Pebble	27	242	144
243.06	145.7	97.55	Bend Break	27	242	144
243.35	145.35	97.46	Chert Debris	27	242	144
243.51	145.87	98	Flake	27	242	144
243.68	145.86	97.91	Cortical Pebble	27	242	144
243.74	145.27	97.65	Poss. Chert Tool	27	242	144
243.77	145.47	97.43	Hammerstone Fragment	27	242	144
243.8	145.98	97.81	Broken Chert Flake	27	242	144
243.88	145.52	98.21	Cortical Chert Debris	27	242	144
243.88	145.52	98.21	Cortical Chert Debris	27	242	144
243.89	145.4	97.63	Cortical Debris	27	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
243.89	145.61	97.58	Debris/Poss. Tool	27	242	144
243.93	145.92	97.97	Broken Quartz Pebble	27	242	144
243.97	145.75	97.76	Chert Debris	27	242	144
244	145.34	97.501	Secondary Flake	27	242	144
			Chert Debris	27	242	144
242.86	144.54	97.89	Poss. Core Tip	28	242	144
243.24	145.39	98.06	Boulder	28	242	144
243.3	145.9	97.88	Broken Hammerstone	28	242	144
243.32	145.43	97.45	Weathered Chert Tool	28	242	144
243.53	145.58	97.44	Chert Pebble	28	242	144
243.61	145.87	98.02	Distal Flake	28	242	144
243.71	145.33	97.65	Cortical Pebble	28	242	144
243.76	145.4	97.6	Distal Flake	28	242	144
243.76	145.6	98.2	Cortical Chert Pebble	28	242	144
243.76	145.6	98.2	Cortical Chert Pebble	28	242	144
243.79	145.89	97.91	Chert Debris	28	242	144
243.84	145.99	97.81	Flake	28	242	144
243.87	145.59	97	Cortical Pebble	28	242	144
243.93	145.96	97.98	Broken Quartz Pebble	28	242	144
243.94	145.32	97	Cortical Utilized Flake	28	242	144
243.99	145.81	97.77	Cortical Debris	28	242	144
242.88	144.56	97.85	Hammerstone	29	242	144
243.34	145.23	97.45	Cortical Pebble	29	242	144
243.35	145.39	98.08	Cortical Debris	29	242	144
243.43	145.92	98.01	Broken Quartz Cobble	29	242	144
243.49	145.54	97.39	Chert Tool Weathered	29	242	144
243.67	145.331	97.65	Rejuvination Flake	29	242	144
243.73	145.45	97.6	Broken Flake Distal	29	242	144
243.74	145.71	97.87	Broken Quartz Pebble	29	242	144
243.79	145.55	97.55	Broken Quartz Pebble	29	242	144
243.81	145.68	98.22	Chert Pebble	29	242	144
243.81	145.68	98.22	Chert Pebble	29	242	144
243.83	145.93	97.9	Chert Flake	29	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
243.88	145.14	97.5	Bend Break	29	242	144
243.93	145.97	97.96	Chert Flake	29	242	144
243.99	145.87	97.81	Cortical Pebble	29	242	144
243.14	145.44	98.08	Chert Debris	30	242	144
243.3	145.43	97.45	Cortical Chert Debris	30	242	144
243.3	145.97	98	Chert Flake	30	242	144
243.4	145.63	97.43	Cortical Chert	30	242	144
243.56	145.54	97.55	Cortical Pebble	30	242	144
243.6	145.32	97.61	Chert Debris	30	242	144
243.67	145.6	97.87	Broken Quartz Pebble	30	242	144
243.84	145.58	98.24	Decortication Flake	30	242	144
243.84	145.58	98.24	Decortication Flake	30	242	144
243.86	145.21	97.5	Cortical Chert Debris	30	242	144
243.89	145.86	97.95	Flake	30	242	144
243.92	145.48	97.7	TA Debris	30	242	144
243.97	145.91	97.78	Hammerstone Quartz	30	242	144
243.99	145.92	97.91	Flake Distal	30	242	144
243.13	145.35	97.46	Broken Quartz Pebble	31	242	144
243.3	145.33	98.1	Cortical Debris	31	242	144
243.33	145.59	97.46	Chert Flake	31	242	144
243.51	145.55	97.58	Cortical Pebble	31	242	144
243.63	145.35	97.61	Quartz Pebble	31	242	144
243.67	145.97	98.01	Cortical Debris	31	242	144
243.69	145.68	97.86	Broken Quartz Pebble	31	242	144
243.73	145.17	97.53	Bend Break Chert	31	242	144
243.84	145.88	97.95	Chert Flake	31	242	144
243.9	145.43	97.65	Chert Flake	31	242	144
243.92	145.59	98.2	Broken Quartz Pebble	31	242	144
243.92	145.59	98.2	Broken Quartz Pebble	31	242	144
243.98	145.93	97.91	Flake	31	242	144
243.99	145.94	97.81	Broken Quartz Pebble	31	242	144
243.26	145.47	97.4	Chert Tool	32	242	144
243.45	145.9	98.04	=Rejuvination Flake	32	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
243.46	145.48	97.56	Chert Pebble	32	242	144
243.54	145.22	97.63	Broken Flake	32	242	144
243.63	145.59	97.85	Weathered Chert Debris	32	242	144
243.75	145.95	98	Chert Debris	32	242	144
243.77	145.21	97.53	Cortical Chert Debris	32	242	144
243.77	145.42	97.7	Cortical Pebble	32	242	144
243.83	145.89	97.95	Chert Debris	32	242	144
243.85	145.84	97.78	Quartz Pebble	32	242	144
243.96	145.72	98.22	Cortical Chert Debris	32	242	144
243.96	145.72	98.22	Cortical Chert	32	242	144
243.97	145.9	97.91	Flake	32	242	144
243.99	145.6	97.46	Cortical Pebble	32	242	144
243.03	145.83	98.23	Chert Debris	33	242	144
243.03	145.83	98.23	Chert Debris	33	242	144
243.19	145.52	97.4	Chert Debris	33	242	144
243.45	145.17	97.6	Quartz Hammerstone	33	242	144
243.48	145.42	97.55	Flake Fragment	33	242	144
243.66	145.7	97.85	Chert Debris	33	242	144
243.72	145.45	97.67	Bend Break	33	242	144
243.72	145.87	97.97	Prox Flake	33	242	144
243.73	145.26	97.53	Bend Break Chert	33	242	144
243.75	145.85	97.895	Flake Distal	33	242	144
243.8	145.68	97.45	Retouched Chert Debris	33	242	144
243.85	145.9	97.79	Broken Quartz Pebble	33	242	144
243.85	145.93	98.01	Distal Chert Flake	33	242	144
243.14	145.89	98.23	TA Flake	34	242	144
243.14	145.89	98.23	TA Flake	34	242	144
243.26	145.48	97.38	Quartz Pebble	34	242	144
243.38	145.42	97.55	Cortical Chert Pebble	34	242	144
243.5	145.28	97.64	Cortical Debris	34	242	144
243.66	145.1	97.9	Weathered Flake	34	242	144
243.66	145.27	97.535	Weathered Chert Debris	34	242	144
243.71	145.63	97.85	Cortical Pebble	34	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
243.72	145.7	97.45	Weathered Chert Debris	34	242	144
243.78	145.98	97.95	Quartz Pebble	34	242	144
243.79	145.5	97.69	Cortical Debris	34	242	144
243.86	145.92	97.79	Cortical Pebble	34	242	144
243.93	145.96	98.05	Cortical Debris	34	242	144
243.26	145.15	97.63	Broken Flake	35	242	144
243.26	145.45	97.58	Flake Prox	35	242	144
243.63	145.97	97.95	Chert Debris	35	242	144
243.72	145.13	97.5	Chert Blade Like Flake	35	242	144
243.72	145.87	97.76	Chert Debris	35	242	144
243.75	145.54	97.68	Chert Debris	35	242	144
243.77	145.61	97.45	Cortical Chert Debris	35	242	144
243.83	145.68	97.42	Broken Quartz Pebble	35	242	144
243.94	145.96	98.04	Broken Quartz Cobble	35	242	144
243.99	145.61	97.85	Cortical Pebble	35	242	144
243.01	145.35	97.56	Chert Debris	36	242	144
243.25	145.21	97.62	Utilized Flake	36	242	144
243.47	145.9	97.98	Chert Debris	36	242	144
243.54	145.85	97.75	Cortical Pebble	36	242	144
243.59	145.51	97.67	Chert Flake/Debris	36	242	144
243.61	145.5	97.46	Chert Debris	36	242	144
243.65	145.29	97.49	Chert Debris	36	242	144
243.74	145.67	97.43	Chert Debris	36	242	144
243.98	145.94	98	Chert	36	242	144
243.99	145.66	97.87	Debris, RC	36	242	144
243.14	145.5	97.55	Chert Debris	37	242	144
243.19	145.19	97.6	Broken Quartz Pebble	37	242	144
243.31	145.32	97.5	Weathered Chert Pebble	37	242	144
243.32	145.99	97.96	Chert Debris	37	242	144
243.44	145.67	97.87	Weathered Chert Flake	37	242	144
243.5	145.88	97.79	Cortical Pebble	37	242	144
243.63	145.52	97.7	Quartz Pebble	37	242	144
243.63	145.67	97.4	Cortical Chert Debris	37	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
243.66	145.56	97.49	Bladelette Core	37	242	144
243.75	145.78	98.02	Chert Debris	37	242	144
243.06	145.5	97.56	Chert Debris	38	242	144
243.17	145.99	98	Quartz Flake	38	242	144
243.18	145.38	97.62	Broken Hammerstone	38	242	144
243.29	145.31	97.515	Blade Like Flake	38	242	144
243.39	145.7	97.4	Quartz Pebble	38	242	144
243.46	145.91	97.79	Chert Debris	38	242	144
243.66	145.79	98.03	Cortical Boulder	38	242	144
243.67	145.57	97.68	Cortical Pebble	38	242	144
243.74	145.57	97.45	Weathered Chert Debris	38	242	144
243.93	145.74	97.89	Broken Quartz Pebble	38	242	144
243.1	145.7	97.59	Cortical Chert Pebble	39	242	144
243.21	145.72	97.43	Cortical Chert Debris	39	242	144
243.22	145.29	97.53	Chert Debris	39	242	144
243.28	145.35	97.6	Cortical Debris	39	242	144
243.53	145.91	97.79	Cortical Pebble	39	242	144
243.68	145.62	97.45	Weathered Chert Debris	39	242	144
243.68	145.81	98.02	Flake	39	242	144
243.75	145.58	97.68	Cortical Pebble	39	242	144
243.85	145.78	97.86	Weathered Chert Pebble	39	242	144
243.15	145.67	97.43	Broken Quartz Pebble	40	242	144
243.16	145.7	97.56	Core Fragment	40	242	144
243.23	145.28	97.49	Chert Bend Break Tool	40	242	144
243.28	145.42	97.62	Cortical Debris	40	242	144
243.65	145.83	98.01	Cortical Flake	40	242	144
243.66	145.56	97.45	Quartz Hammerstone	40	242	144
243.76	145.65	97.67	Chert Flake	40	242	144
243.83	145.78	97.85	Utilized Flake	40	242	144
243.07	145.65	97.44	Weathered Chert Tool	41	242	144
243.16	145.39	97.53	Chert Debris	41	242	144
243.2	145.83	97.58	Cortical Pebble	41	242	144
243.61	145.64	97.48	Bend Break	41	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
243.63	145.46	97.63	Cortical Debris	41	242	144
243.7	145.72	98	Flake Blade Like	41	242	144
243.82	145.65	97.65	Chert Flake	41	242	144
243.95	145.76	97.89	Broken Quartz Pebble	41	242	144
243.06	145.33	97.51	Cortical Chert Debris	42	242	144
243.51	145.55	97.49	Chert Debris	42	242	144
243.66	145.51	97.6	Chert Debris	42	242	144
243.77	145.86	98.02	Cortical	42	242	144
243.96	145.63	97.69	Poss. Side Scraper	42	242	144
243.96	145.74	97.87	Cortical Pebble	42	242	144
243.98	145.83	97.43	Chert Debris	42	242	144
2473.38	145.79	97.58	Core Fragment	42	242	144
243.04	145.37	97.535	TA Chert Debris	43	242	144
243.25	145.99	98	Cortical Flake	43	242	144
243.46	145.76	97.156	Scraper	43	242	144
243.51	145.53	97.5	Cortical Pebble	43	242	144
243.91	145.54	97.63	Chert Debris	43	242	144
243.91	145.62	97.65	Blade Distal	43	242	144
243.91	145.84	97.42	Chert Debris	43	242	144
243.96	145.82	97.89	Broken Hammerstone	43	242	144
243.12	145.42	97.65	Chert Debris	44	242	144
243.43	145.83	97.57	Chert Pebble	44	242	144
243.47	145.5	97.45	Cortical Chert Debris	44	242	144
243.72	145.45	97.52	Bend Break	44	242	144
243.84	145.62	97.65	Flake Fragment	44	242	144
243.91	145.97	97.4	Chert Debris	44	242	144
243.95	145.77	97.85	Chert Debris	44	242	144
243.07	145.49	97.66	Decor. Flake	45	242	144
243.35	145.57	97.5	Scraper Chert	45	242	144
243.47	145.85	97.55	Scraper	45	242	144
243.69	145.42	97.53	Weathered Chert Tool	45	242	144
243.86	145.68	97.63	Chert Debris	45	242	144
243.88	145.77	97.42	Chert Debris	45	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
243.99	145.81	97.87	Chert Debris	45	242	144
243.13	145.7	97.66	Broken Chert Flake	46	242	144
243.26	145.5	97.46	Cortical Pebble	46	242	144
243.45	145.99	97.55	Chert Flake	46	242	144
243.63	145.42	97.5	Scraper	46	242	144
243.68	145.82	97.42	Quartz Pebble	46	242	144
243.8	145.75	97.6	Cortical Pebble	46	242	144
243.89	145.96	97.87	Flake	46	242	144
243.22	145.73	97.65	Chert Pebble	47	242	144
243.24	145.5	97.45	Weathered Chert Debris	47	242	144
243.48	145.75	97.57	Hammerstone Quartz	47	242	144
243.54	145.4	97.5	Cortical Chert Pebble	47	242	144
243.64	145.66	97.6	Bend Break	47	242	144
243.66	145.91	97.42	Broken Quartz Pebble	47	242	144
243.78	145.98	97.85	Chert Flake	47	242	144
243.38	145.36	97.485	Cortical Chert Pebble	48	242	144
243.38	145.55	97.45	Cortical Pebble	48	242	144
243.46	145.57	97.62	Utilized Tool	48	242	144
243.52	145.56	97.67	TA Debris	48	242	144
243.52	145.68	97.6	Hammerstone Quartz	48	242	144
243.55	145.86	97.87	Chert Debris	48	242	144
243.67	145.94	97.42	Broken Quartz Pebble	48	242	144
243.02	145.45	97.5	Quartz Pebble	49	242	144
243.05	145.49	97.48	Chert Debris Poss. Tool	49	242	144
243.42	145.63	97.61	Broken Quartz Pebble	49	242	144
243.49	145.64	97.56	Cortical Pebble	49	242	144
243.52	145.8	97.65	Broken Chert Flake	49	242	144
243.61	145.9	97.87	Chert Debris	49	242	144
243.63	145.99	97.42	Cortical Chert Debris	49	242	144
243.03	145.58	97.48	Broken Quartz Pebble	50	242	144
243.3	145.49	97.525	Chert Debris	50	242	144
243.39	145.62	97.6	Chert Pebble	50	242	144
243.53	145.69	97.55	Cortical Pebble	50	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
243.62	145.94	97.88	Weathered Chert Pebble	50	242	144
243.69	145.9	97.4	Weathered Chert Pebble	50	242	144
243.95	145.82	97.7	Cortical Debris	50	242	144
243.1	145.59	97.44	Cortical Cobble	51	242	144
243.34	145.52	97.52	Chert Debris Poss. Tool	51	242	144
243.47	145.66	97.6	Cortical Pebble	51	242	144
243.51	145.97	97.41	Quartz Pebble	51	242	144
243.59	145.78	97.55	TA Chert Debris	51	242	144
243.92	145.87	97.66	Flake Fragment	51	242	144
243.99	145.97	97.88	Debris, RC	51	242	144
243.4	145.5	97.5	Cortical Chert Pebble	52	242	144
243.42	145.98	97.86	Hammerstone	52	242	144
243.44	145.72	97.63	Cortical Debris	52	242	144
243.51	145.97	97.4	Broken Quartz Pebble	52	242	144
243.66	145.78	97.59	Quartz Pebble	52	242	144
243.92	145.8	97.47	Cortical Pebble	52	242	144
243.97	145.91	97.69	Cortical Pebble	52	242	144
243.14	145.56	97.61	Decor. Flake	53	242	144
243.38	145.78	97.4	Chert Scraper	53	242	144
243.56	145.54	97.5	Chert Debris	53	242	144
243.66	145.82	97.56	Cortical Pebble	53	242	144
243.76	145.86	97.66	Cortical Pebble	53	242	144
243.84	145.82	97.47	Chert Flake Proximal	53	242	144
243.02	145.78	97.64	Cortical Debris	54	242	144
243.4	145.84	97.4	Chert Debris	54	242	144
243.6	14.55	97.5	Utilized Flake	54	242	144
243.67	145.84	97.45	Cortical Chert Debris	54	242	144
243.69	145.93	97.63	Chert Flake	54	242	144
243.72	145.72	97.57	Cortical Pebble	54	242	144
243.01	145.85	97.61	Cortical Debris	55	242	144
243.37	145.86	97.4	Broken Quartz Pebble	55	242	144
243.53	145.98	97.69	Cortical Debitage	55	242	144
243.54	145.59	97.5	Weathered Chert Debris	55	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
243.6	145.84	97.45	Cortical Pebble	55	242	144
243.82	145.64	97.58	Cortical Chert Debris	55	242	144
243.3	145.83	97.42	Weathered Chert Pebble	56	242	144
243.34	145.95	97.6	Chert Debris	56	242	144
243.48	145.97	97.65	Broken Quartz Pebble	56	242	144
243.54	145.77	97.5	Chert Debris	56	242	144
243.7	145.58	97.53	Quartz Hammerstone	56	242	144
243.81	145.69	97.6	Chert Debris	56	242	144
243.38	145.81	97.4	Weathered Chert Pebble	57	242	144
243.44	145.98	97.65	Cortical Debris	57	242	144
243.59	145.74	97.45	Cortical Pebble	57	242	144
243.66	145.56	97.51	Bend Break	57	242	144
243.87	145.68	97.55	Blade Poss. TA	57	242	144
245.62	145.95	97.62	Broken Quartz Pebble	57	242	144
243.53	145.98	97.67	Quartz Hammerstone	58	242	144
243.78	145.45	97.5	Cortical Chert Pebble	58	242	144
243.8	145.94	97.55	Quartz Pebble	58	242	144
243.84	145.92	97.45	Cortical Weathered	58	242	144
245.65	145.99	97.64	Chert Debris	58	242	144
243.66	145.99	97.68	Broken Hammerstone	59	242	144
243.8	145.51	97.51	Chert Debris	59	242	144
243.8	145.96	97.47	Broken Quartz Pebble	59	242	144
243.83	145.84	97.59	Chert Debris	59	242	144
245.8	145.84	97.6	Cortical Debris	59	242	144
243.11	145.54	97.5	Quartz Pebble	60	242	144
243.48	145.9	97.45	Broken Quartz Pebble	60	242	144
243.91	145.76	97.6	Cortical Chert Debris	60	242	144
245.86	145.92	97.6	Quartz Pebble	60	242	144
243.09	145.61	97.5	Cortical Chert Pebble	61	242	144
243.32	145.82	97.46	Bend Break Tool	61	242	144
243.91	145.77	97.55	Cortical Chert Debris	61	242	144
245.84	145.96	97.6	Quartz Pebble	61	242	144
243.13	145.6	97.5	Broken Quartz Pebble	62	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
243.27	145.78	97.47	Quartz Pebble	62	242	144
243.99	145.76	97.61	Cortical Chert Pebble	62	242	144
245.94	145.89	97.6	Cortical Debris	62	242	144
243.12	145.62	97.5	Broken Quartz Pebble	63	242	144
243.28	145.74	97.45	Cortical Pebble	63	242	144
243.98	145.84	97.58	Chert Debris	63	242	144
243.27	145.63	97.52	Flake Proximal	64	242	144
243.28	145.85	97.45	Cortical Chert Debris	64	242	144
243.99	145.89	97.59	Cortical Debris	64	242	144
243.27	145.9	97.45	Chert Debris Tool	65	242	144
243.49	145.72	97.54	Chert Debris	65	242	144
243.95	145.92	97.59	Cortical Chert Debris	65	242	144
243.22	145.88	97.49	Cortical Chert Debris	66	242	144
243.56	145.7	97.51	Decortication Flake	66	242	144
243.99	145.86	97.55	Chert Debris	66	242	144
243.18	145.99	97.47	Bend Break	67	242	144
243.34	145.65	97.5	Cortical Chert Pebble	67	242	144
243.4	145.3	97.55	Anvil Stone/Boulder	67	242	144
243.04	145.8	97.47	Cortical Pebble	68	242	144
243.38	145.26	97.56	Chert Debris	68	242	144
243.72	145.68	97.5	Clay Clump	68	242	144
243.42	145.38	97.57	Chert Debris	69	242	144
243.76	145.7	97.53	Cortical Chert Debris	69	242	144
243.46	145.37	97.55	Quartz Pebble	70	242	144
243.74	145.76	97.5	Chert Debris	70	242	144
244.05	145.52	97.51	Chert Pebble	71	242	144
244.01	145.5	97.5	Broken Quartz Pebble	72	242	144
243.95	145.45	97.51	Cortical Chert Debris	73	242	144
243.91	145.51	97.51	Cortical Chert Cobble	74	242	144
243.96	145.57	97.53	Chert Debris	75	242	144
243.89	145.59	97.54	Quartz Pebble	76	242	144
243.84	145.63	97.51	Chert Flake	77	242	144
243.89	145.66	97.52	Proximal Flake	78	242	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
243.86	145.7	97.5	Weathered Chert Debris	79	242	144
243.83	145.86	97.48	Weathered Chert Debris	80	242	144
244.03	145.69	97.48	Cortical Chert Pebble	81	242	144
245.92	145.76	97.48	Cortical Chert Pebble	82	242	144
244.03	145.84	97.52	Cortical Chert Debris	83	242	144
244.02	145.86	97.5	Chert Flake	84	242	144
243.83	145.96	97.51	Cortical Chert Debris	85	242	144
243.84	145.87	97.52	Cortical Chert Pebble	86	242	144
243.66	145.89	97.49	Quartz Hammerstone	87	242	144
243.53	145.87	97.5	Cortical Chert Debris	88	242	144
243.42	145.85	97.53	Broken Quartz Pebble	89	242	144
243.35	145.84	97.48	Cortical Chert Pebble	90	242	144
243.33	145.87	97.48	Cortical Chert Debris	91	242	144
243.4	145.86	97.51	Cortical Chert Pebble	92	242	144
243.19	145.87	97.505	Broken Quartz Pebble	93	242	144
243.16	145.94	97.485	Broken Quartz Pebble	94	242	144
243.2	145.69	97.48	Broken Quartz Pebble	95	242	144
243.15	145.75	97.52	Broken Quartz	96	242	144
243.1	145	97.51	Broken Quartz Pebble	97	242	144
243.88	145.09	97.65	Weathered Chert Pebble	1	243	145
243.82	145.19	97.65	Chert Debris	2	243	145
243.71	145.14	97.68	Chert Debris	3	243	145
243.68	145.16	97.65	Cortical Pebble	4	243	145
243.39	145.28	97.65	Chert Debris	5	243	145
243.02	145.18	97.68	Cortical Debris	6	243	145
243.04	145.26	97.67	Cortical Debris	7	243	145
243.09	145.31	97.66	Cortical Pebble	8	243	145
243.24	145.38	97.66	Chert Debris	9	243	145
243.35	145.41	97.65	Cortical Debris	10	243	145
243.51	145.5	97.65	Quartz Pebble	11	243	145
243.5	145.57	97.68	Cortical Chert Debris	12	243	145
243.36	145.57	97.69	Cortical Pebble	13	243	145
243.31	145.57	97.69	Broken Quartz Pebble	14	243	145

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
243.29	145.61	97.67	Cortical Debris	15	243	145
243.68	145.6	97.66	Broken Quartz Pebble	16	243	145
243.82	145.71	97.65	Corticlal	17	243	145
243.7	145.77	97.65	Cortical Debris	18	243	145
243.35	145.78	97.67	Quartz Pebble	19	243	145
243.39	145.81	97.65	Cortical Debris	20	243	145
243.03	145.89	97.65	Broken Quartz Pebble	21	243	145
243.13	145.8	97.67	Broken Quartz Pebble	22	243	145
243.18	145.87	97.65	Cortical Pebble	23	243	145
243.22	145.88	97.67	Chert Debris	24	243	145
243.24	145.88	97.66	Broken Quartz Pebble	25	243	145
243.26	145.97	97.65	Cortical Debris	26	243	145
243.35	145.89	97.65	Broken Quartz Pebble	27	243	145
243.59	145.94	97.65	Broken Quartz Pebble	28	243	145
244.01	145.02	98.12	Chert Flake	1	244	144
244.12	146.14	98.21	Chert Debitage	1	244	144
244.14	145.99	97.7	Cortical Pebble	1	244	144
244.15	145.55	98.3	Chert Flake	1	244	144
244.17	144.99	98.16	Tertiary Flake	1	244	144
244.17	145.11	98.05	Chert Debris/Outre Passe	1	244	144
244.19	145.41	98.343	Chert Debitage/Debris	1	244	144
244.24	145.09	98.03	Chert Debris	1	244	144
244.37	145.01	97.9	TA Chert Debris	1	244	144
244.43	145	97.8	Chert Scraper	1	244	144
244.44	145.07	97.83	Weathered Chert	1	244	144
244.5	145.05	97.44	Quartz Pebble	1	244	144
244.56	145.12	97.94	Broken Quartz Pebble	1	244	144
244.62	145.81	98.26	Chert Debris	1	244	144
244.62	145.81	98.26	Chert Debris	1	244	144
244.73	145	97.52	Cortical Debris	1	244	144
244.8	145	97.62	Cortical Debris	1	244	144
244.82	145	97.92	Cortical Debris	1	244	144
244.96	145.07	97.61	Chert Debris	1	244	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
245.01	145.33	97.88	Chert Flake	1	244	144
245.02	145.11	97.9	Chert Flake	1	244	144
245.03	145.14	97.78	Chert Flake Fragment	1	244	144
245.03	145.31	97.81	Chert Flake	1	244	144
245.06	145.17	98.362	Cortical Chert Pebble	1	244	144
245.07	145.19	97.7	Cortical Pebble	1	244	144
245.07	145.36	98.135	Cortical Chert Pebble	1	244	144
245.07	145.36	98.135	Cortical Chert Pebble	1	244	144
245.12	145.85	98.1	Cortical Chert Pebble	1	244	144
245.13	145.14	97.63	Chert Debris	1	244	144
245.15	145.54	98.15	Cortical Pebble	1	244	144
245.15	145.54	98.15	Cortical Pebble	1	244	144
245.17	145.47	98.22	Chert Flake	1	244	144
245.17	145.47	98.22	Chert Flake	1	244	144
245.19	145.17	98.28	Biface	1	244	144
245.2	145.55	98.25	Cortical Chert Debris	1	244	144
245.37	145.16	98.02	Cortical	1	244	144
245.44	145.04	97.99	Core	1	244	144
244.01	145.12	98.34	Blade-Like Flake	2	244	144
244.12	145.06	98.12	Chert Flake	2	244	144
244.22	145	97.62	Tertiary Chert Flake	2	244	144
244.27	144.98	98.21	Chert Flake	2	244	144
244.3	145.2	97.74	Chert Pebble	2	244	144
244.36	145.02	97.78	Quartz Pebble	2	244	144
244.42	145.24	98.343	Chert Debitage/Debris	2	244	144
244.43	145.1	98.09	Cortical Chert Flake	2	244	144
244.48	145	97.5	Chert Debris	2	244	144
244.6	145.18	98.02	Flake	2	244	144
244.6	145.25	97.88	Chert Debris	2	244	144
244.61	145.02	97.58	Quartz Pebble	2	244	144
244.66	145.14	97.94	Chert Flake	2	244	144
244.7	145.14	97.48	Chert Pebble	2	244	144
244.91	145.46	98.21	Chert Cobble	2	244	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
244.92	145.15	97.95	Chert Blade Like Flake	2	244	144
244.95	145.14	97.83	Weathered Chert Debris	2	244	144
244.96	145.83	98.27	Chert Debris	2	244	144
244.96	145.83	98.27	Chert Debris	2	244	144
245.03	145.2	97.78	Broken Chert Pebble	2	244	144
245.03	145.31	98.23	Cortical Chert Debris	2	244	144
245.05	145.57	97.89	Weathered Chert Pebble	2	244	144
245.06	145.44	98.07	Chert Flake	2	244	144
245.07	145.62	98.26	Broken Hammerstone	2	244	144
245.07	145.62	98.26	Broken Hammerstone	2	244	144
245.07	145.81	97.73	Weathered Chert Pebble	2	244	144
245.17	145.5	98.125	Cortical Chert Pebble	2	244	144
245.17	145.5	98.125	Cortical Chert Pebble	2	244	144
245.22	145.18	97.94	Cortical	2	244	144
245.24	145.12	97.8	Weathered Chert Pebble	2	244	144
245.35	145.36	97.9	Chert Pebble	2	244	144
245.49	145.08	98.03	Chert Debris	2	244	144
245.57	145.37	98.28	Chert Flake	2	244	144
245.57	145.54	97.62	Broken Quartz Pebble	2	244	144
245.66	145.69	98.2	Chert Bend Break	2	244	144
245.66	145.69	98.2	Chert Bend Break	2	244	144
244.03	145.65	98.29	Chert Flake	3	244	144
244.03	145.65	98.29	Chert Flake	3	244	144
244.16	145.23	97.72	Chert Pebble	3	244	144
244.25	145.07	98.1	Secondary Flake	3	244	144
244.26	145.04	97.64	Broken Quartz Pebble	3	244	144
244.31	145	97.58	Chert Debris Blade Like	3	244	144
244.36	145.03	97.48	Cortical Pebble	3	244	144
244.38	145.34	97.76	Cortical Debris	3	244	144
244.39	145.17	98.09	Chert Flake	3	244	144
244.42	145.25	98.343	Chert Flake	3	244	144
244.45	144.95	98.23	Chert Flake	3	244	144
244.54	145.21	97.5	Chert Debris	3	244	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
244.55	145.25	98.33	Cortical Chert Cobble	3	244	144
244.56	145.24	97.86	Broken Quartz Pebble	3	244	144
244.64	145.3	97.89	TA Chert Flake	3	244	144
244.67	145.2	97.91	Quartz Hammerstone	3	244	144
244.71	145.79	98.25	River Chert Flake	3	244	144
244.82	145.17	97.99	Chert Flake	3	244	144
244.85	145.19	98.01	Chert Debris	3	244	144
245.05	145.2	97.77	Chert Debris	3	244	144
245.05	145.68	98.25	Chert Flake	3	244	144
245.05	145.68	98.25	Chert Flake	3	244	144
245.08	145.42	98.18	Cortical Chert Scraper	3	244	144
245.08	145.42	98.18	Cortical Chert Debris	3	244	144
245.11	145.7	97.88	TA Chert Flake	3	244	144
245.11	145.77	98.23	Cortical Chert Cobble	3	244	144
245.14	145.4	97.82	Weathered Chert Pebble	3	244	144
245.23	145.82	98.125	Cortical Chert Pebble	3	244	144
245.23	145.82	98.125	Cortical Chert Pebble	3	244	144
245.3	145.69	97.72	Cortical Debris	3	244	144
245.44	145.92	98.08	Cortical Chert Pebble	3	244	144
245.62	145.48	97.64	Chert Flake	3	244	144
245.64	145.13	98.01	Cortical	3	244	144
245.73	145.39	98.29	Chert Flake	3	244	144
245.82	145.34	97.96	Debris	3	244	144
245.84	145.44	97.96	Chert Core	3	244	144
244	145.55	97.79	Cortical Pebble	4	244	144
244.07	145.32	97.92	Broken Quartz Pebble	4	244	144
244.1	145.21	98.05	Secondary Flake	4	244	144
244.11	145.23	97.73	Flake	4	244	144
244.2	145	97.56	Chert Pebble	4	244	144
244.23	145.06	97.64	Chert Debris	4	244	144
244.32	145.01	97.49	Chert Pebble – Cobble	4	244	144
244.51	145.45	97.42	Chert Bend Break	4	244	144
244.58	145.41	98.02	Chert Debris	4	244	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
244.59	145.12	98.13	Chert Blade Like Flake	4	244	144
244.64	145.11	98.18	Chert Flake	4	244	144
244.66	145.24	97.97	Hammerstone	4	244	144
244.66	145.25	97.86	Flake	4	244	144
244.66	145.37	97.8	Flake	4	244	144
244.96	145.63	98.3	Chert Flake	4	244	144
245.04	145.46	97.97	Cortical	4	244	144
245.09	145.73	98.26	TA Chert Flake	4	244	144
245.09	145.73	98.26	TA Chert Flake	4	244	144
245.19	145.89	98.24	Chert Flake	4	244	144
245.19	145.99	98.17	Decortication Flake	4	244	144
245.19	145.99	98.17	Decortication Flake	4	244	144
245.2	145.11	97.75	Broken Quartz Pebble	4	244	144
245.24	145.58	98.31	Cortical Chert Pebble	4	244	144
245.28	145.79	97.74	Cortical Pebble	4	244	144
245.56	145.97	98.07	Weathered Chert	4	244	144
245.59	145.49	97.82	Weathered Chert Pebble	4	244	144
245.61	145.68	98.105	TA Chert Flake	4	244	144
245.61	145.68	98.105	TA Chert Flake	4	244	144
245.65	145.5	97.63	Cortical Pebble	4	244	144
245.77	145.14	97.85	Quartz Debris	4	244	144
245.84	145.27	98	Chert Flake Distal End	4	244	144
244.05	145.48	97.92	Cortical Debris	5	244	144
244.12	145.4	97.82	Quartz Pebble	5	244	144
244.13	145.34	97.88	Cortical Debris	5	244	144
244.21	145.33	98.08	Secondary Flake	5	244	144
244.22	145	97.5	Quartz Pebble	5	244	144
244.24	145.71	97.78	Broken Chert Pebble	5	244	144
244.24	145.77	98.04	Weathered Chert Debris	5	244	144
244.31	145.01	97.59	Chert Debris	5	244	144
244.34	145.16	98.09	Secondary Flake	5	244	144
244.5	145.1	97.64	Bend Break	5	244	144
244.58	145.4	97.48	Cortical Chert Pebble	5	244	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
244.59	144.88	98.15	Cortical Chert Pebble	5	244	144
244.64	145.36	97.63	Chert Debris	5	244	144
244.68	145.29	97.99	Chert Blade Proximal	5	244	144
244.95	145.185	98.33	Cortical Chert Flake	5	244	144
245.15	145.28	97.79	Chert Debris	5	244	144
245.2	145.57	98.31	Quartz Pebble	5	244	144
245.23	145.83	98.27	Chert Debris	5	244	144
245.23	145.83	98.27	Chert Debris	5	244	144
245.34	145.83	98.095	Cortical Chert Pebble	5	244	144
245.34	145.83	98.095	Cortical Chert Pebble	5	244	144
245.35	145.81	97.73	Weathered Chert Pebble	5	244	144
245.36	145.9	98.2	Chert Cobble	5	244	144
245.36	145.9	98.2	Chert Cobble	5	244	144
245.45	145.91	98.08	Chert Cobble	5	244	144
245.55	145.5	98.02	Cortical Chert Debris	5	244	144
245.6	145.54	97.825	Broken Quartz Pebble	5	244	144
245.73	145.12	97.88	Flake Chert Fragment	5	244	144
245.73	145.47	97.97	Cortical Chert Debris	5	244	144
245.75	145.59	97.65	Chert Debris	5	244	144
244.02	145.76	97.77	Broken Quartz Pebble	6	244	144
244.1	145.05	97.57	Quartz Hammerstone	6	244	144
244.1	145.48	97.84	Weathered Chert Debris	6	244	144
244.12	145.44	97.95	TA Chert Flake	6	244	144
244.23	145.27	98.06	Chert Debris	6	244	144
244.31	145.04	97.59	Cortical Pebble	6	244	144
244.36	145.25	98.1	Chert Blade Like Flake	6	244	144
244.37	145.7	98.04	Cortical Chert Debris	6	244	144
244.43	145	97.47	Cortical Chert Debris	6	244	144
244.52	145.37	97.89	TA Chert Flake	6	244	144
244.66	145.09	97.63	Cortical Debris	6	244	144
244.66	145.57	97.94	Cortical Debris	6	244	144
244.83	145.02	98.18	Decortication Flake	6	244	144
244.92	145.41	97.71	Chert Debris	6	244	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
245	145.46	98.27	Chert Boulder	6	244	144
245.1	145.79	97.86	Broken Quartz Pebble	6	244	144
245.17	145.39	97.76	Weathered Chert Debris	6	244	144
245.37	145.92	98.17	Chert Pebble	6	244	144
245.37	145.92	98.17	Chert Pebble	6	244	144
245.44	145.68	97.6	Chert Debris	6	244	144
245.48	145.74	97.73	Chert Flake	6	244	144
245.58	145.64	98.01	Chert Debris	6	244	144
245.58	145.72	98.23	Chert Flake	6	244	144
245.58	145.72	98.23	Chert Flake	6	244	144
245.66	145.46	97.8	Weathered Chert Pebble	6	244	144
245.99	145.36	97.98	Cortical Debris	6	244	144
244.03	145.01	97.5	Quartz Pebble	7	244	144
244.19	145.48	97.46	Quartz Pebble	7	244	144
244.31	145.19	97.99	Cortical Chert Pebble	7	244	144
244.33	145.12	97.58	Cortical Cobble	7	244	144
244.34	145.68	97.96	Flake	7	244	144
244.47	145.4	97.88	Chert Flake Fragment	7	244	144
244.51	145.56	97.75	Chert Debris	7	244	144
244.53	145.37	98.04	Cortical Chert Flake	7	244	144
244.53	145.47	97.73	Chert Debris	7	244	144
244.64	145.48	97.84	Cortical Debris	7	244	144
244.66	145.14	97.63	Cortical Debris	7	244	144
244.66	145.68	98.02	Cortical	7	244	144
244.76	145.13	98.11	Chert Flake	7	244	144
244.77	145.03	98.17	Tertiary Flake	7	244	144
245.13	145.65	98.01	Chert Flake	7	244	144
245.21	145.59	97.96	TA Flake	7	244	144
245.48	145.44	97.78	Quartz Pebble	7	244	144
245.55	145.56	97.78	Weathered Chert Pebble	7	244	144
245.57	145.43	97.72	Broken Quartz Pebble	7	244	144
245.78	145.67	97.66	Chert Debris	7	244	144
245.97	145.63	98.31	Chert Flake	7	244	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
244.02	145.27	97.5	Chert Flake	8	244	144
244.05	145.49	97.45	Weathered Chert Debris	8	244	144
244.3	145.21	97.98	Secondary Chert Flake	8	244	144
244.35	145.75	97.95	Chert Debris	8	244	144
244.45	145.19	98.12	Decor. Debris	8	244	144
244.48	145.08	97.58	Cortical Pebble	8	244	144
244.51	145.26	97.63	Cortical Debris	8	244	144
244.51	145.57	97.74	Chert Flake Distal	8	244	144
244.69	145.51	97.84	Chert Debris	8	244	144
244.73	145.44	98.07	TA Flake	8	244	144
244.78	145.4	97.87	Chert Debris	8	244	144
244.78	145.88	98.02	Chert Flake	8	244	144
244.87	145.53	97.77	Flake	8	244	144
244.88	145	98.19	Tertiary Flake	8	244	144
245.11	145.63	97.97	Flake	8	244	144
245.29	145.59	97.81	Uniface	8	244	144
245.42	145.47	97.77	Chert Proximal	8	244	144
245.59	145.48	97.74	Weathered Chert Debris	8	244	144
245.8	145.78	97.65	Chert Debris	8	244	144
245.84	145.77	98.05	Cortical Debris	8	244	144
245.96	145.6	98.3	Cortical Chert Pebble	8	244	144
244.14	145.2	97.51	Quartz Pebble	9	244	144
244.17	145.72	97.97	Chert Core	9	244	144
244.21	145.6	97.49	Weathered Chert Pebble	9	244	144
244.21	145.69	97.7	Chert Debris	9	244	144
244.33	145.77	97.81	Weathered Chert Debris	9	244	144
244.37	145.79	97.94	Flake	9	244	144
244.43	145.23	98.1	Bend Break	9	244	144
244.51	145.12	97.58	Quartz Pebble	9	244	144
244.51	145.42	98.08	Chert Debris	9	244	144
244.58	145.56	97.79	Flake	9	244	144
244.65	145.9	98.02	Blade-Like Flake	9	244	144
244.67	145.27	97.63	Chert Debris	9	244	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
244.86	144.96	98.2	Chert Debris	9	244	144
244.92	145.45	97.87	Chert Debris	9	244	144
245.01	145.82	97.8	TA Chert Flake	9	244	144
245.03	145.61	97.96	Cortical Debris	9	244	144
245.03	145.65	98	TA Flake Chert	9	244	144
245.17	145.68	98.27	Chert Debitage	9	244	144
245.53	145.54	97.74	Chert Flake	9	244	144
245.56	145.32	97.77	Chert Flake	9	244	144
245.71	145.85	97.63	Cortical Pebble	9	244	144
244.15	145.5	98.03	Cortical Chert Cobble	10	244	144
244.16	145.72	97.85	Chert Debris	10	244	144
244.22	145.59	97.48	Chert Pebble	10	244	144
244.24	145.17	97.64	Chert Flake	10	244	144
244.24	145.18	97.55	Cortical Chert Pebble	10	244	144
244.24	145.36	97.96	Primary Chert Flake	10	244	144
244.29	145.84	97.69	Weathered Chert Debris	10	244	144
244.38	145.84	97.94	Flake	10	244	144
244.44	145.11	97.57	Quartz Pebble	10	244	144
244.5	145.17	98.11	Chert Debris	10	244	144
244.61	145.45	97.8	Cortical Debris	10	244	144
244.65	145.14	98.13	Chert Flake	10	244	144
244.86	145.49	97.87	TA Flake	10	244	144
245.01	145.7	97.99	Cortical Debris	10	244	144
245.07	145.84	97.59	Weathered Chert Pebble	10	244	144
245.13	145.81	98.01	Cortical Chert Flake	10	244	144
245.18	145.66	98.27	Cortical Chert Pebble	10	244	144
245.26	145.84	97.63	Chert Pebble	10	244	144
245.64	145.61	97.74	Chert Debris	10	244	144
245.67	145.44	97.76	Chert Debris	10	244	144
244.05	145.79	97.85	Weathered Chert Debris	11	244	144
244.12	145.13	97.59	Quartz Pebble	11	244	144
244.14	145.25	97.51	Chert Debris	11	244	144
244.18	145.57	98	Chert Flake	11	244	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
244.29	145.6	97.48	Chert Debris	11	244	144
244.33	145.42	97.99	Flake	11	244	144
244.34	145.88	97.71	Chert Debris	11	244	144
244.37	145.2	97.65	Cortical Debris	11	244	144
244.45	145.18	98.09	Blade/Flake Prox	11	244	144
244.52	145.7	97.94	Broken Hammerstone	11	244	144
244.62	145.51	97.78	Decortication Flake	11	244	144
244.8	145.5	97.86	Cortical Debris	11	244	144
244.96	145.2	98.2	Cortical Chert Pebble	11	244	144
245.13	145.86	98.04	Cortical Chert Debris	11	244	144
245.21	145.87	97.6	Cortical Pebble	11	244	144
245.21	145.9	98.33	Chert Flake	11	244	144
245.23	145.74	97.96	Flake	11	244	144
245.24	145.86	97.82	Weathered Chert Pebble	11	244	144
245.52	145.45	97.77	Chert Debris	11	244	144
245.65	145.62	97.7	Chert Debris	11	244	144
244.01	145.56	97.91	Cortical Debris	12	244	144
244.05	145.19	97.59	Broken Quartz Pebble	12	244	144
244.13	145.26	97.61	Chert Debris	12	244	144
244.15	145.25	97.49	Chert Pebble	12	244	144
244.44	145.43	97.94	Chert Core	12	244	144
244.51	145.58	98.08	Cortical Chert Debris	12	244	144
244.51	145.82	97.7	Quartz Pebble	12	244	144
244.55	145.72	97.93	Cortical Debris	12	244	144
244.59	145.62	97.45	Broken Quartz Pebble	12	244	144
244.68	145.46	97.77	Chert Debris	12	244	144
244.73	145.68	97.84	Chert Debris	12	244	144
244.97	145.19	98.2	Cortical Chert Pebble	12	244	144
244.99	145.1	98.13	Chert Flake	12	244	144
245.14	145.9	98.31	Chert Debitage	12	244	144
245.22	145.86	98.02	Quartz Pebble	12	244	144
245.3	145.73	97.98	TA Flake	12	244	144
245.35	145.94	97.81	Chert Spall	12	244	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
245.55	145.55	97.8	Weathered Chert Debris	12	244	144
245.6	145.74	97.73	Chert Pebble	12	244	144
244	145	97	Cortical Chert Debitage	13	244	144
244.04	145.67	97.88	Chert Flake	13	244	144
244.14	145.26	97.59	Decor. Flake	13	244	144
244.23	145.42	98.11	TA Flake	13	244	144
244.36	145.33	97.65	Cortical Pebble	13	244	144
244.41	145.13	97.5	Quartz Pebble	13	244	144
244.42	145.85	98.06	Chert Flake	13	244	144
244.5	145.88	97.71	Cortical Pebble	13	244	144
244.65	145.57	97.78	Cortical Pebble	13	244	144
244.66	144.68	97.49	Broken Quartz Pebble	13	244	144
244.68	145.76	97.95	Chert Debris	13	244	144
244.91	145.75	97.85	Chert Debris	13	244	144
244.97	145.2	98.16	Cortical Chert Pebble	13	244	144
245.35	145.8	97.96	Blade-Like Flake	13	244	144
245.45	145.9	97.8	Chert Debris	13	244	144
245.51	145.76	98.03	Flake Fragment	13	244	144
245.51	145.93	98.29	Chert Debris/Debitage	13	244	144
245.63	145.49	97.8	Weathered Chert Pebble	13	244	144
245.77	145.53	97.74	Weathered Chert Pebble	13	244	144
244.16	145.3	97.59	Broken Chert Flake	14	244	144
244.23	145.88	97.7	Chert Debris	14	244	144
244.33	145.51	97.89	TA Chert Debris	14	244	144
244.47	145.44	97.6	Chert Debris	14	244	144
244.5	145.08	97.5	Broken Quartz Pebble	14	244	144
244.5	145.49	98.13	Chert Flake	14	244	144
244.57	145.87	98.08	Secondary Flake	14	244	144
244.58	145.86	97.92	Poss. Tool	14	244	144
244.66	145.63	97.78	Cortical Pebble	14	244	144
244.67	144.71	97.48	Cortical Pebble	14	244	144
244.67	145.77	97.83	Flake	14	244	144
244.71	145.36	98.19	Flake	14	244	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
244.83	145.48	98	Broken Quartz Pebble	14	244	144
245.63	145.8	97.97	Flake	14	244	144
245.66	145.55	97.79	Chert Debris	14	244	144
245.69	145.93	98.03	Chert Flake	14	244	144
245.86	145.61	97.73	Chert Pebble	14	244	144
244.09	145.78	97.61	Broken Quartz Pebble	15	244	144
244.24	145.84	97.91	Cortical Pebble	15	244	144
244.25	145.99	98.14	Chert Blade Like Flake	15	244	144
244.34	145.93	98.1	Chert Debris	15	244	144
244.39	145.61	97.6	Cortical Pebble	15	244	144
244.44	144.87	97.48	Broken Quartz Pebble	15	244	144
244.51	145.15	97.5	Cortical Chert Pebble	15	244	144
244.51	145.48	97.89	Chert Debris	15	244	144
244.69	145.59	97.75	Chert Debris	15	244	144
244.74	145.67	98	Chert Flake	15	244	144
244.76	145.8	97.82	Weathered Chert Pebble	15	244	144
244.86	145.55	98.19	Chert Flake	15	244	144
245.49	145.97	98.03	Blade Prox	15	244	144
245.76	145.54	97.75	Chert Flake	15	244	144
244.1	145.29	97.61	Chert Debris	16	244	144
244.13	145.68	97.87	Chert Debris	16	244	144
244.22	145.85	97.79	Flake	16	244	144
244.26	145.93	98.09	Chert Blade	16	244	144
244.34	145.92	97.91	Quartz Pebble	16	244	144
244.53	144.8	97.49	Broken Quartz Pebble	16	244	144
244.62	145.12	97.51	Chert Pebble	16	244	144
244.69	145.63	97.6	Cortical Pebble	16	244	144
244.75	145.68	97.98	Chert Spall	16	244	144
244.8	145.55	98.13	Chert Pebble	16	244	144
244.85	145.84	97.81	Broken Quartz Pebble	16	244	144
245.78	145.48	97.76	Weathered Chert Debris	16	244	144
244.02	145.36	97.53	Cortical Chert Pebble	17	244	144
244.06	144.84	97.48	Cortical Debris	17	244	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
244.2	145.93	98.08	TA Chert Debris	17	244	144
244.24	145.84	97.78	Quartz Pebble	17	244	144
244.35	145.64	97.61	Cortical Debris	17	244	144
244.37	145.68	97.87	Weathered Chert Pebble	17	244	144
244.66	145.22	97.56	Chert Debris	17	244	144
244.66	145.73	98.2	Cortical Chert Pebble	17	244	144
244.84	145.84	97.93	TA Chert Debris	17	244	144
244.92	145.7	97.95	Chert Spall	17	244	144
244.94	145.99	97.86	Flake	17	244	144
245.87	145.5	97.77	Cortical Pebble	17	244	144
244.07	145.36	97.52	Quartz Pebble	18	244	144
244.1	144.86	97.47	Cortical Debris	18	244	144
244.17	145.93	98.06		18	244	144
244.35	145.83	97.77	Quartz Debris	18	244	144
244.37	145.64	97.63	Broken Quartz Pebble	18	244	144
244.42	145.38	97.59	Chert Debris	18	244	144
244.6	145.71	98.19	Quartz Pebble	18	244	144
244.64	145.64	97.87	Quartz Debris	18	244	144
244.9	145.99	97.91	TA Chert Debris	18	244	144
244.97	145.92	97.94	Chert Core	18	244	144
244.98	145.97	97.86	Weathered Cortex	18	244	144
245.94	145.6	97.82	Broken Quartz Pebble	18	244	144
244.08	144.85	97.45	Cortical Pebble	19	244	144
244.15	145.46	97.61	Chert Debris	19	244	144
244.15	145.99	97.93	Chert Debris	19	244	144
244.33	145.28	97.5	Broken Quartz Pebble	19	244	144
244.41	145.82	97.77	Quartz Pebble	19	244	144
244.56	145.7	98.17	River Chert Flake	19	244	144
244.57	145.7	97.62	Broken Quartz Pebble	19	244	144
244.89	145.9	97.94	Chert Debris	19	244	144
245.52	145.7	97.78	Chert Debris	19	244	144
244.03	145.75	97.62	Cortical Pebble	20	244	144
244.15	145.53	97.59	Chert Debris	20	244	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
244.19	144.88	97.45	Cortical Pebble	20	244	144
244.31	145.36	97.49	Chert Flake	20	244	144
244.36	145.83	98.18	Chert Flake	20	244	144
244.4	145.71	97.98	Chert Debris	20	244	144
244.49	145.75	97.79	Weathered Chert Pebble	20	244	144
244.69	145.77	97.88	Quartz Pebble	20	244	144
245.33	145.72	97.76	Chert Pebble	20	244	144
244.16	145.7	98.17	Chert Flake	21	244	144
244.2	145.78	97.95	Chert Debris	21	244	144
244.25	145.76	97.62	Cortical Debris	21	244	144
244.28	144.75	97.45	Cortical Debris	21	244	144
244.33	145.38	97.51	Weathered Chert Flake	21	244	144
244.47	145.47	97.57	Cortical Pebble	21	244	144
244.52	145.69	97.79	Flake	21	244	144
244.89	145.73	97.86	Chert Debris	21	244	144
245.25	145.79	97.81	Chert Flake	21	244	144
244.13	145.67	98.19	Chert Debris	22	244	144
244.16	145.09	97.95	Chert Pebble	22	244	144
244.27	144.88	97.49	Cortical Pebble	22	244	144
244.39	145.32	97.48	Chert Debris	22	244	144
244.41	145.75	97.63	Bend Break	22	244	144
244.65	145.43	97.58	Cortical Chert Debris	22	244	144
244.69	145.86	97.77	Chert Debris	22	244	144
244.9	145.8	97.9	Chert Debris	22	244	144
245.1	145.85	97.76	Chert Pebble	22	244	144
244.08	144.84	97.45	Broken Quartz Pebble	23	244	144
244.09	145.63	98.16	Chert Flake	23	244	144
244.24	145.89	97.95	Chert Debris	23	244	144
244.42	145.76	97.6	Cortical Debris	23	244	144
244.51	145.28	97.5	Broken Chert Pebble	23	244	144
244.66	145.82	97.59	Bend Break	23	244	144
244.66	145.82	97.75	Decor. Flake	23	244	144
244.89	145.92	97.91	Chert Flake Distal	23	244	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
245.26	145.91	97.79	Chert Debris	23	244	144
244.09	145.63	98.16	Chert Pebble	24	244	144
244.24	144.96	97.48	Quartz Pebble	24	244	144
244.37	145.61	97.59	Broken Chert Flake	24	244	144
244.51	145.36	97.53	Broken Chert Flake	24	244	144
244.52	145.95	97.98	Chert Debris	24	244	144
244.62	145.72	97.6	Cortical Pebble	24	244	144
244.8	145.84	97.75	Weathered Chert Debris	24	244	144
244.93	145.96	97.87	Weathered Chert Tool	24	244	144
245.39	145.97	97.78	Chert Cobble	24	244	144
244.06	145.89	97.62	Hammerstone	25	244	144
244.09	145.66	98.73	Quartz Pebble	25	244	144
244.34	145.7	97.59	Chert Debris	25	244	144
244.4	144.94	97.47	Cortical Pebble	25	244	144
244.59	145.32	97.51	Cortical Chert Pebble	25	244	144
244.59	145.95	97.99	Decortication Flake	25	244	144
244.85	145.79	97.77	Chert Debris	25	244	144
244.92	145.97	97.87	Weathered Chert Debris	25	244	144
245.65	145.8	97.8	Chert Debris	25	244	144
244.13	145.66	98.73	Chert Pebble	26	244	144
244.29	145.91	97.63	Chert Debris	26	244	144
244.36	145.71	97.59	Chert Debris	26	244	144
244.38	144.94	97.45	Cortical	26	244	144
244.47	145.36	97.5	Broken Quartz Pebble	26	244	144
244.56	145.56	97.87	Cortical Pebble	26	244	144
244.87	145.79	97.76	Weathered Chert Flake	26	244	144
245.9	145.73	97.78	Chert Pebble	26	244	144
244.19	145.98	97.86	Chert Debris	27	244	144
244.33	145.47	98.16	Chert Pebble	27	244	144
244.35	145.87	97.64	Chert Debris	27	244	144
244.39	145.69	97.57	Quartz Pebble	27	244	144
244.41	144.94	97.46	Chert Debris	27	244	144
244.6	145.31	97.5	Chert Pebble	27	244	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
244.92	145.83	97.75	Weathered Chert Flake	27	244	144
245.92	145.64	97.79	Chert Debris	27	244	144
244.38	145.47	98.16	Chert Debris	28	244	144
244.42	144.96	97.48	Quartz Pebble	28	244	144
244.45	145.95	97.63	Chert Debris	28	244	144
244.6	145.65	97.6	Quartz Pebble	28	244	144
244.77	145.36	97.5	Broken Quartz Pebble	28	244	144
244.96	145.78	97.8	Chert Flake	28	244	144
245.53	145.45	97.75	Cortical Debris	28	244	144
244.35	145.49	97.51	Broken Quartz Pebble	29	244	144
244.48	144.97	97.47	Broken Quartz Pebble	29	244	144
244.49	145.89	197.65	Broken Quartz Pebble	29	244	144
244.65	145.68	97.88	Chert Debris	29	244	144
245.58	145.46	97.75	Cortical Debris	29	244	144
244.37	145.54	97.49	Poss. Bend Break	30	244	144
244.51	144.85	97.46	Broken Quartz Pebble	30	244	144
244.55	145.89	97.65	Bend Break	30	244	144
244.68	145.71	97.57	Chert Debris	30	244	144
245.63	145.52	97.75	Chert Debris	30	244	144
244.12	145.8	97.55	Chert Pebble	31	244	144
244.37	145.56	97.5	Cortical Pebble	31	244	144
244.52	144	97.45	Broken Quartz Pebble	31	244	144
244.56	145.89	97.65	Bend Break	31	244	144
245.58	145.61	97.79	Cortical Pebble	31	244	144
244.02	145.58	97.52	Chert Debris	32	244	144
244.11	145.84	97.57	Cortical Pebble	32	244	144
244.61	144.88	97.47	Chert Debris	32	244	144
244.62	145.92	97.62	Chert Debris	32	244	144
244.08	145.85	97.5	Cortical Chert Pebble	33	244	144
244.12	145.92	97.58	Cortical Pebble	33	244	144
244.58	144.91	97.47	Cortical	33	244	144
244.66	145.87	97.61	Cortical Debris	33	244	144
244.17	145.89	97.61	Cortical Chert Debris	34	244	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
244.19	145.83	97.5	Chert Debris	34	244	144
244.64	144.86	97.45	Broken Quartz Pebble	34	244	144
244.91	145.87	97.63	Chert Flake Distal	34	244	144
244.02	145.8	97.6	Cortical Debris	35	244	144
244.33	145.82	97.57	Cortical Chert Debris	35	244	144
244.63	145.81	97.5	Cortical Chert Pebble	35	244	144
244.68	144.88	97.45	Broken Quartz Pebble	35	244	144
244.07	145.92	97.62	Broken Quartz Pebble	36	244	144
244.39	145.82	97.55	Quartz Pebble	36	244	144
244.62	144.94	97.47	Bend Break	36	244	144
244.72	145.81	97.57	Chert Debris	36	244	144
244.4	145.93	97.56	Broken Quartz Debris	37	244	144
244.6	144.94	97.47	Quartz Pebble	37	244	144
244.85	145.74	97.5	Quartz Hammerstone	37	244	144
244.38	145.94	97.56	Cortical Debris	38	244	144
244.58	144.96	97.47	Chert Debris	38	244	144
244.78	145.92	97.57	Cortical Debris	38	244	144
244.35	145.97	97.54	Chert Debris	39	244	144
244.56	144.94	97.45	Cortical Debris	39	244	144
244.59	145.93	97.51	Chert Pebble	39	244	144
244.51	145.83	97.58	Quartz Debris	40	244	144
244.532	145.89	97.52	Chert Debris	40	244	144
244.74	144.94	97.46	Cortical Pebble	40	244	144
244.47	145.9	97.51	Quartz Debris	41	244	144
244.52	145.84	97.56	Broken Quartz Pebble	41	244	144
244.72	144.92	97.47	Chert Debris	41	244	144
244.5	145.91	97.6	Broken Quartz Pebble	42	244	144
244.51	145.89	98.49	Cortical Chert Debris	42	244	144
244.79	144.86	97.47	Cortical Debris	42	244	144
244.41	145.9	97.48	Cortical Pebble	43	244	144
244.51	145.94	97.58	Broken Chert Pebble	43	244	144
244.79	144.84	97.46	Quartz Pebble	43	244	144
244.02	145.95	97.49	Cortical Pebble	44	244	144

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
244.58	145.9	97.56	Utilized Flake	44	244	144
244.77	144.89	97.45	Cortical Pebble	44	244	144
244.61	145.92	97.56	Chert Debris	45	244	144
244.75	144.86	97.47	Cortical Debris	45	244	144
244.6	145.95	97.54	Chert Pebble /Cobble	46	244	144
244.89	144.82	97.47	Cortical Cobble	46	244	144
244.68	145.85	97.57	Cortical Chert Flake	47	244	144
244.73	145.85	97.58	Quartz Pebble	48	244	144
244.78	145.8	97.56	Broken Quartz Pebble	49	244	144
244.78	145.92	97.55	Chert Debris	50	244	144
244.91	145.83	97.57	Broken Chert Flake	51	244	144
244.96	15.87	97.58	Broken Chert Flake	52	244	144
244.59	145.04	97.56	Chert Debris	53	244	144
244.48	145.38	97.55	Chert Debris	54	244	144
244.64	145.62	97.56	Quartz Pebble	55	244	144
246.59	140.98	97.1	Chert Flake	1	246	140
246.33	141.01	96.888	Cortical	1	246	140
247.04	141.07	96.993	Broken Quartz Pebble	1	246	140
247.22	140.19	97.038	Chert Debris	1	246	140
247.18	140.24	96.95	Modified River Quartz	1	246	140
247.06	140.59	96.9	Chert Debris	1	246	140
246.71	140.93	97.038	Possible Hammerstone	1	246	140
246.57	140	96.953	Chert Pebble	1	246	140
246.77	140.88	97.138	Cortical Chert	1	246	140
246.32	140.855	96.938	Quartz Pebble	1	246	140
246.26	140.86	96.89	Chert Pebble	1	246	140
246.96	140.43	96.823	Cortical	1	246	140
246.89	140.98	96.818	Cortical Chert Pebble	1	246	140
246.92	140.83	96.808	Cortical	1	246	140
246.61	140.99	96.788	Cortical Chert Pebble	1	246	140
246.7	140.35	96.763	Cortical Debris	1	246	140
246.61	140.92	97.148	Chert Debris	2	246	140
246.975	140.93	97.018	Cortex Flake	2	246	140

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
246.53	140.95	97.09	Chert Debris	2	246	140
246.57	140.975	96.868	Cortical	2	246	140
247.42	140.76	97.03	Cortical Chert Debris	2	246	140
247.35	140.39	96.95	Cortical Chert	2	246	140
246.215	140.9	96.968	Cortical	2	246	140
247.87	140.68	96.94	Cortical Chert	2	246	140
246.45	140.78	96.928	Cortical	2	246	140
246.69	140.98	96.89	Broken Quartz Pebble	2	246	140
246.9	140.08	96.823	Reduced Cortical	2	246	140
246.04	140.77	96.818	Cortical	2	246	140
246.625	140.653	96.783	Cortical	2	246	140
246.22	140.7	96.748	Quartz Pebble	2	246	140
246.62	140.745	96.763	Cortical Debris	2	246	140
246.54	140.96	96.988	Broken Quartz Pebble	3	246	140
246.16	140.89	96.863	Cortical	3	246	140
246.62	140.83	97.038	Bend Break	3	246	140
247.19	140.83	96.94	Cortical Chert	3	246	140
246.7	140.87	97.09	Poss. Uniface	3	246	140
247.43	140.86	97.01	River Quartz	3	246	140
247.04	140.47	96.93	Cortical Chert Debris	3	246	140
246.54	140.71	97.13	Chert Debris	3	246	140
247	140.65	96.938	Weathered Chert	3	246	140
246.71	140.95	96.89	Cortical Chert Pebble	3	246	140
246.79	140.62	96.803	Cortical	3	246	140
246.58	140.795	96.838	Chert Debris	3	246	140
246.54	140.45	96.773	Quartz Pebble	3	246	140
246.36	140.345	96.733	Cortical	3	246	140
246.475	140.73	96.798	Chert Debris	3	246	140
247.07	140.51	96.95	Cortical Chert Pebble	4	246	140
247.1	140.88	97.03	Chert Debris	4	246	140
246.02	140.88	97.148	Cortical Chert	4	246	140
246.85	140.65	97.07	Cortical Chert	4	246	140
247.3	140.89	96.94	Cortical Chert	4	246	140

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
246.05	140.8	96.868	Quartz Pebble	4	246	140
246.98	140.75	97.038	Cortical	4	246	140
246.51	140.9	96.968	Cortical	4	246	140
246.23	140.64	96.938	Cortical	4	246	140
246.93	141.03	96.89	Broken Quartz Pebble	4	246	140
246.705	140.63	96.838	Cortical	4	246	140
246.92	140.85	96.828	Cortical	4	246	140
246.61	140.352	96.768	Debris	4	246	140
246.59	140.77	96.778	Cortical Chert Pebble	4	246	140
246.315	140.485	96.758	Cortical	4	246	140
246.52	140.84	96.988	Broken Quartz	5	246	140
247.32	140.6	96.98	River Quartz	5	246	140
247.05	140.52	96.95	Chert Debris	5	246	140
246.23	140.54	97.07	Cortical Chert	5	246	140
246.45	140.37	97.128	Chert Debris	5	246	140
246.45	140.59	96.853	Cortical	5	246	140
247.04	141...	96.87	Chert Debris	5	246	140
246.31	140.62	96.938	Quartz Pebble	5	246	140
246.625	140.095	96.828	Flake	5	246	140
246.47	140.6	96.838	Cortical Chert Pebble	5	246	140
246.59	140.095	96.766	Broken Quartz Pebble	5	246	140
246.86	140.65	96.793	Cortical Chert Pebble	5	246	140
246.385	140.28	96.753	Cortical Pebble	5	246	140
246.67	140.76	97.018	Cortical	5	246	140
246.64	140.27	97.138	Chert Debris	6	246	140
246.265	140.72	97.028	Cortical Fl	6	246	140
246.69	140.98	96.988	Cortical	6	246	140
246.24	140.49	97.07	Cortical Chert	6	246	140
247.44	140.72	96.97	Chert Flake	6	246	140
246.38	140.34	96.853	Flake Possible Retouch	6	246	140
246.74	140.58	96.908	Chert Flake Fragment	6	246	140
246.69	140.84	96.87	Chert Pebble	6	246	140
246.525	1440.1	96.823	River Pebble	6	246	140

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
246.05	140.54	96.838	Broken Quartz Pebble	6	246	140
246.355	140.88	96.777	Quartz Pebble	6	246	140
246.92	140.78	96.758	Quartz Pebble	6	246	140
246.385	140.27	96.753	Cortical	6	246	140
246.64	140.28	97.138	Chert Debris	7	246	140
246.28	140.49	97.07	Chert Flake W/ Cortex	7	246	140
246.62	140.815	96.968	Chert Debris	7	246	140
246.2	140.69	97.038	Cortical	7	246	140
246.735	140.4	96.918	Cortical	7	246	140
246.77	140.8	96.888	Cortical Chert	7	246	140
246.38	140.08	96.823	Reduced Cortical	7	246	140
246.185	140.47	96.828	Cortical Chert Pebble	7	246	140
246.13	140.676	96.786	Cortical Bend Break	7	246	140
246.985	140.75	96.793	Cortical Pebble	7	246	140
246.085	140.665	96.723	Cortical	7	246	140
246.69	140.61	96.99	Cortex Flake	8	246	140
246.06	140.36	97.09	Chert Flake W/ Cortex	8	246	140
246.58	140.76	96.968	Broken Quartz Pebble	8	246	140
246.88	140.46	96.948	Cortical	8	246	140
246.87	140.82	96.868	Cortical Chert Pebble	8	246	140
246.26	140.09	96.853	Reduced Cortical	8	246	140
246.32	140.47	96.828	Chert Debris	8	246	140
246.136	140.562	96.779	Cortical	8	246	140
246.715	140.58	96.788	Chert Debris	8	246	140
246.09	140.33	97.08	Cortical Chert	9	246	140
246.82	140.65	97.028	Cortical	9	246	140
246.68	140.76	96.988	Cortex	9	246	140
246.915	140.465	96.948	Cortical Flake	9	246	140
246.935	140.82	96.868	Chert Debris	9	246	140
246.265	140.105	96.843	Flake	9	246	140
246.71	140.59	96.828	Broken Quartz Pebble	9	246	140
246.036	140.518	96.789	Quartz Pebble	9	246	140
246.85	140.56	96.788	Cortical	9	246	140

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
246.88	140.655	97.028	River Pebble	10	246	140
246.63	140.75	96.958	Cortical	10	246	140
246.95	140.28	96.918	Quartz Boulder	10	246	140
246.45	140.57	96.898	Quartz Pebble	10	246	140
246.18	140.01	96.848	Cortical	10	246	140
246.28	140.38	96.818	Chert Debris	10	246	140
246.047	140.315	96.779	Cortical	10	246	140
246.25	140.4	96.788	Quartz Pebble	10	246	140
246.49	140.52	97.048	Cortex	11	246	140
246.16	140.72	96.993	Broken Quartz Pebble	11	246	140
246.09	140.1	96.928	Cortical	11	246	140
246.495	140.62	96.878	Broken Quartz Pebble	11	246	140
246.1	140.275	96.843	Pebble	11	246	140
246.24	140.31	96.848	Chert Debris	11	246	140
246.37	140.47	96.785	Cortical Debris	11	246	140
246.53	140.35	96.748	Chert Debris	11	246	140
246.45	140.72	96.978	Cortex Debris	12	246	140
246.33	140.47	97.028	River Pebble	12	246	140
246.38	140.19	96.938	Cortical Bend Break	12	246	140
246.65	140.54	96.888	Broken Quartz Pebble	12	246	140
246.13	140.28	96.833	River Pebble	12	246	140
246.48	140.38	96.838	Chert Debris	12	246	140
246.69	140.35	96.758	Cortical Pebble	12	246	140
246.31	140.41	97.043	Cortex	13	246	140
246.84	140.8	96.988	Cortical Debris	13	246	140
246.94	140.11	96.938	Flake	13	246	140
246.53	140.455	96.858	Quartz Pebble	13	246	140
246.415	140.575	96.823	Cortical	13	246	140
246.87	140.41	96.828	Cortical Chert Debris	13	246	140
246.725	140.27	96.788	Cortical Debris	13	246	140
246.11	140.33	97.038	Possible Bend Break	14	246	140
246.99	140.76	96.988	Cortical Debris	14	246	140
246.01	140.9	96.943	Retouch Chert Tool	14	246	140

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
246.34	140.37	96.878	Chert Flake	14	246	140
246.43	140.745	96.838	Reduced Chert	14	246	140
246.93	140.4	96.828	Quartz Pebble	14	246	140
246.28	140.31	96.788	Cortical	14	246	140
246.28	140.18	97.028	Cortical	15	246	140
246.96	141.05	96.948	Cortical	15	246	140
246.09	140.09	96.919	Flake	15	246	140
246.625	140.42	96.88	Quartz Pebble	15	246	140
246.39	140.88	96.803	Quartz Pebble	15	246	140
246.93	140.315	96.738	Chert Debris	15	246	140
246.43	140.3	96.788	Chert Debris	15	246	140
247	140.65	96.958	Cortical	16	246	140
246.82	140.375	97.028	Cortical Chert	16	246	140
246.9	140.08	96.898	River Cobble	16	246	140
246.85	140.37	96.868	Cortical Chert Pebble	16	246	140
246.69	140.05	96.838	Cortical Chert Debris	16	246	140
246.9	140.33	96.753	Bend Break	16	246	140
246.25	140.595	96.958	Weathered Chert Pebble	17	246	140
246.575	140.11	97.008	Cortical	17	246	140
246.87	140.34	96.878	Cortical Chert	17	246	140
246.74	140.04	96.808	Quartz Pebble	17	246	140
246.42	140.1	96.788	Chert Debris	17	246	140
246.915	140.54	96.968	Flake	18	246	140
246.43	140.02	97.038	Cortical	18	246	140
246.97	140.42	96.858	Chert Debris	18	246	140
246.26	140.18	96	Chert Cobble/Core	18	246	140
246.705	140.09	97.038	Pebble	19	246	140
246.12	140.36	96.958	Broken Quartz Pebble	19	246	140
246.015	140.23	96.88	Chert Debris	19	246	140
246.525	140.325	96.968	Cortical	20	246	140
246.03	140.72	97.018	Cortical	20	246	140
246.27	140.22	96.888	Cortical Chert Pebble	20	246	140
246.7	140.29	96.968	Broken Quartz Pebble	21	246	140

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
246.69	140.93	97.028	Cortical	21	246	140
246.15	140.15	96.858	Cortical Chert Pebble	21	246	140
246.79	140.65	97.008	Cortical	22	246	140
246.07	140.08	96.993	Decor.	22	246	140
246.15	140.08	96.88	Cortical Chert Pebble	22	246	140
246.68	140.07	97.033	Flake	23	246	140
246.3	140.14	96.988	Flake	23	246	140
246.18	140.03	96.88	Cortical Chert Debris	23	246	140
247.01	140.36	96.973	Cortical Debris	24	246	140
246.46	140.105	96.878	Cortical Chert Pebble	24	246	140
246.825	140.17	96.988	Chert Debris	25	246	140
246.46	140.19	96.868	Cortical Chert	25	246	140
246.54	140.19	96.878	Cortical Chert Debris	26	246	140
246.77	140.06	96.853	Cortical Chert	27	246	140
246.79	142.02	96.808	Cortical Pebble	1	246	142
246.07	142.11	97.043	Broken Quartz Pebble	1	246	142
246.61	142.01	96.873	Cortical	1	246	142
246.64	142.02	96.953	Flake	1	246	142
246.16	142.04	96.803	Cortical Chert Pebble	1	246	142
246.155	142.4	97.008	Cortical	2	246	142
246.6	142.09	96.923	Cortical	2	246	142
246.6	142.09	96.923	Cortical	2	246	142
246.55	142.12	96.863	Quartz Pebble	2	246	142
246.66	142.12	96.778	Cortical	2	246	142
246.86	142.03	96.843	Chert Debris	2	246	142
246.38	142.1	96.773	Chert Debris	3	246	142
246.72	142.11	96.933	Quartz Pebble	3	246	142
246.245	142.41	96.995	Cortical	3	246	142
246.73	142.16	96.853	Blade-Like Flake	3	246	142
246.13	142.18	96.803	Broken Quartz Pebble	3	246	142
246.395	142.18	96.793	Cortical Chert Pebble	4	246	142
246.055	142.615	96.893	Cortical	4	246	142
246.85	142.17	96.873	Cortical Chert Pebble	4	246	142

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
246.86	142.08	96.913	Cortical	4	246	142
246.86	142.08	96.913	Cortical Chert Pebble	4	246	142
246.57	142.19	96.823	Weathered Chert Debris	4	246	142
246.45	142.35	96.883	Cortical Chert Pebble	5	246	142
246.09	142.59	96.979	Quartz Pebble	5	246	142
246.48	142.29	96.913	Cortical	5	246	142
246.61	142.12	96.843	Chert Pebble	5	246	142
246.11	142.095	96.733	River Cobble	5	246	142
246.06	142.24	96.973	Cortical	6	246	142
246.22	142.57	97.003	Cortical	6	246	142
246.31	142.265	96.778	Quartz Pebble	6	246	142
246.2	142.45	96.913	Blade Proximal	6	246	142
246.43	142.34	96.833	Weathered Chert Debris	6	246	142
246.34	142.47	96.863	Cortical Chert Pebble	7	246	142
246.03	142.3	96.923	Cortical	7	246	142
246.195	142.69	97.009	Cortical	7	246	142
246.87	142.33	96.823	Rejuvenation Flake	7	246	142
246.17	142.295	96.773	Cortical Pebble	7	246	142
246.22	142.325	96.763	Cortical Pebble	8	246	142
246.03	142.35	96.973	Quartz Pebble	8	246	142
246.175	142.75	96.953	Cortical	8	246	142
246.72	142.42	96.863	Broken Quartz Pebble	8	246	142
246.2	142.39	96.843	Chert Debris	8	246	142
246.5	142.45	96.963	Quartz Pebble	9	246	142
246.82	142.52	96.903	Chert Debris	9	246	142
246.347	142.51	96.968	Quartz Pebble	9	246	142
246.38	142.38	96.779	Cortical Pebble	9	246	142
246.49	142.4	96.843	Chert Debris	9	246	142
246.63	142.45	96.778	Cortical Pebble	10	246	142
246.46	142.5	96.903	Cortical	10	246	142
246.14	142.58	96.883	Cortical Pebble	10	246	142
246.38	142.655	96.983	Cortical	10	246	142
246.65	142.43	96.833	Broken Quartz Pebble	10	246	142

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
246.32	142.54	96.973	Cortical	11	246	142
246.19	142.67	96.883	Cortical Pebble	11	246	142
246.43	142.77	97.003	Cortex Flake	11	246	142
246.69	142.38	96.758	Cortical Chert Debris	11	246	142
246.12	142.4	96.813	Quartz Pebble	11	246	142
246.31	142.53	96.903	Cortical W/ Reduction	12	246	142
246.26	142.68	96.873	Cortical Pebble	12	246	142
246.425	142.53	96.981	Cortical	12	246	142
246.76	142.42	96.758	Cortical	12	246	142
246.44	142.44	96.843	Quartz Pebble	12	246	142
246.72	142.38	96.913	Cortical	13	246	142
246.72	142.38	96.913	Cortical	13	246	142
246.74	142.51	96.776	Cortical Pebble	13	246	142
246.535	142.482	96.991	Cortical	13	246	142
246.27	142.62	96.863	Cortical Chert Debris	13	246	142
246.16	142.44	96.823	Cortical Chert Pebble	13	246	142
246.36	142.67	96.863	Cortical Chert Debris	14	246	142
246.74	142.58	96.747	River Pebble	14	246	142
246.8	142.35	96.953	Quartz Pebble	14	246	142
246.623	142.93	96.991	Broken Quartz Pebble	14	246	142
246.18	142.47	96.803	Cortical Chert Pebble	14	246	142
246.87	142.4	96.953	Chert Fragment	15	246	142
246.42	142.61	96.883	Chert Debris	15	246	142
246.77	142.625	96.743	Broken Quartz Pebble	15	246	142
246.725	142.51	97.003	Quartz Pebble	15	246	142
246.91	142.57	96.843	Cortical	15	246	142
246.846	142.595	97.175	TA Flake	16	246	142
246.36	142.66	96.963	Cortical	16	246	142
246.495	142.58	96.745	Chert Debris	16	246	142
246.44	142.69	96.853	Chert Flake	16	246	142
246.71	142.59	96.803	Cortical	16	246	142
246.48	142.73	96.893	Broken Quartz Pebble	17	246	142
246.825	142.85	96.979	Cortical	17	246	142

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
246.4	142.69	96.903	Cortical	17	246	142
246.822	142.705	96.743	Cortical Chert	17	246	142
246.77	142.59	96.813	Cortical	17	246	142
246.71	142.59	96.963	Cortical	18	246	142
246.72	142.75	96.748	Chert Debris	18	246	142
246.51	142.73	96.893	Chert Pebble	18	246	142
246.58	142.63	96.833	Chert Debris	18	246	142
246.63	142.67	96.983	Cortical	19	246	142
246.695	142.785	96.748	Cortical Chert Debris	19	246	142
246.63	142.67	96.983	Cortical	19	246	142
246.57	142.74	96.903	Quartz Pebble	19	246	142
246.69	142.65	96.823	Bend Break	19	246	142
246.77	142.875	96.758	Cortical Chert Debris	20	246	142
246.63	142.72	96.893	Chert Debris	20	246	142
246.75	142.67	96.953	Quartz Boulder	20	246	142
246.78	142.68	96.803	Chert Debris	20	246	142
246.415	142.925	96.738	Chert Debris	21	246	142
246.63	142.72	96.893	Cortical Chert Pebble	21	246	142
246.53	142.71	96.933	Cortical	21	246	142
246.6	142.74	96.843	Chert Debris	21	246	142
246.175	142.97	96.783	Cortical Pebble	22	246	142
246.33	142.77	96.853	Chert Debris	22	246	142
246.55	142.75	96.963	Quartz Pebble	22	246	142
246.74	142.73	96.803	Cortical	22	246	142
246.35	142.81	96.853	Chert Debris	23	246	142
246.02	142.75	96.823	Chert Debris	23	246	142
246.58	142.73	96.963	Flake	23	246	142
246.86	142.91	96.754	Broken Quartz Pebble	23	246	142
246.02	142.96	96.853	Quartz Debris	24	246	142
246.58	142.78	96.923	Cortical	24	246	142
246.72	142.77	96.803	Broken Quartz Pebble	24	246	142
246.34	142.97	96.863	Weathered Chert Debris	25	246	142
246.09	142.78	96.973	Cortical	25	246	142

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
246.58	142.8	96.843	Quartz Pebble	25	246	142
246.44	142.97	96.863	Cortical Pebble	26	246	142
246.61	142.83	96.843	Cortical	26	246	142
246.64	142.88	96.943	Cortical	26	246	142
246.68	142.81	96.843	Chert Pebble	27	246	142
246.69	142.84	96.943	Cortical Bend Break	27	246	142
246.35	142.9	96.843	Chert Debris	28	246	142
246.2	142.91	96.943	Quartz Pebble	28	246	142
246.01	142.85	97.023	Cortical	29	246	142
246.38	142.92	96.843	Chert Debris	29	246	142
246.2	142.96	96.843	Chert Debris	30	246	142
246.75	142.98	96.833	Weathered Chert Debris	31	246	142
248.75	140.35	96.738	Cortical	1	248	140
248.165	140.17	96.688	Cortical Chert Pebble	1	248	140
248.74	140.39	96.733	Weathered Cortical	2	248	140
248.15	140.09	96.683	Cortical Chert Debris	2	248	140
248.79	140.66	96.728	Cortical	3	248	140
248.21	140.11	96.678	Quartz Pebble	3	248	140
248.495	140.76	96.728	Broken River Pebble	4	248	140
248.355	140.205	96.653	Decor. Debris	4	248	140
248.37	140.82	96.748	Cortical	5	248	140
248.44	140.14	96.628	Cortical Chert Boulder	5	248	140
248.29	140.88	96.738	Flake	6	248	140
248.625	140.01	96.693	Cortical Chert Debris	6	248	140
248.14	140.83	96.758	Cortical Pebble	7	248	140
248.52	140.32	96.658	Cortical Chert Debris	7	248	140
263.075	143.78	98.413	Uniface	1	262	142
263.236	143.247	98.333	Hammerstone	1	262	142
263.173	143.702	98.4	Core	2	262	142
263.321	143.116	98.316	Biface	2	262	142
263.318	143.607	98.406	Biface	3	262	142
263.518	143.23	98.288	Broken Hammerstone	3	262	142
263.044	143.615	98.389	Utilized Flake	4	262	142

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
263.054	143.291	98.367	Core	5	262	142
264.226	143.48	98.153	Flake	1	264	142
264.552	143.503	98.02	Core	1	264	142
264.794	143.977	98.05	Flake	1	264	142
264.899	143.69	98.089	TA Flake	1	264	142
265.656	143.325	98.279	MALA Point Base	1	264	142
264.403	143.448	98.102	Flake	2	264	142
264.733	143.609	98.01	Flake	2	264	142
265.02	143.946	98.086	Flake	2	264	142
265.466	143.412	98.107	Flake	2	264	142
264.941	143.68	98.192	Debris	3	264	142
265.284	144	98.071	Flake	3	264	142
265.711	143.204	98.097	Flake	3	264	142
265.929	143.345	98.024	Flake	3	264	142
265.228	143.387	98.052	Flake	4	264	142
265.661	143.594	98.15		4	264	142
265.42	143.675	98.043	Debris	5	264	142
265.422	143.408	98.174	Flake	5	264	142
265.344	143.87	98.032	Debris	6	264	142
265.956	143.531	98.152	Flake	6	264	142
265.828	143.78	98.044	Flake	7	264	142
265.864	143.653	98.046	Flake	8	264	142
266.32	134.24	97.713	Hammerstone	1	265	134
266.32	134.32	97.683	Core	1	265	134
267.01	134.88	97.89	Blade Like Flake	1	265	134
266.41	134.26	97.707	Flake	2	265	134
266.72	134.95	97.705	Flake	2	265	134
266.28	135.07	97.704	Cortical	3	265	134
266.83	134.8	97.711	Flake	3	265	134
266.85	134.97	97.732	Flake	4	265	134
267.2	134.14	97.665	Flake	4	265	134
266.97	134.47	97.718	Flake (Blade)	5	265	134
267.64	134.22	97.695	TA Flake	5	265	134

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
267.53	134.21	97.715	Flake	6	265	134
267.72	134.09	97.705	TA Flake	6	265	134
266.14	135.72	97.688	Flake	7	265	134
266.07	132.09	97.851	Hammerstone	1	266	132
266.19	132.37	97.794	Hammerstone	1	266	132
266.211	132.176	97.68	Cortical	1	266	132
266.393	132.131	97.717	Flake	1	266	132
266.72	133.85	97.93	Distal Biface	1	266	132
267.02	133.79	98.11	Distal MALA Preform	1	266	132
267.13	133.93	98.08	Possible Tool	1	266	132
266.005	132.484	97.802	Flake	2	266	132
266.08	132.13	97.839	Flake	2	266	132
266.26	133.4	97.845	Bifacial Thinning Flake	2	266	132
266.44	132.18	98.095	Tool	2	266	132
266.668	132.855	97.727	Flake	2	266	132
267.8	133.49	98.07	Scraper	2	266	132
268.01	133.13	97.93	Hammerstone	2	266	132
266.09	133.6	97.834	Bifacial Thinning Flake	3	266	132
266.179	132.513	97.75	Flake Fragment	3	266	132
266.19	132.14	97.785	Cortical	3	266	132
266.38	132.49	98.045	Biface Distal	3	266	132
266.677	132.933	97.709	Flake, RC	3	266	132
267.79	133	97.88	Flake Core	3	266	132
266.01	132.22	97.793	Cortical	4	266	132
266.17	133.16	97.819	Bifacial Thinning Flake	4	266	132
266.33	132.56	98.06	Biface Medial	4	266	132
266.739	132.995	97.752	Flake, RC	4	266	132
266.859	132.958	97.766	Flake	4	266	132
267.49	133.07	97.88	Hammerstone	4	266	132
266.23	133.15	97.806	Bifacial Thinning Flake	5	266	132
266.5	132.77	97.826	Debris, RC	5	266	132
266.946	132.973	97.718	Flake, RC	5	266	132
266.948	132.734	97.753	Flake	5	266	132

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
266.99	132.83	98.01	Biface Perform	5	266	132
266.14	133.23	97.809	Bifacial Thinning Flake	6	266	132
266.613	132.591	97.758	Flake, RC	6	266	132
266.71	132.93	97.83	Flake	6	266	132
266.947	132.562	97.693	Flake, RC	6	266	132
266.02	133.25	97.836	Thinning Flake	7	266	132
266.694	132.201	97.687	Flake Core	7	266	132
266.77	132.95	97.8	Flake, RC	7	266	132
266.793	132.584	97.746	Flake, RC	7	266	132
266.04	133.44	97.827	Flake	8	266	132
266.475	132.368	97.767	Flake	8	266	132
266.681	132.133	97.716	Flake, RC	8	266	132
267.02	132.52	97.845	Flake	8	266	132
266.035	132.348	97.745	Bifacial Thinning Flake	9	266	132
266.05	133.5	97.835	Flake	9	266	132
266.486	132.178	97.791	TA Flake	9	266	132
266.85	132.36	97.846	Thinning Flake	9	266	132
266.08	133.52	97.805	Flake	10	266	132
266.254	133.875	97.74	BF Primary	10	266	132
266.65	132.45	97.821	Flake Distal	10	266	132
266.808	132.183	97.78	Flake	10	266	132
266.036	133.279	97.789	TA Flake	11	266	132
266.07	133.897	97.702	Flake	11	266	132
266.3	133.56	97.803	Thinning Flake	11	266	132
266.59	132.4	97.846	Thinning Flake	11	266	132
266.087	133.632	97.75	Flake	12	266	132
266.38	133.77	97.811	Late Stage Bifacial	12	266	132
266.417	133.326	97.726	Pot Lid	12	266	132
267.01	132.52	97.817	Flake	12	266	132
266.03	133.04	97.839	Thinning Flake	13	266	132
266.257	133.891	97.762	Flake	13	266	132
266.3	133.95	97.804	Flake River Chert	13	266	132
267.245	133.371	97.73	Flake	13	266	132

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
266.09	133	97.863	Thinning Flake	14	266	132
266.611	133.948	97.78	Flake	14	266	132
267.27	133.503	97.73	TA Flake	14	266	132
266.12	133.07	97.83	Flake	15	266	132
266.79	133.626	97.768	Flake	15	266	132
267.18	133.668	97.73	Flake, RC	15	266	132
266.08	133.12	97.835	Thinning Flake	16	266	132
266.4	133.479	97.781	Flake	16	266	132
267.12	134.022	97.724	Flake	16	266	132
266.09	133.26	97.83	Thinning Flake	17	266	132
267.051	133.253	97.81	Flake	17	266	132
267.779	133.635	97.717	Thinning Flake	17	266	132
266.228	133.115	97.83	Flake Fragment	18	266	132
267.428	133.828	97.78	Flake	18	266	132
267.643	133.161	97.743	Thinning Flake	18	266	132
266.076	133.442	97.771	Reduction Flake, RC	19	266	132
267.35	133.44	97.755	Flake	19	266	132
268.07	133.155	97.721	Overshot Flake	19	266	132
264.324	133.033	97.761	Flake	20	266	132
266.121	133.529	97.828	Thinning Flake	20	266	132
267.808	132.875	97.736	Flake Fragment	20	266	132
266.131	133.659	97.854	Thinning Flake	21	266	132
267.484	133.024	97.753	Flake	21	266	132
267.826	132.771	97.729	Bifacial Flake	21	266	132
266.171	133.555	97.829	Cortical	22	266	132
267.893	132.998	97.806	Flake	22	266	132
268.08	132.513	97.754	Biface Thinning Flake	22	266	132
266.401	133.481	97.815	Thinning Flake	23	266	132
267.689	132.852	97.758	Flake	23	266	132
268.108	132.122	97.742	TA Flake	23	266	132
266.319	133.769	97.851	Flake	24	266	132
267.406	132.974	97.793	Flake	24	266	132
267.845	132.318	97.736	Biface	24	266	132

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
266.454	133.693	97.836	Flake, RC	25	266	132
267.434	132.802	97.763	Flake, RC	25	266	132
267.771	132.435	97.765	Thinning Flake	25	266	132
266.317	133.738	97.867	Thinning Flake	26	266	132
267.495	132.462	97.703	Chert	26	266	132
267.496	132.612	97.788	Flake	26	266	132
266.552	133.548	97.812	Flake Fragment	27	266	132
267.355	132.633	97.774	Flake, RC	27	266	132
267.389	132.456	97.73	TA Flake	27	266	132
266.583	133.605	97.814	Flake Fragment	28	266	132
267.289	132.573	97.753	Cortical	28	266	132
267.747	132.085	97.716	Flake Fragment	28	266	132
266.288	133.776	97.845	Flake	29	266	132
267.069	132.685	97.779	Flake	29	266	132
267.597	132.065	97.717	Thinning Flake	29	266	132
266.248	133.739	97.82	Thinning Flake	30	266	132
267.48	132.107	97.724	Thinning Flake	30	266	132
267.58	132.556	97.751	Cortical	30	266	132
266.836	133.395	97.811	Cortical	31	266	132
267.03	132.312	97.715	Flake, RC	31	266	132
267.394	132.599	97.77	Flake	31	266	132
266.882	133.148	97.818	Thinning Flake	32	266	132
267.437	132.481	97.753		32	266	132
267.316	133.543	97.799	Flake Fragment	33	266	132
267.357	132.402	97.769	Ta Flake Reduction	33	266	132
267.27	133.965	97.845	Debris	34	266	132
267.501	132.358	97.769	Cortical	34	266	132
267.395	133.985	97.838	Thinning Flake	35	266	132
267.543	132.199	97.753	Flake, RC	35	266	132
267.363	132.207	97.749	TA Flake	36	266	132
267.575	133.991	97.827	Decor. Flake	36	266	132

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
267.68	133.709	97.818	Flake, RC	37	266	132
267.969	132.106	97.764	Flake	37	266	132
267.616	132.143	97.795	TA Flake	38	266	132
267.986	133.201	97.837	Flake	38	266	132
267.33	132.145	97.776	Flake	39	266	132
267.636	133.107	97.831	Cortical	39	266	132
267.218	132.157	97.755	TA Flake	40	266	132
267.508	133.018	97.81	Flake	40	266	132
267.358	132.099	97.781	TA Flake	41	266	132
267.904	133.105	97.799	Flake	41	266	132
267.611	132.143	97.774	Flake	42	266	132
267.88	132.817	97.816	Thinning Flake	42	266	132
267.462	132.642	97.816	TA Flake	43	266	132
268.015	132.582	97.829	Thinning Flake	44	266	132
268.034	132.418	97.836	Thinning Flake	45	266	132
267.771	132.306	97.827	Flake, RC	46	266	132
267.381	132.402	97.808	TA Flake	47	266	132
267.239	132.284	97.822	Flake, RC	48	266	132
267.731	132.052	97.95	Flake		266	132
267.63	135.63	98.17	Utilized Flake	1	267	136
267.81	135.127	98.14	Base Margin	1	267	136
267.7	135.76	98.14	Poss. Hammerstone	2	267	136
267.9	134.13	98.12	Poss. Core Top	2	267	136
267.23	135.84	98.12	Proximal Of Perform	3	267	136
267.25	135.115	98.9	Utilized Flake	3	267	136
267.68	135.125	98.1	Biface Perform	4	267	136
268.161	134.31	98.1	Small Chert Core Top	4	267	136
267.23	134.5	98.13	Altered Preform	5	267	136
267.5	135.137	98.1	Busted Hammerstone	5	267	136
267.109	134.53	98.7	Utilized Scraper	6	267	136
267.78	134.54	98.7	Biface Preform	7	267	136

Table A15-20 N continued

2011 N	E	Depth	Type	Art#	North	East
267.7	135.153	98.7	Biface Preform	8	267	136
267.1	135.104	98.8	Utilized Blade	9	267	136
267.25	136.2	98.9	Biface Margin	10	267	136

Table A15-20 O
Mapped Artifacts from 2012 Excavations at the Topper Site (38AL23).

2012 N	E	Depth	Type	Art#	North	East
246.92	139.57	97.15	Cortical Chert	3	246	138
246.44	139.46	97.15	Cortical Chert	1	246	138
246.2	138.05	97.11	Quartz Pebble	1	246	138
246.2	138.05	97.11	Quartz Pebble	1	246	138
246.12	139.07	97.13	Cortical Chert	1	246	138
246.13	139.23	97.05	Cortical Chert	1	246	138
246.23	138.13	97.07	Bend Break	1	246	138
246.04	138.37	97.03	Cortical Chert	1	246	138
246.05	138.38	96.97	Chert Pebble	1	246	138
246.11	139.99	96.96	Core , Chert	1	246	138
246.21	138.115	96.94	Chert Debris	1	246	138
246.99	139.08	96.95	Cortical Chert	1	246	138
246.34	138.21	96.87	Bend Break	1	246	138
246.08	139.07	96.878	Chert Pebble	1	246	138
246.09	138.21	96.81	Chert Debris	1	246	138
246.12	139.25	96.8	Chert Debris	1	246	138
246.42	138.79	96.79	Chert Pebble	1	246	138
246.03	139.36	96.76	Cortical Chert Debris	1	246	138
246.03	138.27	96.12	Cortical Pebble	1	246	138
246.07	139.71	96.73	Chert Tool	1	246	138
246.27	139.09	96.67	Broken Quartz	1	246	138
246.89	139.09	97.16	Debris Cortical Chert	2	246	138
246.32	139.24	97.14	Pebble Cortical Chert	2	246	138
246.2	139.63	97.06	Pebble Cortical Chert	2	246	138
246.25	138.05	97	Broken Quartz	2	246	138
246.23	138.65	97.00	Pebble	2	246	138
246.68	138.13	96.95	Bend Break	2	246	138
246.99	139.9	96.99	Boulder, Chert	2	246	138
246.15	138.7	96.95	Chert Debris	2	246	138
246.64	139.1	96.94	Cortical Chert	2	246	138
246.29	138.27	96.89	Quartz Pebble	2	246	138
246.42	139.2	96.895	Cortical Chert Debris	2	246	138
246.24	138.33	96.84	Quartz Pebble	2	246	138
246.43	139.07	96.8	Chert Debris	2	246	138
246.09	138.51	96.8	Cortical Chert Debris	2	246	138
246.57	139.37	96.78	River Pebble	2	246	138

Table A15-20 O continued

2012 N	E	Depth	Type	Art#	North	East
246.01	138.38	96.73	Quartz Pebble	2	246	138
246.07	139.79	96.71	Chert Bend Break	2	246	138
246.22	139.16	96.69	Cortical Chert Debris	2	246	138
246.31	139.81	97.14	Tool, Possible	3	246	138
246.22	139.71	97.05	Pebble , Chert	3	246	138
246.5	138.19	97	Chert Debris	3	246	138
246.18	138.97	97.00	Quartz	3	246	138
246.21	138.45	96.98	Cortical Chert Debris	3	246	138
246.48	139.175	96.95	Chert Flake	3	246	138
246.09	138.9	96.94	Chert Debris	3	246	138
246.3	139.18	96.92	Cortical Chert	3	246	138
246.25	138.3	96.9	Chert Debris	3	246	138
246.66	139.055	96.9	Chert Flake	3	246	138
246.2	138.5	96.84	Chert Debris	3	246	138
246.61	139.08	96.81	Chert Debris	3	246	138
246.29	138.62	96.79	Chert Pebble	3	246	138
246.59	139.46	96.8	Cortical Chert Debris	3	246	138
246.25	138.86	96.74	Chert Flake	3	246	138
246.205	139.15	96.75	Chert Bend Break	3	246	138
246.41	139.22	96.69	Cortical Chert Debris	3	246	138
246.23	139.92	97.14	Pebble , Quartz	4	246	138
246.61	139.81	97.05	Debris, Cortical Chert	4	246	138
246.63	138.6	96.99	Blade Like Flake	4	246	138
246.35	138.36	97.00	Pebble , Quartz	4	246	138
246.35	138.45	96.97	Chert Debris	4	246	138
246	139	96.98	Cortical Chert	4	246	138
246.22	138.89	96.88	Quartz Pebble	4	246	138
246.19	139.05	96.92	Cortical Chert Debris	4	246	138
246.17	188.43	96.89	Chert Debris	4	246	138
246.912	139.11	96.9	Chert Pebble	4	246	138
246.18	138.57	96.82	Quartz Pebble	4	246	138
246.48	139.34	96.81	Chert Debris	4	246	138
246.07	138.22	96.81	Cortical Chert Pebble	4	246	138
246.4	139.57	96.8	Cortical Chert Debris	4	246	138
246.3	138.98	96.76	Cortical Chert Debris	4	246	138
246.28	139.12	96.71	Chert Debris	4	246	138

Table A15-20 O continued

2012 N	E	Depth	Type	Art#	North	East
246.52	139.23	96.66	Cortical Chert Pebble	4	246	138
246.18	139.94	97.13	Pebble , Quartz	5	246	138
246.68	138.78	97.08	Broken Quartz	5	246	138
246.6	139.23	97.002	Cortical Chert Debris	5	246	138
246.17	138.54	96.99	Cortical Chert Pebble	5	246	138
246.99	139.21	96.99	Pebble	5	246	138
246.51	138.87	96.91	Broken Quartz Pebble	5	246	138
246.17	139.13	96.92	Cortical Chert	5	246	138
246.03	138.38	96.87	Chert Debris	5	246	138
246.04	139.42	96.88	Chert Pebble	5	246	138
246.13	138.61	96.82	Cortical Chert Debris	5	246	138
246.46	139.37	96.82	Chert Pebble	5	246	138
246.27	138.11	96.79	Quartz Pebble	5	246	138
246.52	139.59	96.78	Bend Break	5	246	138
246.18	138.71	96.72	Cortical Chert Debris	5	246	138
246.24	139.25	96.75	Chert Debris	5	246	138
246.56	139.04	96.64	Cortical Chert Debris	5	246	138
246.12	139.84	97.14	Debris, Cortical Chert	6	246	138
246.03	138.77	97.15	Broken Quartz Pebble	6	246	138
246.68	139.49	97.02	Cortical Chert Pebble	6	246	138
246.71	139.44	96.97	Debris, Cortical Chert	6	246	138
246.66	138.82	96.91	Broken Quartz Pebble	6	246	138
246	139.04	96.95	Cortical Chert	6	246	138
246.04	138.4	96.89	Chert Debris	6	246	138
246.42	139.33	96.9	Chert Debris	6	246	138
246.8	138.64	96.81	Quartz Pebble	6	246	138
246.59	139.37	96.81	Chert Pebble	6	246	138
246.26	138.17	96.79	Cortical Chert Debris	6	246	138
246.77	139.51	96.78	Chert Debris	6	246	138
246.12	138.4	96.74	Broken Quartz Pebble	6	246	138
246.295	139.34	96.73	Chert Pebble	6	246	138
246.58	139.02	96.67	Bend Break	6	246	138
246.04	139.88	97.10	Pebble Quartz Broken	7	246	138
246.3	139.59	97.02	Cortical Chert Pebble	7	246	138
246.685	139.5	96.96	Debris, Cortical Chert	7	246	138
246.67	138.75	96.82	Bend Break	7	246	138

Table A15-20 O continued

2012 N	E	Depth	Type	Art#	North	East
246.98	139.41	96.92	Cortical Chert	7	246	138
246.16	138.7	96.89	Flake	7	246	138
246..15	139.76	96.88	Chert Pebble	7	246	138
246.4	138.62	96.8	Cortical Pebble	7	246	138
246.62	139.4	96.81	Chert Pebble	7	246	138
246.55	138.27		Chert Debris	7	246	138
246.15	139.68	96.75	Blade Medial	7	246	138
246.22	138.37	96.72	Chert Debris	7	246	138
246.41	139.21	96.73	Chert Pebble	7	246	138
246.57	139.06	96.67	Chert Pebble	7	246	138
246.38	139.52	97.13	Pebble	8	246	138
246.48	139.63	97.03	Cortical Chert Pebble	8	246	138
246.925	139.68	96.96	Chert Debris	8	246	138
246.82	138.45	96.92	Bend Break	8	246	138
246.55	139.68	96.94	Flake	8	246	138
246.11	138.84	96.9	Cortical Chert Debris	8	246	138
246.28	139.74	96.9	Bend Break	8	246	138
246.41	138.56	96.8	Chert Debris	8	246	138
246.66	139.36	96.8	Chert Pebble	8	246	138
246.52	138.35	96.8	Chert Pebble	8	246	138
246.23	138.69	96.79	Cortical Debris	8	246	138
246.31	138.72	96.72	Chert Flake	8	246	138
246.49	139.17	96.7	Cortical Chert Debris	8	246	138
246.55	139.1	96.66	Weathered Chert	8	246	138
246.32	139.45	97.12	Debris, Chert	9	246	138
246.88	139.885	96.95	Quartz Pebble	9	246	138
246.72	138.09	96.9	Cortical Chert Debris	9	246	138
246.78	139.71	96.91	Cortical Chert	9	246	138
246.28	138.85	96.87	Broken Quartz Pebble	9	246	138
246.981	139.65	96.9	Chert Debris	9	246	138
246.64	138.94	96.85	Chert Debris/Flake	9	246	138
246.83	139.37	96.84	Quartz Pebble	9	246	138
246.66	138.44	96.79	Bend Break	9	246	138
246.97	139.67	96.78	Cortical Chert Debris	9	246	138
246.39	138.49	96.73	Chert Debris	9	246	138
			Chert Pebble	9	246	138

Table A15-20 O continued

2012 N	E	Depth	Type	Art#	North	East
246.79	139.06	96.68	Broken Quartz Pebble	9	246	138
246.29	139.5	97.10	Cobble, Chert,	10	246	138
246.94	139.7	96.95	Cortical Debris	10	246	138
246.18	138.1	96.91	Quartz Pebble	10	246	138
246.98	139.64	96.92	Broken Quartz Pebble	10	246	138
246.46	138.87	96.89	Chert Pebble	10	246	138
139.97	96.9		Chert Pebble	10	246	138
246.84	138.87	96.84	Quartz Pebble	10	246	138
246.97	139.44	96.82	Chert Pebble	10	246	138
246.47	138.38	96.79	Cortical Flake	10	246	138
246.99	139.77	96.8	Cortical Chert Debris	10	246	138
246.4	138.65	96.71	Quartz Pebble	10	246	138
246.62	138.2	96.72	Chert Pebble	10	246	138
246.68	139.17	96.68	Chert Pebble	10	246	138
246.33	139.55	97.10	Debris, Cortical Chert	11	246	138
246.96	139.85	96.96	Cortical Pebble	11	246	138
246.11	138.09	96.89	Quartz Pebble	11	246	138
246.98	139.7	96.94	Chert Debris	11	246	138
246.41	138.58	96.86	Cortical Chert Pebble	11	246	138
139.91	96.87	Chert Flake	Chert Flake	11	246	138
246.73	138.75	96.84	Chert Debris	11	246	138
246.16	139.57	96.8	Chert Pebble	11	246	138
246.78	138.13	96.77	Bend Break	11	246	138
246.07	139.88	96.8	Potlid	11	246	138
246.41	138.68	96.71	Bend Break	11	246	138
246.98	139.25	96.72	Chert Pebble	11	246	138
246.93	139.25	96.65	Chert Debris	11	246	138
246.95	139.87	96.96	Cortical Pebble	12	246	138
246.86	139.98	96.82	Cortical Chert	12	246	138
246.97	138.92	96.89	TA Chert Debris	12	246	138
246.58	139.94	96.88	Quartz Pebble	12	246	138
246.86	138.69	96.84	Medial Flake	12	246	138
246.44	139.5	96.84	Quartz Pebble	12	246	138
246.8	138.29	96.8	Chert Debris	12	246	138
246.05	139.92	96.8	Cortical Pebble	12	246	138
246.45	138.71	96.72	Chert Pebble	12	246	138

Table A15-20 O continued

2012 N	E	Depth	Type	Art#	North	East
246.95	139.29	96.72	Chert Pebble	12	246	138
246.17	139.45	96.86	Chert Debris	12	246	138
246.85	139.79	96.95	Cortical Chert Flake	13	246	138
246.79	139.97	96.9	Quartz Pebble	13	246	138
246.88	138.65	96.8	Chert Pebble	13	246	138
246.7	139.47	96.83	Chert Debris	13	246	138
246.34	138.48	96.73	Chert Debris	13	246	138
246.52	139.83	96.8	Chert Debris	13	246	138
246.45	138.76	96.73	Cortical Chert Pebble	13	246	138
246.045	139.39	96.755	Chert Pebble	13	246	138
246.36	139.41	96.66	Cortical Chert Debris	13	246	138
246.55	139.99	97	Cortical Pebble	14	246	138
246.79	139.2	96.87	Chert Cobble	14	246	138
246.99	138.78	96.8	Chert Debris	14	246	138
246.7	139.55	96.84	Chert Pebble	14	246	138
246.77	139.9	96.78	Quartz Pebble	14	246	138
246.49	138.85	96.71	Chert Debris	14	246	138
246.555	139.31	96.73		14	246	138
246.65	139.04	96.67	Chert Flake Proximal	14	246	138
246.39	139.56	96.9	Chert Cobble	15	246	138
246.5	138.55	96.84	Cortical Chert Debris	15	246	138
246.76	139.55	96.82	Chert Pebble	15	246	138
246.86	139.86	96.8	Cortical Pebble	15	246	138
246.45	138.8	96.76	Chert Debris	15	246	138
				15	246	138
246.94	139.37	96.67	Chert Pebble	15	246	138
246.39	138.15	96.9	Chert Boulder/Core	16	246	138
246.58	138.47	96.84	Cortical Chert Debris	16	246	138
246.04	139.85	96.83	Cortical Chert Debris	16	246	138
246.92	139.88	96.8	Cortical Debris	16	246	138
246.52	138.48	96.71	Chert Debris	16	246	138
256.56	139.15	96.74	Chert Flake	16	246	138
246.28	139.62	96.68	Chert Pebble	16	246	138
246.52	138.32	96.83	Broken Quartz Pebble	17	246	138
246.16	139.99	96.81	Chert Pebble	17	246	138
246.98	139.86	96.8	Quartz Pebble	17	246	138

Table A15-20 O continued

2012 N	E	Depth	Type	Art#	North	East
246.48	138.13	96.7	Broken Quartz Pebble	17	246	138
246.26	139.48	96.73	Quartz Debris	17	246	138
246.2	139.75	96.67	Cortical Chert Debris	17	246	138
246.83	138.28	96.83	Chert Debris	18	246	138
246.47	139.8	96.8	Chert Debris	18	246	138
246.37	139.98	96.76	Chert Debris	18	246	138
246.7	138.7	96.73	Chert Pebble	18	246	138
246.71	139.56	96.72	Chert Pebble	18	246	138
246.17	139.94	96.66	Chert Debris	18	246	138
246.37	138.15	96.79	Chert Cobble	19	246	138
246.95	139.92	96.8	Chert Pebble	19	246	138
				19	246	138
246.17	138.44	96.71	Chert Pebble	19	246	138
246.09	139.55	96.7	Weathered Chert	19	246	138
246.09	139.91	96.69	Broken Quartz Pebble	19	246	138
246.41	138.7	96.78	Chert Core	20	246	138
246.99	139.79	96.84	Broken Quartz	20	246	138
246.78	139.25	96.76	Cortical Pebble	20	246	138
246.78	138.77	96.73	Chert Debris	20	246	138
246.3	139.58	96.7	Weathered Chert	20	246	138
246.99	139.94	96.69	Chert Debris	20	246	138
246.8	139.26	96.75	Chert Debris	21	246	138
246.82	138.79	96.72	Chert Debris	21	246	138
246.23	139.64	96.75	Chert Pebble	21	246	138
2446.66	139.43	96.66	Cortical Chert Debris	21	246	138
246.78	138.87	96.73	Cortical Chert Debris	22	246	138
241.92	139.6	96.73	Bend Break	22	246	138
246.84	138.88	96.73	Cortical Chert Debris	23	246	138
246.445	139.68	96.75	Chert Pebble	23	246	138
246.29	138.91	96.74	Quartz Pebble	24	246	138
246	139.76	96.72	Quartz Pebble	24	246	138
246.5	138.52	96	Chert Debris	25	246	138
246.06	139.76	96.73	Chert Debris	25	246	138
246.18	139.76	96.72	Chert Pebble	26	246	138
246.2	139.78	96.72	Bend Break	27	246	138
246.28	139.75	96.75	Chert Pebble	28	246	138

Table A15-20 O continued

2012 N	E	Depth	Type	Art#	North	East
246.565	139.79	96.745	Quartz Pebble	29	246	138
246.7	139.79	96.75	Chert Flake	30	246	138
246.64	139.95	96.74	Cortical Chert Pebble	31	246	138
246.25	139.1	96.75	Chert Cobble	32	246	138
246.23	139.78	96.72	Broken Quartz	33	246	138
246.44	139.23	96.7		34	246	138
246.13	141.58	96.83	Chert, Cortical	1	246	140
246.1	141.49	96.81	Pebble , Quartz ,	1	246	140
246.18	141.14	96.72	Cortical Chert Pebble	1	246	140
246.03	140.05	96.74	Chert Debris	1	246	140
247.02	141.92	96.72	Pebble , Quartz ,	1	246	140
246.31	141.995	96.71	Chert Debris	1	246	140
246.04	140.02	96.69	Cortical Chert Pebble	1	246	140
247.03	141.54	96.61	Debris, Chert	1	246	140
246.14	141.71	96.6	Chert Pebble	1	246	140
247.77	140.44	96.575	Chert Flake	1	246	140
246.12	141.04	96.6	Broken Quartz	1	246	140
246.29	140.09	96.59	Chert Debris	1	246	140
246.31	140.67	96.57	Quartz Pebble	1	246	140
246.2	141.48	96.84	Chert, Cortical	2	246	140
246.13	141.3	96.81	Pebble , Cortical	2	246	140
246.03	141.65	96.73	Cortical Chert Pebble	2	246	140
246.035	140.1	96.71	Cortical Chert Pebble	2	246	140
247.04	141.36	96.68	Divot	2	246	140
246.52	141.42	96.65	Quartz Pebble	2	246	140
246.39	140.03	96.65	Chert Debris	2	246	140
247.06	141.45	96.60	Pebble , Quartz	2	246	140
246.12	141.66	96.63	Broken Quartz	2	246	140
247.23	140.48	96.57	Cortical	2	246	140
246.16	141.15	96.55	Cortical Chert Debris	2	246	140
246.5	140.24	96.59	Chert Pebble	2	246	140
246.28	141.63	96.84	Chert, Cortical	3	246	140
246.32	141.19	96.79	Flake, Chert	3	246	140
246.18	141.72	96.7	Cortical Chert Pebble	3	246	140
246.03	140.17	96.72	Chert Pebble	3	246	140
247.06	141.21	96.65	Flake, Chert	3	246	140

Table A15-20 O continued

2012 N	E	Depth	Type	Art#	North	East
246.59	141.8	96.71	Chert Debris	3	246	140
246.33	140.07	96.68	Quartz Pebble	3	246	140
247.26	141.3	96.60	Pebble , Quartz	3	246	140
246.64	141.81	96.6	Chert Debris	3	246	140
247.16	140.9	96.55	Chert	3	246	140
246.3	141.12	96.55	Cortical Chert Pebble	3	246	140
246.45	140.41	96.59	Broken Quartz	3	246	140
246.33	141.35	96.82	Chert, Cortical	4	246	140
246.53	141.11	96.81	Pebble , Cortical	4	246	140
246.36	141.41	96.72	Chert Debris	4	246	140
246.54	140.295	96.71	Chert Debris	4	246	140
247.29	141.93	96.68	Pebble , Cortical	4	246	140
246.7	141.71	96.7	Chert Debris	4	246	140
246.54	140.295	96.71	Decortication Flake	4	246	140
247.26	141.97	96.59	Chert, Cortical	4	246	140
246.84	141.74	96.62	Chert Debris	4	246	140
247.11	140.94	96.585	Possible Flake	4	246	140
246.42	141.15	96.61	TA Chert Debris	4	246	140
246.03	140.46	96.58	Chert Pebble	4	246	140
246.55	141.04	96.83	Bend Break, Possible	5	246	140
246.52	141.45	96.84	Pebble , Quartz ,	5	246	140
246.36	141.98	96.72	Broken Quartz	5	246	140
246.65	140.29	96.7	Chert Debris	5	246	140
247.27	141.21	96.72	Pebble , Cortical	5	246	140
246.66	141.8	96.7	Chert Debris	5	246	140
246.32	140.29	96.69	Cortical Chert Debris	5	246	140
247.43	141.58	96.59	Pebble , Quartz	5	246	140
246.65	141.93	96.61	Quartz Pebble	5	246	140
247.32	140.98	96.56	Broken Quartz	5	246	140
246.34	141.26	96.6	Quartz Pebble	5	246	140
246.13	140.51	96.59	Quartz Pebble	5	246	140
246.6	141.54	96.84	Flake, Chert	6	246	140
246.58	141.83	96.79	Pebble , Chert	6	246	140
246.44	141.88	96.7	Cortical Chert Pebble	6	246	140
246.65	140.35	96.7	Fossil	6	246	140
247.5	141.14	96.68	Flake, Chert	6	246	140

Table A15-20 O continued

2012 N	E	Depth	Type	Art#	North	East
246.75	141.92	96.71	Quartz Pebble	6	246	140
246.82	140.22	96.68	3° Chert Flake	6	246	140
247.73	141.46	96.58	Debris, Cortical	6	246	140
246.36	141.25	96.61	Core	6	246	140
246.15	140.15	96.55	Chert Pebble	6	246	140
246.7	141.45	96.82	Pebble , Quartz ,	7	246	140
246.71	141.95	96.81	Debris, Chert	7	246	140
246.61	141.955	96.74	Chert Pebble	7	246	140
246.36	140.55	96.7	Chert Debris	7	246	140
247.81	141.66	96.65	Pebble , Quartz ,	7	246	140
246.77	141.85	96.71	Quartz Pebble	7	246	140
246.04	140.38	96.68	Bend Break	7	246	140
247.84	141.89	96.60	Flake, Chert	7	246	140
246.3	141.37	96.55	Bend Break	7	246	140
246.04	140.55	96.56	Chert Debris	7	246	140
246.79	141.15	96.81	Pebble , Cortical	8	246	140
246.8	141.8	96.80	Pebble , Chert	8	246	140
246.55	141.51	96.72	Cortical Chert Pebble	8	246	140
246.59	140.43	96.74	Broken Quartz	8	246	140
247.86	141.85	96.65	Pebble , Quartz ,	8	246	140
246.86	141.81	96.71	Quartz Pebble	8	246	140
246.89	140.38	96.69	Chert Debris	8	246	140
247.94	141.16	96.62	Pebble , Cortical	8	246	140
246.61	141.14	96.58	Cortical Chert Debris	8	246	140
246.04	140.63	96.59	Chert Debris	8	246	140
246.84	141.65	96.83	Chert, Cortical	9	246	140
246.81	141.6	96.83	Debris, Chert	9	246	140
246.53	141.17	96.7	Broken Quartz	9	246	140
246.7	140.485	96.74	Chert Debris	9	246	140
246.84	141.51	96.73	Chert Debris	9	246	140
246.48	140.36	96.67	Quartz Pebble	9	246	140
246.61	141.02	96.55	Cortical Pebble	9	246	140
246.33	140.55	96.56	Weathered Chert	9	246	140
246.95	141.63	96.82	Pebble , Cortical	10	246	140
246.95	141.81	96.85	Debris, Chert	10	246	140
246.56	141.17	96.69	Chert Debris	10	246	140

Table A15-20 O continued

2012 N	E	Depth	Type	Art#	North	East
246.06	140.58	96.72	Chert Pebble	10	246	140
246.76	141.44	96.67	Quartz Pebble	10	246	140
246.11	140.41()	96.65	3° Flake	10	246	140
246.65	141.12	96.57	River Pebble	10	246	140
246.38	140.54	96.6	Chert Bend Break	10	246	140
246.96	141.9	96.84	Pebble , Quartz ,	11	246	140
246.93	141.84	96.81	Pebble , Cortical	11	246	140
246.67	141.72	96.73	Broken Chert Pebble	11	246	140
246.18	140.69	96.74	Chert Pebble	11	246	140
246.1	141.36	96.73	Chert Flake	11	246	140
246.35	140.45	96.66	Chert Debris	11	246	140
246.76	141.07	96.54	Bend Break	11	246	140
246.95	141.54	96.84	Pebble , Chert	12	246	140
246.85	141.8	96	Broken Quartz	12	246	140
246.58	140.55	96.74	Chert Pebble	12	246	140
246.07	141.74	96.73	Chert Debris	12	246	140
246.67	140.35	96.65	Chert Debris	12	246	140
246.76	141.22	96.57	Broken Quartz	12	246	140
246.36	140.62	96.56	Chert Pebble	12	246	140
246.64	141.25	96.82	Pebble , Quartz ,	13	246	140
246.87	141.67	96.7	Broken Quartz	13	246	140
246.46	140.64	96.73	Chert Debris	13	246	140
246.08	141.64	96.78	Quartz Pebble	13	246	140
246.61	140.42	96.66	Bend Break	13	246	140
246.95	141.27	96.62	Cortical Debris	13	246	140
246.43	140.59	96.58	Chert Debris	13	246	140
246.81	141.02	96.83	Pebble , Quartz ,	14	246	140
246.84	141.66	96.7	Cortical Chert Pebble	14	246	140
246.44	140.71	96.74	Chert Pebble	14	246	140
246.14	141.59	96.71	Broken Quartz	14	246	140
246.74	140.57	96.66	3° Flake	14	246	140
246.92	141.31	96.58	Cortical Debris	14	246	140
246.14	140.66	96.57	Chert Pebble	14	246	140
246.84	141.62	96.7	Chert Pebble	15	246	140
246.58	140.55	96.74	Chert Pebble	15	246	140
246.02	141.59	96.79	Quartz Pebble	15	246	140

Table A15-20 O continued

2012 N	E	Depth	Type	Art#	North	East
246.04	140.55	96.66	Broken Quartz	15	246	140
246.97	141.56	96.59	Cortical Chert Debris	15	246	140
246.55	140.49	96.58	Broken Quartz	15	246	140
246.8	141.85	96.75	Chert Pebble	16	246	140
246.72	140.56	96.74	Chert Debris	16	246	140
246.13	141.54	96.78	Chert Debris	16	246	140
246.34	140.52	96.65	Bend Break	16	246	140
246.1	141.86	96.59	Cortical Pebble	16	246	140
246.55	140.71	96.58	Broken Pebble	16	246	140
246.92	141.36	96.73	Chert Pebble	17	246	140
246.94	140.51		Broken Quartz	17	246	140
246.21	141.52	96.73	Chert Pebble	17	246	140
246.25	140.63	96.65	Broken Quartz	17	246	140
246.58	141.68	96.59	Cortical Flake	17	246	140
246.61	140.66	96.55	Chert Debris	17	246	140
246.83	141.13	96.72	Chert Debris	18	246	140
246.87	140.64	96.71	Chert Pebble	18	246	140
246.24	141.49	96.69	Broken Quartz	18	246	140
246.44	140.61	96.66	Chert Debris	18	246	140
246.51	141.76	96.58	Cortical Pebble	18	246	140
246.63	140.73	96.6	Chert Debris	18	246	140
246.79	141.07	96.72	Quartz Pebble	19	246	140
246.61	140.8	96.74	Chert Flake Proximal	19	246	140
246.04	141.52	96.71	Broken Quartz	19	246	140
246.29	140.65	96.69	Broken Quartz	19	246	140
246.56	141.82	96.59	Chert Pebble	19	246	140
246.39	140.88	96.55	Chert Debris	19	246	140
246.96	141.9	96.73	Chert Pebble	20	246	140
246.66	140.73	96.7	Chert Pebble	20	246	140
246.03	141.48	96.72	Chert Debris	20	246	140
246.64	140.64	96.65	Cortical Chert Debris	20	246	140
246.4	140.94	96.57	Chert Debris	20	246	140
246.61	140.99	96.7	Broken Quartz	21	246	140
246.02	141.38	96.69	Broken Quartz	21	246	140
246.86	140.65	96.69	Broken Quartz	21	246	140
246.5	140.99	96.58	Chert Debris	21	246	140

Table A15-20 O continued

2012 N	E	Depth	Type	Art#	North	East
246.66	140.96	96.72	Cortical Chert Debris	22	246	140
246.15	141.34	96.68	Broken Quartz	22	246	140
246.16	140.76	96.67	Chert Debris	22	246	140
246.58	140.96	96.55	Broken Quartz	22	246	140
246.76	141.74	96.71	Chert Pebble	23	246	140
246.18	141.34	96.7	Chert Debris	23	246	140
246.33	140.71	96.65	Cortical Chert Debris	23	246	140
246.61	140.96	96.55	Broken Quartz	23	246	140
246.92	140.81	96.72	Fossiliferous Chert	24	246	140
246.16	141.19	96.7	Chert Debris	24	246	140
246.99	140.72	96.69	Quartz Pebble	24	246	140
246.61	140.86	96.59	TA Chert Debris	24	246	140
246.98	140.72	96.73	Broken Quartz	25	246	140
246.4	141.18	96.68	Chert Debris	25	246	140
246.35	140.91	96.69	Chert Debris	25	246	140
246.59	140.88	96.58	Chert Pebble	25	246	140
246	140.06	96.7	Chert Flake	26	246	140
246.39	141.15	96.7	Chert Debris	26	246	140
246.05	140.95	96.67	Quartz Pebble	26	246	140
246.76	140.69	96.59	TA Chert Debris	26	246	140
246.54	141.21	96.67	Blade Like Flake	27	246	140
246.15	140.95	96.67	Chert Debris	27	246	140
246.82	140.65	96.56	Broken Quartz	27	246	140
246.64	141.19	96.66	Chert Pebble	28	246	140
246.23	140.99	96.67	Cortical Chert Debris	28	246	140
246.78	140.62	96.55	Chert Debris	28	246	140
246.6	141.53	96.67	Chert Debris	29	246	140
246.34	140.72	96.65	Chert Pebble	29	246	140
246.62	140.67	96.55	Chert Pebble	29	246	140
246.06	141.28	96.69	Chert Flake	30	246	140
246.18	140.99	96.65	Chert Pebble	30	246	140
246.12	141.31	96.69	Chert Debris	31	246	140
246.18	141.32	96.66	Chert Debris	32	246	140
246.04	141.54	96.66	Quartz Pebble	33	246	140
246.2	141.52	96.66	Chert Debris	34	246	140
246.8	141.49	96.66	Chert Pebble	35	246	140

Table A15-20 O continued

2012 N	E	Depth	Type	Art#	North	East
246.12	141.3	96.67	Broken Quartz	36	246	140
246.02	141.46	96.68	Battered Quartz	37	246	140
246.49	142	96.725	Cortical Chert Pebble	1	246	142
246.08	142.06	96.65	Cortical Chert Pebble	1	246	142
246.37	142.97	96.6	Broken Quartz	1	246	142
246.31	142.81	96.75	Quartz Debris	1	246	142
246.51	142.05	96.73	Cortical Chert Pebble	2	246	142
246.14	142.93	96.65	Cortical Chert Pebble	2	246	142
246.49	142.89	96.62	Cortical Chert Debris	2	246	142
246.13	142.32	96	Chert Debris	2	246	142
246.48	142.09	96	Broken Quartz	3	246	142
246.28	142.28	96.66	Cortical Chert Pebble	3	246	142
246.57	142.84	96.61	Cortical Chert Debris	3	246	142
246.03	142.02	96.58	Chert Debris	3	246	142
246.7	142.07	96.72	Quartz Pebble	4	246	142
246.42	142.8	96	Cortical Chert Pebble	4	246	142
246.89	142.77	96.62	Broken Quartz	4	246	142
246.57	142.12	96.58	Chert Debris	4	246	142
246.91	142	96.72	Broken Quartz	5	246	142
246.58	142.88	96.65	Cortical Chert Pebble	5	246	142
246.8	142.58	96.6	Broken Quartz	5	246	142
246.72	142.02	96.57	Chert Flake	5	246	142
246.3	142.15	96.73	Chert Pebble	6	246	142
246.63	142.78	96.66	Cortical Chert Debris	6	246	142
246.89	142.37	96.6	Broken Quartz	6	246	142
246.63	142.18	96.6	Broken Quartz	6	246	142
246.46	142.2	96.75	Cortical Chert Pebble	7	246	142
246.82	142.89	96.64	Cortical Chert Pebble	7	246	142
246.27	142.09	96.62	Cortical Chert Pebble	7	246	142
246.84	142.26	96.57	TA Chert Debris	7	246	142
246.3	142.23	96.72	Chert Pebble	8	246	142
246.92	142.87	96.65	Chert Core	8	246	142
246.81	142.15	96.64	Cortical Chert Debris	8	246	142

Table A15-20 O continued

2012 N	E	Depth	Type	Art#	North	East
246.55	142.64	96.59	, Bend Break	8	246	142
246.3	142.3	96.71	Quartz Pebble	9	246	142
246.74	142.7	96.66	Cortical Chert Pebble	9	246	142
246.92	142.19	96.63	Broken Quartz	9	246	142
246.73	142.66	96.6	Quartz Pebble	9	246	142
246.44	142.3	96.7	Quartz Pebble	10	246	142
246.68	142.6	96.65	Chert Pebble	10	246	142
246.58	142.52	96.58	Chert Debris	10	246	142
246.59	142.28	96.74	Chert Debris	11	246	142
246.89	142.34	96.65	Cortical Chert Debris	11	246	142
246.62	142.51	96.58	Chert Debris	11	246	142
246.63	142.27	96.7	Quartz Pebble	12	246	142
246.41	142.07	96.67	Cortical Chert Pebble	12	246	142
246.76	142.49	96.55	Chert Debris	12	246	142
246.87	142.21	96.71	Chert Debris	13	246	142
246.66	142.36	96.67	Cortical Chert Pebble	13	246	142
246.92	142.67	96.55	Cortical Chert Debris	13	246	142
246.91	142.22	96.705	Chert Pebble	14	246	142
246.59	142.04	96.68	Quartz Pebble	14	246	142
246.8	142.55	96.6	Chert Flake Distal	14	246	142
246.89	142.29	96.74	Chert Debris	15	246	142
246.52	142.16	96.65	Chert Debris	15	246	142
246.88	142.98	96.59	Quartz Debris	15	246	142
246.89	142.29	96.72	Cortical Chert Pebble	16	246	142
246.58	142.22	96.67	Chert Debris	16	246	142
246.65	142.51	96.55	Chert Pebble	16	246	142
246.27	142.41	96.72	Cortical Chert Pebble	17	246	142
246.58	142.22	96.66	Chert Flake	17	246	142
246.83	142.55	96.55	Broken Quartz	17	246	142
246.36	142.41	96.72	Cortical Chert Pebble	18	246	142
246.63	142.26	96.67	Chert Pebble	18	246	142
246.43	142.42	96.73	Broken Quartz	19	246	142
246.93	142.27	96.69	Chert Debris	19	246	142

Table A15-20 O continued

2012 N	E	Depth	Type	Art#	North	East
246.48	142.43	96.7	Chert Debris	20	246	142
246.81	142.16	96.68	Cortical Chert Pebble	20	246	142
246.54	142.44	96.7	Broken Chert Pebble	21	246	142
246.76	142.15	96.68	Chert Pebble	21	246	142
246.92	142.45	96.74	Chert Pebble	22	246	142
246.81	142.14	96.67	Possible Tool	22	246	142
246.22	142.63	96	Chert Debris	23	246	142
246.73	142.11	96.65	Chert Debris	23	246	142
246.31	142.64	96.72	Chert Pebble	24	246	142
246.31	142.72	96.71	Chert Pebble	25	246	142
246.4	142.7	96.7	Quartz Pebble	26	246	142
246.63	142.9	96	Chert Flake	27	246	142
			Chert Debris	28	246	142
246.64	142.94	96.71	Chert Debris	29	246	142
248.2	141.5	96.64	Quartz	1	248	140
248.92	141.2	96.59	Decor Flake	1	248	140
248.09	141.53	96.54	Chert Debris	1	248	140
248.05	141.83	96.45	Cortical Chert Pebble	1	248	140
			From F117	1	248	140
248.22	140.4	96.85	Cobble, Chert	1	248	140
248.04	140.89	96.84	Cortical Chert Pebble	1	248	140
248.19	140.93	96.75	Cortical Chert Pebble	1	248	140
248.07	140.91	96.74	Cortical Chert Debris	1	248	140
248.37	140.99	96.65	TA Chert Debris	1	248	140
248.34	140.71	96.6	4t Chert Flake	1	248	140
248.68	140.92	96.595	Chert Debris	1	248	140
248.28	141.46	96.62	Cortical	2	248	140
248.09	141.17	96.58	Chert Flake	2	248	140
248.31	141.77	96.52	Chert Debris	2	248	140
248.14	141.97	96.45	Broken Quartz	2	248	140
248.26	141.44	96.58	Chert Pebble	2	248	140
248.1	140.4	96.85	Flake, Chert	2	248	140
248.24	140.93	96.83	Bend Break	2	248	140

Table A15-20 O continued

2012 N	E	Depth	Type	Art#	North	East
248.91	140.79	96.75	Cortical Chert Pebble	2	248	140
248.61	140.88	96.72	Cortical Chert Pebble	2	248	140
248.37	140.94	96.68	Chert Debris	2	248	140
248.12	140.95	96.61	Cortical Pebble	2	248	140
248.76	140.81	96.56	Cortical Chert Pebble	2	248	140
248.35	141.74	96.61	Cortical	3	248	140
248.05	141.42	96.59	Cortical Chert Pebble	3	248	140
248.3	141.99	96.53	Cortical Pebble	3	248	140
248.22	141.99	96.45	2° Flake	3	248	140
248.27	141.39	96.58	Cortical Chert Pebble	3	248	140
248.34	140.79	96.82	Cortical Chert Debris	3	248	140
248.12	140.48	96.78	Cortical Chert Pebble	3	248	140
248.15	140.73	96.71	Cortical Chert Pebble	3	248	140
248.58	140.8	96.67	Chert Pebble	3	248	140
248.12	140.81	96.59	Cortical Chert Pebble	3	248	140
248.18	140.79	96.585	Cortical Chert Debris	3	248	140
248.43	141.49	96.62	Cortical	4	248	140
248.25	141.57	96.57	Chert Debris	4	248	140
248.41	141.92	96.51	Quartz Pebble	4	248	140
248.31	141.74	96.46	Chert Flake	4	248	140
248.2	141.33	96.51	Cortical Chert Cobble	4	248	140
248.34	140.74	96.8	Flake	4	248	140
248.47	140.55	96.77	Chert Flake	4	248	140
248.24	140.68	96.71	Chert Debris	4	248	140
248.83	140.86	96.7	Chert Debris	4	248	140
248.67	140.85	96.61	Chert Debris	4	248	140
248.24	140.69	96.56	Chert Debris	4	248	140
248.48	141.59	96.61	Cortical	5	248	140
248.31	141.48	96.6	Chert Pebble	5	248	140
248.37	141.18	96.53	Cortical Chert Pebble	5	248	140
248.4	141.85	96.45	Chert Debris	5	248	140
248.2	141.26	96.62	Chert Pebble	5	248	140
248.48	140.77	96.81	Chert Debris	5	248	140

Table A15-20 O continued

2012 N	E	Depth	Type	Art#	North	East
248.52	140.5	96.78	Cortical Chert Debris	5	248	140
248.63	140.71	96.71	Cortical Chert Debris	5	248	140
248.83	140.85	96.7	Chert Pebble	5	248	140
248.63	140.7	96.62	Cortical Chert Debris	5	248	140
248.21	140.68	96.55	Chert Debris	5	248	140
248.52	141.65	96.62	Cortical	6	248	140
248.38	141.17	96.56	Broken Quartz	6	248	140
248.55	141.12	96.51	Cortical Pebble	6	248	140
248.49	141.82	96.45	Cortical Chert Pebble	6	248	140
248.27	141.86	96.55	Cortical Chert Cobble	6	248	140
248.51	140.76	96.8	Broken Quartz	6	248	140
248.13	140.25	96.76	Cortical Chert Debris	6	248	140
248.93	140.58	96.76	Cortical Chert Debris	6	248	140
248.93	140.9	96.7	Quartz Debris	6	248	140
248.82	140.62	96.6	Cortical Chert Flake	6	248	140
248.24	140.65	96.56	Chert Flake	6	248	140
248.5	141.86	96.61	Cortical	7	248	140
248.41	141.66	96.59	Broken Quartz	7	248	140
248.6	141.15	96.51	Possible Tool	7	248	140
248.53	141.79	96.49	Cortical Chert Pebble	7	248	140
248.14	141.29	96.51	Chert Debris	7	248	140
248.57	140.71	96.8	Cortical Chert Debris	7	248	140
248.23	140.1	96.75	Cortical Chert Pebble	7	248	140
248.94	140.55	96.75	Cortical Chert Debris	7	248	140
248.02	140.76	96.69	Cortical Chert Debris	7	248	140
248.87	140.54	96.6	Quartz Pebble	7	248	140
248.25	140.62	96.55	Weathered Chert	7	248	140
248.51	141.98	96.64	Cortical	8	248	140
248.4	141.75	96.6	Cortical Chert	8	248	140
248.67	141.15	96.5	Cortical Chert Pebble	8	248	140
248.44	141.16	96.44	Bend Break	8	248	140
248.22	141.34	96.48	Broken Quartz	8	248	140
248.06	140.42	96.8	Cortical Chert Pebble	8	248	140

Table A15-20 O continued

2012 N	E	Depth	Type	Art#	North	East
248.59	140.16	96.78	Cortical Chert Debris	8	248	140
248.78	140.51	96.73	Cortical Chert Pebble	8	248	140
248.3	140.7	96.65	Chert Debris	8	248	140
248.48	140.57	96.6	Cortical Chert Debris	8	248	140
248.11	140.58	96.56	Broken Quartz	8	248	140
248.6	141.44	96.62	Cortical Debris	9	248	140
248.53	141.19	96.57	Cortical Chert Pebble	9	248	140
248.57	141.4	96.54	Quartz Pebble	9	248	140
248.58	141.28	96.49	Cortical Chert Pebble	9	248	140
248.1	140.42	96.8	Chert Debris	9	248	140
248.57	140.1	96.76	Chert Secondary	9	248	140
248.89	140.4	96.7	Chert Debris	9	248	140
248.4	140.59	96.65	Chert Pebble	9	248	140
248.33	140.55	96.63	Cortical Chert Pebble	9	248	140
248.39	140.6	96.585	Chert Debris	9	248	140
248.63	141.42	96.61	Broken Quartz	10	248	140
248.53	141.82	96.6	Cortical Chert Pebble	10	248	140
248.73	141.31	96.52	TA Chert Debris	10	248	140
248.55	141.28	96.49	Cortical Chert Pebble	10	248	140
248.12	140.4	96.8	Chert Debris	10	248	140
248.94	140.31	96.8	Cortical Chert Debris	10	248	140
248.15	140.28	96.73	Cortical Chert Pebble	10	248	140
248.06	140.5	96.68	Chert Pebble	10	248	140
248.2	140.55	96.58	Cortical Chert Pebble	10	248	140
248.43	140.67	96.59	TA Chert Debris	10	248	140
248.63	141.34	96.63	2° Chert Debris	11	248	140
248.6	141.07	96.57	Quartz Pebble	11	248	140
248.79	141.38	96.53	Cortical Chert Pebble	11	248	140
248.58	141.07	96.49	Cortical Chert Pebble	11	248	140
248.27	140.38	96.81	Broken Quartz	11	248	140
248.22	140.23	96.7	Cortical Chert Pebble	11	248	140
248.2	140.46	96.17	Chert Debris	11	248	140
248.03	140.59	96.62	Cortical Chert Debris	11	248	140

Table A15-20 O continued

2012 N	E	Depth	Type	Art#	North	East
248.45	140.71	96.59	Chert Debris	11	248	140
248.74	141.26	96.62	2° Chert Debris	12	248	140
248.64	141.23	96.57	Chert Debris	12	248	140
248.77	141.52	96.52	Chert Flake Distal	12	248	140
248.68	141.03	96.5	Flake Distal	12	248	140
248.16	140.16	96.82	Quartz Pebble	12	248	140
248.42	140.29	96.73	Chert Debris	12	248	140
248.1	140.41	96.65	Chert Pebble	12	248	140
248	140.53	96.61	Chert Debris	12	248	140
248.51	140.71	96.59	Cortical Chert Debris	12	248	140
248.81	141.47	96.61	Cortical Chert	13	248	140
248.7	141.36	96.56	Chert Debris	13	248	140
248.88	141.82	96.52	Cortical Pebble	13	248	140
248.75	141	96.49	Quartz Pebble	13	248	140
248.15	140.11	96.83	Cortical Chert Pebble	13	248	140
248.45	140.2	96.7	Chert Debris	13	248	140
248.75	140.3	96.66	Chert Flake	13	248	140
248.13	140.51	96.62	Cortical Chert Pebble	13	248	140
248.47	140.75	96.55	Chert Debris	13	248	140
248.83	141.08	96.65	Chert Debris	14	248	140
248.77	141.94	96.59	Chert Cobble	14	248	140
248.9	141.83	96.5	Broken Quartz	14	248	140
248.89	141.1	96.44	Cortical Debris	14	248	140
248.37	140.19	96.8	Chert Debris	14	248	140
248.17	140.22	96.71	Chert Debris	14	248	140
248.04	140.2	96.66	Chert Flake	14	248	140
248.13	140.44	96.63	Cortical Chert Pebble	14	248	140
248.53	140.78	96.55	Cortical Chert Debris	14	248	140
248.36	141.75	96.61	2° Chert Debris	15	248	140
248.74	141.7	96.555	Chert Flake	15	248	140
248.9	141.17	96.51	Chert Debris	15	248	140
248.95	141.09	96.47	Broken Quartz	15	248	140
248.49	140.1	96.81	Cortical Chert Pebble	15	248	140

Table A15-20 O continued

2012 N	E	Depth	Type	Art#	North	East
248.28	140.22	96.68	Chert Pebble	15	248	140
248.18	140.32	96.6	Chert Debris	15	248	140
248.42	140.66	96.56	Broken Chert Pebble	15	248	140
248.89	141.12	96.54	Cortical Pebble	16	248	140
248.7	141.66	96	Chert Debris	16	248	140
248.28	140.14	96.66	Broken Quartz	16	248	140
248.91	140.39	96.6	Cortical Chert Debris	16	248	140
248.56	140.57	96.55	Chert Debris	16	248	140
248.9	141.07	96.54	Cortical Chert Pebble	17	248	140
248.55	141.45	96.43	Chert Cobble/Core	17	248	140
248.43	140.25	96.6	Chert Debris	17	248	140
248.77	140.67	96.55	Chert Pebble	17	248	140
248.89	141.05	96.53	Cortical Chert Pebble	18	248	140
248.65	141.1	96.46	Chert Tool	18	248	140
248.34	140.22	96.61	Cortical Chert Debris	18	248	140
248.81	140.64	96	Battered Quartz	18	248	140
248.17	141.96	96.49	Cortical Pebble	19	248	140
248.19	140.19	96.61	Cortical Chert Flake	19	248	140
248.88	140.61	96.56	Cortical Chert Pebble	19	248	140
248.96	141.13	96.53	Cortical Pebble	20	248	140
248.12	140.2	96.62	Quartz Pebble	20	248	140
248.91	140.63	96	Cortical Chert Pebble	20	248	140
248.92	141.04	96.53	Chert Debris	21	248	140
248.05	140.07	96.63	Cortical Chert Pebble	21	248	140
248.01	140.49	96.55	TA Chert Flake	21	248	140
248.12	140.03	96.64	Cortical Chert Debris	22	248	140
248.6	140.44	96.55	Cortical Chert Pebble	22	248	140
248.35	140	96.65	Chert Flake	23	248	140
248.8	140.44	96.56	Broken Quartz	23	248	140
248.11	140.4	96.59	Chert Debris	24	248	140
248.22	140.47	96.55	Cortical Chert Pebble	25	248	140
248.22	140.29	96.55	TA Chert Flake	26	248	140
248.33	140.3	96.59	Chert Debris	27	248	140

Table A15-20 O continued

2012 N	E	Depth	Type	Art#	North	East
248.47	140.32	96.59	Cortical Chert Pebble	28	248	140
248.49	140.3	96.57	Chert Debris	29	248	140
248.62	140.3	96.55	Chert Pebble	30	248	140
248.72	140.45	96.55	Chert Debris	31	248	140
248.8	140.52	96.55	Chert Debris	32	248	140
248.83	140.39	96.55	Chert Debris	33	248	140
248.88	140.47	96.55	Chert Debris	34	248	140
248.87	140.2	96.56	Chert Debris	35	248	140
248.41	140.06	96.55	Quartz Pebble	36	248	140
248.31	140.12	96.57	Cortical Chert Pebble	37	248	140

Table A15-20 P
Mapped Artifacts from 1985 Excavations at the Topper Site (38AL23).

1985 N	E	Depth	Type			
220.21	88.18	64cmbs	Uniface			
221.22	88.18	64cmbs	Uniface			
222.1	108.83	70cmbs	Uniface			
222.18	108.33	68cmbs	Uniface			
222.18	108.33	68cmbs	Uniface			
223	109.85	69cmbs	Uniface			
223.66	109.98	70cmbs	Uniface			
230	111.33	50cmbs	Uniface			
188.18	90.58	87cmbs				
188.64	90.45	81cmbs				
188.66	91.08	48cmbs				
188.72	90.32	49cmbs				
188.84	90.32	94cmbs				
188.85	90.28	74cmbs				
189.04	92.3	57.3cmbs				
189.08	90.37	90cmbs				
189.2	90.25	89cmbs				
189.46	90.08	29cmbs				
189.46	90.58	74cmbs				
189.675	91.77	57.5cmbs				

Table A15-20 P continued

N	E	Depth	Type			
189.7	90.12	50cmbs				
189.77	90.15	74cmbs				
189.97	91.39	89cmbs				
213.95	131.4	98.52				
214	131.63	98.18				
220	87.75	70cmbs				
220.01	88.77	33cmbs				
220.25	87.92	16cmbs				
220.4	87.5	80cmbs				
220.55	87.5	18cmbs				
220.7	87.77	76.5cmbs				
221.65	87.5	39cmbs				
221.88	88.75	59cmbs				
221.98	87.19	71.5cmbs				
222.05	108.1	66cmbs				
222.13	108.06	42cmbs				
222.35	108.04	69cmbs				
222.42	108.29	71.5cmbs				

Table A15-20 P continued

N	E	Depth	Type			
222.65	108.6					
222.8	108.05	47cmbs				
222.95	108.81	64.5cmbs				
223	109.8	70cmbs				
223.02	109.62	63cmbs				
223.1	108.3	48cmbs				
223.14	108.46	71cmbs				
223.35	109.17	73cmbs				
224	168.81	73cmbs				
225.19	109.3	82cmbs				
229.1	111.44	50cmbs				
229.16	110.81	54cmbs				
229.2	110.86	56cmbs				
229.37	110.84	58cmbs				
230.3	111.67	47				
230.67	111.56	46.6cmbs				
230.9	111.65	47.5				
230.91	111.8	46cmbs				
231.14	91.33	21cmbs				
231.14	91.88	10cmbs				
231.2	92.45	19.5cmbs				
231.7	91.56	85cmbs				
232.47	92.04	9cmbs				
232.58	92.59	14cmbs				

Table A15-21
Number of Artifacts by Unit and Level for each Field Season at the Topper Site (38AL23)

N	E	1998	Depth	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
244	106	2X2	0-100		0	1	4	32	5	8	8	4	0	0	0	0													
244	110	2X2	0-170	0	2	2	2	22	3	1	5	2	0	0	0	0	0	0	0	0	0	0	0						
244	118	2X2	0-200		0	7	4	19	4	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
244	124	2X2	0-170		0	0	6																						
244	130	1X2	0-194																										
244	130	1X2	0-210																										
250	92	2X2	0-140																										
254	110	2X2	0-100																										
282	112	2X2	0-100																										

Table A15-21 continued

N	E	1999	Depth	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
208	130	2X2	0-210	0	1	20	2																						
208	132	2X2	0-110	1	0	20	0	0	0	0	0	0	0	0	0	4	3	4	3	4	0	0	0	1	0	1	1	0	
208	134	2X2	97.50	1	2	9	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
208	136	2X2	95.599	0	0	9	1																						
210	130	2X2	96.06	18	0	0	0																						
210	132	2X2	97.60	0	0	2	1	0	0	0	0	0	0	11	11	10	5	9	20	4	6	5	0	0	0	0	1	0	
210	134	2X2	97.60	0	0	4	4	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0		
210	136	2X2	96.550	0	2	9																							
212	132	2X2	97.98	1	2	2																							
212	134	2X2	97.80	5	0	0																							
212	136	2X2	98.00	0	0	1																							

Table A15-21

N	**E**	**1999**	**Depth**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	26
242	130	2X2	170	0	0	0	0	0		0	0	3	2	1	0	4	1	1	13	42									
242	132	2X2	165	0	0	15	0	1	2	5	1	0	0	2	0	0	1	15	14	1									
268	132	1X2	210	0	0	0	0	0	1	0	2	7	2	0	0	1	8	1	5	2	0	0	0	0	0	0			
282	132	2X2	230	0	0	0	0	0	0	0	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	1			

Table A15-21 continued

N	**E**	**2000**	**Depth**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	26
242	128	2X2	Tert.	0	0	0	0	3	0	7	13	6	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	2
242	130	2X2	Tert.																		0	1	0	2	5				
242	132	2X2	205																		1	3	0						
242	134	2X2	195	0	16	0	2	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	3	6	0	23	28	2
244	108	2X2	95	0	0	1	0	4	1	0	1	0	0																
244	128	2X2	195	0	0	0	1	0	0	3	1	0	0	0	0	0	1	0	2	0	0	0	0	1	1	0	0	0	1
244	132	2X2	210	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	0	9	0	0
244	134	2X2	195	0	0	1	0	1	30	2	0	1	0	0	0	0	0	0	1	0	0	0	1	2	3	21	1	2	1
244	146	2X2	220	0	0	0	7	0	1	4	0	0	0	0	4	0	2	11	2	4	12	21	18	16	5				
244	148	2X2	210	0	0	44	16	0	0	2	1	0	5	5	44	0	0	12	18	3	5	27	32						

Table A15-21 continued

N	**E**	**2001**	**Depth**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	26
230	106			0	0	0	0	4	0	0	0	0	0	0															
232	102			0	0	0	0	0	0	0	49	0	0	0															
232	104			0	0	0	0	0	0	0	0	0	0	0															
232	106			0	0	0	0	0	0	0	0	0	0	0															
234	102			0	0	0	0	0	0	0	0	0	0	0															
234	104			0	0	0	0	0	0	0	0	0	0	0															
234	106			0	0	0	0	0	0	0	16	0	0	0															
236	106			0	0	1	0	32	0	0	0	0	0	0															
238	106			0	0	0	0	1	4	2	5	2	0	0															
240	106			0	0	0	0	0	0	0	0	0	0	0															
242	106			0	9	0	0	0	0	0	0	0	0	0															

Table A15-21 continued

N	E	2001	Depth	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
238	128			-	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	2	0	0	0	0	0		-	0
238	130				1	1	1	0																					1
238	132			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						0	0
238	134			6	4	0	0	0	0	0	0	0	0	0	0	1	0	4	2	2	1	0	1	0				6	4
240	128			-	11	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	-	11
240	130			1	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	1	0	4		1	2
240	132			2	1	1	0	0	3	0	0	0	0	0	0	60	0	12	0	0	2	2	0	0				2	1
240	134			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	11	0	2				0	0
236	126			0	0	0	0																						
236	128			-	5	0	0																						
236	130			0	1	0																							
236	132			0	0	0																							
236	134			0	0	0																							
236	136			0	5	0																							
237	136			-																									
238	136			-	1	0	0																						
240	126			-	0	1	0																						
240	136			2	0	0																							

Table A15-21 continued

N	**E**	**2002**	**Depth**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	26
242	136			0	0	2	2	2	0	0	0	0	0	0	0	0	0	2	0	10	6	5	4	5	5	1	0	0	2
N	**E**	**2002**	**Depth**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	26
242	138			0	0	0	2	0	0	0	0	0	0	1	4	1	17	7	1	11	7	11					0	0	0
242	140			0	0	5	5	2	0	0	0	1	1	1	12	11	11										0	0	5
242	142			0	3	2	1	1	1	0	0	2	1	0	2	12	8										0	3	2
242	144			0	3	3	2																				0	3	3
244	136			0	0	0	33	2	2	0	0	1	0	0	1	1	1	0	3	1	1	5	1				0	0	0
244	138			0	0	2	4	3	0	0	1	1	1	1	2	7	87	1	10	10	1	2	3				0	0	2
244	140			0	0	9	5	0	0	0	0	0	0	1	3	1	20	23									0	0	9
244	142			0	1	5	1	0	0	0	1	15	5	4	4	8	68										0	1	5
244	144			0	6	0	1																				0	6	0
246	136			0	0	0	4	0																			0	0	0
246	138			0	0	1	5	0																			0	0	1
246	140			0	0	1	2	3																			0	0	1
246	142			0	4	6	0																				0	4	6
246	144			3	0	0	0																				3	0	0
267	134				0	0	0	0	0	0	0	0	0	5	0	0	0		0	0	0	0	0	0	0	0	0	5	0
267	136				0	0	0	0	1	1	0	0	2	1	0	0			0	0	0	0	1	1	0	0	2	1	0
269	134			0	0	0	0	0	0	0	0	0	1	8	0			0	0	0	0	0	0	0	0	0	1	8	0
284	134			0	0	0	2	0	0	1	0	0	0	0	10	0	0	0	0	0	0	0	0						0
284	136			0	0	0	0	0	0	1	1	0	14	19	0	0	0	0	0	0	0	0	0						0
285	135																	0	0	0	0	0	0						
285	137																	0	0	0	0	0	0						
286	134			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						0
286	136			0	0	0	0	0	0	0	1	1	2	8	1	1													0
286	138			0	0	0	0	0	0	0	0	0	2	3	1	7	8	0	0	0									0
T	A			0	0	0	0	0	0																				
T	B			2	0	1	3	1	0																				
T	C			0	0	3	3	0	0																				
T	D			0	0	2	3	4	4																				
T	E			0	0	0	5	5	3																				

Table A15-21 continued

N	**E**	**2003**	**Depth**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	26
242	140			-	5	13	24	-																						
242	142			6	5	28	-	-																						
244	140			-	2	2	3	3																						
244	142			7	14	24	-	-																						
270	152					0	2	2	3																					
270	154				21	7																								
270	156			2	29																									
272	152			1																										
272	154				4	3																								

Table A15-21 continued

N	E	2002	Depth	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
272	156				39																								
274	152						2																						
274	154				1	16	9	24									7												
274	156				45																								

Table A15-21 continued

N	E	2003	Depth	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
284	132			0	3	0	1	1	14	4	2	1	0	3	0	4	0	0	0	0	0								
286	132			0	2	1	0	1	3	1	1	1	2	1	2	2	4	1	0	1	1								
288	132			0	1	0	1	1	2	1	0	1	2	2	6	4	1	0	0	0	0								
288	134			0	0	0	0	1	2	2	0	5	3	6	26	16	3	1	0	0	0								
286	134			1	7	8	0	4	5	1	2	3	3	9	13	2	1	0	0	0	0								

Table A15-21 continued

N	E	2004	Depth	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
288	138			0	0	0	0	0	0	0	0	0	0	3	6	2	5	0	0	0	0	0	0	0	0	0	0	0	0
290	132			0	0	0	0	2	0	3	0	0	0	5	2	2	3	0	0	0	0	0	0	0	0	2	0	3	0
290	134			0	0	0	0	0	0	0	0	0	0	0	25	17	4	0	0	0	0	0	0	0	0	0	0	0	0
290	136			0	0	0	0	1	1	0	0	0	0	4	6	12	0	0	0		0	0	0	0	0	1	1	0	0
292	134			0	0	0	1	1	1	3	2	3	4	4	2	6	11	4	0	0	0	0	0	0	1	1	1	3	2
292	136			0	0	0	0	1	1	0	0	0	0	4	6	12	0	0	0	0	0	0	0	0	0	1	1	0	0
290	138			0	1	0	10	0	0	0	0	2	2	11	19	0	3	1	0	0	0	0	1	0	10	0	0	0	0
292	132					3	1	0	0	2	1	2	0	1	1	4	2	0	0					3	1	0	0	2	1
294	122								0	0	0	2	1	2	1	2	1	1	0				0	0	0	2	1	2	1
296	114								0	0	0	2	1	2	1	2	1	1	0				0	0	0	2	1	2	1
296	126							0	1	0	0	1	0	2	0	0	1	0	0	0	0	0	1	0	0	1	0	2	0
238	138			0	0	4	0	27																					
242	140							0	1	4	2	3	1	0	0	1	4	2	3	1	0								
242	140			0	0	2	2	2	10	11																			
242	140			1	1	6	3	2	1	3	1	4	4	4															
242	142			0	1	4	5	1	12	6																			
246	140				0	2	1	0	0	0	0	1	6	3	0	1	1	5	6	2	14	18	4	12	24	4	0	0	0
246	142			1	0	6	1	1	3	1	6	3	3	2	2	4	4	24	5	2	0	2	6	5	6	6	16	1	
248	140				1	4	0	0	5	0	0	4	3	0	0	0	0												
248	142			0	2	16	3	3	2	0	0	0	1	2	0	0	0												

N	E	2002	Depth	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
244	140SW			1	0	0	4	3	5	2	0	0	1	0	2	0	3	2	3	1									
244	144SW			0	3	1	2	3	8	16	4	4	5	10	6	4	5												
242	140NE				4	16	12	15	6	3																			
242	140NW			0	0	2	14	11	40	23	0	0	5	3	6	2													
242	144NW			3	4	4	4	1	4	2	6	2	5	11	16	20	4	0											

APPENDIX 16

SPECIMEN CATALOG OF UNMAPPED ARTIFACTS FROM EXCAVATIONS AT THE TOPPER SITE (38AL23)

Table A16-1
Specimen Catalog of unmapped artifacts from the 1998 Excavations at the Topper Site (38AL23)

	Mississippian	**Woodland**	**Archaic**	**Paleoindian**	**PS**	**Total**
	0-10cmbs	**10-40cmbs**	**40-90cmbs**	**>90cmbs**	**>120cmbs**	
Bifaces	4	1	21	2	**0**	**28**
Blades	0	0	4	0	**0**	**4**
Cores	0	0	6	2	**0**	**8**
Unifaces	0	0	4	0	**0**	**4**
Hammer-stone	0	0	3	0	**0**	**3**
Scraper	0	0	1	1	**0**	**2**
Flake Tool	0	0	2	3	**3**	**8**
Graver	0	0	0	0	**0**	
Not Spec.	1	12	74	0	**0**	**87**
Total	**5**	**13**	**115**	**8**	**3**	**144**

PS = Pleistocene Sands

Table A16-2
Results of 1999 Excavation. Lithic Tool Types recovered from the Screen by Culture Chronology.

	Mississippian	**Woodland**	**Archaic**	**Paleoindian**	**Total**
	0-10cmbs	**10-40cmbs**	**40-90cmbs**	**>90cmbs**	
Bifaces	3	5	7	1	**16**
Blades	2	4	1	7	**14**
Cores	0	0	7	3	**10**
Unifaces	0	0	7	1	**8**
Pottery	2	3	0	0	**5**
Hammer-stone	0	1	1	0	**2**
Scraper	1	0	5	1	**7**
Flake Tool	0	1	1	3	**5**
Graver	0	0	0	1	**1**
Not Spec	1	1	7	0	**9**
Total	**9**	**15**	**36**	**17**	**77**

Table A16-3
Specimen Catalog of unmapped artifacts from the 1999 Excavations at the Topper Site (38AL23)

Provenience	Cat #	Contents	Quant.	Vertical	Horizontal	Date
N208 E130	1	Microblades		0-10		5-6-99
N208 E132	1	Microblade	1	97.90-97.80		5-6-99
N208 E132	2	Microblade	1	96.75-96.70		5-19-99
N208 E132	3	Flake	1	96.75-96.70		5-20-99
N208 E134	1	Microblades		98.00-97.90		5-6-99
N208 E134	2	Microblades		97.70-97.60		5-8-99
N208 E134	3	Blade Medial	1	97.00-96.95		5-20-99
N210 E130	1	Microblades		70-80		5-6-99
N210 E130	2	Microblades		80-90		5-6-99
N210 E130	3	Microblades		97.80-97.70		5-11-99
N210 E130	4	End Scraper		97.70-97.60		5-11-99
N210 E130	5	Flake	1	97.70-97.60		5-11-99
N210 E130	6	Ceramic	1	70-80		5-6-99
N210 E132	1	Microblades		70-80		5-5-99
N210 E132	2	Chert Cluster		80-90		5-6-99
N210 E134	1	Microblade	1	70-80		5-5-99
N210 E134	2	Macroblade	1	70-80		5-5-99
N210 E134	3	Microblades		80-90		5-6-99
N210 E134	4	Macroblades		80-90		5-6-99
N210 E134	5	Utilized Flakes		80-90		5-6-99
N210 E134	6	Biface	1	80-90		5-6-99
N210 E134	7	Uniface	1	97.25-97.20		5-14-99
N242 E130	1	Biface	1	0-10		-
N242 E130	2	Endscraper	1	0-10		-
N242 E130	3	Pottery	1	0-10		-
N242 E130	4	Blade	1	0-10		-
N242 E130	5	Lead Shot	1	10-20		5-20-99
N242 E130	6	Pottery Sherds		10-20		5-20-99
N242 E130	7	Chert Flakes		10-20		5-20-99
N242 E130	8	Blade	1	10-20		5-20-99
N242 E130	9	Blade Section	1	10-20		5-20-99
N242 E130	10	Flakes		20-30		5-21-99
N242 E130	11	Blades		20-30		5-21-99
N242 E130	12	Stamped Sherds		20-30		5-21-99
N242 E130	13	Chert Flakes		30-40		5-21-99
N242 E130	14	Sherds		30-40		5-21-99
N242 E130	15	River Cobble	1	30-40		5-21-99
N242 E130	16	Flake	1	30-40		5-21-99
N242 E130	17	Blades		40-50		5-21-99
N242 E130	18	Chert Flakes		40-50		5-21-99
N242 E130	19	Quartz Cobble	1	40-50		5-21-99

Table A16-3 continued

Provenience	Cat #	Contents	Quant.	Vertical	Horizontal	Date
N242 E130	20	Charcoal		40-50		5-21-99
N242 E130	22	Small Sherd		40-50		5-21-99
N242 E130	21	Hematite		40-50		5-21-99
N242 E130	23	Heated Pebbles		40-50		5-21-99
N242 E130	24	Flakes		50-60		5-22-99
N242 E130	25	Blade Frags		50-60		5-22-99
N242 E130	26	Core	1	50-60		5-22-99
N242 E130	27	Fcr	1	50-60		5-22-99
N242 E130	28	Chert		50-60		5-22-99
N242 E130	29	Flakes		60-70		5-22-99
N242 E130	30	Blades		60-70		5-22-99
N242 E130	31	Hammerstones		60-70		5-22-99
N242 E130	32	Core Blade	1	60-70		5-22-99
N242 E130	33	Flakes		70-80		5-25-99
N242 E130	34	Tool	1	70-80		5-25-99
N242 E130	35	Hammerstone	1	70-80		5-25-99
N242 E130	36	Scraper	1	70-80		5-25-99
N242 E130	37	Steatite	1	70-80		5-25-99
N242 E130	38	Disc	1	70-80		5-25-99
N242 E130	39	Flakes		80-90		5-25-99
N242 E130	40	Broken Point	1	80-90		5-25-99
N242 E130	41	Uniface	1	80-90		5-25-99
N242 E130	42	Scraper	1	80-90		5-25-99
N242 E130	43	Blade Core	1	80-90		5-25-99
N242 E130	44	Blade Frag	1	80-90		5-25-99
N242 E130	45	Blade Core	1	90-100		5-22-99
N242 E130	46	Blade Frag	1	90-100		5-22-99
N242 E130	47	Microblade	1	90-100		5-22-99
N242 E130	48	Flake	1	140-150		5-27-99
N242 E130	49	Blade	1	120-130		5-26-99
N242 E130	50	Blade Core	1	120-130		5-26-99
N242 E132	1	Triangular Point	1	0-18		6-21-99
N242 E132	2	Pottery		0-18		6-21-99
N242 E132	3	Biface Base	1	10-20		6-22-99
N242 E132	4	Bif. Fragments		20-30		6-22-99
N242 E132	5	Mala Preforms		20-30		6-22-99
N242 E132	6	Burned Chert		20-30		6-22-99
N242 E132	7	Quartz		20-30		6-22-99
N242 E132	8	Debitage		20-30		6-22-99
N242 E132	9	Blade		40-50		6-22-99
N242 E132	10	Side Scraper	1	40-50		6-22-99
N242 E132	11	Debitage				6-22-99
N242 E132	12	Grinding Stone	2	50-60		6-22-99
N242 E132	13	Uniface	2	50-60		6-22-99

Table A16-3 continued

Provenience	Cat #	Contents	Quant.	Vertical	Horizontal	Date
N242 E132	14	Uniface	1	60-70		6-23-99
N242 E132	15	Cores		60-70		6-23-99
N242 E132	16	Utilized Flakes		60-70		6-23-99
N242 E132	17	Blades		60-70		6-23-99
N242 E132	18	Debitage		60-70		6-23-99
N242 E132	19	Burins		70-80		6-23-99
N242 E132	20	Blades		70-80		6-23-99
N242 E132	21	Small Flakes		90-100		6-23-99
N242 E132	22	Microblades		90-100		6-23-99
N242 E132	23	Flakes		90-100		6-23-99
N242 E132	24	Small Debitage		90-100		6-23-99
N242 E132	25	Gravel		90-100		6-23-99
N242 E132	26	Utilized Flakes		150-160		6-25-99
N242 E132	27	Endscraper	1	160-165		6-25-99
N268 E132	1	Pottery		0-10		5-13-99
N268 E132	2	Blade	1	0-10		5-13-99
N268 E132	3	Yadkin Point	1	10-20		5-13-99
N268 E132	4	Pottery	1	10-20		5-13-99
N268 E132	5	Yadkin Point	1	20-30		5-13-99
N268 E132	6	Pottery	1	20-30		5-13-99
N268 E132	7	Blade	1	20-30		5-13-99
N268 E132	8	Blade	1	30-40		5-14-99
N268 E132	9	Pottery	1	30-40		5-14-99
N268 E132	10	Biface Distal	1	40-50		5-14-99
N268 E132	11	Uniface Scraper	1	40-50		5-14-99
N268 E132	12	Biface Proximal	1	40-50		5-14-99
N268 E132	13	Blades		40-50		5-14-99
N268 E132	14	Pottery		40-50		5-14-99
N268 E132	15	Granite	1	50-60		5-14-99
N268 E132	16	Granite	1	50-60		5-14-99
N268 E132	17	Pottery		60-70		-
N268 E132	18	Blade Core	1	60-70		-
N268 E132	19	Blades		60-70		-
N268 E132	20	Bifaces		70-80		5-14-99
N268 E132	21	Bifaces		80-90		5-15-99
N268 E132	22	Blade Core	1	80-90		5-15-99
N268 E132	23	Point Tip	1	80-90		5-15-99
N268 E132	24	Blade Core	1	90-100		5-18-99
N268 E132	25	Palmer	1	90-100		5-18-99
N268 E132	26	Kirk	1	90-100		5-18-99
N268 E132	27	Blade Fragment	1	140-150		5-19-99
N268 E132	28	Microblade	1	160-170		5-20-99
N268 E132	29	Microblades		160-170		5-20-99
N268 E132	30	Small Biface	1	160-170		5-20-99

Table A16-3 continued

Provenience	Cat #	Contents	Quant.	Vertical	Horizontal	Date
N268 E132	31	Graver	1	200-210		5-25-99
N282 E132	1	Biface Fragment	1	0-10		5-25-99
N282 E132	2	Taylor Point	1	20-30		5-25-99
N282 E132	3	Preforms		50-60		5-25-99
N282 E132	4	Uniface	1	70-80		5-26-99
N282 E132	5	Sidescraper	1	70-80		
N282 E132	6	Biface	1	70-80		5-26-99
N282 E132	7	Large Core	1	70-80		5-26-99
N282 E132	8	Blade Core	1	70-80		5-26-99
N282 E132	9	Uniface	1	70-80		5-26-99
N282 E132	10	Chert Flakes		160-170		5-27-99

Table A16-4
Results of 2000 Excavation. Lithic Tool Types recovered from the Screen by Culture Chronology.

	Mississippian	**Woodland**	**Archaic**	**Paleoindian**	**Pre Clovis**	**Total**
	0-10cmbs	**10-40cmbs**	**40-90cmbs**	**90-140cmbs**	**>140cmbs**	
Bifaces	0	5	6	0	0	**11**
Blades	0	0	3	3	2	**8**
Cores	0	0	1	2	1	**4**
Unifaces	0	0	0	0	0	**0**
Pottery	0	3	0	0	0	**3**
Hammer-stone	0	0	1	0	0	**1**
Scraper	0	0	0	0	0	**0**
Flake Tool	0	0	0	3	0	**3**
Graver	0	0	0	1	1	**2**
Flake	0	0	2	3	1	**6**
Chunks	0	0	5	2	1	**8**
Total	**0**	**8**	**18**	**14**	**6**	**46**

Table A16-5

Specimen Catalog of unmapped artifacts from the 2000 Excavations at the Topper Site (38AL23)

Provenience	Cat	Contents	Quant.	Vertical	Horizontal	Date
N242 E128	1	Chert Flakes		10-20		5-03-2000
N242 E128	2	Preform Distal	1	20-30		5-03-2000
N242 E128	3	Flake	1	20-30		5-03-2000
N242 E128	4	Chert Flakes		20-30		5-03-2000
N242 E128	5	Feature 50		70-80		5-4-2000
N242 E128	6	Graver	1	135-140		5-12-2000
N242 E132	1	Microblade Core	1	190-195		5-27-2000
N242 E134	1	Cluster Of Sherds		20-30		5-09-2000
N242 E134	2	Ta Pebble		140-150		5-18-2000
N242 E134	3	Ta Pebble		140-150		5-18-2000
N242 E134	4	Ta Pebble		140-150		5-18-2000
N242 E134	5	Scraper		160-165		5-24-2000
N242 E134	6	Burin Spall		160-165		5-24-2000
N224 E108	1	Woodland Point	1	10-20		5-10-2000
N224 E108	2	Flakes		10-20		5-10-2000
N224 E108	3	Sherds		10-20		5-10-2000
N224 E108	4	Flakes		20-30		5-10-2000
N224 E108	5	Sherds		20-30		5-10-2000
N224 E108	6	Ta Chert		30-40		5-11-2000
N224 E108	7	Biface Flakes		60-70		5-12-2000
N224 E108	8	Flake	1	90-95		5-13-2000
N244 E128	1	Biface	1	20-30		5-03-2000
N244 E128	2	Biface	1	20-30		5-03-2000
N244 E128	3	Flakes		30-40		5-03-2000
N244 E128	4	Sherds		30-40		5-03-2000
N244 E128	5	MALA Point	1	30-40		5-03-2000
N244 E128	6	Mack Point	1	30-40		5-03-2000
N244 E128	7	Blade Frag	1	125-130		5-12-2000
N244 E128	8	Blade	1	135-140		5-12-2000
N244 E128	9	Utilized Flake	2	135-140		5-12-2000
N244 E128	10	Chert Flakes		135-140		5-13-2000
N244 E128	11	Chert Flake	1	140-145		5-13-2000
N244 E132	1	Chert Flakes		0-10		5-4-2000
N244 E132	2	Sherds		0-10		5-4-2000
N244 E132	3	Sherd	1	10-20		5-4-2000
N244 E132	4	Chert Chunk	1	40-50		5-4-2000
N244 E132	5	Chert Chunk	1	40-50		5-4-2000
N244 E132	6	Microblade	1	50-60		5-5-2000
N244 E132	7	Microblade	1	50-60		5-5-2000
N244 E132	8	Microblade	1	50-60		5-5-2000
N244 E132	9	Flake	1	80-90		5-6-2000

Table A16-5 continued

Provenience	Cat	Contents	Quant.	Vertical	Horizontal	Date
N244 E132	10	Chert Chunks		90-95		5-6-2000
N244 E132	11	Blade	1	120-125		5-7-2000
N244 E132	12	Burin Spall	1	120-125		5-7-2000
N244 E132	13	Thinning Flakes	1	120-125		5-7-2000
N244 E132	14	Graver	1	140-145		5-11-2000
N244 E134	1	Woodland Point	1	20-30		5-10-2000
N244 E134	2	Distal Preform	1	40-50		5-10-2000
N244 E134	3	Mala Preform	1	40-50		5-10-2000
N244 E134	4	Ta Point Tip	1	40-50		5-10-2000
N244 E134	5	Core	1	70-80		5-11-2000
N244 E134	6	Quartz Cobbles		95-100		5-11-2000
N244 E134	7	Chert Flakes		95-100		5-11-2000
N244 E134	8	Flake	1	110-115		5-13-200
N244 E146	1	Sherds		20-30		5-18-2000
N244 E146	2	Flakes		20-30		5-18-2000
N244 E146	3	Cobbles		40-50		5-19-2000
N244 E146	4	Flakes		40-50		5-19-2000
N244 E146	5	Cobble		50-60		5-20-2000
N244 E146	6	Cobble		50-60		5-20-2000
N244 E146	7	Cobble		50-60		5-20-2000
N244 E146	8	Cobble		50-60		5-20-2000
N244 E146	9	Chert Flakes		90-100		5-23-2000
N244 E146	10	Hammerstone	1	90-100		5-23-2000
N244 E146	11	Chert Flakes		100-110		5-23-2000
N244 E146	12	Chert Core	1	100-110		5-23-2000
N244 E146	13	Chert Cobble	1	100-110		5-24-2000
N244 E146	14	Chert Cobbles		110-120		5-24-2000
N244 E146	15	Chert Cobbles		120-130		5-24-2000
N244 E146	16	Chert Flakes		120-130		5-24-2000
N244 E146	17	Rock Cluster		130-140		5-25-2000
N244 E146	18	Chert Rocks		140-150		5-25-2000
N244 E146	19	Chert Boulder	1	140-150		5-25-2000
N244 E146	20	Chert Flakes		170-180		5-27-2000
N244 E146	21	Chert Pebbles		170-180		5-27-2000
N244 E146	22	Microlithics		170-180		5-27-2000
N244 E146	23	Chert Flakes		180-190		5-27-2000
N244 E146	24	Chert Tools		180-190		5-27-2000
N244 E146	25	Chert Rocks		190-200		5-31-2000
N244 E146	26	Chert Flakes		190-200		5-31-2000
N244 E148	1	Deptford Sherd	1	20-30		5-18-2000
N244 E148	2	Cord Marked Sherd	1	20-30		5-18-2000
N244 E148	3	Large Sherd	1	20-30		5-18-2000

Table A16-5 continued

Provenience	Cat	Contents	Quant.	Vertical	Horizontal	Date
N244 E148	4	Chert Chunks		40-50		5-23-2000
N244 E148	5	Chert Flakes		40-50		5-23-2000
N244 E148	6	Chert Flake	1	50-60		5-23-2000
N244 E148	7	Chert Flakes		70-80		5-24-2000
N244 E148	8	Chert Chunk Refit	1	80-90		5-24-2000
N244 E148	9	Chert Chunk Refit	1	80-90		5-24-2000
N244 E148	10	Chert Chunk	1	80-90		5-24-2000
N244 E148	11	Preform	1	80-90		5-24-2000
N244 E148	12	Chert Flakes				5-24-2000
N244 E148	13	Chert Cobbles				5-24-2000
N244 E148	14	Chert Burned Cobble	1	90-100		5-24-2000
N244 E148	15	Blade		110-120		5-25-2000
N244 E148	16	Chert Chunk		110-120		5-25-2000
N244 E148	17	Boulder		110-120		5-25-2000
N244 E148	18	Rock Cluster		120-130		5-25-2000
N244 E148	19	Boulder		120-130		5-25-2000
N244 E148	20	Chunks		120-130		5-25-2000
N244 E148	21	Flakes		120-130		5-25-2000
N244 E148	22	Chert Rocks		150-160		5-30-2000
N244 E148	23	Broken Quartz		150-160		5-30-2000
N244 E148	24	Small Flakes		150-160		5-30-2000
N244 E148	25	Small Blade Fragment	1	150-160		5-30-2000
N244 E148	26	Large Chert Flakes		170-180		6-2-2000
N244 E148	27	Broken Quartz Pebble		170-180		6-2-2000
N244 E148	28	Chert Flakes		180-190		6-2-2000
N244 E148	29	Chert Pebbles		190-200		6-3-2000
N244 E148	30	Chert Boulders		190-200		6-3-2000
N244 E148	31	Chert Flakes		190-200		6-3-2000
N244 E148	32	Chert Flakes		200-210		6-3-2000
N244 E148	33	Chert Pebbles		200-210		6-3-2000
N244 E148	34	Chert Boulders		200-210		6-3-2000
N244 E148	35	Chert Flakes		200-210		6-3-2000

Table A16-6
Results of 2001 Excavation. Lithic Tool Types recovered from the Screen by Culture Chronology.

	Mississippian	**Woodland**	**Archaic**	**Paleoindian**	**Pre Clovis**	**Total**
	0-10cmbs	**10-40cmbs**	**40-90cmbs**	**90-140cmbs**	**>140cmbs**	
Bifaces	8	8	27	5	0	**48**
Blades	0	0	1	4	0	**5**
Cores	0	0	0	2	0	**2**
Unifaces	0	0	1	3	0	**4**
Pottery	2	5	0	0	0	**7**
Hammerstone	0	1	2	1	2	**6**
Scraper	0	0	2	10	0	**12**
Flake Tool	0	1	2	5	2	**10**
Graver	0	0	0	0	0	**0**
Flake	1	0	2	3	2	**8**
Chunks	1	0	0	0	4	**5**
	12	**15**	**37**	**33**	**10**	**107**

Table A16-7

Specimen Catalog of unmapped artifacts from the 2001 Excavations at the Topper Site (38AL23)

Provenience	Cat	Contents	Quant.	Vertical	Horizon.	Date
N230 E106	1	Sherds		0-10		5-18-2001
N230 E106	2	Flakes		0-10		5-18-2001
N230 E106	1	Sherds		10-20		5-18-2001
N230 E106	2	Flakes		10-20		5-18-2001
N230 E106	3	Hammerstone	1	10-20		5-18-2001
N230 E106	4	Point Fragment	1	20-30		5-18-2001
N230 E106	5	Sherds		20-30		5-18-2001
N230 E106	6	Flakes		20-30		5-18-2001
N230 E106	7	Chert Flakes		30-40		5-18-2001
N230 E106	8	Endscraper	1	40-50		5-18-2001
N230 E106	9	Kirk Preform	1	60-70		5-18-2001
N230 E106	10	Blade	1	70-80		5-19-2001
N230 E106	11	Blade	1	70-80		5-19-2001
N230 E106	12	Preform Frag	1	70-80		5-19-2001
N230 E106	13	Blade Fragments		80-90		5-22-2001
N230 E106	14	Preforms		80-90		5-22-2001
N230 E106	15	Unifaces		80-90		5-22-2001
N230 E106	16	Flakes		90-100		5-22-2001
N232 E102	1	Sherds		0-10		5-22-2001
N232 E102	2	Biface Frag	1	0-10		5-22-2001
N232 E102	3	Projectile Tip	1	0-10		5-22-2001
N232 E102	4	Triangular Point	1	0-10		5-22-2001
N232 E102	5	Sherds		10-20		5-23-2001
N232 E102	6	TA Flakes		10-20		5-23-2001
N232 E102	7	Ta Flakes		20-30		5-23-2001
N232 E102	8	Ta Flakes		30-40		5-23-2001
N232 E102	9	Biface	1	30-40		5-23-2001
N232 E102	10	Ta Flakes		50-60		5-23-2001
N232 E102	11	River Chert		60-70		5-24-2001
N232 E102	12	Ta Flakes		60-70		5-24-2001
N232 E102	13	Decort. Flakes		70-80		5-24-2001
N232 E102	14	River Cortex	1	70-80		5-24-2001
N232 E102	15	Uniface	1	70-80		5-24-2001
N232 E102	16	Blade	1	70-80		5-24-2001
N232 E102	17	Core Frag	1	70-80		5-24-2001
N232 E102	18			70-80		5-25-2001
N232 E104	1	Woodland Point	1	10-20		5-29-2001
N232 E104	2	Woodland Preform	1	10-20		5-29-2001
N232 E104	3	Ta Flakes		10-20		5-29-2001
N232 E104	4	Quartz Pebbles		10-20		5-29-2001
N232 E104	5	Ta Flakes		20-30		5-29-2001
N232 E104	6	Quartz Flake	1	30-40		5-30-2001

Table A16-7 continued

Provenience	Cat	Contents	Quant.	Vertical	Horizon.	Date
N232 E104	7	Ta Flakes		30-40		5-30-2001
N232 E104	8	Preform	1	30-40		5-30-2001
N232 E104	9	Mala	1	30-40		5-30-2001
N232 E104	10	Ta Flakes		40-50		5-30-2001
N232 E104	11	Decort Flakes	1	70-80		5-31-2001
N232 E104	12	River Cortex	1	70-80		5-31-2001
N232 E104	13	Preform	1	70-80		5-31-2001
N232 E106	1	Ceramics		0-13		5-15-2001
N232 E106	2	Alkaline Glaze	1	0-13		5-15-2001
N232 E106	3	Mala	1	43-53		5-16-2001
N232 E106	4	Preform	1	43-53		5-16-2001
N232 E106	5	Ceramics		53-63		5-16-2001
N232 E106	6	Taylor Point	1	63-73		5-17-2001
N232 E106	7	Egg Stone	1	73-83		5-17-2001
N232 E106	8	Paleo Preform	1	73-83		5-17-2001
N234 E102	1	Ta Frag	1	0-15		5-24-2001
N234 E102	2	Glass	1	0-15		5-24-2001
N234 E102	3	Sherds		0-15		5-24-2001
N234 E102	4	Ta Flakes		15-25		5-24-2001
N234 E102	5	Shatter		15-25		5-24-2001
N234 E102	6	Ta Flakes		35-45		5-25-2001
N234 E102	7	Ta Flakes		45-55		5-25-2001
N234 E102	8	River Cortex		45-55		5-25-2001
N234 E102	9	Ta Flakes		55-65		5-25-2001
N234 E104	1	Sherds		0-15		5-29-2001
N234 E104	2	Sherds		15-25		5-30-2001
N234 E104	3	Flakes		25-35		5-30-2001
N234 E104	4	Ta Flakes		45-55		5-31-2001
N234 E104	5	Preform Frag	1	45-55		5-31-2001
N234 E104	6	Ta Flakes		55-65		5-31-2001
N234 E104	7	River Chert		65-75		5-31-2001
N234 E106	8	Triangular Points	2	0-13		5-08-2001
N234 E106	9	Sherds	1	13-20		5-08-2001
N234 E106	10	Woodland Tool	1	13-20		5-08-2001
N234 E106	11	Sherds		20-30		5-8-2001
N234 E106	12	Triangular Point	1	30-40		5-9-2001
N234 E106	13	Sherds		30-40		5-9-2001
N234 E106	14	Flakes		30-40		5-9-2001
N234 E106	15	Mala Points	2	40-50		5-9-2001
N234 E106	16			40-50		5-9-2001
N234 E106	17	Taylor	1	70-80		5-9-2001
N234 E106	18			70-80		5-9-2001
N234 E106	19	Flakes		90-100		5-10-2001
N234 E106	20	Quartz Pebbles		90-100		5-10-2001

Table A16-7 continued

Provenience	Cat	Contents	Quant.	Vertical	Horizon.	Date
N236 E106	21	Pottery	1	0-10		5-11-2001
N236 E106	22	Triangular Point	2	15-25		5-11-2001
N236 E106	23	Pottery		35-45		5-11-2001
N236 E106	24	Mala Preform	2	45-55		5-11-2001
N236 E106	25	Hammerstone	1	45-55		5-11-2001
N236 E106	26	Flakes		85-95		5-15-2001
N238 E106	1	Pottery		0-15		5-9-2001
N238 E106	2	Triangular Point	1	0-15		5-9-2001
N238 E106	3	Sherds	2	15-25		5-9-2001
N238 E106	4	Triangular Points	2	15-25		5-9-2001
N238 E106	5	Ceramics		25-35		5-9-2001
N238 E106	6	Ceramics		35-45		5-10-2001
N238 E106	7	Triangular Point	1	35-45		5-10-2001
N238 E106	8	Mala Point	1	45-55		5-10-2001
N238 E106	9	Stemmed Point	1	45-55		5-10-2001
N238 E106	10	Utilized Flakes	2	45-55		5-10-2001
N238 E106	11	Flakes		45-55		5-10-2001
N238 E106	12	Clovis Preform	1	55-65		5-10-2001
N238 E106	13	Blade	1	65-75		5-11-2001
N238 E106	14	River Chert		75-85		5-11-2001
N238 E106	15	Decort Flakes		75-85		5-11-2001
N238 E106	16	Flakes		95-105		5-12-2001
N240 E106	1	Yadkin	1	0-10		5-15-2001
N240 E106	2	Ceramics		0-10		5-15-2001
N240 E106	3	Ceramics		0-10		5-15-2001
N240 E106	4	Pottery		20-30		5-15-2001
N240 E106	5	Mala Preform	1	30-40		5-16-2001
N240 E106	6	Fcr		50-60		5-16-2001
N240 E106	7	Ta Flakes		50-60		5-16-2001
N240 E106	8	Blade	1	60-70		5-16-2001
N242 E106	1	Triangular	1	0-20		5-17-2001
N242 E106	2	Woodland Ceramics		0-20		5-17-2001
N242 E106	3	Ta Chert		30-40		5-18-2001
N242 E106	4	Sherds		60-70		5-18-2001
N236 E128	1	Scrapers	2	97.85*		5-10-2001
N236 E130	1	Chert Flakes		97.70*		5-11-2001
N236 E130	2	Chert Pebbles		97.70*		5-11-2001
N236 E134	1	Flakes		98.00*		5-11-2001
N236 E134	2	Ta Flakes		-98.00*		5-11-2001
N236 E134	3	River Cortex Flakes		97.90*		5-11-2001
N236 E136	1	Uniface	1	98.00*		5-12-2001
N236 E136	2	Blade Like Flakes	1	98.00*		5-12-2001
N236 E136	3	Flakes		98.00*		5-12-2001
N236 E136	4	Taylor Point	1	98.00*		5-12-2001

Table A16-7 continued

Provenience	Cat	Contents	Quant.	Vertical	Horizon.	Date
N236 E136	5	Hammerstone	1	97.90-97.80*		5-12-2001
N237 E136	1	Woodland Ceramics	1	20-30 cmbs		5-02-2001
N237 E136	2	Mala Preform Base	1	20-30 cmbs		5-02-2001
N237 E136	3	Deptford Pottery	1	30-40 cmbs		5-02-2001
N237 E136	4	Yadkin Preform	1	30-40 cmbs		5-02-2001
N237 E136	5	Unifacial Scraper	1	70-80 cmbs		5-03-2001
N238 E126	1	Scraper	1	97.95-97.85*		5-11-2001
N238 E126	2	Scraper	1	97.95-97.85*		5-11-2001
N238 E126	3	Scraper	1	97.95-97.85*		5-11-2001
N238 E126	4	Utilized Flake	1	97.95-97.85*		5-11-2001
N238 E136	1	Core Fragments		98.10-98.00*		5-11-2001
N238 E136	2	Decortication Flakes		98.10-98.00*		5-11-2001
N238 E136	3	Utilized Blade	1	98.00-97.90*		5-11-2001
N238 E136	4	Abrader	1	98.00-97.90*		5-11-2001
N238 E136	5	Debitage		98.00-97.90*		5-11-2001
N238 E138	1	Scrapers	2	97.95-97.85*		5-9-2001
N238 E138	2	Unifacial Flakes	4	97.95-97.85*		5-9-2001
N238 E138	3	Unifacial Scraper	1	97.85-97.75*		5-10-2001
N238 E138	4	Chert Chunk	1	97.25-97.20*		5-23-2001
N238 E138	5	Lithic Cluster		97.25-97.20*		5-23-2001
N238 E138	6	Chert Pebbles		97.15-97.10*		5-24-2001
N238 E138	7	Quartz Shatter		97.15-97.10*		5-24-2001
N238 E138	8	Chert Shatter		97.05-		5-26-2001

Table A16-7 continued

Provenience	Cat	Contents	Quant.	Vertical	Horizon.	Date
				97.00*		
N238 E138	9	Chert Flake	1	97.00-96.95*		5-29-2001
N238 E138	10	Chert Cortex		97.00-96.95*		5-29-2001
N238 E130	1	Core Chunks		98.00-97.90*		5-9-2001
N238 E130	2	Bolo Stone Frag	1	98.00-97.90*		5-9-2001
N238 E132	1	Large Rock	1	97.15-97.10*		6-28-2001
N238 E132	2	TA Chert		97.90-97.80*		5-9-2001
N240 E128	1	Taylor Point	1	97.95-97.85*		5-9-2001
N240 E128	2	Mala	1	97.95-97.85*		5-9-2001
N240 E128	3	Flakes		97.95-97.85*		5-9-2001
N240 E128	4	Flake Cluster		97.85-97.75*		5-10-2001
N240 E128	5	Biface	1	97.85-97.75*		5-10-2001
N240 E128	6	Denticulate	1	97.85-97.75*		5-10-2001
N240 E128	7	Blade Core	1	97.85-97.75*		5-10-2001
N240 E128	8	River Quartz	1	97.00-96.95*		5-29-2001
N240 E128	9	Quartz Hammerstone	1	96.95-96.90*		5-30-2001
N240 E128	10	Rock	1	96.85-96.80*		5-30-2001
N240 E130	2	Ta Chert		98.00-97.90*		5-11-2001
N240 E130	3	Pottery		98.00-97.90*		5-11-2001
N240 E130	4	Ta Scraper	1	97.90-97.80*		5-12-2001
N240 E130	5	Ta Flakes		97.80-97.70*		5-12-2001
N240 E130	6	Mala Base	1	97.80-97.70*		5-12-2001
N240 E130	7	Pottery		97.60-		5-16-2001

Table A16-7 continued

Provenience	Cat	Contents	Quant.	Vertical	Horizon.	Date
				97.55*		
N240 E130	8	Flakes		97.10-97.05*		5-24-2001
N240 E130	9	Utilized Flake	1	97.05-97.00*		5-29-2001
N240 E132	1	Mala Fragment	1	98.05-97.95*		5-9-2001
N240 E132	2	Mala Base	1	98.05-97.95*		5-9-2001
N240 E132	3	Side Scraper	1	98.05-97.95*		5-9-2001
N240 E132	4	Mala	1	97.95-97.85*		5-10-2001
N240 E132	5	Denticulate	1	97.95-97.85*		5-10-2001
N240 E132	6	Mala Point	1	97.85-97.75*		5-10-2001
N240 E132	7	Ta Flakes		97.85-97.75*		5-10-2001
N240 E132	8	Flakes In Disturbance		97.65-97.60*		5-16-2001
N240 E132	9	Chert Chunk	1	97.60-97.55*		5-16-2001
N240 E132	10	Chert Biface	1	97.60-97.55*		5-16-2001
N240 E134	1	Lithic Tool	1	97.25-97.20*		5-24-2001

Table A16-8
Results of 2002 Excavation. Lithic Tool Types recovered from the Screen by Culture Chronology.

	Mississippian	**Woodland**	**Archaic**	**Paleoindian**	**Pre Clovis**	**Total**
	0-10cmbs	**10-40cmbs**	**40-90cmbs**	**90-140cmbs**	**>140cmbs**	
Biface	2	3	21	6	0	**32**
Blade	0	0	2	8	0	**10**
Flake Tool	0	0	3	2	0	**5**
Adze	0	0	1	0	0	**1**
Denticulate	0	0	1	0	0	**1**
Scraper	1	0	2	1	1	**5**
Core	0	0	5	2	2	**9**
Hammerstone	0	0	5	0	1	**6**
Flake	0	0	2	7	0	**9**
Bone	0	0	1	0	0	**1**
Pottery	0	1	2	3	0	**6**
Pebble/Cobble	0	2	8	7	2	**19**
Shell	0	2	0	0	0	**2**
Bend Break	0	0	0	0	1	**1**
Total	**3**	**8**	**53**	**36**	**7**	**107**

Table A16-9
Specimen Catalog of unmapped artifacts from the 2002 Excavations at the Topper Site (38AL23).

Provenience	Cat	Contents	Quantity	Vertical	Horizontal	Date
N242 E136	1	Corner Notched	1	70-80		5-7-2002
N242 E136	2	Chert Flake	1	80-90		5-7-2002
N242 E136	3	River Cortex				5-7-2002
N242 E136	4	Uniface	1	90-100		5-9-2002
N242 E136	5	Blade	1	90-100		5-9-2002
N242 E136	6	TA Flake	1	100-105		5-11-2002
N242 E136	7	Blade	1	105-110		5-15-2002
N242 E136	8	Scraper	1	150-155		5-31-2002
N242 E138	1	Blade Core	1	80-90		5-8-2002
N242 E138	2	Microblade Core	1	90-100		5-8-2002
N242 E138	3	Microblade	1	105-110		5-15-2002
N242 E138	4	Flake	1	110-115		5-16-2002
N242 E138	5	Bend Break	1	130-135		5-21-2002
N242 E140	1	Burned Flakes	1	105-110		5-15-2002
N242 E140	2	Crest Blade	1	120-125		5-18-2002
N242 E142	1	Biface Flakes		110-115		5-16-2002
N242 E142	2	Flake	1	115-120		5-17-2002
N242 E142	3	Cortical Chunk	1	130-135		5-23-2002
N242 E142	4	Flake	1	140-145		5-24-2002
N244 E136	1	Blade Proximal	1	90-100		5-8-2002
N244 E136	2	Retouched Blade	1	115-120		5-17-2002
N244 E136	3	Chert Boulder	1	155-160		5-31-2002
N244 E138	1	Utilized Flakes	1	80-90		5-8-2002
N244 E138	2	Bone Fragment	1	80-90		5-8-2002
N244 E138	3	Chert Core	1	90-100		5-8-2002
N244 E138	4	Biface Tip	1	90-100		5-8-2002
N244 E140	1	Biface Tip	1	20-80		5-7-2002
N244 E140	2	Biface Tip	1	80-90		5-7-2002
N244 E140	3	Taylor Preform	1	80-90		5-7-2002
N244 E140	1	Sidescraper	1	90-100		5-7-2002
N244 E140	2	TA Biface	1	90-100		5-7-2002
N244 E140	3	Hammerstone	1	90-100		5-7-2002
N244 E140	4	Chert Chunk	2	90-100		5-7-2002
N244 E140	5	Pottery	3	100-105		5-29-2002
N244 E140	6	Hammerstone	1	145-150		5-29-2002
N244 E140	7	Core	2	145-150		5-29-2002
N244 E142	1	Uniface	1	70-80		5-3-2002
N244 E142	2	Chunk	3	70-80		5-3-2002
N244 E142	3	Chunk	1	140-145		5-24-2002
N244 E144	1	Blades	2	100-110		5-10-2002

Table A16-9 continued

Provenience	Cat	Contents	Quantity	Vertical	Horizontal	Date
N246 E136	1	Hammerstone	1	80-90		5-9-2002
N246 E138	1	Cortical Flake	1	90-100		5-10-202
N246 E140		Chert Chunk	1	80-90		5-10-2002
N246 E140		Core Fragment	1	80-90		5-10-2002
N246 E140		Utilized Flakes	1	80-90		5-10-2002
N246 E140		Biface Tip	1	90-100		5-10-2002
N246 E140		Core Fragment	1	90-100		5-10-2002
N246 E140		TA Preform	1	90-100		5-10-2002
N246 E140		Pottery	1	90-100		5-10-2002
N246 E142		Chert Cobble	1	70-80		5-10-2002
N246 E144		Chert Chunk	1	100-110		5-10-2002
N267 E134	1	Simple Stamped	1	5-15		3-4-2002
N267 E134	2	Chunk	1	15-25		3-4-2002
N267 E134	3	Chunk	1	25-35		3-5-2002
N267 E134	4	MALA Point	1	35-45		3-5-2002
N267 E134	5	MALA Tip	1	45-55		3-5-2002
N267 E134	6	Chunk	1	45-55		3-5-2002
N267 E134	7	Point Tip (EA)		65-75		3-5-2002
N267 E136	1	MALA Preform	4	45-50		3-6-2002
N267 E136	2	Savanna Point	1	45-50		3-6-2002
N267 E136	3	Hammerstone	1	45-50		3-6-2002
N267 E136	4	Adze	1	50-55		3-6-2002
N267 E136	5	Preform	5	50-55		3-6-2002
N267 E136	6	Rock	1	90-95		3-7-2002
N267 E136	7	Mala Flake	1	104		3-7-2002
N269 E134	1	Mala Point		0-5		3-7-2002
N269 E134	2	Chunks	2			3-7-2002
N269 E134	3	Biface Tip	1	5-15		3-8-2002
N269 E134	4	MALA Point Tip	1	45-55		3-8-2002
N269 E134	5	Eggstone	1	55-65		3-8-2002
N269 E134	6	MALA Tip	2			3-8-2002
N269 E134	7	Denticulate	1	55-65		3-8-2002
N269 E134	8	Biface Blank	1	65-75		3-8-2002
N269 E134	9	Point Tip	1	65-76		3-8-2002
N284 E134	1	Hammerstone		55-65		3-9-2002
N284 E134	2	Core		55-65		3-9-2002
N284 E134	3	Core		55-65		3-9-2002
N284 E134	4	Scraper		75-85		3-9-2002
N284 E134	5	Scraper		85-95		3-9-2002
N284 E134	6	Blade		85-95		3-9-2002
N284 E134	7	Hammerstone		85-95		3-9-2002
N284 E134	1	Taylor Point		95-105		3-9-2002
N286 E134	1	Shell	2	0-5		3-6-2002
N286 E136	1	Point	1	15-25		

Table A16-9 continued

Provenience	Cat	Contents	Quantity	Vertical	Horizontal	Date
N286 E136	2	Triangular Point	1	15-25		3-4-2002
N286 E136	3	Cord Marked Sherd	1	45-55		3-5-2002
N286 E136	4	Ta Biface	1	55-65		3-5-2002
N286 E136	5	Plain Sherd	1	64		3-4-2002
N286 E136	6	MALA Point	1	85-95		3-6-2002
N286 E136	7	Microblade	1	95-105		3-6-2002
N286 E136	8	Utilized Flake	1	95-105		3-6-2002
N86 E138	1	Chert Flake	1	20-30		5-14-2002
N86 E138	2	Quartz Pebble	1	60-70		5-22-2002
N86 E138	3	Biface	1	70-80		5-22-2002
N86 E138	4	Biface	1	80-90		5-22-2002
N86 E138	5	Blade	1	80-90		5-22-2002
Trench A	1	Quartz Pebble	1	0-70		6-30-2002
Trench B	1	Biface	1	0-70		5-1-2002
5x9	1	Scraper	1	0-5		4-30-2002
5x9		Yadkin	1	0-5		4-30-2002
5x9		Triangular Point	1	0-5		4-30-2002

Table A16-10
Results of 2003 Excavation. Lithic Tool Types recovered from the Screen by Culture Chronology.

	Mississippian	**Woodland**	**Archaic**	**Paleoindian**	**Pre Clovis**	**Total**
	0-10cmbs	**10-40cmbs**	**40-90cmbs**	**90-140cmbs**	**>140cmbs**	
Biface	0	1	1	0	0	**2**
Flake Tool	0	1	0	1	2	**4**
Blade	0	0	0	0	0	**0**
Core	0	0	0	0	0	**0**
Hammerstone	0	0	0	0	0	**0**
Uniface	0	0	0	0	0	**0**
Bend Break	0	0	0	0	0	**0**
Scraper	0	0	0	0	0	**0**
Flake	0	0	2	1	0	**3**
Pottery	0	0	0	0	0	**0**
Pebble	0	0	1	2	0	**3**
Total	**0**	**2**	**4**	**4**	**2**	**12**

Table A16-11
Specimen Catalog of unmapped artifacts from the 2003 Excavations at the Topper Site (38AL23)

Provenience	Cat	Contents	Quantity	Vertical	Horizontal	Date
N242 E142	1	Blade Medial	1	97.40		5-21-2003
N270 E152	1	Woodland	1	PZ		5-06-2003
N270 E152	2	Archaic Biface	1	98.87		5-07-2003
N272 E154	1	Core Top	1	99.0		5-17-2003
N288 E132	1	Hammerstone	1	90cmbd		5-24-2003
N288 E132	2	Biface Preform	1	90cmbd		5-24-2003
N288 E132	3	Flakes	2	90cmbd		5-24-2003
N288 E134	1	Biface Preform	1	20cmbd		5-21-2003
N288 E134	2	Rim Sherd	1	40cmbd		5-22-2003
N288 E134	3	Chert Flakes	2	50cmbd		5-22-2003
N288E136	1	Sherd	1	40cmbd		5-29-2003
N288E136	2	Blade	1	70cmbd		5-31-2003
BHT 17	1	Bend Break	1	96.02		7-01-2003
BHT 17	2	Flake	1	96.02		7-01-2003
BHT 17	3	Chunk	1	95.77		7-01-2003
BHT 17	4	Bend Break	1	95.665		7-01-2003
BHT 17	5	Core	1	95.71		7-01-2003
BHT 17	6	Bend Break	1	96.01		7-01-2003
BHT 17	7	Bend Break	1	96.23		7-01-2003
BHT 17	8	Bend Break	1	-		7-01-2003
BHT 17	9	Flake	1	-		7-01-2003
BHT 17	10	Bend Break	1	-		7-01-2003
BHT 17	11	Bend Break	1	-		7-01-2003
BHT 17	12	Core	1	-		7-01-2003
BHT 17	13	Flake	1	-		7-01-2003
BHT 17	14	Core	1	-		7-01-2003
BHT 17	15	Flake	1	-		7-01-2003

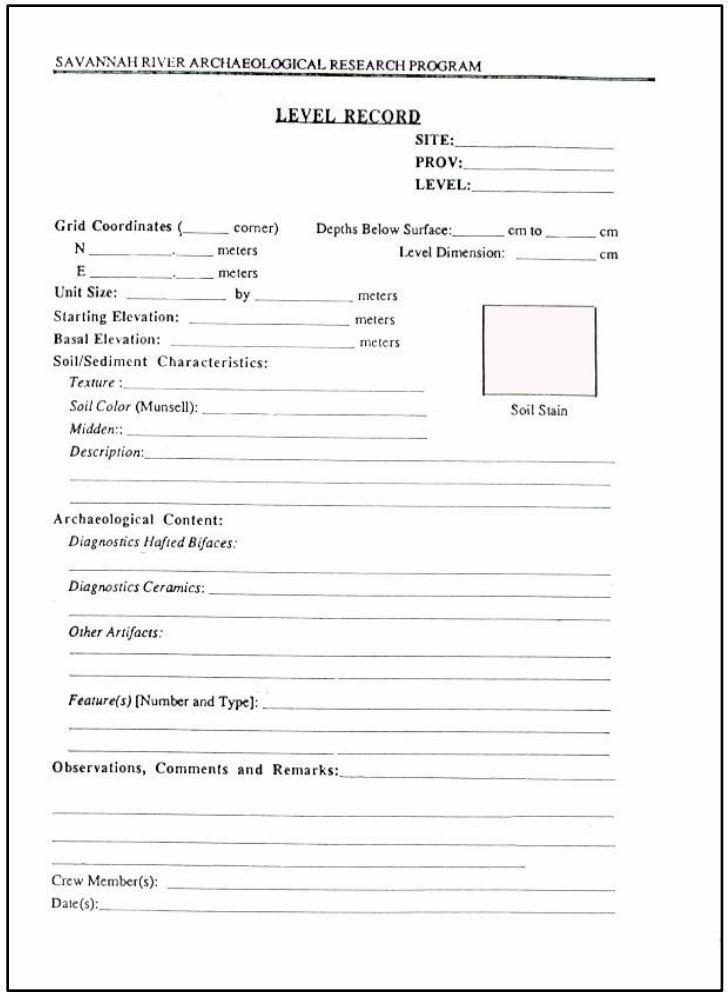
Table A16-11 continued

Provenience	Cat	Contents	Quantity	Vertical	Horizontal	Date
BHT 17	16	Core	1	-		7-01-2003
BHT 17	17	Flake	1	-		7-01-2003
BHT 17	18	Chunk	1	-		7-01-2003
BHT 17	19	Flake	1	-		7-01-2003
BHT 17	20	Cortical Flake	1	-		7-01-2003
BHT 17	21	Flake	1	-		7-01-2003
BHT 17	22	Chunk	1	-		7-01-2003
BHT 17	23	Chunk	1	-		7-01-2003
BHT 17	24	Chunk	1	-		7-01-2003
BHT 17	25	Chunk	1	-		7-01-2003
BHT 17	26	Chunk	1	-		7-01-2003
BHT 17	27	Chunk	1	-		7-01-2003
BHT 17	28	Chunk	1	-		7-01-2003
BHT 17	29	Chunk	1	-		7-01-2003
BHT 17	30	Flake	1	-		7-01-2003
BHT 17	31	Flake	1	-		7-01-2003
BHT 17	32	Flake	1	-		7-01-2003
BHT 17	33	Chunk	1	-		7-01-2003
BHT 17	34	Flake	1	-		7-01-2003
BHT 17	35	Flake	1	-		7-01-2003
BHT 17	36	Core	1	-		7-01-2003
BHT 17	37	Core	1			7-01-2003
BHT 17	38	Core	1			7-01-2003
BHT 17	39	Core	1			7-01-2003
BHT 17	40	Core	1			7-01-2003

APPENDIX 17

UNIT LEVEL FORMS at the Topper Site (38AL23)

The onsite excavation protocol at Topper calls for all information pertaining to the contents of a level to be accurately recorded and documented on a unit level form, and subsequently for a plan view drawing of the level contents to be provided on graph paper. Over the course of field seasons, unit recording forms have changed and have varied in layout by year. A list of the site level form templates used at Topper over the course of the field investigations is presented in Appendix 17. Figure A17-1 illustrates the recording form utilized for the 1998 Field Season, and Figures 2- and 3 illustrate the recording forms used from 2005-2012. If features (documented in Appendix 18) were encountered during excavation they were assigned a feature number and recorded and drawn on a separate feature form (Figure A17-4). Since 2005 all features that have been encountered have been photographed and recorded using the feature form; prior to this features were recorded on the unit level forms.



SAVANNAH RIVER ARCHAEOLOGICAL RESEARCH PROGRAM

LEVEL RECORD

SITE:_____
PROV:_____
LEVEL:_____

Grid Coordinates (_____ corner)
N _____.____ meters
E _____.____ meters

Depths Below Surface:_____ cm to _____ cm
Level Dimension: _____ cm

Unit Size: _____ by _____ meters
Starting Elevation: _____ meters
Basal Elevation: _____ meters

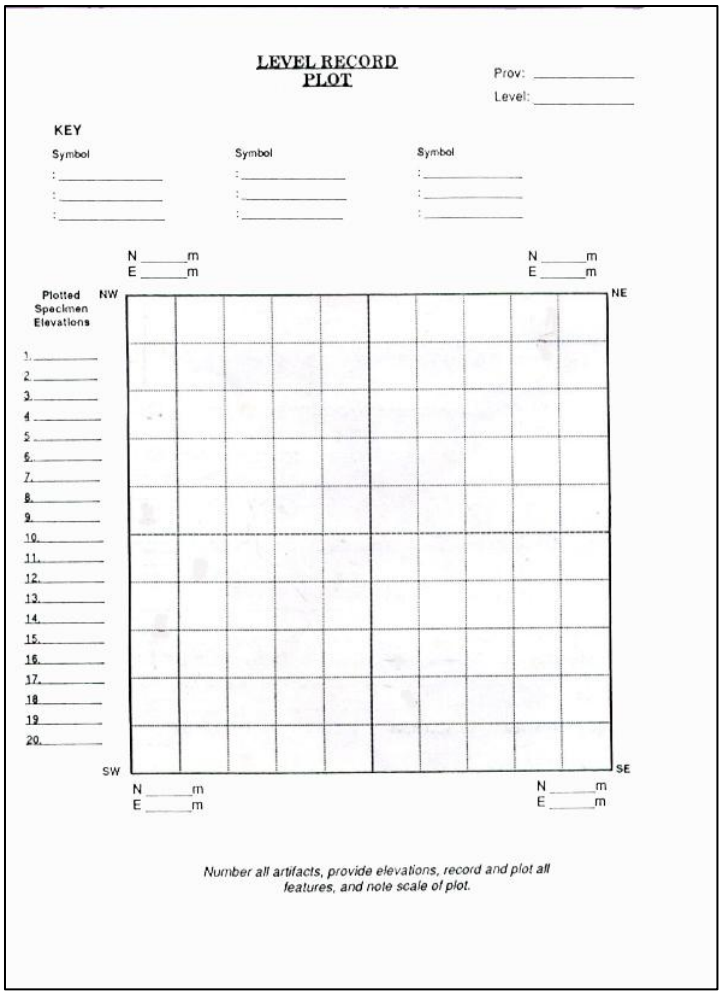
Soil/Sediment Characteristics:
Texture :_____
Soil Color (Munsell): _____
Midden:: _____
Description:_____

Soil Stain

Archaeological Content:
Diagnostics Hafted Bifaces:
Diagnostics Ceramics: _____
Other Artifacts:
Feature(s) [Number and Type]: _____

Observations, Comments and Remarks:_____

Crew Member(s): _____
Date(s):_____



LEVEL RECORD PLOT

Prov: _____
Level: _____

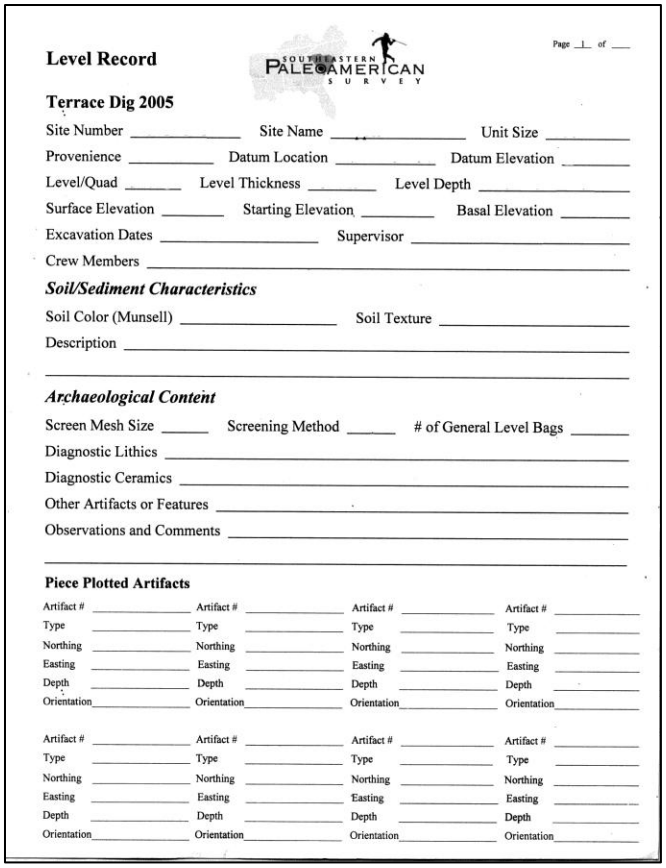
KEY
Symbol : _____
Symbol : _____
Symbol : _____

N ____m E ____m (NW)
N ____m E ____m (NE)
N ____m E ____m (SW)
N ____m E ____m (SE)

Plotted Specimen Elevations
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

Number all artifacts, provide elevations, record and plot all features, and note scale of plot.

Figure A17-1
Site Level form used from 1998-2004 Topper Field Seasons



Level Record

SOUTHEASTERN PALEOAMERICAN SURVEY

Page _1_ of ___

Terrace Dig 2005

Site Number _____ Site Name _____ Unit Size _____

Provenience _____ Datum Location _____ Datum Elevation _____

Level/Quad _____ Level Thickness _____ Level Depth _____

Surface Elevation _____ Starting Elevation _____ Basal Elevation _____

Excavation Dates _____ Supervisor _____

Crew Members _____

Soil/Sediment Characteristics

Soil Color (Munsell) _____ Soil Texture _____

Description _____

Archaeological Content

Screen Mesh Size _____ Screening Method _____ # of General Level Bags _____

Diagnostic Lithics _____

Diagnostic Ceramics _____

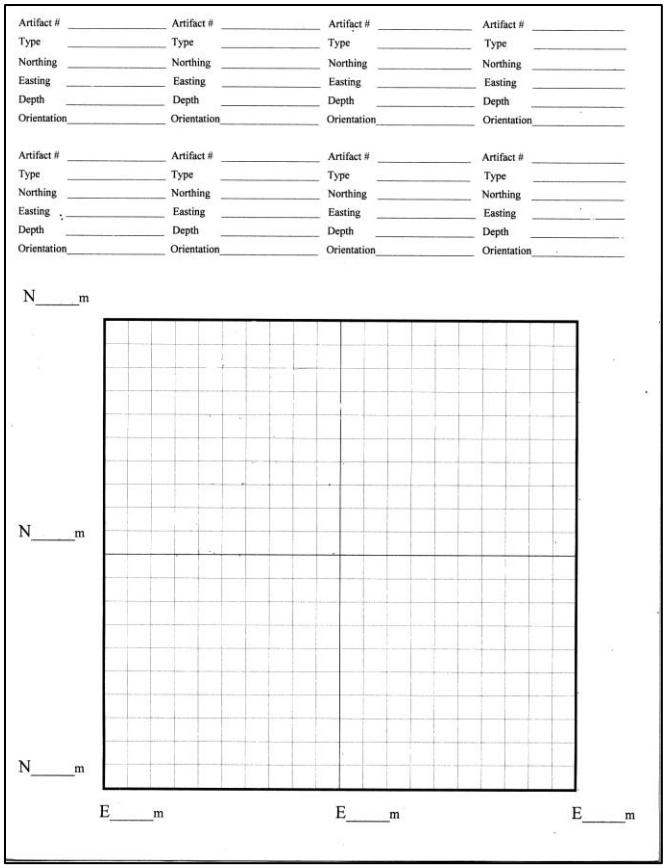
Other Artifacts or Features _____

Observations and Comments _____

Piece Plotted Artifacts

Artifact #	Artifact #	Artifact #	Artifact #
Type	Type	Type	Type
Northing	Northing	Northing	Northing
Easting	Easting	Easting	Easting
Depth	Depth	Depth	Depth
Orientation	Orientation	Orientation	Orientation

Artifact #	Artifact #	Artifact #	Artifact #
Type	Type	Type	Type
Northing	Northing	Northing	Northing
Easting	Easting	Easting	Easting
Depth	Depth	Depth	Depth
Orientation	Orientation	Orientation	Orientation



Artifact #	Artifact #	Artifact #	Artifact #
Type	Type	Type	Type
Northing	Northing	Northing	Northing
Easting	Easting	Easting	Easting
Depth	Depth	Depth	Depth
Orientation	Orientation	Orientation	Orientation

Artifact #	Artifact #	Artifact #	Artifact #
Type	Type	Type	Type
Northing	Northing	Northing	Northing
Easting	Easting	Easting	Easting
Depth	Depth	Depth	Depth
Orientation	Orientation	Orientation	Orientation

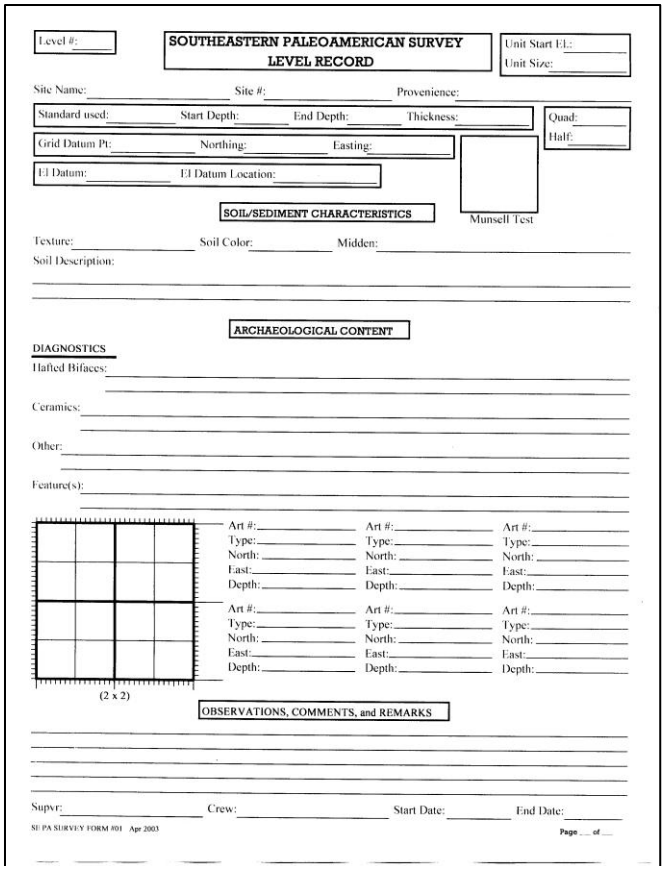
N_____m

N_____m

N_____m

E_____m E_____m E_____m

Figure A17-2
Site Level form used from 2005 Topper Field Seasons



Level #:

SOUTHEASTERN PALEOAMERICAN SURVEY
LEVEL RECORD

Unit Start El.:
Unit Size:

Site Name: Site #: Provenience:

Standard used: Start Depth: End Depth: Thickness:

Quad:
Half:

Grid Datum Pt: Northing: Easting:

El Datum: El Datum Location:

Munsell Test

SOIL/SEDIMENT CHARACTERISTICS

Texture: Soil Color: Midden:

Soil Description:

ARCHAEOLOGICAL CONTENT

DIAGNOSTICS

Hafted Bifaces:

Ceramics:

Other:

Feature(s):

(2 x 2)

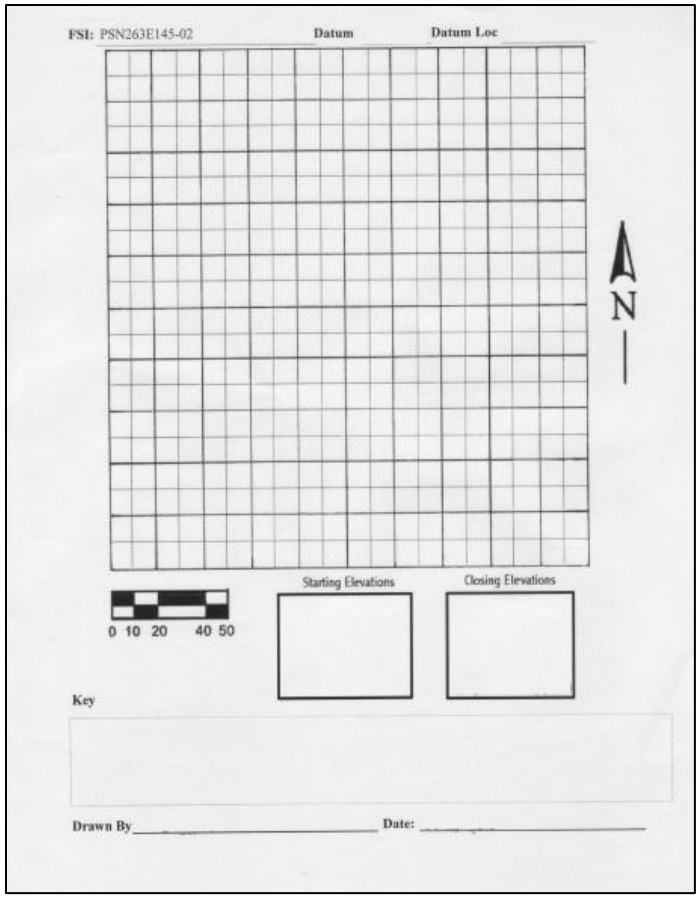
Art #: Type: North: East: Depth:

OBSERVATIONS, COMMENTS, and REMARKS

Supvr: Crew: Start Date: End Date:

SEPA SURVEY FORM #01 Apr 2003

Page ___ of ___



FSI: PSN263E145-02 Datum Datum Loc

N

0 10 20 40 50

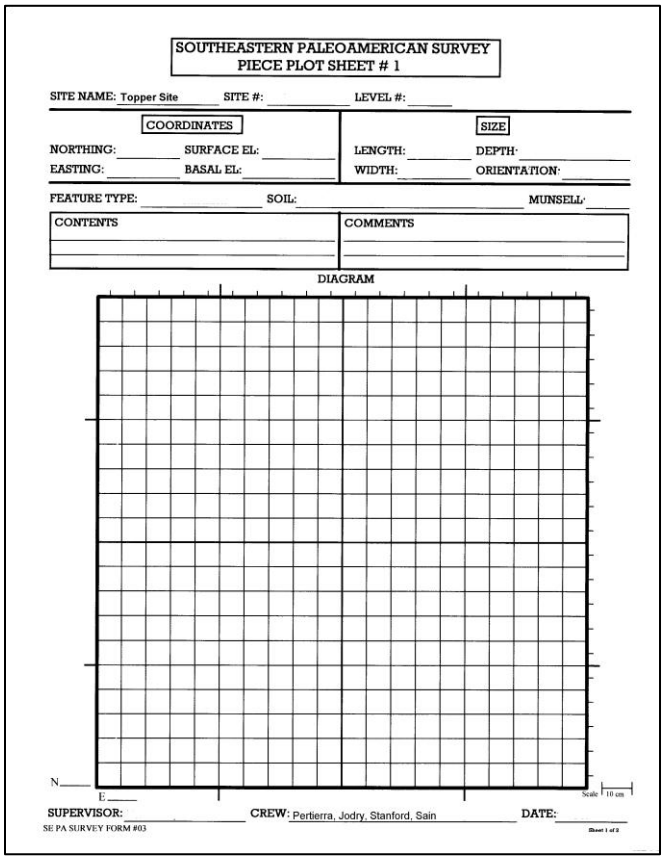
Starting Elevations

Closing Elevations

Key

Drawn By Date:

Figure A17-3
Site Feature form used from at Topper Site.



SOUTHEASTERN PALEOAMERICAN SURVEY
PIECE PLOT SHEET # 1

SITE NAME: Topper Site SITE #: LEVEL #:

COORDINATES
NORTHING: SURFACE EL:
EASTING: BASAL EL:

SIZE
LENGTH: DEPTH:
WIDTH: ORIENTATION:

FEATURE TYPE: SOIL: MUNSELL:

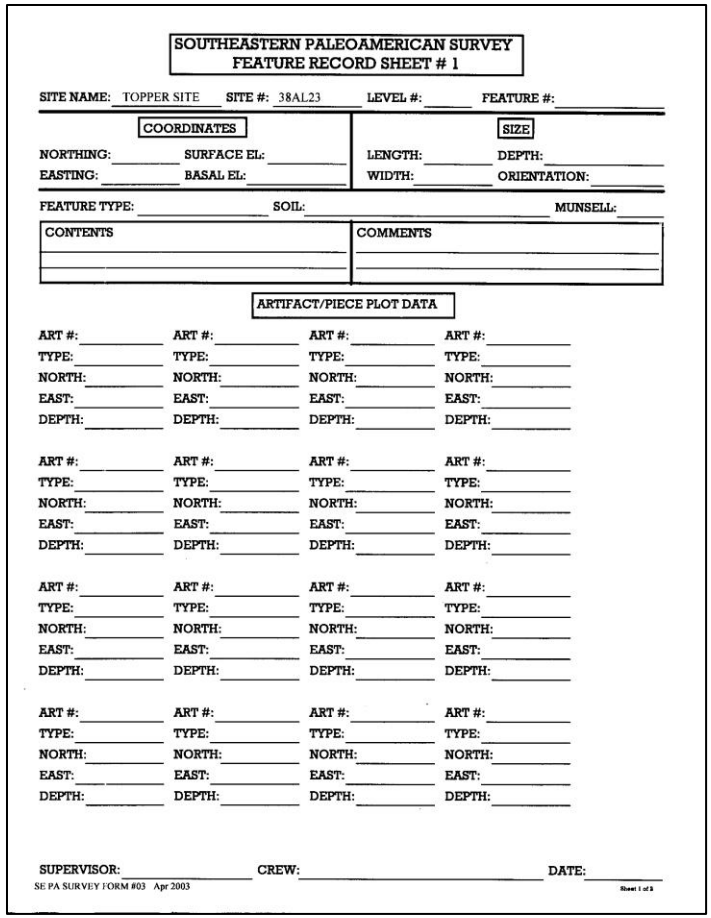
CONTENTS | COMMENTS

DIAGRAM

N
E
Scale 10 cm

SUPERVISOR: CREW: Pertierra, Jodry, Stanford, Sain DATE:

SE PA SURVEY FORM #03



SOUTHEASTERN PALEOAMERICAN SURVEY
FEATURE RECORD SHEET # 1

SITE NAME: TOPPER SITE SITE #: 38AL23 LEVEL #: FEATURE #:

COORDINATES
NORTHING: SURFACE EL:
EASTING: BASAL EL:

SIZE
LENGTH: DEPTH:
WIDTH: ORIENTATION:

FEATURE TYPE: SOIL: MUNSELL:

CONTENTS | COMMENTS

ARTIFACT/PIECE PLOT DATA

ART #:	ART #:	ART #:	ART #:
TYPE:	TYPE:	TYPE:	TYPE:
NORTH:	NORTH:	NORTH:	NORTH:
EAST:	EAST:	EAST:	EAST:
DEPTH:	DEPTH:	DEPTH:	DEPTH:

ART #:	ART #:	ART #:	ART #:
TYPE:	TYPE:	TYPE:	TYPE:
NORTH:	NORTH:	NORTH:	NORTH:
EAST:	EAST:	EAST:	EAST:
DEPTH:	DEPTH:	DEPTH:	DEPTH:

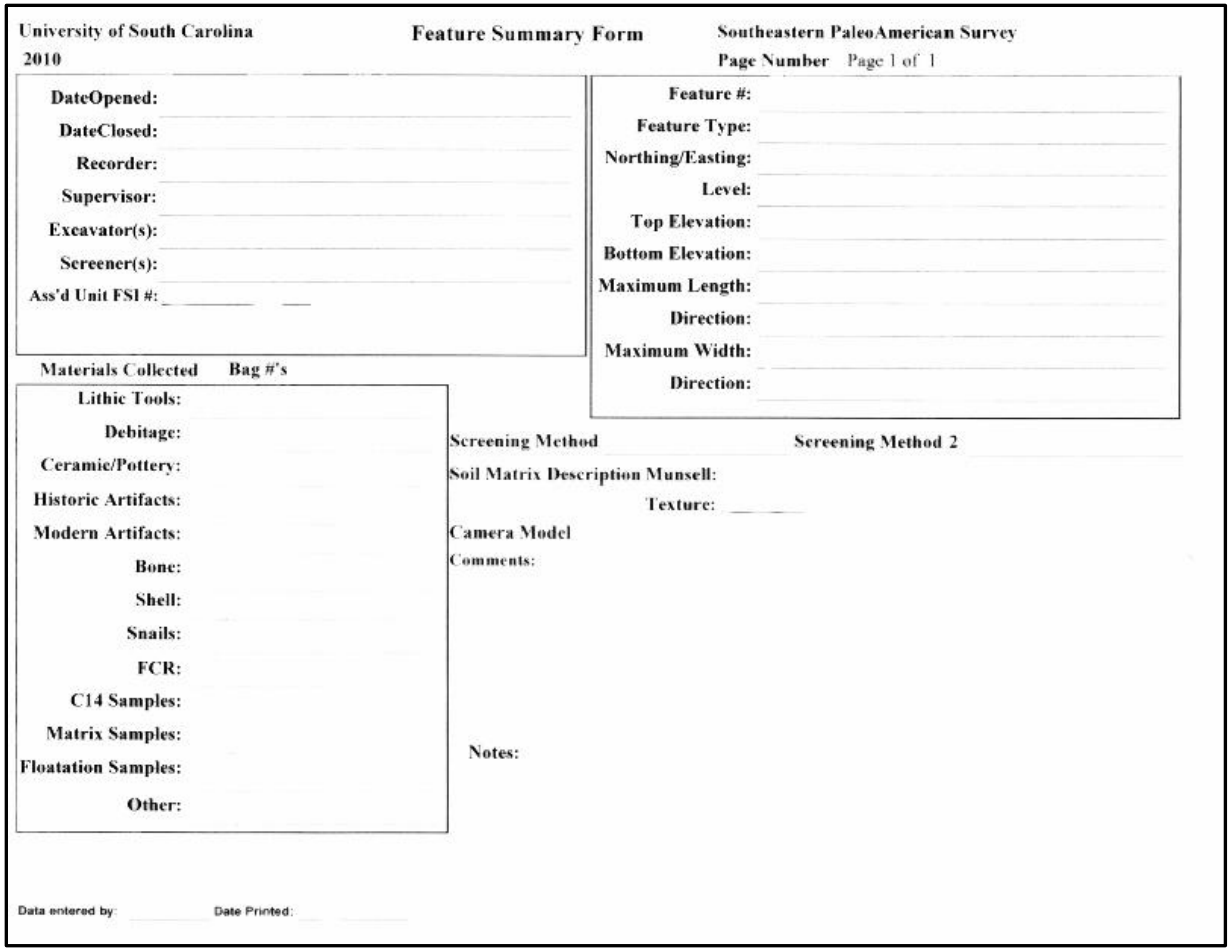
ART #:	ART #:	ART #:	ART #:
TYPE:	TYPE:	TYPE:	TYPE:
NORTH:	NORTH:	NORTH:	NORTH:
EAST:	EAST:	EAST:	EAST:
DEPTH:	DEPTH:	DEPTH:	DEPTH:

ART #:	ART #:	ART #:	ART #:
TYPE:	TYPE:	TYPE:	TYPE:
NORTH:	NORTH:	NORTH:	NORTH:
EAST:	EAST:	EAST:	EAST:
DEPTH:	DEPTH:	DEPTH:	DEPTH:

SUPERVISOR: CREW: DATE:

SE PA SURVEY FORM #03 Apr 2003

Figure A17-4
Site Feature form used from at Topper Site



University of South Carolina
2010

Feature Summary Form

Southeastern PaleoAmerican Survey
Page Number Page 1 of 1

DateOpened:
DateClosed:
Recorder:
Supervisor:
Excavator(s):
Screener(s):
Ass'd Unit FSI #:

Feature #:
Feature Type:
Northing/Easting:
Level:
Top Elevation:
Bottom Elevation:
Maximum Length:
Direction:
Maximum Width:
Direction:

Materials Collected Bag #'s

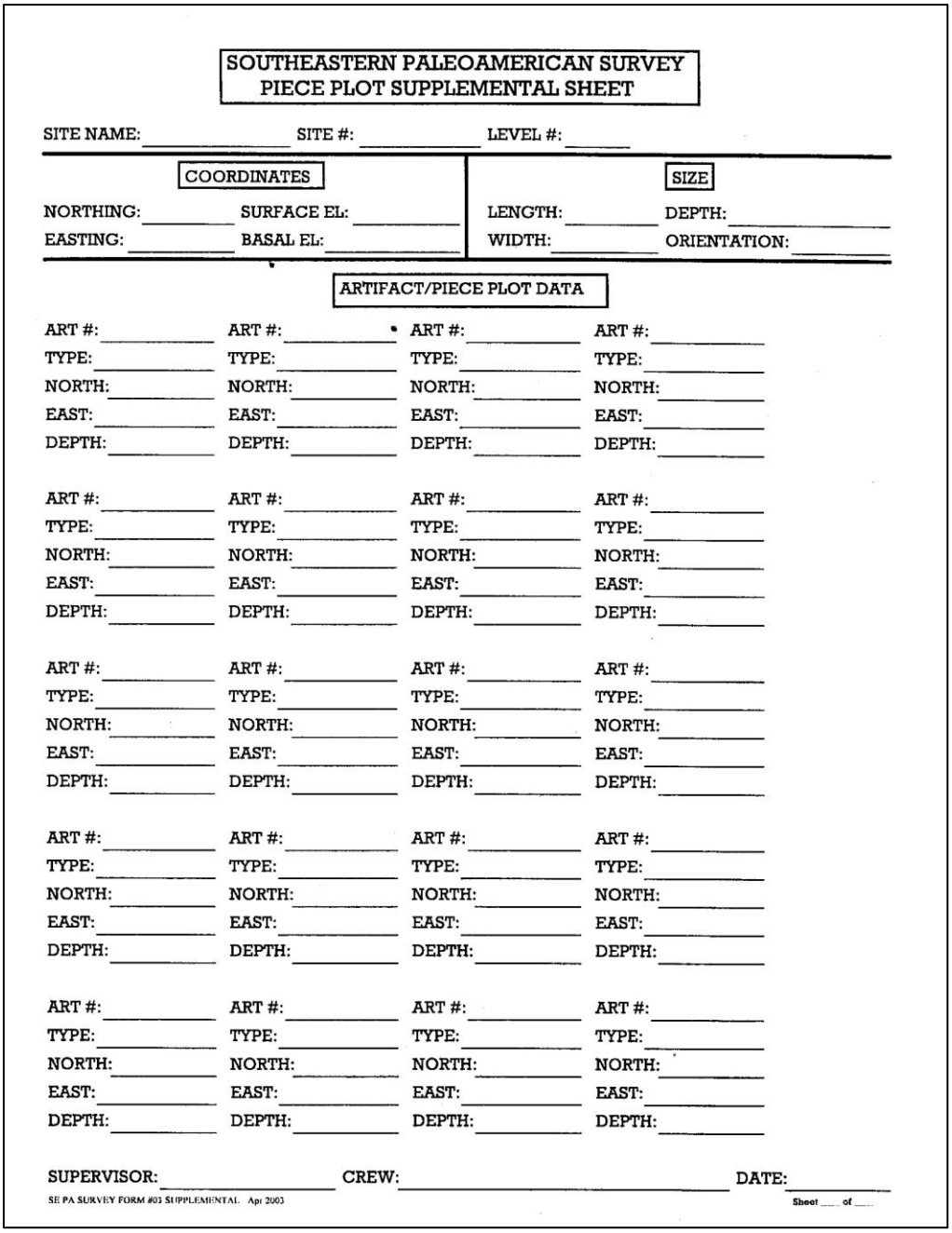
Lithic Tools:
Debitage:
Ceramic/Pottery:
Historic Artifacts:
Modern Artifacts:
Bone:
Shell:
Snails:
FCR:
C14 Samples:
Matrix Samples:
Floatation Samples:
Other:

Screening Method
Screening Method 2
Soil Matrix Description Munsell:
Texture:
Camera Model
Comments:

Notes:

Data entered by:
Date Printed:

Figure A17-5
Site Feature form used from at Topper Site.



SOUTHEASTERN PALEOAMERICAN SURVEY
PIECE PLOT SUPPLEMENTAL SHEET

SITE NAME: _____ SITE #: _____ LEVEL #: _____

COORDINATES

NORTHING: _____ SURFACE EL: _____
EASTING: _____ BASAL EL: _____

SIZE

LENGTH: _____ DEPTH: _____
WIDTH: _____ ORIENTATION: _____

ARTIFACT/PIECE PLOT DATA

ART #:	ART #:	ART #:	ART #:
TYPE:	TYPE:	TYPE:	TYPE:
NORTH:	NORTH:	NORTH:	NORTH:
EAST:	EAST:	EAST:	EAST:
DEPTH:	DEPTH:	DEPTH:	DEPTH:
ART #:	ART #:	ART #:	ART #:
TYPE:	TYPE:	TYPE:	TYPE:
NORTH:	NORTH:	NORTH:	NORTH:
EAST:	EAST:	EAST:	EAST:
DEPTH:	DEPTH:	DEPTH:	DEPTH:
ART #:	ART #:	ART #:	ART #:
TYPE:	TYPE:	TYPE:	TYPE:
NORTH:	NORTH:	NORTH:	NORTH:
EAST:	EAST:	EAST:	EAST:
DEPTH:	DEPTH:	DEPTH:	DEPTH:
ART #:	ART #:	ART #:	ART #:
TYPE:	TYPE:	TYPE:	TYPE:
NORTH:	NORTH:	NORTH:	NORTH:
EAST:	EAST:	EAST:	EAST:
DEPTH:	DEPTH:	DEPTH:	DEPTH:
ART #:	ART #:	ART #:	ART #:
TYPE:	TYPE:	TYPE:	TYPE:
NORTH:	NORTH:	NORTH:	NORTH:
EAST:	EAST:	EAST:	EAST:
DEPTH:	DEPTH:	DEPTH:	DEPTH:

SUPERVISOR: _____ CREW: _____ DATE: _____

SE PA SURVEY FORM #03 SUPPLEMENTAL Apr 2003 Sheet ___ of ___

Figure A17-6
Site Piece Plot supplemental form used at Topper Site.

APPENDIX 18

LIST OF FEATURES AT THE TOPPER SITE (38AL23)

For the purpose of this dissertation, features refer to contexts that represent either human activity or natural disturbances, differ in color or texture from the primary matrix, and may intersect multiple site strata. Features can be the byproduct of cultural or natural processes. Cultural features, by definition are non-moveable elements from archaeological sites whereby the culturally produced materials make up a part of the natural deposits. The most common human related features at Topper include post holes, hearths, middens, fire pits, and lithic concentrations. Natural features are often considered disturbances, and at Topper can include rodent burrows (faunalturbation), tree throws, burned roots, and cracks in the sediment. Natural features are not limited to Holocene deposits at Topper but can extend well into the Pleistocene Terrace as much as four meters below modern ground surface. Figure A19-7 presents examples of various disturbances identified from the Pleistocene deposits at Topper. When encountered, the excavation protocol calls for all material to be carefully recorded, mapped, and for feature fill (if present) to be screened separately.

Because natural disturbances can adversely affect cultural associations, it is important to document features when first encountered and to screen their contents separately from the remainder of the unit. At Topper, most features were treated as separate entities with regard to the contents and stratigraphy of each level. As a result, it is possible that features may cross multiple levels of excavation. To help record features properly, a feature log was implemented to allow for the documentation of features when encountered, and is presented, together with details on the major presumed cultural features from the pre Clovis deposits, in Appendix 18. As of 2012, one hundred and twenty one features have been identified at Topper, including at least 19 from the pre Clovis excavation units examined herein. In 2015, excavations resulting from a joint field school between Mississippi State University and the University of Tennessee that was

carried out on the Hillside at Topper have led to the identification of more than 100 additional features (Anderson, David G. personal communication). The majority of these features were recovered from Mississippian, Woodland and Archaic contexts.

Table A18-1
List of Features at the Topper Site (38AL23).

F	N	E	Loc	Date	Description	L	W	Start	End	Art	Deposit	Land
1	222	108	NA	1985	Lithic Cluster							Terrace
2	229	110	NA	1985	Hearth							Terrace
3	NA	NA	NA	1985	Possible Hearth			30cmbs	40cmbs			Terrace
4	220	87	NA	1985	Lithic Cluster							Terrace
5	220	87	NA	1985	Lithic Cluster			50cmbs	70cmbs		Archaic	Terrace
6	204	160	NA	1985	Chert Cluster			50cmbs	70cmbs		Archaic	Terrace
7	212	130	NA	1985	Pot with Urn			70cmbs	75cmbs		Archaic	Terrace
8	231	91	NA	1985	Lithic Cluster	18	21	65cmbd	94cmbd		Paleoindian	Terrace
9	NA	NA	NA	NA								Terrace
10	244	110	N	1998	Post Mold			20cmbs	70cmbs	NA	Woodland	Terrace
11	244	110	N	1998	Post Mold			20cmbs	70cmbs	NA	Woodland	Terrace
12	244	110	N	1998	Post Mold			20cmbs	70cmbs	NA	Woodland	Terrace
13	244	124	W	1998	Burned Area	60	100	13	30cmbs	0	Woodland	Terrace
14	244	130	S	1998	Lithic Cluster			80cmbs	85cmbs	2	Clovis	Terrace
15	244	118	NW	1998	Post Mold			50cmbs	60cmbs	NA	Archaic	Terrace
16	244	130	SE	1998	Post Mold					NA		Terrace
17	244	118	NE	5-16-1998	Post Mold			45cmbs	100cmbs	NA	Woodland	Terrace
18	244	118	W	5-13-1998	Hearth			30cmbs	75cmbs		Woodland	Terrace
19	282	112	NA	1998	Hearth							Terrace
20	250	92	NA	1998	Possible Post					NA		Terrace
21	282	112	NA	1998	Lithic Cluster							Terrace
22	244	106	NA	1998	Post Mold	30		95cmbs	100cmbs	NA	E. Archaic	Terrace
23	244	130	S	1998	Lithic Cluster			160cmbs		22	Pre Clovis	Terrace
24	NA	NA	NA	1998								Terrace
25	NA	NA	NA	1998								Terrace
26	NA	NA	NA	1998								Terrace
27	NA	NA	NA	1998								Terrace
28	NA	NA	NA	1998								Terrace
29	NA	NA	NA	1998								Terrace
F=Feature #; N=Northing; E=Easting; Loc=location; L=Length; W=Width; Art=number of artifacts; Land=Landform												

Table A18-1 continued

F	N	E	Loc	Date	Description	L	W	Start	End	Art	Deposit	Land
30	NA	NA	NA	1998								Terrace
31	NA	NA	NA	1998								Terrace
32	212	134	NA	5/5/1999	Lithic Cluster	75	65	70	80	4	Archaic	Terrace
33	210	130	NA	5/6/1999	Stain			97.88	97.77	NA	Clovis	Terrace
34	210	130	NA	5/6/1999	Lithic Cluster			97.88	97.77		Clovis	Terrace
35	210	134	NA	5/18/1999	Pedogenic	40	285	97.32	96.95	NA	Pre Clovis	Terrace
36	268	132	NA	5/19/1999	Lithic Cluster				140cmbs		Pre Clovis	Terrace
37	268	132	NA	5/20/1999	Lithic Cluster			160cmbs			Pre Clovis	Terrace
38	242	130	NA	5/25/1999	Lithic Cluster	124	40	84.5cmbs	102cmbs	2	Paleoindian	Terrace
39	242	130	NA	5/28/1999	Stain			160	170	NA	Pre Clovis	Terrace
40	242	130	NA	5/28/1999	Stain			160	170	NA	Pre Clovis	Terrace
41	242	130	NA	5/28/1999	Stain			160	170	NA	Pre Clovis	Terrace
42	242	130	NA	5/28/1999	Stain			160	170	NA	Pre Clovis	Terrace
43	242	130	NA	5/28/1999	Stain			160	170	NA	Pre Clovis	Terrace
44	242	130	NA	5/28/1999	Stain			160	170	NA	Pre Clovis	Terrace
45	242	130	NA	5/28/1999	Stain			160	170	NA	Pre Clovis	Terrace
46	242	130	NA	5/28/1999	Stain			160	170	NA	Pre Clovis	Terrace
47	242	130	NA	5/28/1999	Stain			160	170	NA	Pre Clovis	Terrace
48	242	132	NA	6/22/1999	Cache			118cmbs	128cmbs	11	E. Archaic	Terrace
49	242	132	NA	6-241999	Lithic Cluster			140	150		Pre Clovis	Terrace
50	242	128	NA	5/5/2000	Lithic Cluster							Terrace
51	242	134	NA	5/10/2000	Pot Bust							Terrace
52	244	134	NA	5/11/2000	Lithic Cluster					31		Terrace
53	244	128	SE	5/16/2000	Stain			150cmbd		NA	Pre Clovis	Terrace
54	244	128	SE	5/16/2000	Stain					NA		Terrace
55	244	128	SE	5/16/2000	Stain					NA		Terrace
56	244	128	SE	5/17/2000	Stain					NA		Terrace
57	242	128	SE	5/17/2000	Stain					NA		Terrace
58	242	128	NE	5/17/2000	Stain					NA		Terrace
59	242	134	SE	5/25/2000	Lithic Cluster			170cmbd			Pre Clovis	Terrace
60	242	134	NA	5/25/2000	Lithic Cluster							Terrace

Table A18-1 continued

F	N	E	Loc	Date	Description	L	W	Start	End	Art	Deposit	Land
61	244	134	NA	5/25/2000	Lithic Cluster							Terrace
62	244	148	NA	5/26/2000	Lithic Cluster							Terrace
63	244	132	NA	5/27/2000	Lithic Cluster							Terrace
64	244	132	NE	5/27/2000	Lithic Cluster							Terrace
65	242	128	SE	5/27/2000	Lithic Cluster							Terrace
66	242	134	NA	5/30/2000	Lithic Cluster							Terrace
67	244	148	NA	6/1/2000	Lithic Cluster			160cmbd	170cmbd			Terrace
68	244	146	NA	6/1/2000	Lithic Cluster							Terrace
69	237	127	NA	5/3/2001	Lithic Cluster			98.35m	98.31m	9		Terrace
70	240	132	NA	5/4/2001	Lithic Cluster			98.22m	98.17m	10		Terrace
71	238	134	NA	5/5/2001	Post Mold					NA		Terrace
72	234	106	NA	5/9/2001	Post Mold					NA		Terrace
73	234	106	NA	5/9/2001	Lithic Cluster							Terrace
74	240	128	NA	5/9/2001	Lithic Cluster							Terrace
75	236	106	NA	5/11/2001	Lithic Cluster							Terrace
76	242	106	NA	5/18/2001	Pit Feature							Terrace
77	240	132	NA	5/19/2001	Lithic Cluster							Terrace
78	242	106	NA	5/19/2001	Storage Pit						Archaic	Terrace
79	232	102	NA	5/24/2001	Lithic Cluster							Terrace
80	238	128	NA	5/24/2001	Lithic Cluster							Terrace
81	238	134	N	5/29/2001	Post Mold					NA		Terrace
82	240	134	SW	5/30/2001	Lithic Cluster						Pre Clovis	Terrace
83	240	132	NW	5/31/2001	Lithic Cluster						Pre Clovis	Terrace
84	286	136	NA	3/2/2002	Shell Cluster							Terrace
85	244	136	NA	5/8/2002	Lithic Cluster							Terrace
86	244	242	NA	5/21/2002	Lithic Cluster							Terrace
87	242	138	NA	5/24/2002	Lithic Cluster							Terrace
88	244	142	NA	6/3/2002	Lithic Cluster							Terrace
89	284	132	NA	5/8/2003	Possible Burial							Terrace
90	242	140	NA	6/2/2003	Lithic Cluster							Terrace

Table A18-1 continued

F	N	E	Loc	Date	Description	L	W	Start	End	Art	Deposit	Land
91	NA	NA	NA	NA	NA							Terrace
92	246	142	N	5-4-2005	Pot Bust							Terrace
93	NA	NA	NA	NA	NA							Terrace
94	246	140	NA	5/27/2005	Lithic Cluster	100	100					Terrace
95	Trench	D	NA	10/30/2005	Lithic Cluster						Clovis	Hillside
96	102	56	S	5/5/2006	Lithic Cluster	NA	NA	NA	NA		Clovis	Terrace
97	102	66	NA	6/17/2006	Clovis	NA	NA	NA	NA	9	Clovis	Terrace
98	100	54	NA	6/2/2006	Stain	NA	NA	NA	NA			Terrace
99	140	38	NA	5/22/2008	Lithic Cluster	NA	NA	NA	NA	8		Terrace
100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Terrace
101	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Terrace
102	172	62	NA	2009	Pedogenic	36	34	108.83	108.79			Hillside
103	270	162	NA	5/26/2009	Stain	26	24	108.89	108.84			Hillside
104	172	62	NA	5/19/2009	Pedogenic	33	33	108.95	108.9		Clovis	Hillside
105	248	140	NA	5/7/2009	Lithic Cluster	40	105	97.62	97.51	12	Pre Clovis	Terrace
106	160	57	NA	5/12/2009	Soil Stain	80	113	108.79	108.75	19		Hillside
107	246	140	SE	5/20/2009	Lithic Cluster	70	35	97.25	97.16			Terrace
108	262	146	NA	3/1/2010	Pot Bust	77	47	99.03	98.95			Terrace
109	264	144	E	5/10/2010	Lithic Cluster	61	48	98.25	98.2	4		Terrace
110	207	064	NA	5/17/2011	Hardened soil	32	32	109.65	109.60			Hillside
111	262	142	NA	3/11/2011	Lithic Cluster	20	20	98.47	98.444			Terrace
112	244	144	NA	3/14/2011	Lithic Cluster	80	85	98.41	98.35			Terrace
113	232	062	NA	5/24/2011	Compacted soil	20	15	110.104	109.957			Hillside
114	244	144	NA	5/26/2011	Lithic Cluster	38	18	97.80	97.70			Terrace
115	207	066	NA	5/27/2011	Post Mold	NA	NA	110.389	Unknown			Hillside
116	226	022	NA	5/27/2011	Stain	25	25	110.7	110.6			Hillside
117	248	140	NA	5/07/2012	Lithic Cluster	20	25	96.60	96.45			Terrace
118	270	037	NA	5/11/2012	Human burial	150	150	109.95	109.85		Archaic	Hillside
119	209	066	NA	5/22/2012	Dark Stain	30	42	109.73	109.68			Hillside
120	209	066	NA	5/22/2012	Dark Stain	28	18	109.744	109.69			Hillside
121	220	067	NA	3/12/2014	Pit	NA	NA	110.378	110.3	NA	Mississippian	Hillside



Figure A18-1
Feature 14, an Early Archaic lithic Cluster at the Topper Site (38AL23) 1998 Field Season. Unit N244 E130 80-85cmbs. (Photo courtesy of AL Goodyear).

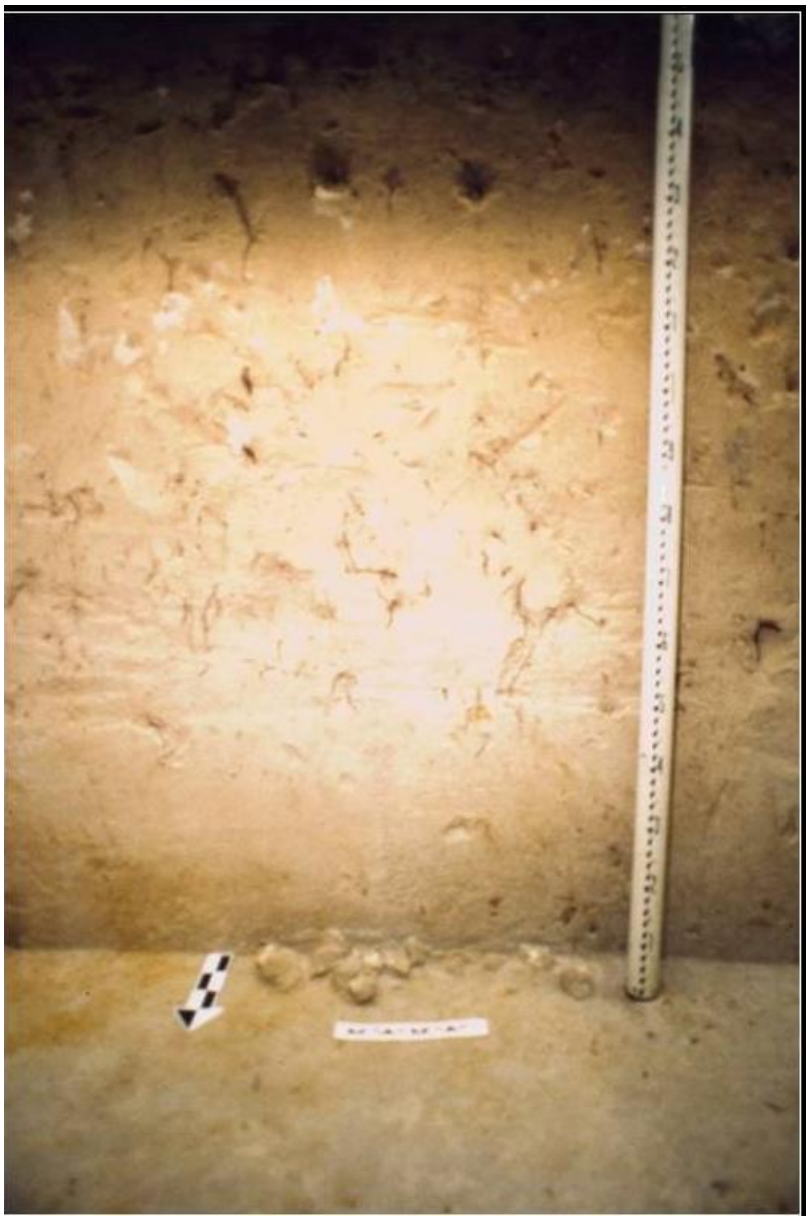


Figure A18-2
Feature 23 Lithic Cluster from Pleistocene Sands deposits at Topper: N244 E140 South Wall 180cmbs
(97.05-96.95m) 5-28-1998



Figure A18-3
Feature 23 Lithic Cluster from Pleistocene Sands deposits at Topper: N244 E140 South Wall 180cmbs (97.05-96.95m) 5-28-1998



Figure A18-4
Feature 50 Lithic Cluster from Early Archaic deposits at Topper: N242 E128 73cmbd 2000.

Table A18-1B
Feature 50 Lithic Cluster from Early Archaic deposits at Topper: N242 E128 73cmbd.

Art.	North	East	Depth below Surface
1	242.1	128.64	73
2	242.18	128.78	72
3	242.08	128.77	72.5
4	242.17	128.9	74
5	242.17	128.9	74.5
6	242.14	128.94	74.5

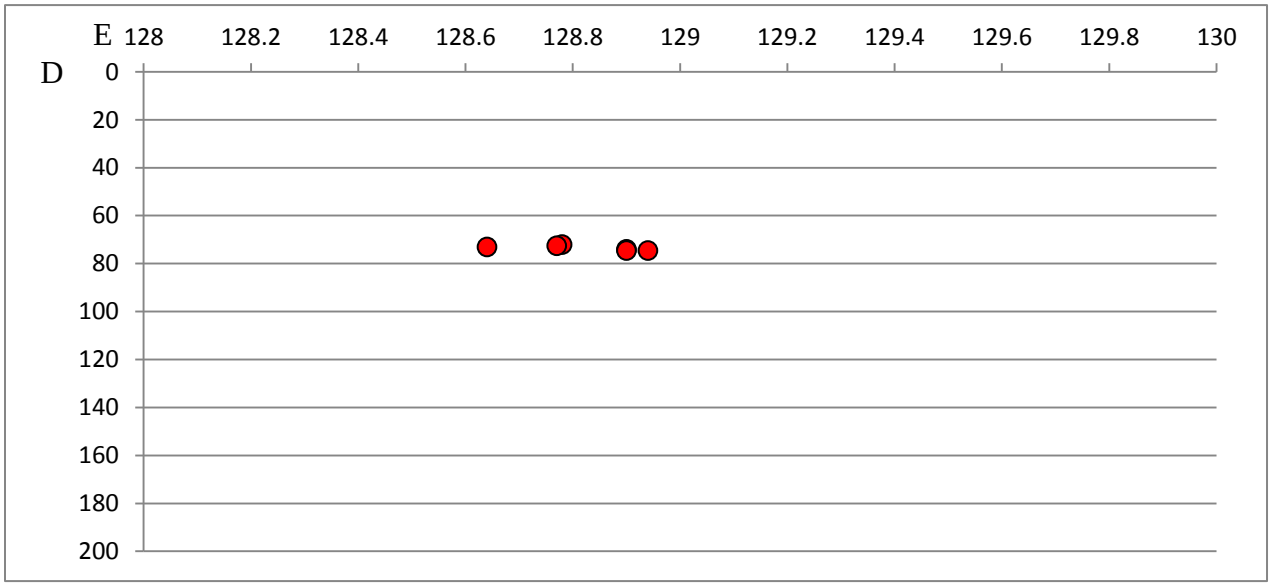


Figure A18-5
Vertical Distribution of Feature 52
Lithic Cluster from Early Archaic deposits at Topper: N242 E128 73cmbd. Y axis = depth, X axis = Easting



Figure A18-6
Feature 52 Lithic Cluster from the Archaic deposits at Topper: N244 E134 50-60cmbs, 2000.
Image by Al Goodyear.

Table A18-2
Feature 52 Lithic Cluster from Archaic deposits at Topper: N244 E134 50-60cmbd.

Art.	North	East	Depth below Surface	Type
1	245.07	135.47	98.24	FCR
2	245.11	135.41	98.25	FCR
3	245.03	135.6	98.27	FCR
4	245.95	135.59	98.27	FCR
5	245	135.65	98.24	FCR
6	244.99	135.62	98.26	FCR
7	245.11	135.65	98.28	FCR
8	245.16	135.68	98.26	FCR
9	245.17	135.7	98.26	FCR
10	245.14	135.72	98.26	FCR
11	244.08	135.72	98.26	FCR
12	244.88	135.73	98.24	FCR
13	244.99	135.67	98.25	FCR
14	244.95	135.75	98.24	FCR
15	244.92	135.71	98.27	FCR
16	244.94	135.72	98.23	FCR
17	244.89	135.73	98.22	FCR
18	244.99	135.56	98.22	FCR
19	245.1	135.72	98.26	FCR
20	245.13	135.72	98.27	FCR
21	245.1	135.78	98.23	FCR
22	245.11	135.74	98.23	FCR
23	244.99	135.76	98.24	FCR
24	245.14	135.56		FCR
25	245.11	135.63	98.28	FCR
26	245.12	135.69	98.22	FCR
27	245.08	135.66		FCR
28	245.06	135.68	98.26	FCR
29	244.97	135.77	98.21	FCR
30	244.97	135.69	98.25	FCR
31	244.97	135.7	98.26	FCR

Art = Artifact #; FCR = Fire Cracked Rock.

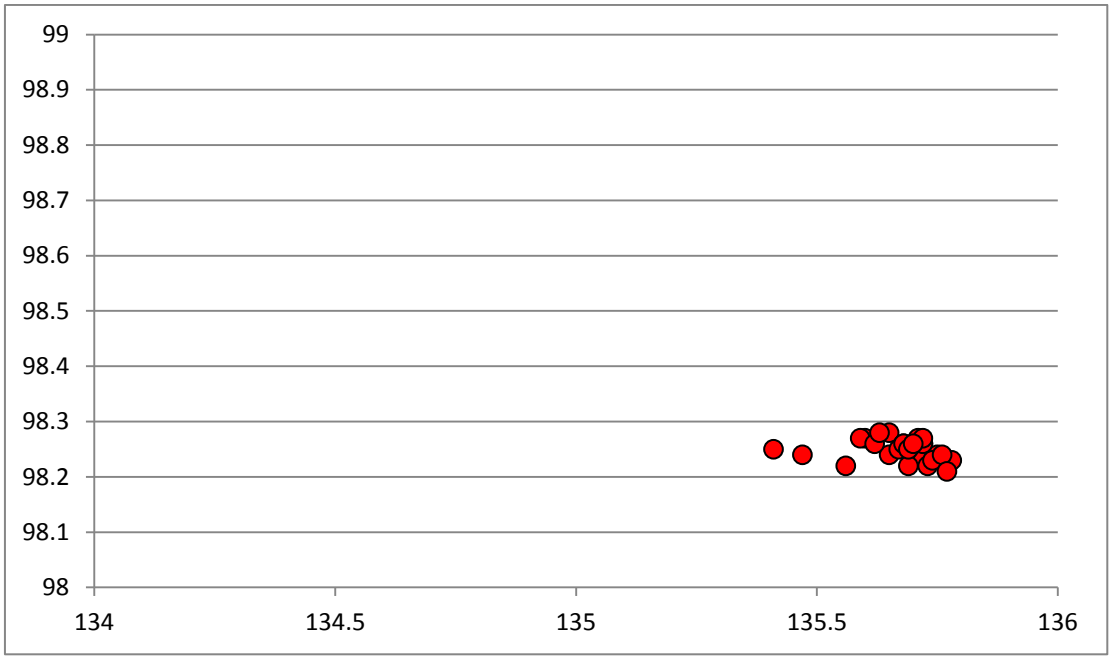


Figure A18-7
Vertical Distribution of Feature 52 Lithic Cluster from the Archaic deposits at Topper: N244 E134 50-60cmbs, 2000. Y axis = depth, x axis = Easting



Figure A18-8
Feature 59 Lithic Cluster from the Pleistocene Sands deposits at Topper: N244 E134 170cmbs, 2000. Photo by Al Goodyear.

Table A18-3
Feature 59 Lithic Cluster from the Pleistocene Sands deposits at Topper: N244 E134 170cmbs, 2000.

Art.	North	East	Depth below Surface	Type
1	242.54	135.98	97.09	F59 Core
2	242.24	135.85	97.02	F59 Chert cobble
3	242.94	136.02	97.05	F59
4	242.25	135.98	97.08	F59
5	242.15	135.83	97.16	F59 Large flake
6	242.09	135.88	97.03	F59 Sm. Flake
7	242.2	135.76	97.02	F59
8	242.1	135.75	97.06	F59
9	242.18	135.89	97.03	F59
10	242.33	135.78	97.1	F59
11	242.31	135.68	97.06	F59
12	242.25	135.63	97.08	F59
14	242.32	135.52	97.03	F59
15	242.42	135.46	97.03	F59
16	243.68	135.14	97.08	F59
17	243.69	135.08	97.07	F59
18	243.51	135.46	97.07	F59
19	243.9	135.7	97.11	F59 Flake

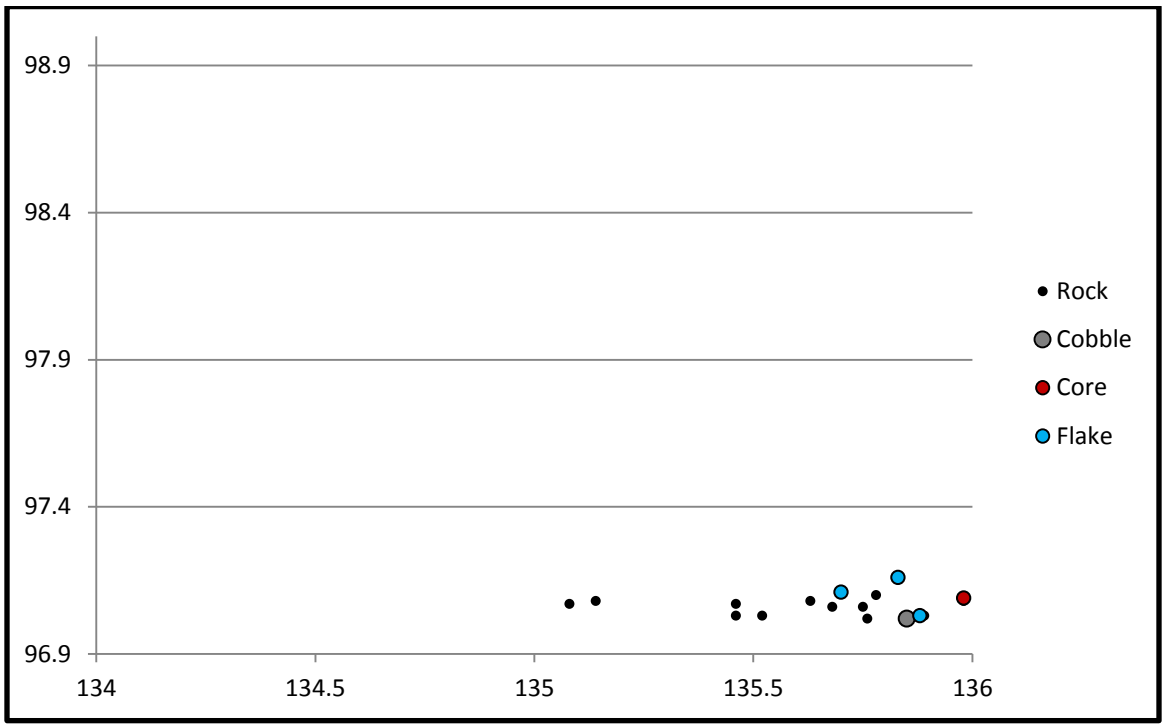


Figure A18-9
Vertical Distribution of Feature 59 Lithic Cluster from the Pleistocene Sands deposits at Topper: N244 E134 170cmbs, 2000. Photo by Al Goodyear.
Y axis = depth, x axis = Easting



Figure A18-10
Feature 60 Lithic Cluster from the Pleistocene Sands deposits at Topper: N242E134 170cmbs, 2000.

Table A18-4
Feature 60 Lithic Cluster from the Pleistocene Sands deposits at Topper: N242E134 170cmbs, 2000.

Art.	North	East	Depth below Surface	Type
1	243.39	135.51	97.1	Rock
3	243.42	135.77	97.09	Rock
4	243.64	135.8	97.08	Rock
5	243.54	135.81	97.11	Rock
6	243.63	135.83	97.11	Core Fragment
7	243.53	135.86	97.11	Rock
8	243.58	135.94	97.12	Rock
9	243.59	136	97.1	Rock

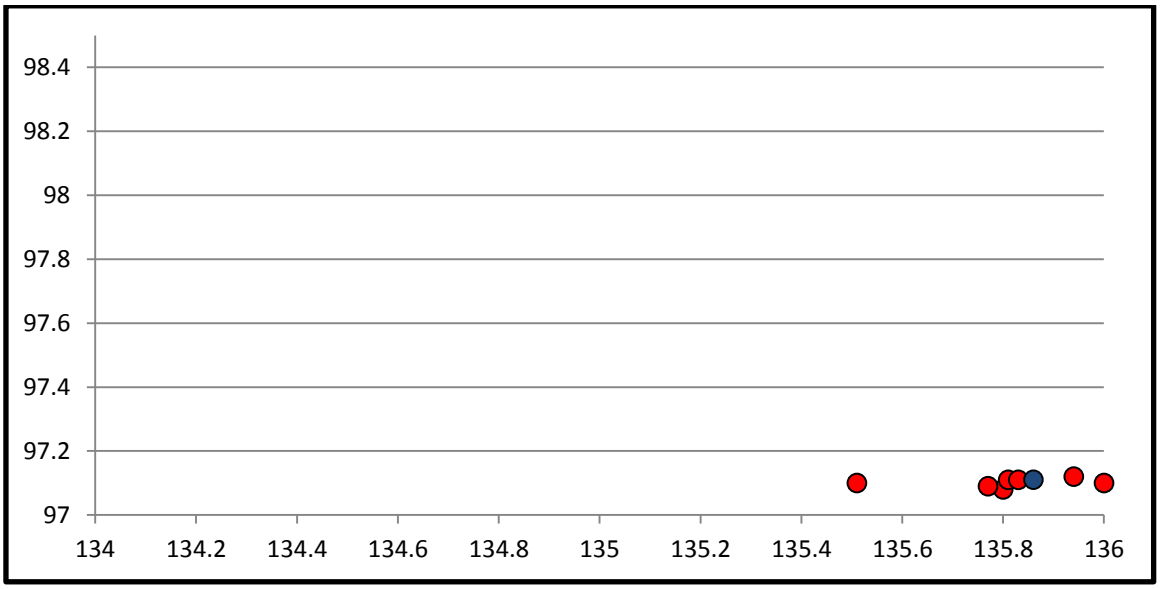


Figure A18-11
Vertical Distribution of Feature 60 Lithic Cluster from the Pleistocene Sands deposits at Topper: N242E134 170cmbs, 2000. Red dots reflect chert cobbles, blue dot reflects chert core. Y axis = depth, x axis = Easting



Figure A18-12
Feature 61 Lithic Cluster from the Pleistocene Sands deposits at Topper: N244 E134 170cmbs, 2000. Photo by Al Goodyear.

Table A18-5
Feature 61 Lithic Cluster from the Pleistocene Sands deposits at Topper: N244 E134 170cmbs, 2000.

Art.	North	East	Depth below Surface	Type
1	244.5	133	97.11	Feature 61
2	244.14	135.36	97.07	Feature 61
3	244.06	134.58	97.12	Feature 61
4	244.08	134.73	97.13	Feature 61
5	244.05	134.69	97.12	Quartz Pebble
6	244.06	134.64	97.12	Quartz Pebble
7	244.11	134.6	97.12	Quartz Pebble
8	244.18	134.62	97.12	Feature 61
9	244.18	134.68	97.12	Feature 61
10	244.23	134.63	97.12	Feature 61
11	244.24	134.6	97.11	Chert Flake
12	244.22	134.69	97.12	Feature 61
13	244.25	134.68	97.12	Feature 61
14	244.26	134.71	97.12	Feature 61
15	244.12	134.8	97.11	Feature 61
16	244.08	134.76	97.13	Feature 61
1	244.5	133	97.11	Feature 61

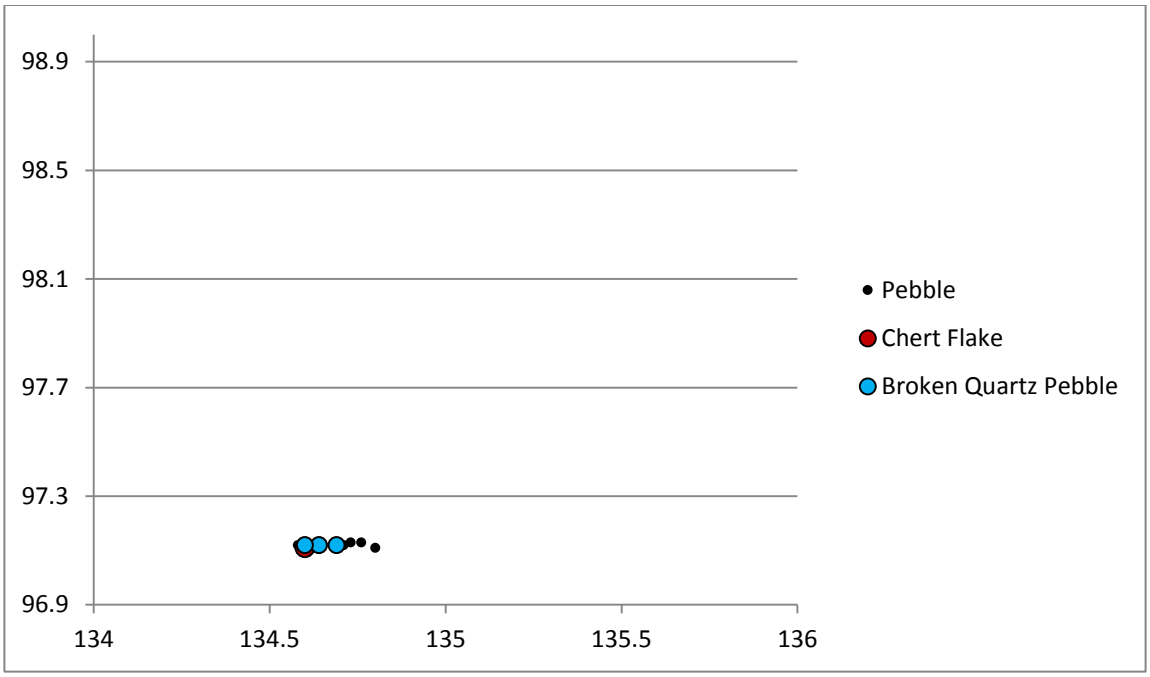


Figure A18-13
Vertical Distribution of Feature 61 Lithic Cluster from the Pleistocene Sands deposits at Topper: N244 E134 170cmbs, 2000. Photo by Al Goodyear.
Y axis = depth, x axis = Easting

Table A18-1
List of Features at the Topper Site (38AL23).



Figure A18-14
Feature 62 Lithic Cluster from the Pleistocene Sands deposits at Topper: N244 E146 130cmbs, (at Top). Feature 62 in N248 E146 south profile wall (2000). Photograph by Al Goodyear.

Table A18-6
Feature 62 Lithic Cluster from the Pleistocene Sands deposits at Topper: N244 E146 130cmbs.

Art.	North	East	Depth below Surface
1	244.2	148.44	98.2
2	244.31	148.5	98.19
3	244.64	148.24	98.24
4	244.78	148.34	98.15
5	244.41	148.93	98.2
6	244.46	148.88	98.15
7	244.44	148.83	98.13
8	244.06	148.92	98.2
9	244.404	149.1	98.2
10	244.4	148.51	98.18
11	244.45	148.58	98.14
12	244.13	148.67	98.23
13	244.22	148.67	98.18
14	244.19	148.76	98.18
15	244.32	148.66	98.15
16	244.28	148.47	98.12
17	244.34	148.67	98.17
18	244.3	148.73	98.15
19	244.33	148.75	98.15
20	244.4	148.81	98.14
21	244.14	148.73	98.16
22	244.33	148.95	98.13
23	244.3	148.83	98.11
24	244.37	144.89	98.13
25	244.35	148.77	98.11
26	244.37	148.81	98.1
27	244.32	148.74	98.11
28	244.31	148.57	98.12
29	244.36	148.69	98.11
30	244.34	148.9	98.11
31	244.29	148.82	98.11
32	244.12	148.51	98.18
33	244.13	148.7	98.11
34	244.2	148.74	98.1
35	244.16	148.55	98.14
36	244.1	148.81	98.12
37	244.08	148.81	98.12

Table A18-6 continued

Art.	North	East	Depth below Surface
38	244.21	148.86	98.1
39	244.05	148.95	98.14
40	244.08	148.63	98.13
41	244.13	148.67	98.1
42	244.23	149.1	98.1
43	244.37	148.8	98.1
44	244.4	148.9	98.09

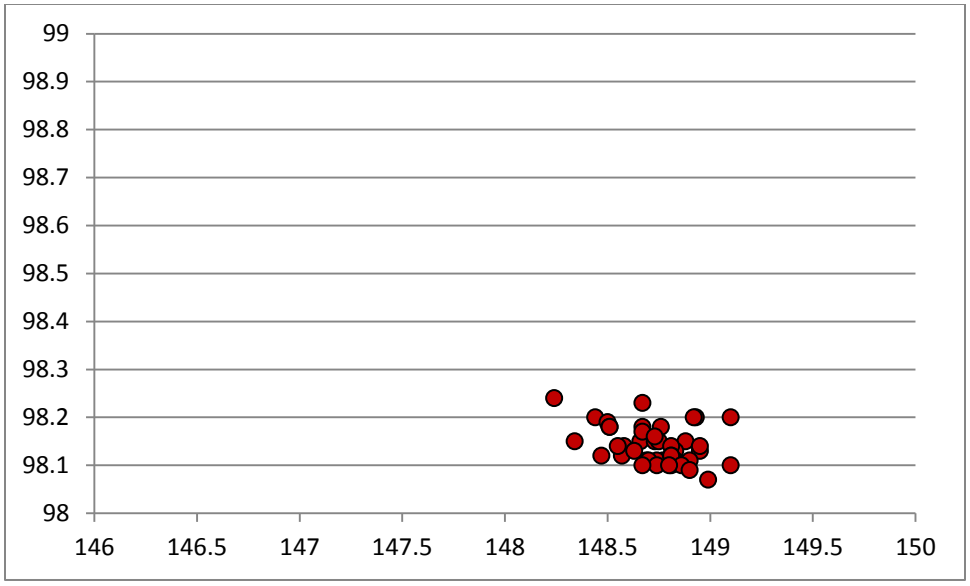


Figure A18-15
Vertical Distribution of Feature 62 Lithic Cluster from the Pleistocene Sands deposits at Topper: N244 E146 130cmbs. (2000). Photograph by Al Goodyear.
Y axis = depth, x axis = Easting



Figure A18-16
Feature 76 Pit Feature. N242 E108 97.8M (2001) Topper Site, 38AL23.
Photograph by Al Goodyear.



Figure A18-17
Feature 75 Archaic Lithic Cluster. N236 E106 97.8M (2001) Topper Site, 38AL23.
Photograph by Al Goodyear



Figure A18-18
Feature 79 Early Archaic Lithic Cluster. N232 E102 97.3M (2001) Topper Site, 38AL23.
Photograph by Al Goodyear

Figure A18-7
Feature 79 Early Archaic Lithic Cluster. N232 E102 97.3M (2001) Topper Site, 38AL23.

Northing	Easting	Depth	Type	Feature
233.09	103.98	97.29	Core	79
233.11	103.71	97.29	tertiary flake	79
233.16	103.42	97.3	flake	79
233.18	103.83	97.29		79
233.18	103.99	97.29	Scraper	79
233.2	103.77	97.29	scraper	79
233.22	103.55	97.29	flake	79
233.22	103.63	97.29	tertiary flake	79
233.22	103.73	97.29	tertiary flake	79
233.22	103.95	97.29	flake	79
233.24	103.25	97.28	flake	79
233.25	102.99	97.22	Sidescraper	79
233.25	103.67	97.22	Crested Blade	79
233.27	103.64	97.29	tertiary flake	79
233.27	103.78	97.29	tertiary flake	79
233.28	103.88	97.29	Smashed core	79
233.29	103.76	97.29	Bend Break	79
233.3	103.91	97.29	Smashed core	79
233.32	103.85	97.29	Sandstone chunk	79
233.33	103.19	97.29	blade distal	79
233.34	103.67	97.27	Bend Break	79
233.35	103.8	97.29	Bend Break	79
233.38	103.6	97.26	flake	79
233.47	103.54	97.27	chunk	79
233.47	103.9	97.29	Crested Blade	79
233.53	103.48	97.29	tertiary flake	79
233.61	103.05	97.23	hammerstone	79
233.61	103.87	97.29	tertiary flake	79
233.62	103.43	97.28	tertiary flake	79
233.65	103.73	97.28	tertiary flake	79
233.69	103.65	97.29	flake	79
233.74	103.36	97.25	tertiary flake	79
233.76	103.57	97.26	Bipolar Core	79
233.77	103.88	97.29	tertiary flake	79
233.79	103.58	97.26	Denticulate	79
233.8	103.17	97.25	Blade Core	79
233.8	103.55	97.25	Scraper	79
233.82	103.95	97.25	outre passe	79
233.84	103.48	97.29	flake	79
233.84	103.56	97.27	Bipolar Core	79
233.88	103.88	97.29	UT flake	79
233.89	103.62	97.27	End scraper bit	79

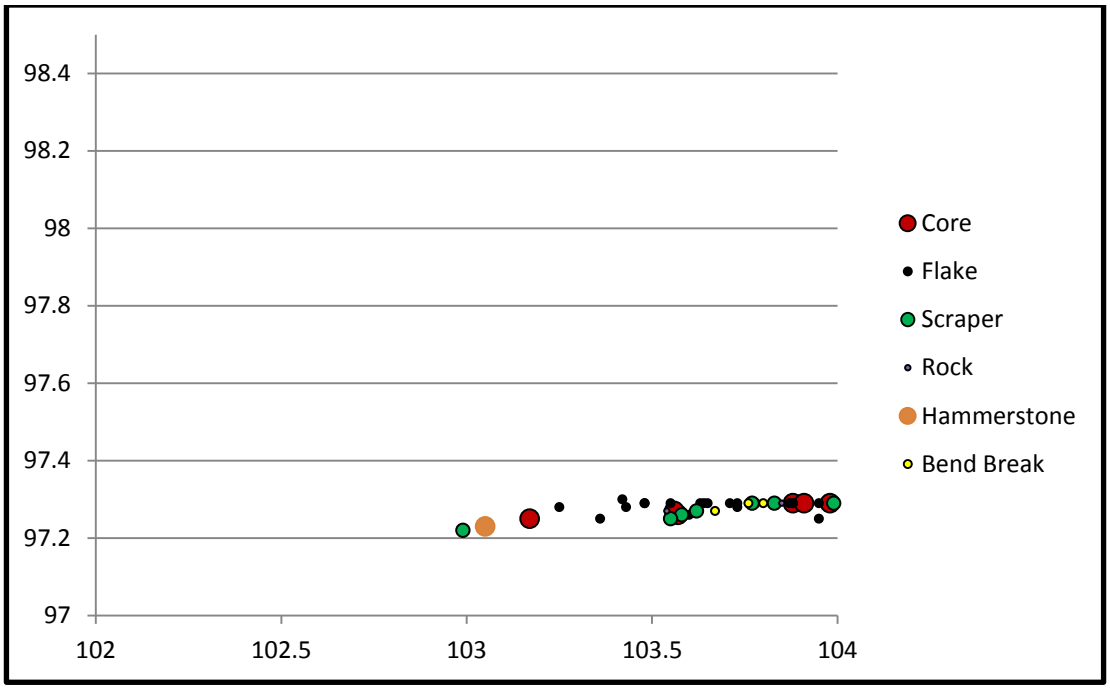


Figure A18-19
Vertical Distribution of Feature 79 Early Archaic Lithic Cluster. N232 E102 Topper Site, 38AL23. Y axis = depth, x axis = Easting



Figure A18-20
Feature 77, Lithic Cluster from Pleistocene Sands. N240 E132 97.2-97.3M (2001) Topper Site, 38AL23.Photograph by Al Goodyear

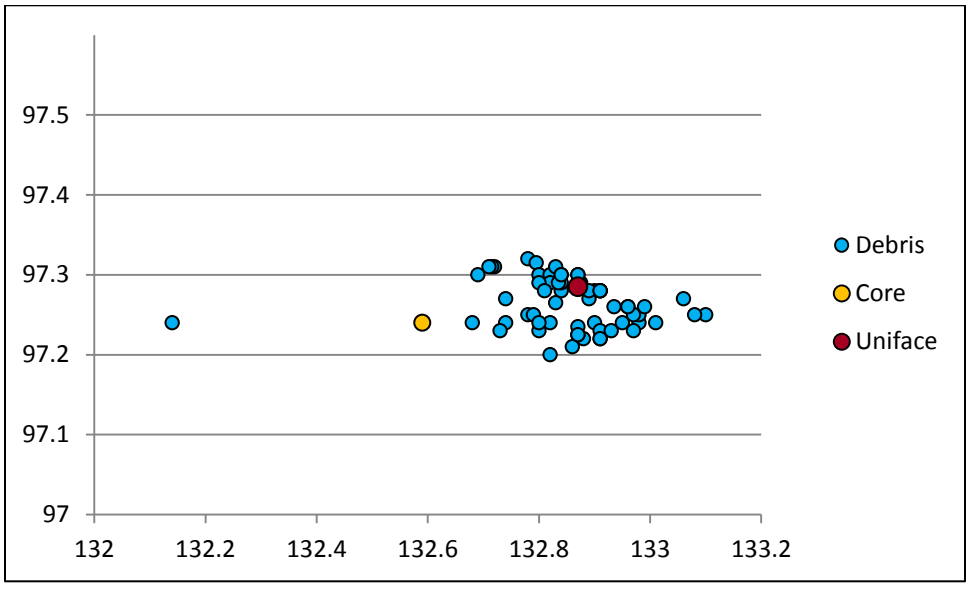


Figure A18-21
Vertical Distribution of Feature 77, Lithic Cluster from Pleistocene Sands. N240 E132 97.2-97.3M (2001) Topper Site, 38AL23. Y axis = depth, X axis = Easting

Table A18-8
Feature 77 Early Archaic Lithic Cluster. N240 E132 Topper Site, 38AL23.

Northing	Easting	Depth	Type	Feature
240.7	132.87	97.225	chert debris	77
240.65	132.87	97.285	uniface	77
240.6	132.87	97.3	chert debris	77
240.58	132.91	97.28	flake fragment	77
240.51	132.96	97.26	core fragment	77
240.49	132.91	97.28	formless debris	77
240.43	132.91	97.22		77
240.435	132.84	97.3	chert flake	77
240.46	132.805	97.65	chert debris	77
240.47	132.59	97.24	chert core	77
240.47	132.59	97.24		77
240.475	132.72	97.31	formless debris	77
240.48	132.715	97.31	formless debris	77
240.53	132.74	97.24		77
240.49	132.71	97.31	formless Debris	77
240.46	132.69	97.3	formless Debris	77
240.51	132.78	97.32	formless debris	77
240.58	132.795	97.315	formless debris	77
240.605	132.8	97.3	formless Debris	77
240.55	132.82	97.3	formless debris	77
240.51	132.935	97.26	formless debris	77
240.47	132.88	97.22		77
240.45	132.9	97.28		77
240.505	132.875	97.29		77
240.515	132.87	97.29		77
240.535	132.82	97.29		77
240.48	132.8	97.29		77
240.6	132.89	97.27		77
240.575	132.83	97.31		77
240.625	132.78	97.25		77
240.635	132.84	97.28		77
240.7	132.87	97.225		77
240.65	132.87	97.285		77
240.6	132.87	97.3		77
240.58	132.91	97.28		77
240.51	132.96	97.26		77
240.49	132.91	97.28		77
240.43	132.91	97.22		77
240.435	132.84	97.3		77
240.46	132.805	97.65		77

Table A18-8 continued

Northing	Easting	Depth	Type	Feature
240.47	132.59	97.24		77
240.47	132.59	97.24		77
240.47	132.84	97.29		77
240.46	132.835	97.29		77
240.46	132.81	97.28		77
240.56	132.87	97.29		77
240.55	132.89	97.28		77
240.46	132.74	97.27		77
240.44	132.82	97.2		77
240.4	132.8	97.23		77
240.4	132.73	97.23		77
240.44	132.79	97.25		77
240.46	132.82	97.24	Debris	77
240.45	132.68	97.24	Debris	77
240.5	132.83	97.265	Debris	77
240.52	132.87	97.235	Debris	77
240.52	132.9	97.24	Flake	77
240.54	132.8	97.24	Debris	77
240.83	132.98	97.24	Debris	77
240.88	132.14	97.24	debris	77
240.91	132.91	97.23	Debris	77
240.89	132.86	97.21	Debris	77
241.03	132.93	97.23		77
240.87	133.01	97.24		77
240.785	133.1	97.25		77
240.895	133.06	97.27		77
240.85	132.95	97.24		77
240.89	132.97	97.23		77
240.97	133.08	97.25		77
240.935	132.98	97.25		77
240.96	132.99	97.26		77
241	132.97	97.25		77



Figure A18-22
Feature 87, Lithic Cluster from Pleistocene Sands. N244-E138 97.50-97.3M (2002) Topper Site, 38AL23. Photograph by Al Goodyear

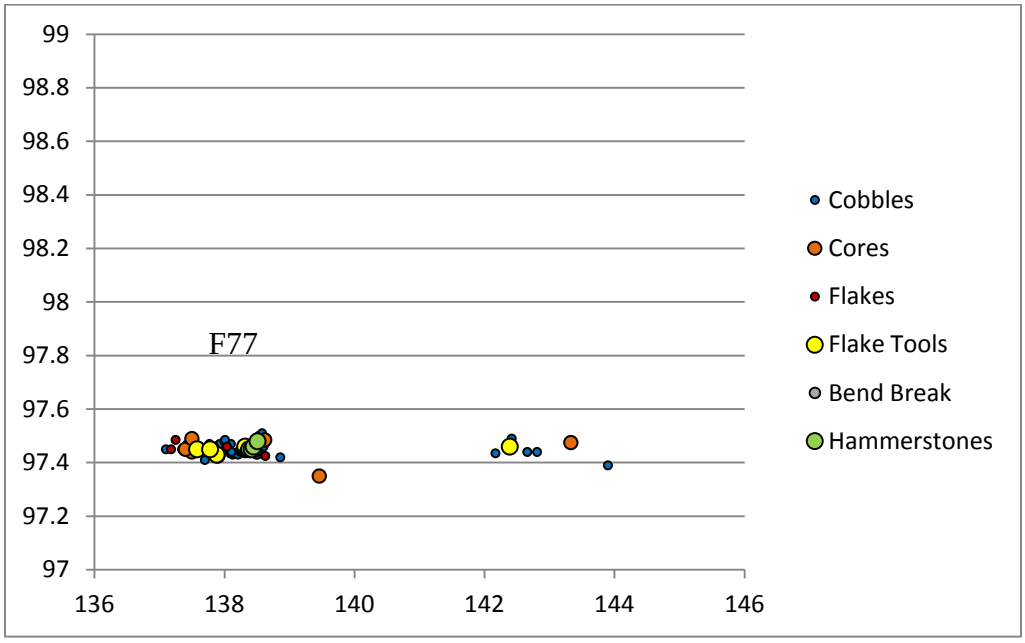


Figure A18-23
Vertical Distribution of Feature 77, Lithic Cluster from Pleistocene Sands. N240 E132 97.2-97.3M (2001) Topper Site, 38AL23.
Y axis = depth, x axis = Easting.



Figure A18-24
Image showing basal elements of Features 87 and 88 excavated from the pre Clovis 5x9block excavation at Topper in 2002. F87 - N244-E138, F 88 – N244 E142. 97.50-97.35m.

Table A18-9
List of Features at the Topper Site (38AL23).

Northing	Easting	Depth	Type	Feature
243.5	138.6	97.46	chert tool	87
243.5	138.6	97.46	flake tool	87
243.47	137.95	97.445	chert debris	87
			flake tool	87
243.47	137.95	97.445	chert debris	87
243.42	137.77	97.47	chert scraper	87
243.5	139.46	98.05	chert core,	87
			chert cobble	87
243.85	137.1	97.45	chert core,	87
			chert cobble	87
243.92	137.18	97.45	flake fragment	87
			core	87
243.9	137.25	97.485	Cobble	87
			chert debris	87
243.93	138.32	97.46	chert flake core	87
244.6	143.33	97.475	Chert scraper	87
243.95	137.43	97.47	Bend break	87
			chert debris	87
243.95	137.46	97.47	broken quartz	87
			formless debris	87
			quartz pebble	87
244.17	137.4	97.45	quartz pebble	87
			chert pebble	87
244.55	137.46	97.46	formless debris	87
245	143.9	97.69	chert pebble	87
244.46	137.5	97.49	quartz pebble	87
244.64	137.5	97.44	chert pebble	87
244.38	137.58	97.45	quartz pebble	87
244.5	137.78	97.45	chert pebble	87
244.06	137.88	97.43	chert pebble	87
244.36	137.84	97.46	quartz pebble	87
244.59	137.91	97.465	quartz pebble	87
244.73	138.01	97.485		87
244.37	137.93	97.47	chert pebble	87
244.28	138	97.48	chert pebble	87
244.14	138.04	97.46	chert pebble	87
244.81	142.42	97.49	Formless debris	87
244.16	138.1	97.47	Formless debris	87
245.3	142.81	97.44	quartz pebble	87
244.34	138.13	97.43	chert pebble	87
245.1	142.39	97.455	chert pebble	87

Table A18-9 continued

Northing	Easting	Depth	Type	Feature
244.3	138.21	97.43	chert pebble	87
244.53	138.25	97.44	Core	87
244.64	138.32	97.44	core	87
244.68	142.17	97.435	quartz pebble	87
244.26	138.34	97.44	Chert pebble	87
244.22	138.26	97.445	formless debris	87
244.23	138.46	97.475	chert core tool	87
244.15	138.53	97.48	chert pebble	87
244.2	138.53	97.49	chert pebble	87
244.31	138.53	97.49	chert pebble	87
244.4	138.53	97.5	quartz pebble	87
244.36	138.58	97.51	chert pebble	87
244.19	138.62	97.49	formless debris	87
244.11	138.62	97.485	chert debris	87
244.14	138.63	97.475	Chert cobble	87
245.92	138.35	97.45	quartz pebble	87
243.88	138.86	97.42	chert core tool	87
243.82	137.7	97.41	chert pebble	87
243.94	137.45	97.45	chert cobble	87
244.15	137.35	97.45	core	87
244.19	137.9	97.425	formless debris	87
244.36	138.09	97.435	chert flake	87
244.3	138.11	97.44	chert cobble	87
244.55	138.23	97.445	chert cobble	87
244.46	138.38	97.45	chert cobble	87
244.23	138.38	97.45	chert core tool	87
244.34	138.42	97.45	formless debris	87
244.26	138.41	97.45	chert cobble	87
244.15	138.45	97.46	chert flake core	87
244.34	138.47	97.47		87
244.35	138.51	97.48	utilized flake	87
244.53	138.49	97.43	cortical chert	87
244.91	142.39	97.46	chert cobble	87
244.27	138.63	97.425	cortical chert	87
244.13	138.57	97.48	, core tool	87
244.86	142.66	97.44	chert cobble	87
244.27	138.51	97.44	chert formless	87
244.25	138.51	97.43	chert cobble	87



Figure A18-25
Feature 90 from Pleistocene Terrace surface. Feature from unit N242 E140 97.30-97.25m. Feature contains two chert cores, a chert flake, nine chert cobbles and a quartz hammerstone.

Figure A18-10
Provenience information for Feature 90 from Pleistocene Terrace surface. Feature from unit N242 E140 97.30-97.25m..

	Northing	Easting	Depth	Length	Width	Thickness	Type
11	243.28	141.03	97.335	55.39	50.07	23.55	Chert pebble
10	243.1	141.03	97.355	77.13	68.77	42.13	Chert pebble
6	243.04	141.06	97.355	96.23	74.95	57.33	Chert pebble
13	243.13	141.03	97.32	90.35	64.11	43.2	Chert pebble
1	242.95	140.93	97.345	55.21	33.63	22.64	Hammerstone
4	243.19	141	97.36	134.84	60.46	40.11	Formless debris
7	243.06	140.97	97.365	98.53	57.93	46.91	Formless debris
5	242.98	141.01	97.36	112.77	106.89	48.82	Utilized debris
12	242.98	141.05	97.35	28.5	21..96	67.8	Bend break
3	243.23	140.9	97.32	152.74	77.28	61.29	Chert core
9	243.12	141.15	97.315	217	148.36	51.05	Chert core
8	242.97	141.12	97.32	132.18	103.64	63.46	Chert core tool
2	243.35	141.21	97.285	151.88	71.24	72.57	Core tool



Figure A18-26
Putative pre Clovis chert cores mapped from Feature 90.

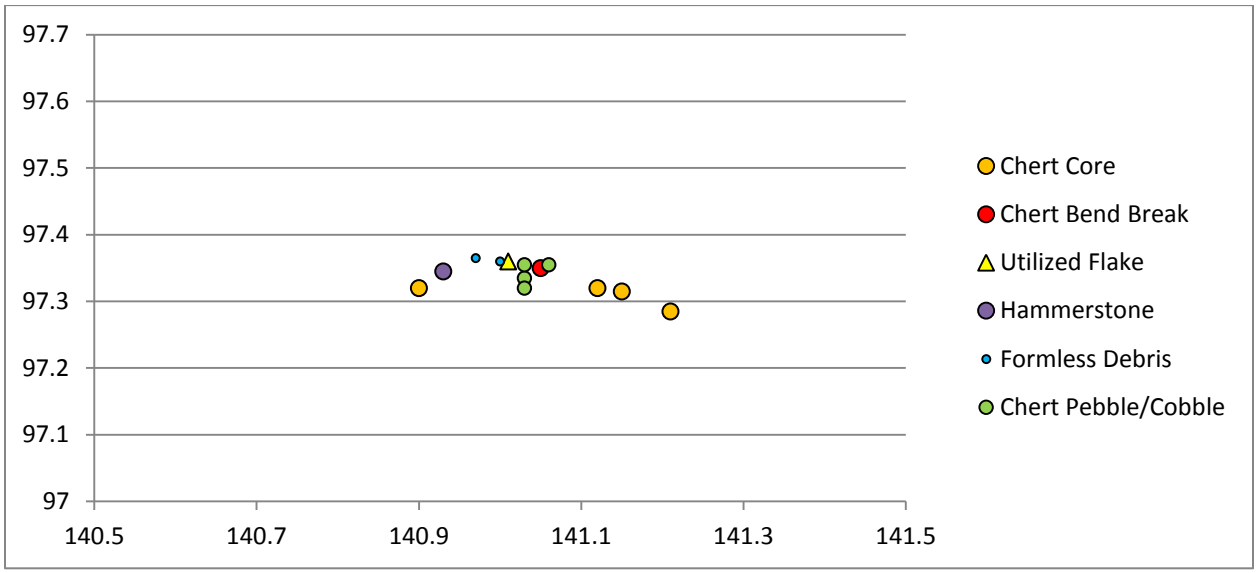


Figure A18-27
Vertical distribution of mapped artifacts from Feature 90 at the Topper Site (38AL23).
Y axis = depth, x axis = Easting



Figure A18-28
Putative pre Clovis chert chopper (top) and bend break (bottom) mapped from Feature 90 at the Topper Site (38AL23).





Figure A18-29
Feature 91 from the base of BHT 17.



Figure A18-30
Feature 94, Pleistocene Sands N246 E140 97.5-97.45M Topper Site (38AL23).

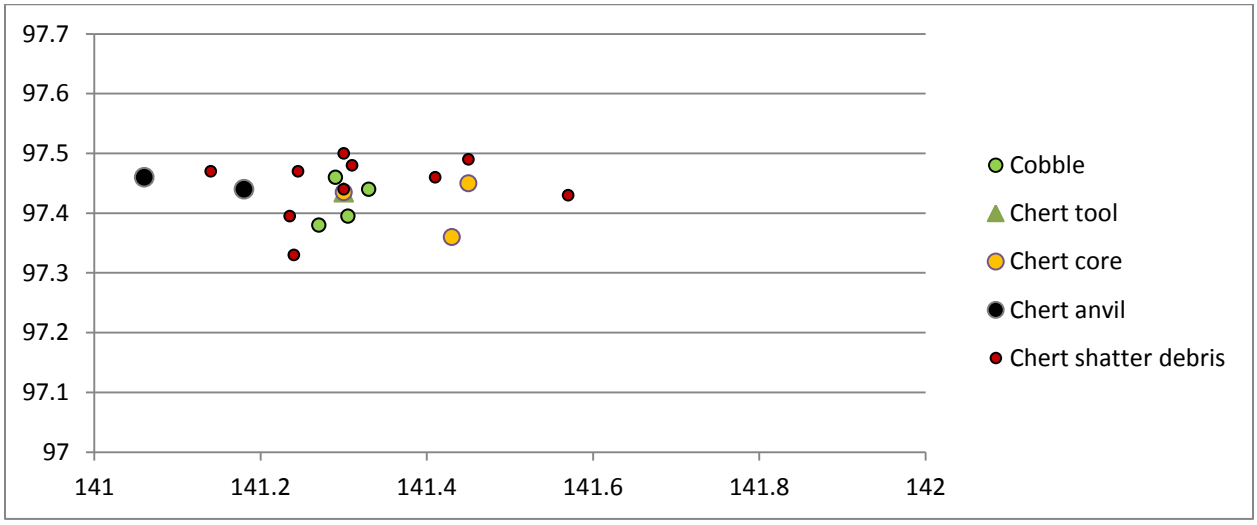


Figure A18-31
Vertical distribution of Feature 94, Pleistocene Sands N246 E140 97.5-97.45M Topper Site (38AL23). Y axis = depth, x axis = Easting

Table A18-11
Artifact Provenience information for Feature 94, Pleistocene Sands N246 E140 97.5-97.45M
Topper Site (38AL23). Y axis = depth, x axis = Easting

	Northing	Easting	Depth	Length	Width	Thickness	Type
2	246.31	141.41	97.46	118.49	92.6	43.1	flake/shatter
3	246.27	141.24	97.33	82.7	68.8	61.5	flake/shatter
6	246.2	141.3	97.5	190	118.6	68.1	flake/shatter
7	246.2	141.45	97.49	104.8	75.7	61.5	flake/shatter
8	246.406	141.31	97.48	29.4	30.6	9.1	flake/shatter
11	246.2	141.57	97.43	158.2	117.5	58.3	flake/shatter
13	246.405	141.14	97.47	106.7	75.8	35	flake/shatter
16	246.445	141.245	97.47	41.2	20.1	9.6	flake/shatter
17	246.4	141.3	97.44	58.8	65.7	37.5	flake/shatter
19	246.58	141.235	97.395	65.2	54	17.8	Chert flake
4	246.92	141.06	97.46	139	79.7	71.1	Chert anvil
12	246.48	141.18	97.44	162	132	100.2	Chert anvil
5	246.66	141.43	97.36	223	132	102.6	Chert core
10	246.45	141.45	97.45				Chert core
14	246.48	141.3	97.435	130.1	68.1	78.6	Chert core
9	246.56	141.1	97.44	61.5	51.6	16.5	Chert tool
15	246.295	141.29	97.46	33.1	17.4	10	Chert cobble
18	246.33	141.33	97.44	22.5	15.9	7	Chert cobble
20	246.65	141.305	97.395	77.9	78.6	61.2	Chert cobble
21	246.68	141.27	97.38	81.3	85	44.8	Chert cobble

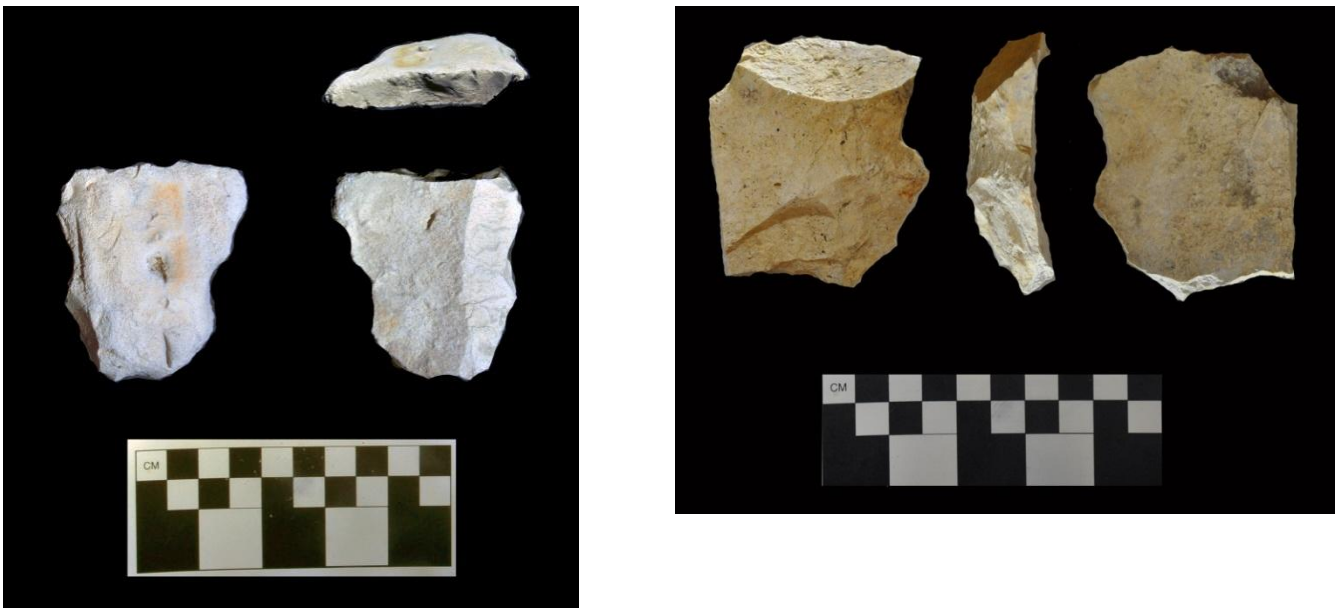
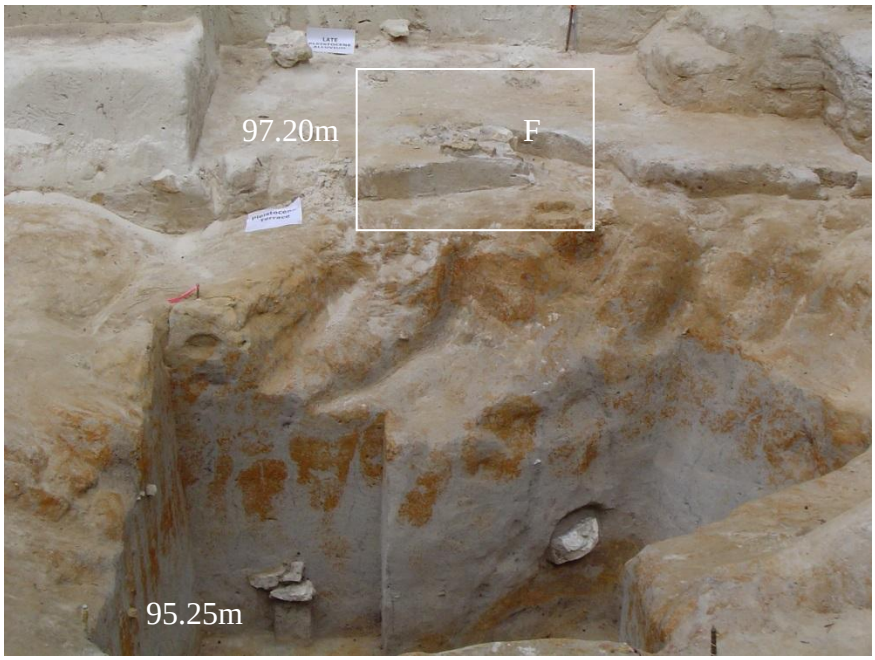


Figure A18-32
Selected artifacts from Feature 94. At left chert flake tool. At right, chert flake.



Figure A18-33
Feature 03, 1985. Woodland period Pot.



A



B

Figure A18-34
Feature 94 a lithic clustter in the Pleistocene Sands at the Topper Site (38AL23). Feature initially exposed in 2005 and excavated in 2009. N246 E140 97.45-97.25m. Inset in image A depicts Feature,



Figure A18-35
Feature 94 in the Pleistocene Sands at the Topper Site (38AL23). Feature completely exposed in 2009. N246 E140 97.45-97.25m

APPENDIX 19

FEATURE AND UNRECORDED DISTURBANCES AT THE TOPPER SITE (38AL23)

While efforts at Topper were made to identify and document all features to the best of a unit supervisors' ability, evidence from the unit level records and photographs indicates that not all features at Topper were identified or feature fill screened separately. In general, level control and piece plotting were conducted at high standards, but feature and disturbance recognition was not. According to records, prior to 2005, stains, when encountered, were not drawn on level forms with the same consistency than they were in subsequent field seasons (2005-2012). Moreover, feature fill was not as frequently screened separately from the remainder of the unit. As a result, important data regarding site integrity may have been compromised. Most errors include the inability to recognize features when initially encountered and subsequent failure to screen feature fill separately from the remainder of the unit level.

Appendix 19 includes a listing of all units and associated levels from the site that may be compromised along with a description of the disturbance. The appendix also provides a list of proveniences where disturbances were recognized but features may or may not have been assigned and/or recorded. Figure A19-2 illustrates an error whereby a stain was encountered in unit N248 E138 and the contents were not screened separately from the remainder of the unit. Under such circumstances, it is possible that a portion of the recovered materials from a given level may actually have been re-deposited from the overlying strata, and should therefore not be used in forming interpretations regarding the age of the presumed archaeological deposits. With regard to the example above, this unit was excluded from the present analysis due to the potential for artifact displacement. As preventative measure all level, feature and photograph records were consulted to assess the integrity of the recovered materials prior to the selection of units for analysis in this study. Only units with records or photographs that did not exhibit evidence of inaccuracy or error in the recording of disturbances or features were used in this study. Of the

units where disturbances were recorded, a list of the contents recovered from such disturbances is presented in Appendix 20.

Appendix 19 presents the distribution of all disturbances observed from the Holocene and Pleistocene Terrace at Topper. Disturbances include all feature and non-feature anomalies encountered over the course of excavation. Not all disturbances were recorded as Features but were however identified and recorded in the level records. The following table presents the spatial distribution of all disturbances encountered at the site between 1985 and 2012. In most cases disturbances were classified as stains, root casts, or burned organic materials. The table provides the year the disturbance was first encountered followed by provenience (unit and depth). If a feature number was not provided to the disturbance, the anomaly was designated as not recorded. Although all disturbances should be screened separately from the remaining unit, such protocol was not always followed in the field. As such, the fourth column from the right reports whether the disturbance was or was not screened separately. The following column notifies the presence or absence of associated artifacts. The last two columns inform (1) if the disturbance was mapped and (2) whether it falls within the selected study sample. A total of 381 disturbances have been identified from the Terrace at Topper and include 149 stains, 97 root casts,73 lithic clusters, 22 pedogenic features, 19 burned areas, 6 backfill disturbances, 4 krotovina, 4 pot busts, and a cluster. of shell

Table A19-1

Features and unrecorded disturbances

Year	Provenience	Depth	Disturbance	Documentation	Scr separate	Artifacts	Mapped	Sample
1985	N214 E130	(50-60cmbs)	Root	Not Recorded	No	No	No	No
1985	N212 E130	65-94cmbs	Pot	F7	Yes	Yes	No	No
1985	N212 E130	90-100cmbs	Stain	Not Recorded	No	No	No	No
1985	N229 E110	20-30cmbs	Heath	F2	Yes	Yes	No	No
1985	N229E110	40-50cmbs	Root	Not Recorded	No	No	No	No
1985	N229E110	52-60cmbs	Root	Not Recorded	No	No	No	No
1985	N229E110	70-80cmbs	Stain	Drawn	No	No	No	No
1985	N204 E160	70-80cmbs	Lithic Cluster	F6	No	Yes	No	No
1985	N204 E160	100-110cmbs	Stain	Not Recorded	No	No	No	No
1985	N231 E091	50-60cmbs	Stain	Not Recorded	No	No	No	No
1985	N231 E091	60-70cmbs	Stain	Not Recorded	No	No	No	No
1985	N188 E090	20-30cmbs	Lithic Cluster	Not Recorded	No	Yes	No	No
1985	N188 E090	30-40cmbs	Stain	Not Recorded	No	Yes	No	No
1985	N188 E090	40-70cmbs	Stain	Not Recorded	No	Yes	No	No
1985	N188 E090	90-120cmbs	Root	Not Recorded	No	No	No	No
1985	N222 E108	0-10cmbs	Stain	Not recorded	No	No	No	No
1985	N222 E108	50-60cmbs	Stain	Not Recorded	No	No	No	No
1985	N220 E087	0-10cmbs	Stain	Not Recorded	No	No	No	No
1985	N220 E087	40-50cmbs	Root	Not Recorded	No	Yes	No	No
1985	N220 E087	50-60cmbs	Lithic Cluster	F4	Yes	Yes	No	No
1985	N220 E087	60-70cmbs	Lithic Cluster	F5	Yes	Yes	No	No
1998	N244 E106	30-40cmbs	Stains (2)	Not Recorded	Yes	No	Drawn	No
1998	N244 E106	40-50cmbs	Lithic Cluster	Not Recorded	Yes	No	Drawn	Yes
1998	N244 E106	60-70cmbs	Stain	Not Recorded	No	No	Drawn	No
1998	N244 E106	95-100cmbs	Stain	F22	Yes	No	No	No
1998	N244 E110	40-50cmbs	Root	Not Recorded	No	Yes	Drawn	No
1998	N244 E118	0-10cmbs	Stain	Not Recorded	No	No	Drawn	No
1998	N244 E118	30-40cmbs	Stain	Feature (Not listed)	Yes	No	No	No
1998	N244 E118	50-60cmbs	Post Mold	F15	yes	No	No	No
1998	N244 E118	70-75cmbs	Post Mold	F 17	Yes	No	No	No
1998	N244 E118	70-75cmbs	Hearth	F 18	Yes	No	No	Yes

Scr. Separate = Screened separately; Sample = study sample.

Table A19-1 continued

Year	Provenience	Depth	Disturbance	Documentation	Scr separate	Artifacts	Mapped	Sample
1998	N244 E118	190-200	Lithic Cluster	Not Recorded	No	Yes	Drawn	No
1998	N224 E144	0-10	Stain	Not Recorded	No	No	Drawn	No
1998	N224 E144	20-30cmbs	Stain	Not Recorded	No	No	Drawn	No
1998	N224 E144	20-30cmbs	Tree Root	Not Recorded	No	No	Drawn	No
1998	N224 E144	30-40cmbs	Burned Area	Not Recorded	Yes	Yes	No	No
1999	N209 E134	NA	Pedogenic Clay	F35	Yes	No	No	No
1999	N210 E130	70-80cmbs	Area A	Not Recorded	Yes	Yes	Drawn	No
1999	N210 E130	70-80cmbs	Area B	Not Recorded	Yes	Yes	Drawn	No
1999	N210 E134	140cmbs	Clay Dome	Not Recorded	No	No	Drawn	No
1999	N210 E134	145cmbs	Clay Dome	Not Recorded	No	No	Drawn	No
1999	N210 E134	150cmbs	Clay Dome	Not Recorded	No	No	Drawn	No
1999	N210 E134	155cmbs	Clay Dome	Not Recorded	No	No	Drawn	No
1999	N212 E132	90-100cmbs	Auger Test	Not Recorded	Yes	No	Drawn	No
1999	N212 E134	70-80cmbs	Lithic Cluster	F32	Yes	Yes	No	No
1999	N242 E130	0-10cmbs	Backfill	Not Recorded	Yes	No	Drawn	Yes
1999	N242 E130	50-60cmbs	Charcoal	Not Recorded	Yes	No	Drawn	Yes
1999	N242 E130	60-70cmbs	Charcoal	Not Recorded	Yes	No	Drawn	Yes
1999	N242 E130	70-80cmbs	Stain	Not Recorded	Yes	No	Drawn	Yes
1999	N242 E130	80-90cmbs		F38	Yes	Yes	No	Yes
1999	N242 E130	120-130cmbs	Lithic Cluster	Not Recorded	Yes	Yes	Drawn	Yes
1999	N242 E130	150-160cmbs	Lithic Cluster	F23	Yes	Yes	No	Yes
1999	N242 E130	150-160cmbs	Lithic Cluster	F39	Yes	No	No	Yes
1999	N242 E130	150-160cmbs	Lithic Cluster	F40	Yes	No	No	Yes
1999	N242 E130	150-160cmbs	Lithic Cluster	F41	Yes	No	No	Yes
1999	N242 E130	150-160cmbs	Lithic Cluster	F42	Yes	No	No	Yes
1999	N242 E130	150-160cmbs	Lithic Cluster	F43	Yes	No	No	Yes
1999	N242 E130	150-160cmbs	Lithic Cluster	F44	Yes	No	No	Yes
1999	N242 E130	150-160cmbs	Lithic Cluster	F45	Yes	No	No	Yes
1999	N242 E130	150-160cmbs	Lithic Cluster	F46	Yes	No	No	Yes
1999	N242 E130	150-160cmbs	Lithic Cluster	F47	Yes	No	No	Yes

Table A19-1 continued

Year	Provenience	Depth	Disturbance	Documentation	Scr separate	Artifacts	Mapped	Sample
1999	N242 E130	160-170cmbs	Lithic Cluster	Not Recorded	Yes	Yes	Drawn	Yes
1999	N242 E132	0-18cmbs	Slump	Not Recorded	Yes	No	Drawn	Yes
1999	N242 E132	20-30cmbs	Lithic Cluster	Not Recorded	yes	yes	Drawn	Yes
1999	N242 E132	50-60cmbs	Root	Not Recorded	No	No	No	Yes
1999	N242 E132	60-70cmbs	Root	Not Recorded	No	No	No	Yes
1999	N242 E132	90-100cmbs	Root	Not Recorded	No	No	No	Yes
1999	N242 E132	100-110cmbs	Root	Not Recorded	No	No	No	Yes
1999	N242 E132	100-110cmbs	Lithic Cluster	Not Recorded	Yes	No	Drawn	Yes
1999	N242 E132	100-110cmbs	Lithic Cluster	Not Recorded	Yes	No	Drawn	Yes
1999	N242 E132	110-120cmbs	Root	Not Recorded	Yes	No	Drawn	Yes
1999	N242 E132	120-130cmbs	Root	Not Recorded	Yes	No	Drawn	Yes
1999	N242 E132	120-130cmbs	Root	Not Recorded	Yes	No	Drawn	Yes
1999	N242 E132	120-130cmbs	Root	Not Recorded	Yes	No	Drawn	Yes
1999	N242 E132	130-140cmbs	Root	Not Recorded	Yes	No	Drawn	Yes
1999	N242 E132	130-140cmbs	Root	Not Recorded	Yes	No	Drawn	Yes
1999	N242 E132	130-140cmbs	Root	Not Recorded	Yes	No	Drawn	Yes
1999	N242 E132	130-140cmbs	Lithic Cluster	Not Recorded	Yes	No	Drawn	Yes
1999	N242 E132	130-140cmbs	Lithic Cluster	Not Recorded	Yes	No	Drawn	Yes
1999	N242 E132	140-150cmbs	Lithic Cluster	F49	Yes	Yes	No	Yes
1999	N242 E132	140-150cmbs	Lithic Cluster	Not Recorded	Yes	Yes	Drawn	Yes
1999	N242 E132	140-150cmbs	Lithic Cluster	Not Recorded	Yes	Yes	Drawn	Yes
1999	N242 E132	140-150cmbs	Lithic Cluster	Not Recorded	Yes	No	Drawn	Yes
1999	N242 E132	140-150cmbs	Lithic Cluster	Not Recorded	Yes	No	Drawn	Yes
1999	N242 E132	150-160cmbs	Stain	Not Recorded	Yes	No	Drawn	Yes
1999	N242 E132	150-160cmbs	Stain	Not Recorded	Yes	No	Drawn	Yes
1999	N242 E132	150-160cmbs	Stain	Not Recorded	Yes	No	Drawn	Yes
1999	N242 E132	150-160cmbs	Stain	Not Recorded	Yes	No	Drawn	Yes
1999	N242 E132	150-160cmbs	Stain	Not Recorded	Yes	No	Drawn	Yes
1999	N242 E132	150-160cmbs	Lithic Cluster	Not Recorded	Yes	Yes	Drawn	Yes
1999	N242 E132	150-160cmbs	Lithic Cluster	Not Recorded	Yes	Yes	Drawn	Yes

Table A19-1 continued

Year	Provenience	Depth	Disturbance	Documentation	Scr separate	Artifacts	Mapped	Sample
1999	N242 E132	150-160cmbs	Lithic Cluster	Not Recorded	Yes	Yes	Drawn	Yes
1999	N242 E132	150-160cmbs	Lithic Cluster	Not Recorded	Yes	Yes	Drawn	Yes
1999	N268 E132	130-140cmbs	Lithic Cluster	F36	No	Yes	No	No
1999	N268 E132	1150-160	Lithic Cluster	F37	No	Yes	No	No
1999	N268 E132	160-170cmbs	Ocher Stain	Not Recorded	No	No	Drawn	No
1999	N282 E132	20-30cmbs	Stain	Not Recorded	No	Yes	Drawn	No
1999	N282 E132	40-50cmbs	Stain	Not Recorded	No	No	Drawn	No
1999	N282 E132	190-200	Depression	Not Recorded	No	No	Drawn	No
1999	N208 E132	20-30cmbs	Lithic Cluster	Not Recorded	No	Yes	Drawn	No
1999	N208 E132	140cmbs	Lithic Cluster	Not Recorded	No	Yes	Drawn	No
1999	N208 E132	140cmbs	Lithic Cluster	Not Recorded	No	Yes	Drawn	No
1999	N208 E132	140cmbs	Lithic Cluster	Not Recorded	No	Yes	Drawn	No
1999	N208 E132	140cmbs	Lithic Cluster	Not Recorded	No	Yes	Drawn	No
1999	N208 E132	140cmbs	Lithic Cluster	Not Recorded	No	Yes	Drawn	No
1999	N208 E132	140cmbs	Clay Pocket	Not Recorded	No	No	Drawn	No
1999	N208 E132	190cmbs	Clay Pocket	Not Recorded	No	Yes	Drawn	No
1999	N210 E132	90cmbs	Lithic Cluster	Not Recorded	Yes	Yes	No	No
1999	N210 E132	97.25M	Clay Dome	Not Recorded	No	No	Drawn	No
1999	N210 E132	97.20M	Clay Dome	Not Recorded	No	No	Drawn	No
1999	N210 E132	97.15M	Clay Dome	Not Recorded	No	No	Drawn	No
1999	N210 E132	97.10M	Clay Dome	Not Recorded	No	No	Drawn	No
1999	N210 E132	97.05M	Clay Dome	Not Recorded	No	No	Drawn	No
1999	N210 E132	97.00M	Clay Dome	Not Recorded	No	No	Drawn	No
1999	N210 E132	96.95M	Clay Dome	Not Recorded	No	No	Drawn	No
1999	N210 E132	96.90M	Clay Dome	Not Recorded	No	No	Drawn	No
1999	N210 E132	96.85M	Clay Dome	Not Recorded	No	No	Drawn	No
2000	N242 E128	98.35M	Stain/Hearth	Not Recorded	Yes	No	Drawn	No
2000	N242 E128	98.25M	Stain	Not Recorded	Yes	No	Drawn	No
2000	N242 E128	122.5cmbs	Stain	Not Recorded	No	No	Drawn	No
2000	N242 E128	130cms	Root Stains	Not Recorded	No	No	No	No

Table A19-1 continued

Year	Provenience	Depth	Disturbance	Documentation	Scr separate	Artifacts	Mapped	Sample
2000	N242 E128	135cmbs	Stain	Not Recorded	No	No	Drawn	No
2000	N242 E128	140cmbs	Stain	Not Recorded	No	No	Drawn	No
2000	N242 E128	150cmbs	Concretions	Not Recorded	No	No	No	No
2000	N242 E128	150cmbs	Stain	F56	No	No	Drawn	No
2000	N242 E128	150cmbs	Stain	F57	No	No	Drawn	No
2000	N242 E128	155cmbs	Stain	F58	Yes	No	Drawn	No
2000	N242 E128	185cmbs	Rock Cluster	F65	Yes	Yes	Drawn	Yes
2000	N242 E134	30cmbs	Pot Bust	F51	Yes	Yes	Drawn	No
2000	N242 E134	135cmbs	Root Mass	Not Recorded	No	No	Drawn	No
2000	N242 E134	140	Root	Not Recorded	No	No	Drawn	No
2000	N242 E134	140	Root Mass	Not Recorded	Yes	No	Drawn	No
2000	N242 E134	170cmbs	Organic Matter	Not Recorded	Yes	No	Drawn	No
2000	N242 E134	180cmbs	Lithic Cluster	F66	Yes	Yes	Drawn	No
2000	N242 E134	205cmbs	Root Mass	Not Recorded	Yes	No	Drawn	No
2000	N244 E108	30cmbs	Looter Pit	Not Recorded	Yes	No	Drawn	No
2000	N244 E108	40cmbs	Post mold	Not Recorded	No	No	Drawn	No
2000	N244 E108	40cmbs	Post Mold	Not Recorded	No	No	Drawn	No
2000	N244 E108	50cmbs	Post Mold	F53	Yes	No	Drawn	No
2000	N244 E108	70cmbs	Root	Not Recorded	No	No	Drawn	No
2000	N244 E128	150cmbs	Stain	F53	Yes	No	Drawn	No
2000	N244 E128	150cmbs	Stain	F54	Yes	No	Drawn	No
2000	N244 E128	150cmbs	Stain	F55	Yes	No	Drawn	No
2000	N244 E128	160cmmbs	Stain	F56	Yes	No	Drawn	No
2000	N244 E132	140-145cmbs	Stain	Not Recorded	No	No	Drawn	No
2000	N244 E132	160cmbs	Root	Not Recorded	No	No	Drawn	No
2000	N244 E132	185smbs	Lithic Cluster	Not Recorded	Yes	Yes	Drawn	No
2000	N244 E132	185smbs	Lithic Cluster	F63	Yes	Yes	Drawn	No
2000	N244 E132	185cmbs	Lithic Cluster	F64	Yes	Yes	Drawn	No
2000	N244 E134	60cmbs	Lithic Cluster	F52	Yes	Yes	Drawn	No
2000	N244 E134	170cmbs	Lithic Cluster	F61	Yes	Yes	Drawn	No

Table A19-1 continued

Year	Provenience	Depth	Disturbance	Documentation	Scr separate	Artifacts	Mapped	Sample
2000	N244 E146	80cmbs	Stain	Not Recorded	Yes	No	Drawn	No
2000	N244 E146	140cmbs	Lithic Cluster	Not Recorded	Yes	Yes	Drawn	No
2000	N244 E146	150cmbs	Stain	Not Recorded	No	No	Drawn	No
2000	N244 E146	160cmbs	Stain	Not Recorded	No	No	Drawn	No
2000	N244 E146	170cmbs	Lithic Cluster	Not Recorded	No	Yes	Drawn	No
2000	N244 E146	190cmbs	Lithic Cluster	Not Recorded	No	Yes	Drawn	No
2000	N244 E146	200cmbs	Lithic Cluster	F68	Yes	Yes	Drawn	No
2000	N244 E148	40cmbs	Lithic Cluster	Not Recorded	No	Yes	Drawn	No
2000	N244 E148	50cmbs	Lithic Cluster	Not Recorded	No	Yes	Drawn	No
2000	N244 E148	60cmbs	Stain	Not Recorded	No	No	Drawn	No
2000	N244 E148	60cmbs	Stain	Not Recorded	No	No	Drawn	No
2000	N244 E148	130cmbs	Lithic Cluster	F62	Yes	Yes	Drawn	No
2000	N244 E148	130cmbs	Roots	Not Recorded	No	No	Drawn	No
2000	N244 E148	170cmbs	Lithic Cluster	F67	Yes	Yes	Drawn	No
2001	N230 E106	30cmbs	Stain	Not Recorded	No	No	No	No
2001	N232 E102	97.21M	Lithic Cluster	F79	Yes	Yes	Drawn	No
2001	N232 E106	63cmbs	Disturbance	Not Recorded	No	No	Drawn	No
2001	N234 E102	35cmbs	Disturbance	Not Recorded	Yes	No	Drawn	No
2001	N234 E104	15cmbs	Disturbance	Not Recorded	Yes	No	Drawn	No
2001	N234 E106	20cmbs	Burned Root	Not Recorded	No	No	No	No
2001	N234 E106	50cmbs	Post hole	F72	No	No	No	No
2001	N234 E106	80cmbs	Lithic Cluster	F73	Yes	Yes	Drawn	No
2001	N236 E106	25cmbs	Burned Root	Not Recorded	No	No	Drawn	No
2001	N236 E106	55cmbs	Lithic Cluster	F75	Yes	Yes	Drawn	No
2001	N238 E106	25cmbs	Stain	Not Recorded	No	No	Drawn	No
2001	N242 E106	40cmbs	Shell	F76	Yes	Yes	Drawn	No
2001	N242 E106	60cmbs	Lithic Cluster	F78	Yes	Yes	Drawn	No
2001	N236 E128	97.85M	Organic Stain	Not Recorded	No	No	Drawn	No
2001	N236 E130		Stain	Not Recorded	No	No	Drawn	No
2001	N236 E136	10cmbs	Root Stain	Not Recorded	No	No	Drawn	No

Table A19-1 continued

Year	Provenience	Depth	Disturbance	Documentation	Scr separate	Artifacts	Mapped	Sample
2001	N238 E128	97.45M	Grey stain	Not Recorded	No	No	Drawn	No
2001	N238 E128	97.15M	Lithic Cluster	Not Recorded	No	Yes	Drawn	No
2001	N238 E128	97.10M	F80	Lithic Cluster	Yes	Yes	Drawn	No
2001	N238 E128	97.05M	Stain	Not Recorded	No	No	Drawn	No
2001	N238 E128	97.00M	Blob	Not Recorded	No	No	Drawn	No
2001	N238 E130	97.45M	Blob	Not Recorded	No	No	Drawn	No
2001	N238 E132	97.70M	Grey Stain	Not Recorded	No	No	Drawn	No
2001	N238 E132	96.60M	Grey Stain	Not Recorded	No	No	Drawn	No
2001	N238 E132	96.60M	Grey Stain	Not Recorded	No	No	Drawn	No
2001	N238 E132	96.60M	Grey Stain	Not Recorded	No	No	Drawn	No
2001	N240 E134	96.90M	Lithic Cluster	F82	Yes	Yes	Drawn	No
2001	N238 E134	98.00M	Stain	F71	Yes	No	Drawn	No
2001	N238 E134	98.00M	Stain	Not Recorded	No	No	Drawn	No
2001	N238 E134	97.90M	Stain	Not Recorded	No	No	Drawn	No
2001	N238 E134	97.90M	Stain	Not Recorded	No	No	Drawn	No
2001	N238 E134	97.35M	Stain	Not Recorded	No	No	Drawn	No
2001	N238 E134	97.30M	Stain	Not Recorded	No	No	Drawn	No
2001	N238 E134	97.30M	Stain	Not Recorded	No	No	Drawn	No
2001	N238 E134	97.20M	Blob	Not Recorded	No	No	Drawn	No
2001	N238 E134	97.20M	Stain	Not Recorded	No	No	Drawn	No
2001	N238 E134	97.10M	Stain	F81	No	No	No	No
2001	N238 E134	97.05M	Stain	Not Recorded	No	No	Drawn	No
2001	N240 E128	97.85M	Lithic Cluster	F74	Yes	Yes	Drawn	No
2001	N240 E128	97.70M	Burned Root	Not Recorded	No	No	Drawn	No
2001	N240 E128	97.65M	Stain	Not Recorded	No	No	Drawn	No
2001	N240 E128	96.90	Stain	Not Recorded	No	No	Drawn	No
2001	N240 E128	96.90	Stain	Not Recorded	No	No	Drawn	No
2001	N240 E128	96.90M	Stain	Not Recorded	No	No	Drawn	No
2001	N240 E128	96.90M	Stain	Not Recorded	No	No	Drawn	No
2001	N240 E128	96.90M	Burned Root	Not Recorded	No	No	Drawn	No

Table A19-1 continued

Year	Provenience	Depth	Disturbance	Documentation	Scr separate	Artifacts	Mapped	Sample
2001	N240 E128	96.70M	Stain	Not Recorded	No	No	Drawn	No
2001	N240 E130	97.885M	Root	Not Recorded	Yes	Yes	Drawn	Yes
2001	N240 E130	97.80M	Stain	Not Recorded	No	No	Drawn	Yes
2001	N240 E130	97.75M	Disturbance	Not Recorded	Yes	No	Drawn	Yes
2001	N240 E130	97.70M	Stain	Not Recorded	Yes	No	Drawn	Yes
2001	N240 E130	97.40M	Stain	Not Recorded	Yes	Yes	Drawn	Yes
2001	N240 E130	97.30M	Stain	Not Recorded	Yes	Yes	Drawn	Yes
2001	N240 E130	96.90M	Stain	Not Recorded	No	No	Drawn	Yes
2001	N240 E132	97.75M	Stain	Not Recorded	No	No	Drawn	Yes
2001	N240 E132	97.55M	Disturbance	Not Recorded	No	No	Drawn	Yes
2001	N240 E132	97.40M	Disturbance	Not Recorded	No	No	Drawn	Yes
2001	N240 E132	97.30M	Lithic Cluster	F77	Yes	Yes	Drawn	Yes
2002	N285 E135	40cmbs	Root Stain	Not Recorded	No	No	Drawn	No
2002	N285 E135	50cmbs	Disturbance	Not Recorded	No	No	Drawn	No
2002	N285 E135	60cmbs	Root Stain	Not Recorded	No	No	Drawn	No
2002	N285 E135	70cmbs	Root Stain	Not Recorded	No	No	Drawn	No
2002	N285 E137	40cmbs	Disturbance	Not Recorded	No	No	Drawn	No
2002	N285 E137	50cmbs	Disturbance	Not Recorded	No	No	Drawn	No
2002	N285 E137	50cmbs	Disturbance	Not Recorded	No	No	Drawn	No
2002	N285 E137	60cmbs	Disturbance	Not Recorded	No	No	Drawn	No
2002	N285 E137	70cmbs	Disturbance	Not Recorded	No	No	Drawn	No
2002	N285 E137	80cmbs	Disturbance	Not Recorded	No	No	Drawn	No
2002	Trench C	98.25M	Stain	Not Recorded	No	Yes	No	No
2003	N288 136	98.55M	Stain	Not Recorded	Yes	No	Drawn	No
2003	N288 136	40cmns	Slump	Not Recorded	Yes	Yes	Drawn	No
2003	N288 136	50cmbs	Stain	Not Recorded	Yes	No	Drawn	No
2003	N288 136	65cmbs	Root Stain	Not Recorded	Yes	No	Drawn	No
2003	N288 136	70cmbs	Root Stain	Not Recorded	Yes	No	Drawn	No
2003	N288 136	80cmbs	Root Stain	Not Recorded	Yes	No	Drawn	No
2003	N288 136	115cmbs	Root Stain	Not Recorded	Yes	No	Drawn	No

Table A19-1 continued

Year	Provenience	Depth	Disturbance	Documentation	Scr separate	Artifacts	Mapped	Sample
2003	N270 E152	10cmbs	Tree Stump	Not Recorded	No	No	Drawn	No
2003	N270 E156	99.20M	Stain	Not Recorded	No	No	Drawn	No
2003	N284 E132	50cmbs	Stain	F89	Yes	Yes	Drawn	No
2003	N284 E132	105cmbs	Stain	Not Recorded	No	No	Drawn	No
2003	N286 E132	98.50M	Stain	Not Recorded	No	No	Drawn	No
2003	N286 E132	105cmbs	Stain	Not Recorded	Yes	Yes	Drawn	No
2003	N286 E132	110cmbs	Stain	Not Recorded	Yes	Yes	Drawn	No
2003	N288 E132	60cmbs	Stain	Not Recorded	No	No	Drawn	No
2003	N288 E132	70cmbs	Stain	Not Recorded	Yes	Yes	Drawn	No
2003	N288 E132	75cmbs	Stain	Not Recorded	Yes	Yes	Drawn	No
2004	N294 E122	55cmbs	Stain	Not Recorded	No	No	No	No
2004	N288 E138	40cmbs	BH Intrusion	Not Recorded	Yes	No	Drawn	No
2004	N288 E138	90cmbs	Tree Burn	Not Recorded	No	No	Drawn	No
2004	N290 E132	50cmbs	Stain	Not Recorded	No	Yes	Drawn	No
2004	N290 E136	20cmbs	Stain	Not Recorded	No	No	Drawn	No
2004	N290 E138	30cmbs	Stain	Not Recorded	No	No	Drawn	No
2004	N290 E138	40cmbs	Stain	Not Recorded	No	No	Drawn	No
2004	N292 E132	40cmbs	Stain	Not Recorded	No	No	Drawn	No
2004	N242 E142	97.05M	Spoil	Not Recorded	Yes	No	Drawn	Yes
2005	N242 E140	95.70M	Stain	Not Recorded	Yes	No	Drawn	Yes
2005	N46 E140	98.65	Stain	Not Recorded	Yes	No	Drawn	Yes
2005	N46 E140	98.60	Stain	Not Recorded	Yes	No	Drawn	Yes
2005	N46 E140	98.20M	Stain	Not Recorded	Yes	No	Drawn	Yes
2005	N46 E140	97.70M	Stain	Not Recorded	Yes	No	Drawn	Yes
2005	N46 E140	97.55M	Stain	Not Recorded	Yes	No	Drawn	Yes
2005	N246 E142	98.70M	Pot Bust	F92	Yes	Yes	Drawn	Yes
2005	N246 E142	98.20M	Stain	Not Recorded	Yes	No	Drawn	Yes
2005	N248 E140	98.75M	Stain	Not Recorded	Yes	No	Drawn	Yes
2005	N248 E142	98.60M	Stain	Not Recorded	Yes	No	Drawn	Yes
2005	N248 E142	98.00M	Stain	Not Recorded	Yes	No	Drawn	Yes

Table A19-1 continued

Year	Provenience	Depth	Disturbance	Documentation	Scr separate	Artifacts	Mapped	Sample
2006	N242 E140	95.95M	Root Cast	Not Recorded	Yes	No	Drawn	Yes
2008	N242 E140	95.45M	Stain	Not Recorded	Yes	No	Drawn	Yes
2008	N244 E138	96.20M	Root Cast	Not Recorded	No	No	Drawn	Yes
2008	N244 E138	96.10M	Root Casts	Not Recorded	No	No	Drawn	Yes
2008	N244 E138	95.90M	Root Cast	Not Recorded	Yes	No	Drawn	Yes
2008	N242 E138	96.80M	Root Cast	Not Recorded	Yes	No	Drawn	Yes
2008	N242 E138	96.70M	Root Cast	Not Recorded	Yes	No	Drawn	Yes
2008	N242 E138	96.65M	Root Cast	Not Recorded	Yes	No	Drawn	Yes
2008	N242 E138	96.45M	Root Cast	Not Recorded	Yes	No	Drawn	Yes
2008	N242 E138	96.40M	Root Cast	Not Recorded	Yes	No	Drawn	Yes
2008	N242 E142	96.00M	Root Cast	Not Recorded	Yes	No	Drawn	Yes
2009	N246 E136	98.35M	Root Cast	Not Recorded	No	No	No	No
2009	N246 E136	97.90M	Stain	Not Recorded	Yes	No	No	No
2009	N246 E136	97.90M	Roots	Not Recorded	Yes	No	No	No
2009	N246 E136	97.55M	Roots	Not Recorded	No	No	No	No
2009	N246 E136	97.60M	Root	Not Recorded	Yes	No	No	No
2009	N246 E136	97.55M	Root	Not Recorded	Yes	No	No	No
2009	N248 E138	98.45M	Hole	Not Recorded	Yes	Yes	No	No
2009	N248 E138	98.20M	Root	Not Recorded	No	No	No	No
2009	N246 E140	97.20M	Lithic Cluster	F107	Yes	Yes	Drawn	Yes
2009	N246 E140	97.15M	Root Stain	Not Recorded	Yes	No	Drawn	Yes
2009	N246 E140	96.90M	Root Stain	Not Recorded	Yes	No	Drawn	Yes
2009	N246 E140	97.10M	Root Stain	Not Recorded	Yes	No	Drawn	Yes
2009	N246 E140	97.15M	Stain	Not Recorded	Yes	No	Drawn	Yes
2009	N246 E140	97.40M	Slump	Not Recorded	Yes	No	Drawn	Yes
2009	N246 E140	97.30M	Root	Not Recorded	No	No	Drawn	Yes
2009	N246 E140	97.35M	Lithic Cluster	F94	Yes	Yes	Drawn	Yes
2009	N248 E138	98.05M	Stain	Not Recorded	Yes	Yes	Drawn	No
2009	N248 E138	98.43M	Stain	Not Recorded	Yes	Yes	Drawn	Yes
2009	N248 E138	98.23M	Burned Root	Not Recorded	Yes	No	Drawn	Yes

Table A19-1 continued

Year	Provenience	Depth	Disturbance	Documentation	Scr separate	Artifacts	Mapped	Sample
2009	N248 E140	97.20M	Root Cast	Not Recorded	Yes	No	Drawn	Yes
2009	N248 E140	97.00M	Root Cast	Not Recorded	Yes	No	Drawn	Yes
2009	N248 E140	98.05M	Stain	Not Recorded	Yes	No	Drawn	Yes
2009	N242 E138	96.30M	Crack	Not Recorded	Yes	No	Drawn	Yes
2009	N242 E138	96.25M	Root Cast	Not Recorded	No	No	Drawn	Yes
2009	N248 E140	95.45M	Stain	Not Recorded	Yes	No	Drawn	Yes
2009	N248 E140	98.76M	Stain	Not Recorded	Yes	No	Drawn	Yes
2009*	N248 E140	97.65M	Stain	Not Recorded	Yes	No	Drawn	Yes
2009	N248 E140	97.50M	Lithic Cluster	F105	Yes	Yes	Drawn	Yes
2009	N248 E140	97.45M	Stain	Not Recorded	Yes	No	Drawn	Yes
2009	N248 E140	97.60M	Roots	Not Recorded	No	No	Drawn	Yes
2009	N246 E140	97.40M	Lithic Cluster	F107	Yes	Yes	Drawn	Yes
2009	N248 E138	97.40M	Stain	Not Recorded	Yes	No	Drawn	Yes
2009	N242 E142	95.45M	Stain	Not Recorded	Yes	No	Drawn	Yes
2009	N242 E142	95.40M	Stain	Not Recorded	Yes	No	Drawn	Yes
2009	N242 E138	95.95M	Root	Not Recorded	Yes	No	Drawn	Yes
2009	N242 E138	95.6M	Root	Not Recorded	Yes	No	Drawn	Yes
2009	N242 E142	95.70M	Root	Not Recorded	Yes	No	Drawn	Yes
2009	N246 E140	97.25M	Stain	Not Recorded	Yes	No	Drawn	Yes
2009	N246 E140	97.15M	Root	Not Recorded	Yes	No	Drawn	Yes
2009	N246 E140	97.20M	Root	Not Recorded	Yes	No	Drawn	Yes
2009	N248 E140	97.20M	Root	Not Recorded	Yes	No	Drawn	Yes
2009	N248 E140	97.05M	Root	Not Recorded	Yes	No	Drawn	Yes
2010	N262 E146	99.03M	Pot Bust	F108	Yes	No	Drawn	No
2010	N262 E144	98.85M	Roots	Not Recorded	Yes	No	Drawn	No
2010	N262 E144	98.50M	Tree Burn	Not Recorded	Yes	No	Drawn	No
2010	N262 E144	98.30M	Stain	Not Recorded	Yes	No	Drawn	No
2010	N262 E144	98.20M	Root	Not Recorded	Yes	No	Drawn	No
2010	N264 E144	98.95M	Root	Not Recorded	Yes	No	Drawn	No
2010	N264 E144	98.75M	Tree Burn	Not Recorded	Yes	No	Drawn	No

Table A19-1 continued

Year	Provenience	Depth	Disturbance	Documentation	Scr separate	Artifacts	Mapped	Sample
2010	N264 E144	98.20M	Burned Area	F109	Yes	Yes	Drawn	No
2010	N246 E136	98.30	Dark Stain	Not Recorded	Yes	No	Drawn	No
2010	N246 E136	97.60M	Dark Stain	Not Recorded	Yes	No	Drawn	No
2010	N248 E136	98.40M	Root	Not Recorded	Yes	Yes	Drawn	No
2010	N246 E142	97.15M	Root	Not Recorded	Yes	No	Drawn	No
2010	N248 E140	96.85M	Stain	Not Recorded	Yes	No	Drawn	Yes
2010	N246 E140	96.90M	Root	Not Recorded	Yes	No	Drawn	Yes
2010	N246 E140	97.20M	Root	Not Recorded	Yes	No	Drawn	Yes
2010	N246 E140	97.15M	Krotovina	Not Recorded	Yes	No	Drawn	Yes
2010	N264 E145	97.70M	Roots	Not Recorded	Yes	No	Drawn	Yes
2010	N264 E145	97.30M	Stain	Not Recorded	Yes	No	Drawn	Yes
2010	N264 E145	97.10M	Stain	Not Recorded	Yes	No	Drawn	Yes
2010	N264 E144	98.40M	Stain	Not Recorded	Yes	No	Drawn	Yes
2010	N264 E144	98.40M	Small Roots	Not Recorded	Yes	No	Drawn	Yes
2010	N264 E144	98.20M	Burn Area	F109	Yes	No	Drawn	Yes
2010	N264 E144	97.90M	Burn Area	F109	Yes	No	Drawn	Yes
2010	N262 E144	98.05M	Roots	Not Recorded	Yes	No	Drawn	Yes
2011	N262 E142	98.65M	Burned Area	Not Recorded	Yes	No	Drawn	Yes
2011	N265 E134	98.30M	Root	Not Recorded	Yes	No	Drawn	No
2011	N270 E132	98.31M	Over burden	Not Recorded	Yes	No	Drawn	No
2011	N270 E132	98.20M	Root stain	Not Recorded	Yes	No	Drawn	No
2011	N270 E132	98.00M	Root stain	Not Recorded	Yes	No	Drawn	No
2011	N264 E142	98.25M	Root stain	Not Recorded	Yes	No	Drawn	No
2011	N242 E144	98.41M	F112	Lithic Cluster	Yes	Yes	Drawn	Yes
2011	N244 E144	98.41M	Roots	Not Recorded	Yes	No	Drawn	Yes
2011	N266 E132	97.90M	Roots	Not Recorded	Yes	No	Drawn	No
2011	N266 E132	97.75M	Roots	Not Recorded	Yes	No	Drawn	No
2011	N266 E132	97.70M	Roots	Not Recorded	Yes	No	Drawn	No
2011	N242 E144	97.75M	Roots	Not Recorded	Yes	No	Drawn	No
2011	N242 E144	97.90M	Roots	Not Recorded	Yes	No	Drawn	No

Table A19-1 continued

Year	Provenience	Depth	Disturbance	Documentation	Scr separate	Artifacts	Mapped	Sample
2011	N242 E144	98.30M	Roots	Not Recorded	Yes	No	Drawn	No
2011	N244 E144	98.15M	Krotovina	Not Recorded	Yes	No	Drawn	No
2011	N244 E144	98.05M	Krotovina	Not Recorded	Yes	No	Drawn	No
2011	N244 E144	97.95M	Pedogenic	Not Recorded	Yes	No	Drawn	No
2011	N244 E144	98.35M	Roots	Not Recorded	Yes	No	Drawn	No
2011	N244 E144	97.70M	Burned/Lithics	F114	Yes	No	Drawn	No
2011	N246 E140	97.05M	Disturbance	Not Recorded	Yes	No	Drawn	Yes
2011	N246 E140	96.95M	Disturbance	Not Recorded	Yes	No	Drawn	Yes
2011	N246 E140	96.90M	Root	Not Recorded	Yes	No	Drawn	Yes
2011	N246 E140	97.05M	Root	Not Recorded	Yes	No	Drawn	Yes
2012	N246 E138	96.90M	Root	Not Recorded	Yes	No	Drawn	Yes
2012	N246 E138	96.70M	Root	Not Recorded	Yes	No	Drawn	Yes
2012	N246 E140	96.55	Root	Not Recorded	Yes	No	Drawn	Yes
2012	N246 E140	96.70M	Root	Not Recorded	Yes	No	Drawn	Yes
2012	N246 E140	96.55M	Root	Not Recorded	Yes	No	Drawn	Yes
2012	N248 E140	96.65M	Root	Not Recorded	Yes	No	Drawn	Yes
2012	N248 E140	96.55	F117	Lithic Cluster	Yes	Yes	Drawn	Yes
2012	N246 E138	96.70M	Root Stain	Not Recorded	Yes	No	Drawn	Yes
2012	N248 E140	96.80M	Root Stain	Not Recorded	Yes	No	Drawn	Yes
2012	N246 E140	96.55M	Root Stain	Not Recorded	Yes	No	Drawn	Yes



Figure A19-1
Stain identified in Pleistocene Sands deposits of unit N248 140 in 2009. Stain was observed in prior levels. Sediment matrix was screened separate from the remainder of the unit, although no artifacts were observed. Although the stain was drawn and screened separate from the remainder of the level, it was not given a Feature number. Unit was included in present study.



Figure A19-2
Stain identified in Holocene deposits of unit N248 E138 98.08m in 2009. Stain was observed in prior levels; however materials collected were not screened separately from remainder of unit until present level. Material was not assigned a Feature number. Unit not selected for analysis in present study.

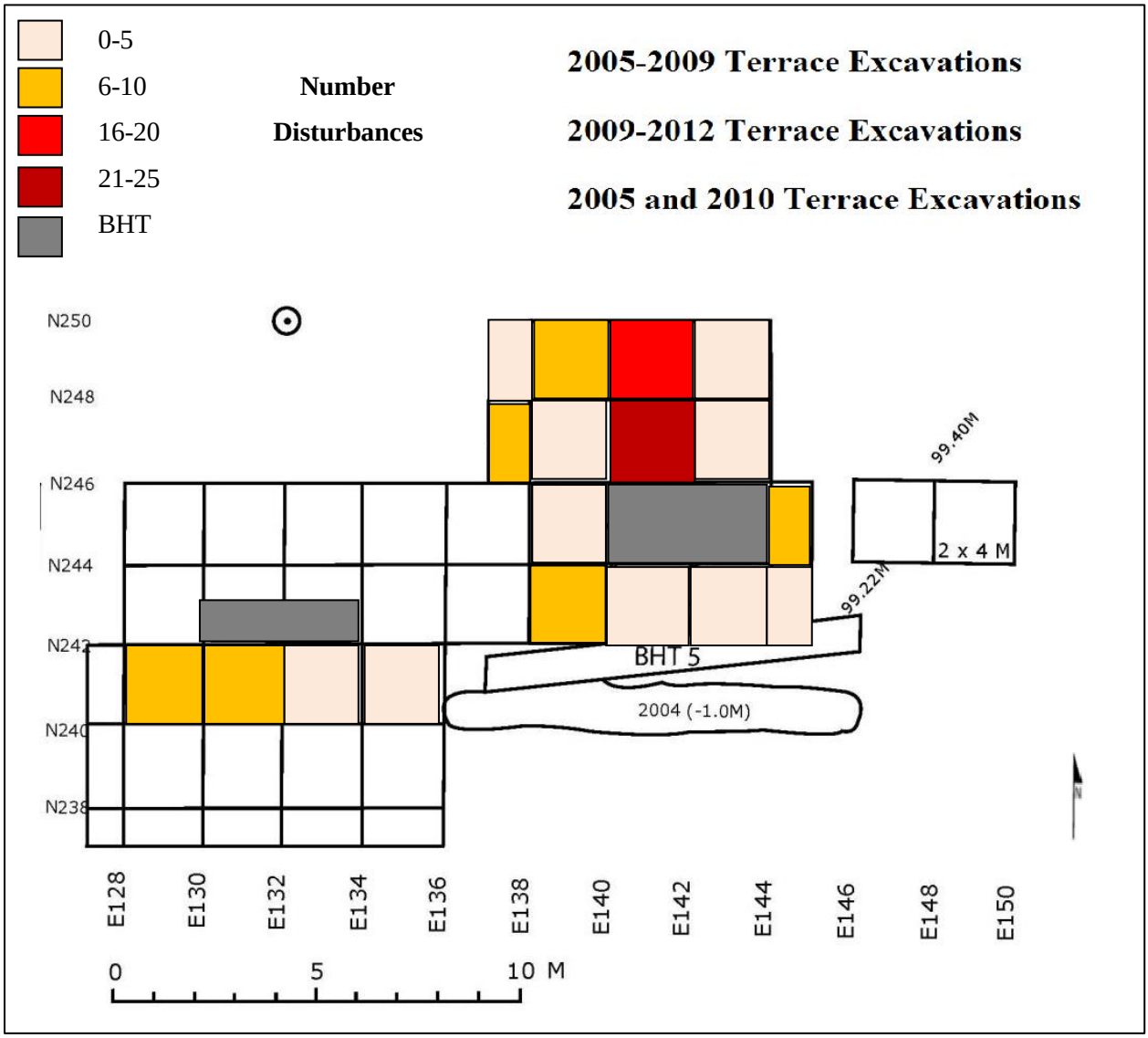


Figure A19-3
Map showing the spatial distribution of Feature and non-Feature disturbances from the study area at Topper. Most disturbances occur in unit N246 E140 (N=193).

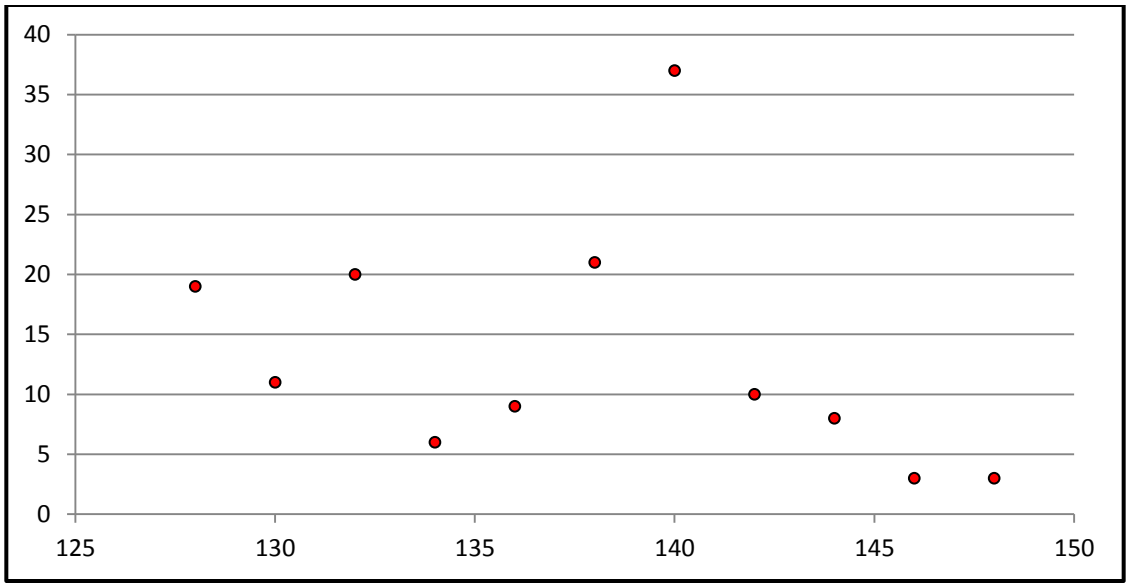


Figure A19-4

Plot map showing the number and distribution of non-lithic disturbances along the East gridline at the Topper Site (38AL23) (Total disturbances =153).

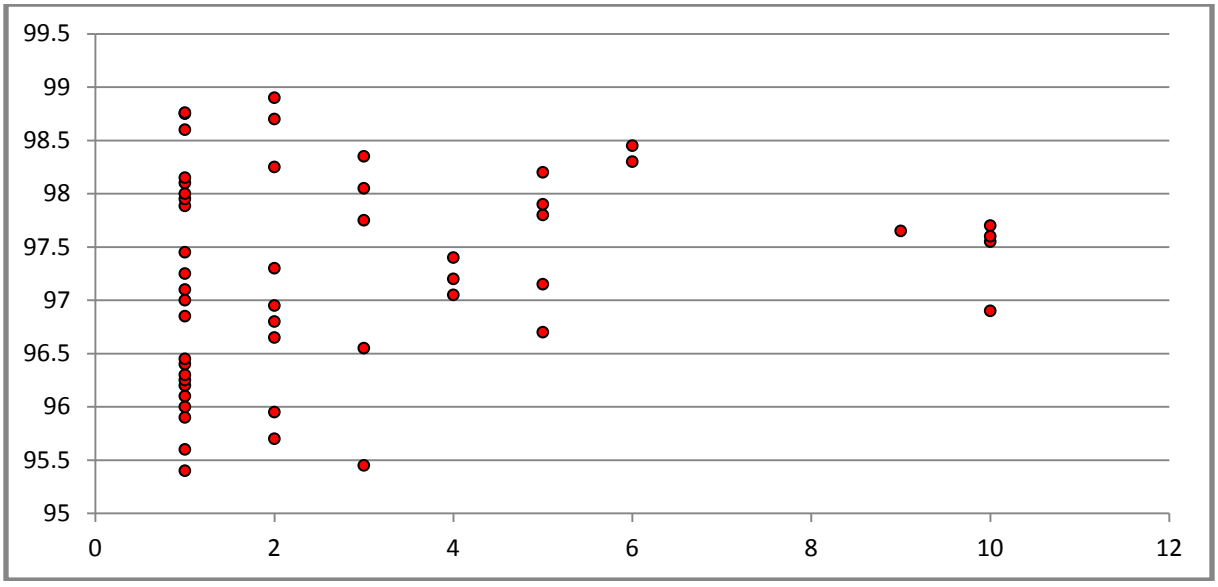


Figure A19-5
Plot map showing the number and distribution of non-lithic disturbances by depth from the study area at the Topper Site (38AL23) (Total disturbances =153).



A



B



D



C



E

Figure A19-6
Possible disturbances identified from Pleistocene Terrace deposits at Topper. A-B are dark root casts at base of level from unit N248 E140; C and E are burned roots from unit N248 E140, D; Tap root extending from base of terrace surface. All disturbed materials from these units were screened separate from contents of remainder of level.



A



B



C



D

Figure 19-7
Types of Features at Topper. A; Stain in SW section of Quad, B; Lithic cobble cluster, C; Burned Archaic (MALA) lithic cluster, D; Pedogenic soil feature (in profile) of compacted sediment

Table A19-2
Table showing the number and distribution of non-lithic disturbances by unit from the study area at the Topper Site (38AL23) (Total disturbances =153).

Northing	Easting	Disturbances	Lvl. Excavated	Disturbances/Level
240	134	1	25	.04
240	132	7	18	.28
240	128	8	25	.32
240	130	7	25	.28
240	132	3	25	.12
242	128	11	29	.37
242	132	16	20	.8
242	134	6	27	.22
242	138	8	87	.09
242	140	3	132	.02
242	142	5	125	.04
242	144	3	19	.15
244	138	3	87	.03
244	144	7	60	.11
244	146	3	23	.13
244	148	3	20	.15
246	136	8	36	.22
246	138	3	31	.09
246	140	20	60	.33
246	142	3	58	.05
248	136	3	5	.6
248	138	6	34	.17
248	140	14	25	.56
248	142	2	14	.14
		153	**873**	**.22**

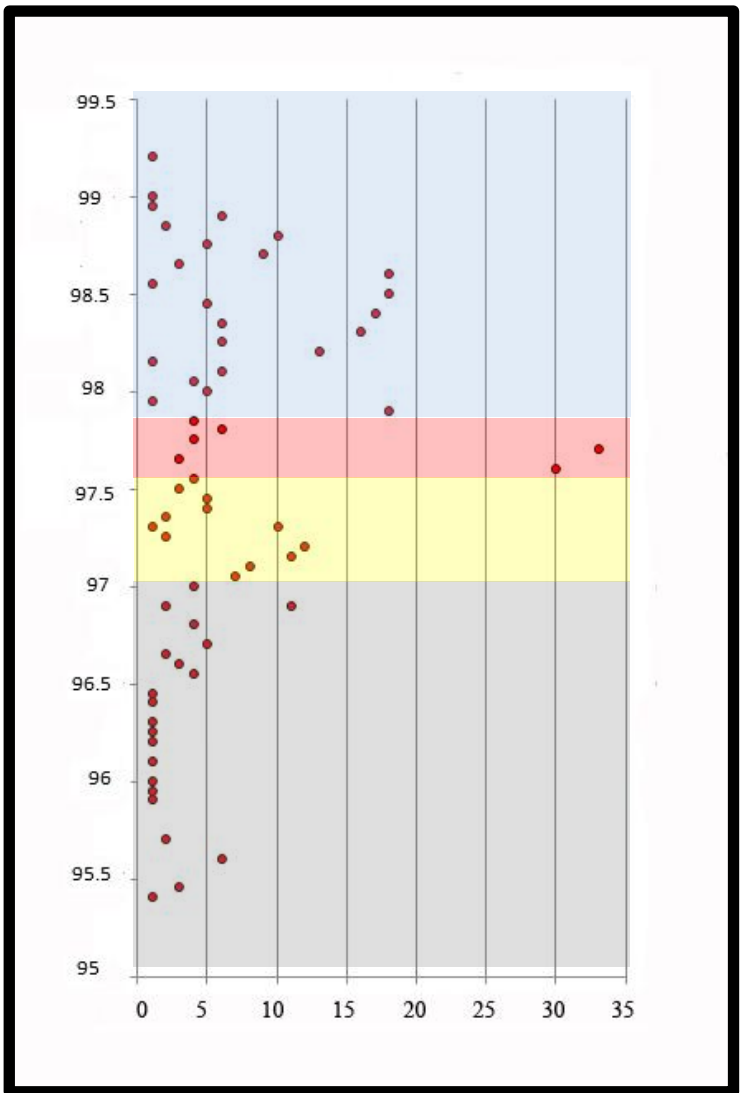


Figure A19-8
Plot map showing the number and distribution of disturbances by depth for proveniences on Alluvial Terrace at the Topper Site (38AL23) (Total disturbances =379).

APPENDIX 20

FEATURE CONTENTS FROM THE TOPPER SITE (38AL23)

Table A20-1 continued
Feature Contents From the Topper Site (38AL23)

F	Yr.	N	E	Depth	Art	Flk	Deb	Core	Bif	Tool	BB	HS	Pebbles	Deposits
23	1998	244	130	160cm	22	1	9	1	0	0	0	2	9	Pre Clovis
32	1999	212	134	80cmbs	4	1		1	1	0	0	0	1	Archaic
34	1999	210	130	97.70M	1	0	100+	1	0	0	0	0	0	Clovis
36	1999	268	132	140cm	8	0	7	1	0	0	0	0	0	Clovis
37	1999	268	132	160cm	5	5	100+	0	0	0	0	100+	0	Pre Clovis
38	1999	242	130	90cm	2	0	100+	2	0	0	0	0	0	Archaic
49	1999	242	132	150cm	4	0	0	0	0	1	0	3	0	Pre Clovis
48	1998	242	138		11	0	0	0	8	1	0	0	2	Archaic
50	2000	242	128	90cm	6	0	0	0	0	0	0	0	6	Archaic
52	2000	244	134	60cm	31	0	0	0	0	0	0	0	31	Archaic
59	2000	242	134	170cm	19	2	1	1	0	0	0	0	15	Pre Clovis
60	2000	242	134	170cm	8	0	0	1	0	0	0	0	7	Pre Clovis
61	2000	244	134	170cm	16	1	0	0	0	0	0	3	12	Pre Clovis
62	2000	244	148	130cm	45	15	0	0	0	1	0	0	29	Pre Clovis
63	2000	244	132	180cm	4	0	0	0	0	0	0	0	4	Pre Clovis
64	2000	244	132	180cm	6	0	0	0	0	0	0	0	6	Pre Clovis
65	2000	242	128	184cm	30	0	0	0	0	0	0	0	30	Pre Clovis
66	2000	242	134	185cm	14	0	0	2	0	1	0	0	11	Pre Clovis
67	2000	244	148	170cm	5	0	0	0	0	0	0	0	5	Pre Clovis
68	2000	244	146	200cm	5	0	0	0	0	0	0	0	5	Pre Clovis
69	2001	237	127	98.31M	10	0	0	0	9	0	0	0	1	Archaic
70	2001	240	132	98.17M	12	0	0	0	5	7	0	0	0	Archaic
73	2001	234	106	80cm	8	0	0	0	1	6	0	0	1	E. Archaic
74	2001	240	128	97.85M	11	4	0	6	0	0	0	1	0	Clovis
75	2001	236	106	55cm	32	0	0	0	2	0	0	1	29	Archaic
77	2001	240	132	97.30M	63	7	16	7	0	0	0	0	33	Pre Clovis
79	2001	232	102	97.30M	47	20	4	5	0	13	3	2	0	Pre Clovis
80	2001	238	128	97.10	14	4	7	0	0	0	0	3	0	Pre Clovis
82	2001	240	134	96.90M	6	0	0	0	0	0	0	0	6	Pre Clovis

Table A20-1 continued

F	Yr.	N	E	Depth	Art	Flk	Deb	Core	Bif	Tool	BB	HS	Pebbles	Deposits
83	2001	240	132	97.15M	9	1	4	3		1	0	0	0	Pre Clovis
85	2002	244	136	90cm	22	2	0	0	0	1	0	0	19	Archaic
86	2002	244	242	125cm	13	0	1	0	0	0	0	1	11	Clovis
87	2002	242	138	145	18	0	0	0	0	4	1	2	11	Pre Clovis
88	2002	244	142	155cm	18	0	9	4	0	0	3	2	0	Pre Clovis
90	2003	242	140	97.285	12	1	9	2	0	0	0	0	0	Pre Clovis
94	2005	246	140	97.40M	21	3	7	6	0	1	0	2	2	Pre Clovis
95	2005	102	56	50cm	172	-	-	-	-	-	-	-	172*	Clovis
96	2006	102	56	-	-	-	-	-	-	-	-	-	-	Clovis
99	2008	140	38	-	-	-	-	-	-	-	-	-	-	Pre Clovis
105	2009	248	140	140cm	13	0	11	1	0	1	0	0	0	Pre Clovis
107	2009	246	140	97.20M	10	0	1	1	0	0	0	1	7	Pre Clovis
109	2010	264	144	98.20M	5	0	2	0	0	0	0	0	3	Clovis
111	2011	262	142	98.40M	0	0	0	0	0	0	0	0	100+	Archaic
112	2011	242	144	98.35	18	13	0	2	0	1	0	2	0	Archaic
114	2011	244	144	97.70	21	7	9	0	0	0	0	1	4	Pre Clovis
117	2012	248	140	96.45	8	0	1	0	0	0	0	1	6	Pre Clovis
A	-	-	-	-	156	16	0	5	26	16	0	3	90	-
C	-	-	-	-	210	4	10	8	0	0	0	2	186	-
PC	-	-	-	-	443	67	88	34	0	23	7	22	202	-
Total (46)	-	-	-	-	809	87	98	47	26	39	7	27	306	-

N=North; E=East; Art=Artifacts; Yr = Year; Flks = Flakes; Deb = Debitage; Bif = Biface; BB = Bend Break; HS = Hammerstone
+ Value estimated as artifact counts not provided in level records.
*No information on artifact classification. Labeled as other.

APPENDIX 21

UNIT SUPERVISORS AT THE TOPPER SITE (38AL23)

Graduate students from multiple institutions have participated in Archaeological investigations at the Topper Site, including from the University of Florida, Mississippi State University, the University of South Carolina, University of Tennessee, Texas A&M University, and Washington State University. Graduate students typically had supervisory roles and these often lead to MA Thesis or PhD Dissertation topics pertaining to some aspect of the site (Miller 2007, 2010; King 2011King 2012; Weidman 2013, Sain 2011).

Dr. Albert C. Goodyear has been the principal Investigator for the project and has made or overseen all archaeological decisions with regard to the placement and method of excavations. From 2005 to 2012, Tom Pertierra held the role of logistics coordinator. In this role, Pertierra oversaw the day to day operations at the site and provided equipment necessary for excavation, analysis, and material transport. Scientific protocol on a day-to-day basis was overseen by the Senior Science Supervisor who was in charge of all excavation in the absence of Dr. Goodyear. From 1998-2004, Kenn Steffy held the position of Senior Science Supervisor at Topper, and oversaw all excavation on the Holocene and Pleistocene Terrace at between these dates. After 2004, the role of Senior Science Supervisor was held by graduate students. Three individuals, Dr. Shane Miller (2006-2008), Dr. Ashley Smallwood (2009-2010), and Derek Anderson (2010-2012)--have held the position of Senior Science supervisor since 2005, and have been in charge of overseeing all facets of excavation on the hilltop and hillside areas of Topper. In additional to these positions, undergraduate and graduate students have also been assigned as individual unit supervisors since 2005. Prior to this date, unit supervisors were both avocationalists and professional archaeologists. A list of all unit supervisors by year is presented in appendix 21. Since From 2005-2012, the author of this dissertation, Douglas A. Sain has overseen all work

conducted on the Holocene and Pleistocene Terrace excavations at the site, into the pre Clovis deposits.

Appendix 21provides a year by year list of the individuals who have overseen excavation of each unit at the Topper Site. The appendix is organized with the unit coordinates and year excavated presented in the two columns to the right. The landform on which the unit is located is presented in the third column from the left, with the unit supervisors listed in the final column at right. To date, a total of 56 individuals have overseen unit excavation at Topper Finally a site map is provided that illustrates the locations of the test units described in the table relative to the site grid.

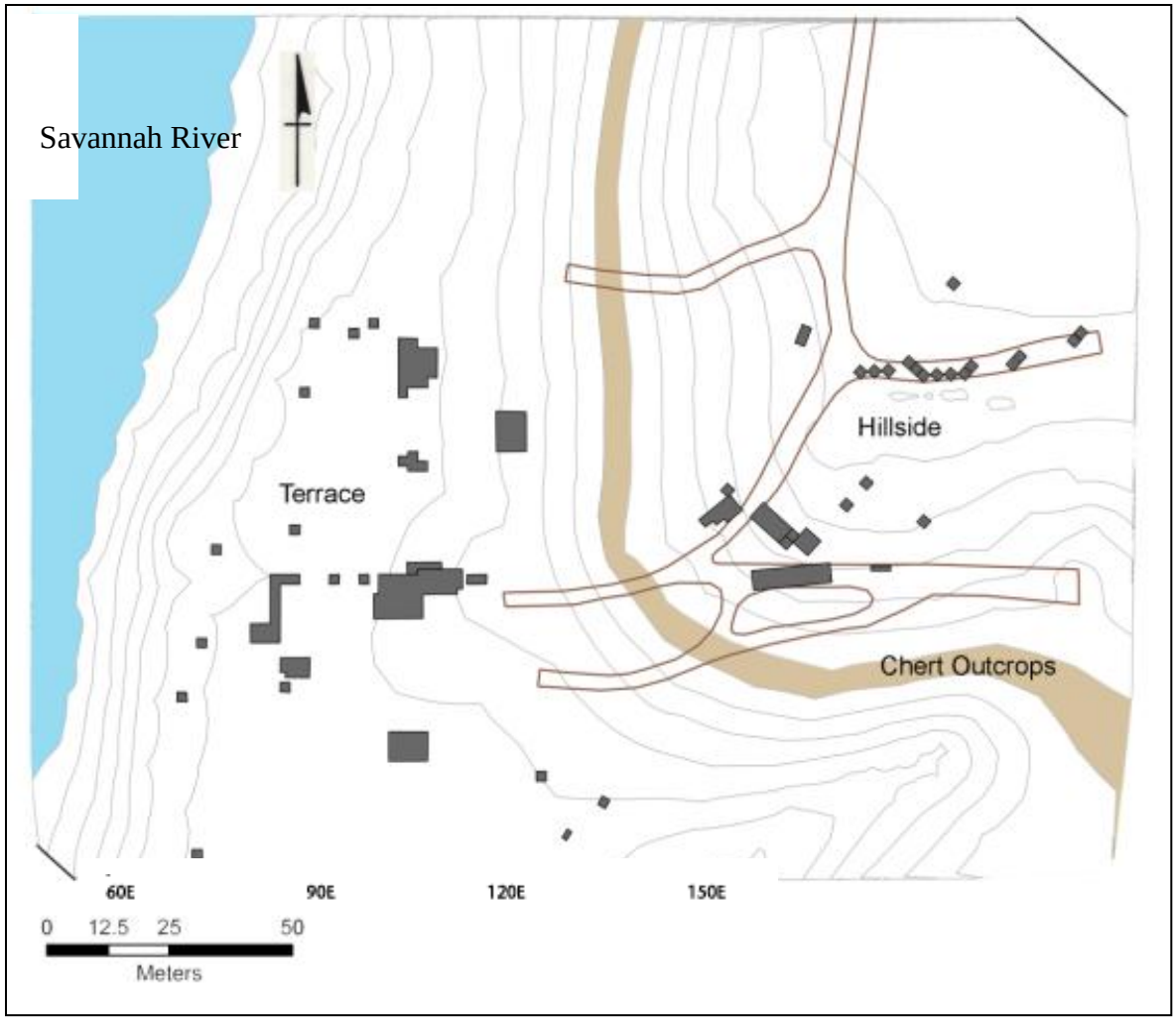


Figure A21-1
Map of Topper Site showing locations of excavation units. Map adapted from Miller 2011.
Note: grid coordinates refer to Terrace grid system. Hillside uses an alternative grid system.

Table A21-1
List of Unit Supervisors and Crew at the Topper Site (38AL23)

Provenience	Date	Depositional Unit	Supervisor
N188 E090	1985	Terrace	A. Goodyear, T. Charles
N204 E160	1985	Terrace	A. Steen
N212 E130	1985	Terrace	A. Steen, A. Goodyear, T. Charles
N222 E108	1985	Terrace	A. Goodyear, T. Charles
N229 E110	1985	Terrace	G. Lewis
N231 E091	1985	Terrace	B. Parler
N220 E087	1985	Terrace	S. Combs
N244 E106	1998	Terrace	T. Charles
N244 E110	1998	Terrace	T. Charles, D. Barnes
N244 E118	1998	Terrace	G. Farr
N244 E124	1998	Terrace	T. Charles, D. Barnes
N208 E130	1999	Terrace	D. Barnes
N208 E132	1999	Terrace	G. Farr
N208 E134	1999	Terrace	K. Eberhart
N208 E136	1999	Terrace	G. Farr
N210 E130	1999	Terrace	C. Gillam, D. Barnes
N210 E132	1999	Terrace	A. King
N210 E134	1999	Terrace	D. Butler
N210 E136	1999	Terrace	G. Farr
N212 E132	1999	Terrace	C. Geiger
N212 E134	1999	Terrace	C. Geiger
N212 E136	1999	Terrace	G. Farr
N242 E130	1999	Terrace	S. Holiday
N242 E132	1999	Terrace	K. Steffy, A. Goodyear
N268 E132	1999	Terrace	K. Steffy, V.Steen
N282 E132	1999	Terrace	B. Covington, D.Barnes
N242 E128	2000	Terrace	J Crockett, D. Barnes
N242 E130	2000	Terrace	K. Steffy , D. Barnes
N242 E132	2000	Terrace	K. Steffy , D. Barnes
N242 E134	2000	Terrace	K. Steffy , D. Barnes
N244 E108	2000	Terrace	S. Holiday
N244 E128	2000	Terrace	T. Charles, D. Barnes
N244 E132	2000	Terrace	D. Barnes
N244 E134	2000	Terrace	D. Barnes
N244 E146	2000	Terrace	S. Holiday
N244 E148	2000	Terrace	S. Holiday
N236 E126	2001	Terrace	K. Steffy
N236 E128	2001	Terrace	G. Farr
N236 E130	2001	Terrace	D. Barnes
N236 E132	2001	Terrace	D. Barnes
N236 E134	2001	Terrace	C. Gillam
N236 E136	2001	Terrace	C. Gillam

Table A21-1 continued

Provenience	Date	Depositional Unit	Supervisor
N237 E136	2001	Terrace	A. Goodyear
N238 E126	2001	Terrace	G. Farr
N238 E136	2001	Terrace	C. Gillam
N240 E126	2001	Terrace	G. Farr
N240 E136	2001	Terrace	D. Barnes
N230 E106	2001	Terrace	K. Steffy, V. Steen
N232 E102	2001	Terrace	K. Steffy , V. Steen
N232 E104	2001	Terrace	K. Steffy , V. Steen, B. Covington
N232E106	2001	Terrace	K. Steffy , V. Steen
N234 E102	2001	Terrace	K. Steffy , V. Steen, D. Barnes
N234E104	2001	Terrace	K. Steffy , V. Steen
N234E106	2001	Terrace	K. Steffy , V. Steen, D. Barnes
N236 E106	2001	Terrace	K. Steffy , V. Steen
N238 E106	2001	Terrace	K. Steffy, D.Barnes
N240E106	2001	Terrace	K. Steffy , V. Steen
N242 E106	2001	Terrace	K. Steffy , V. Steen
N238 E128	2001	Terrace	G. Farr
N238 E130	2001	Terrace	D. Barnes
N238 E132	2001	Terrace	D. Barnes
N240 E134	2001	Terrace	G. Farr
N238 E134	2001	Terrace	C. Gillam
N240 E129	2001	Terrace	C. Gillam
N240 E130	2001	Terrace	C. Gillam
N240 E132	2001	Terrace	C. Gillam
N267 E134	2002	Terrace	J. Kirby
N267 E136	2002	Terrace	D. Barnes
N269 E134	2002	Terrace	J. Kirby
N284 E134	2002	Terrace	B. Lyles
N284 E136	2002	Terrace	D. Barnes
N285 E135	2002	Terrace	C. Gillam
N285 E137	2002	Terrace	C. Gillam
N286 E134	2002	Terrace	B. Lyles, J. White
N286 E136	2002	Terrace	B. Lyles, J. White
N286 E138	2002	Terrace	A. Goodyear
Trench A	2002	Terrace	B. Lyles, B. Covington
Trench B	2002	Terrace	K. Steffy
Trench C	2002	Terrace	K. Steffy
Trench D	2002	Terrace	K. Steffy
Trench E	2002	Terrace	B. Covington, B.Lyles
N242 E136	2002	Terrace	B. Covington, J. White
N242 E138	2002	Terrace	K. Steffy J. Guilleux
N242 E140	2002	Terrace	K. Steffy
N242 E142	2002	Terrace	K. Steffy, B. Covington
N242 E144	2002	Terrace	C. Gillam

Table A21-1 continued

Provenience	Date	Depositional Unit	Supervisor
N244 E136	2002	Terrace	A.Goodyear, J. White
N244 E138	2002	Terrace	K. Bridgman
N244 E140	2002	Terrace	C. Gillam
N244 E142	2002	Terrace	K. Steffy
N244 E144	2002	Terrace	D. Barnes
N246 E136	2002	Terrace	B. Covington, J.White
N246 E138	2002	Terrace	B. Lyles
N246 E140	2002	Terrace	T. Pickering
N246 E142	2002	Terrace	B. Covington, J.White
N246 E144	2002	Terrace	J. Kirby, J.White
N288 E136	2003	Terrace	K. Bridgeman
N242 E140	2003	Terrace	T. Pickering
N242 E142	2003	Terrace	T.Pickering
N244 E140	2003	Terrace	T. Pickering
N244 E142	2003	Terrace	T. Pickering
N270 E152	2003	Terrace	K. Bridgeman
N270 E154	2003	Terrace	B. Cole
N272 E152	2003	Terrace	T.Pertierra
N272 E154	2003	Terrace	B. Cole
N272 E156	2003	Terrace	B. Cole, T.Pickering
N274 E152	2003	Terrace	T. Pickering, K. Bridgeman
N274 E154	2003	Terrace	C. Gillam
N274 E156	2003	Terrace	T. Pertierra
N284 E132	2003	Terrace	D. Barnes
N286 E132	2003	Terrace	J. Simpson
N288 E132	2003	Terrace	B. Lyles
N288 E134	2003	Terrace	J.Kirby
N242 E140	2004	Terrace	T. Pickering
N242 E142	2004	Terrace	T. Pickering
N238 E138	2004	Terrace	T. Pickering
N294 E122	2004	Terrace	A. Williams
N296 E114	2004	Terrace	J. Kirby
N296 E126	2004	Terrace	B. Lyles, D. Barnes
N288 E138	2004	Terrace	J. Kirby, B. Lyles
N290 E132	2004	Terrace	B. Lyles
N290 E134	2004	Terrace	J.Kirby, J.Crockett
N290 E136	2004	Terrace	J.Kirby
N292 E134	2004	Terrace	S. Kautz
N292 E136	2004	Terrace	J. Kirby
N290 E138	2004	Terrace	J.Crockett
N292 E132	2004	Terrace	A. Williams
N294 E122	2004	Terrace	A. Williams
N296 E114	2004	Terrace	J. Kirby
N296 E126	2004	Terrace	B.Lyles, J. Kirby

Table A21-1 continued

Provenience	Date	Depositional Unit	Supervisor
TU4	2004	Hillside	T. Pickering
TU5	2004	Hillside	T. Pickering
TU6	2004	Hillside	T. Pickering
TU7	2004	Hillside	T. Pickering
TU8	2004	Hillside	T. Pickering
TU9	2004	Hillside	T. Pickering
TU10	2004	Hillside	T. Pickering
TU11	2004	Hillside	T. Pickering
N242 E140	2005	Terrace	D. Sain
N242 E144	2005	Terrace	E. Gibson
N244 E140	2005	Terrace	D. Sain
N244 E144	2005	Terrace	E. Gibson
N246 E140	2005	Terrace	D. Sain
N246 E142	2005	Terrace	D. Sain
N248 E140	2005	Terrace	D. Sain
N248 E142	2005	Terrace	D.Sain
N100 E044	2005	Hillside	S. Yerka
N100 E046	2005	Hillside	S. Yerka
N102 E050	2005	Hillside	B. Lyles
N103 E049	2005	Hillside	S. Miller
N104 E048	2005	Hillside	T. Pertierra
104 E050	2005	Hillside	B. Lyles
N114 E050	2005	Hillside	S. Miller
N120 E050	2005	Hillside	B. Lyles
N122 E064	2005	Hillside	B. Lyles
N146 E046	2005	Hillside	S. Yerka
Trench A	2005	Hillside	S. Miller
Trench B	2005	Hillside	T. Pertierra
Trench C	2005	Hillside	T. Pertierra
Trench D	2005	Hillside	T. Pertierra
Trench E	2005	Hillside	T. Pertierra
N100 E038	2006	Hillside	A. Smallwood
N100 E040	2006	Hillside	A. Smallwood
N100 E042	2006	Hillside	A. Smallwood
N100 E044	2006	Hillside	A. Smallwood
N100 E052	2006	Hillside	E. Heimbrook
N100 E054	2006	Hillside	E. Heimbrook
N100E056	2006	Hillside	S. Miller
N100 E058	2006	Hillside	S. Miller
N100 E060	2006	Hillside	A. Williams
N100 E062	2006	Hillside	O. Chapa
N100 E064	2006	Hillside	A. Williams
N100 E066	2006	Hillside	A. Williams
N102 E052	2006	Hillside	T. Pertierra

Table A21-1 continued

Provenience	Date	Depositional Unit	Supervisor
N102 E054	2006	Hillside	T. Pertierra
N102 E056	2006	Hillside	A. Williams
N102 E058	2006	Hillside	J. Odonoughue
N102 E060	2006	Hillside	J. Odonoughue
N102 E062	2006	Hillside	T. Pertierra, D. Barnes
N102 E064	2006	Hillside	E. Heimbrook, B. Covington
N102 E066	2006	Hillside	A. Williams
N114 E050	2006	Hillside	B. Lyles
N122 E064	2006	Hillside	E. Heimbrook, E. Williams
N242 E140	2006	Terrace	D. Sain
N242 E142	2006	Terrace	D. Sain
N242 E140	2007	Terrace	D. Sain
N242 E142	2007	Terrace	D. Sain
N244 E138	2007	Terrace	D. Sain
N138 E036	2007	Hillside	T. Pertierra, D. Barnes
N144 E142	2007	Hillside	J. Kirby
N148 E048	2007	Hillside	B. Bererra
N150 E050	2007	Hillside	B. Lyles
N152 E050	2007	Hillside	T. Pertierra
N170 E062	2007	Hillside	T. Jennings
N242 E138	2008	Terrace	D. Sain
N242 E140	2008	Terrace	D. Sain
N242 E138	2008	Terrace	D. Sain
N244 E138	2008	Terrace	D. Sain
N100 E030	2008	Hillside	T. Hunter
N100 E042	2008	Hillside	A. Smallwood
N100 E044	2008	Hillside	A. Smallwood
N100 E046	2008	Hillside	A. Smallwood
N101 E041	2008	Hillside	B. Lyles, E. Schofner
N102 E040	2008	Hillside	A. Russell
N136 E034	2008	Hillside	C. Ketron
N138 E036	2008	Hillside	T Pertierra, C. Ketron
N140 E038	2008	Hillside	C. Ketron
N144 E040	2008	Hillside	R. Lassen
N152 E050	2008	Hillside	T. Jennings
N158 E056	2008	Hillside	K. Bridgeman Sweeney
N160 E056	2008	Hillside	K. Bridgeman Sweeney
N246 E136	2009	Terrace	B. Covington
N246 E138	2009	Terrace	B. Covington
N246 E140	2009	Terrace	K. Bridgeman Sweeney
N246 E142	2009	Terrace	D. Sain
N248 E138	2009	Terrace	B. Covington, B.Lyles
N248 E140	2009	Terrace	D. Sain, K. Bridgeman Sweeney
N242 E138	2009	Terrace	D. Sain

Table A21-1 continued

Provenience	Date	Depositional Unit	Supervisor
N242 E142	2009	Terrace	D. Sain
N100 E030	2009	Hillside	B. Lyles
N136 E034	2009	Hillside	T. Pertierra
N138 E036	2009	Hillside	T Pertierra
N140 E038	2009	Hillside	K. Bridgeman Sweeney
N144 E040	2009	Hillside	A. Smallwood
N158 E056	2009	Hillside	A. Russell
N158 E056	2009	Hillside	A. Russell
N160 E056	2009	Hillside	A. Russell
N164 E034	2009	Hillside	E. Plummer
N164 E036	2009	Hillside	E. Plummer
N166 E034	2009	Hillside	E. Plummer
N170 E062	2009	Hillside	A. Russell
N172 E062	2009	Hillside	A. Russell
N185 E183	2009	Hillside	A. Russell
N262 E144	2010	Terrace	D. Anderson, B. Covington
N262 E146	2010	Terrace	D. Anderson, E. Plummer
N264 E144	2010	Terrace	D. Anderson, K. Forst
N264 E146	2010	Terrace	D. Anderson, D. Lawrence
N263 E145	2010	Terrace	D. Sain
N246 E136	2010	Terrace	J. Simpson
N248 E136	2010	Terrace	B. Covington
N246 E140	2010	Terrace	K. Forst
N246 E142	2010	Terrace	D. Sain, K. Forst
N248 E140	2010	Terrace	D. Sain
N185 E083	2010	Hillside	E. Johannson
N205 E037	2010	Hillside	B. Covington, J.Simpson
N207 E064	2010	Hillside	S. Walters
N180 E022	2010	Hillside	E. Plummer
N266 E132	2011	Terrace	E. Plummer
N266 E134	2011	Terrace	E. Plummer, J. Simpson
N242 E144	2011	Terrace	D. Sain
N244 E144	2011	Terrace	D. Sain
N246 E140	2011	Terrace	K. Poston
N246 E142	2011	Terrace	A. Weidman, K. Poston
N248 E140	2011	Terrace	K. Poston
N265 E134	2011	Terrace	E. Plummer, J. Simpson
N266 E132	2011	Terrace	E. Plummer, J. Simpson
N246 E138	2012	Terrace	K. Sain, J.L.
N246 E140	2012	Terrace	K. Sain, J.L.
N246 E142	2012	Terrace	D. Sain, J. Cherry
N248 E140	2012	Terrace	J. Cherry . D. Sain

APPENDIX 22

EXCAVATION LOCATION MAPS FOR EACH FIELD SEASON AT THE TOPPER SITE (38AL23)

1998 Excavations at the Topper Site (38AL23)

Plans were originally scheduled to hold the 1998 Allendale Paleoindian Expedition at the nearby Big Pine Tree Site where ongoing research had identified a dense Archaic and Paleoindian deposit (Goodyear personal communication). However, due to recent flooding of the site as a result of abnormally high precipitation earlier in the spring it was decided that excavation would not be possible at Big Pine Tree, and Topper was subsequently chosen as an alternative field site. Because The Topper Site was slightly higher in elevation and less affected by the flooding, it was decided by the research team to resume field investigations at Topper in the summer of 1998.Similar to a field school, the program allowed participants to gain experience in archaeological excavation techniques, artifact identification, and lab analysis; all important aspects of archaeology. In addition to volunteer assistance, students could register to obtain field school credit. All funding for the project was provided from member registration fees and from volunteer donations. Funds were used to provide food for the project and to pay graduate supervisors a stipend. Graduate students from multiple institutions have participated in the project, including from the University of Florida, Mississippi State University, the University of South Carolina, University of Tennessee, Texas A&M University, and Washington State University. Graduate students typically had supervisory roles and these often lead to MA Thesis or PhD Dissertation topics pertaining to some aspect of the site (Miller 2007, 2010; King 2011King 2012; Weidman 2013, Sain 2011). The 1998 excavations include a series of 5 2x2m units oriented along the N244 grid line from E106-E130, and three additional test units to the north along the N250, N254, and N282 gridline (Figure A22-1).

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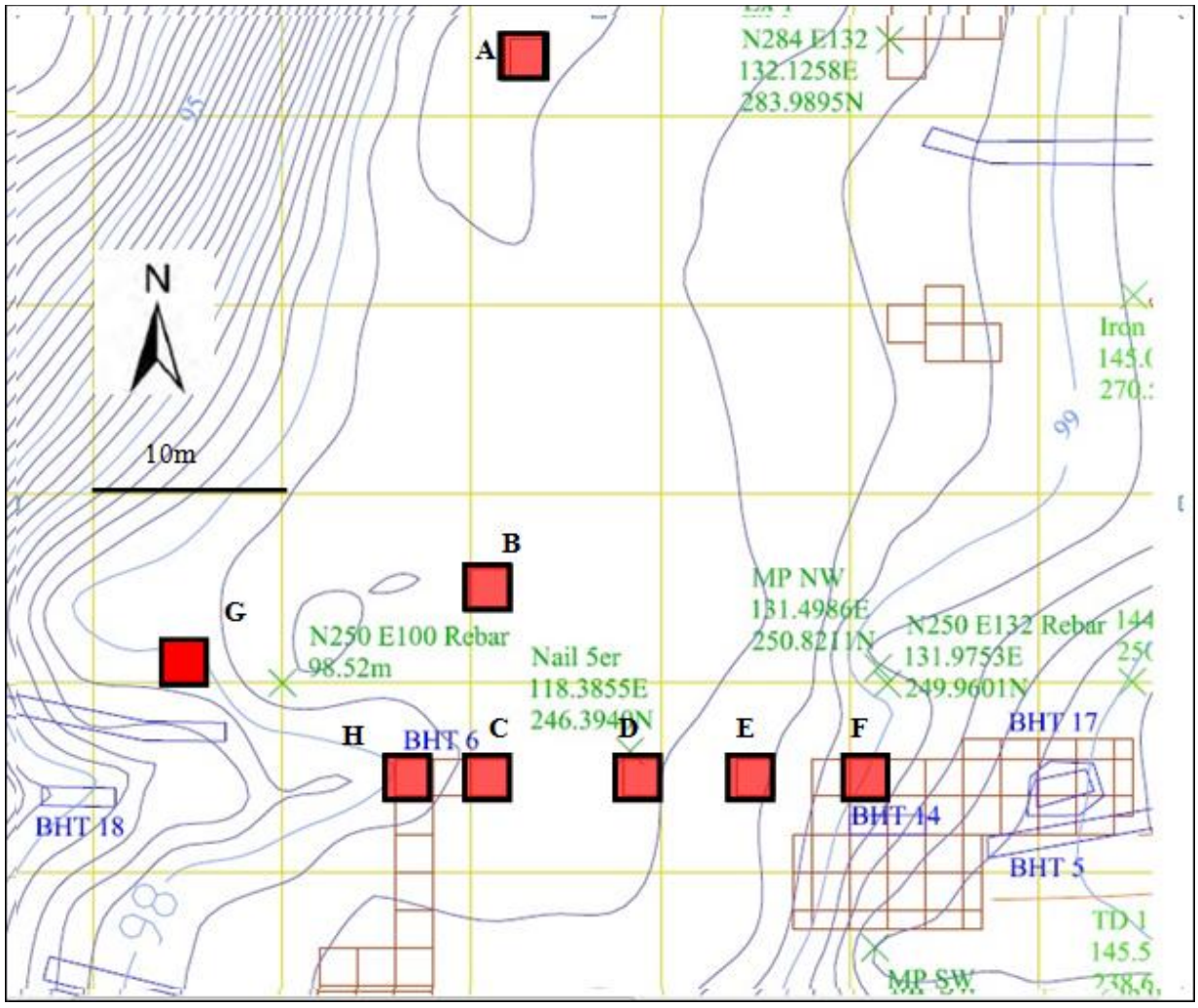


Figure A22-1
Locations of 1998 Excavations at Topper. Eight 2m x 2m units; A; N282 E112, B; N254 E110, C; N244 E110, D; N244 E118, E; N24 E124, F; N244 E130, G; N250 E092, H; N244 E106. Initial Pre Clovis discovery made in unit N244 E130 (F).

1999 Excavations at the Topper Site (38AL23)

Units opened in 1999 included a 48 square meter block extending from N208 along the East 130 line to N214 E136; a 4m x 2m block excavation extending from N242 E130 to E132; and two 2m x 2m units along the Northern perimeter of the site; N268 E132, and N282 E132 (Figure A22-2). A total of 60m² of test units were opened during the 1999 field season. The ground surface of the primary48 square meter block was measured at 98.70m with an approximate 10cm (North to South) variation in slope across the block. The entire block was leveled off to 98.40m prior to undergoing excavation in 10cm arbitrary levels.

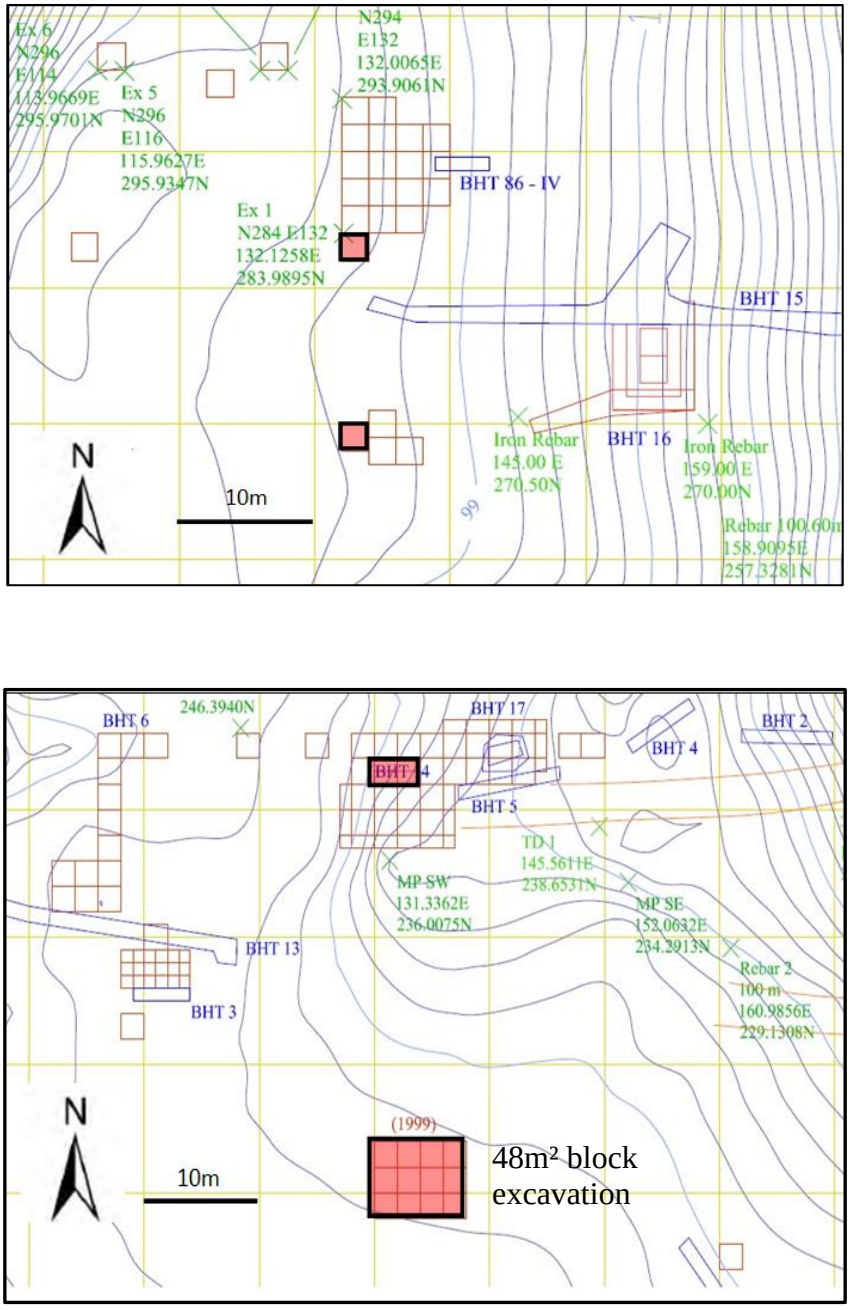


Figure A22-2
Locations of 1999 Excavations at Topper. Above: 2x2m units N268 E132, and N282 E132, Below: 48 square meter block beginning at N208 E130, and a1x2m block extending from N242 E130.

2000 Excavations at the Topper Site (38AL23)

In May 2000, two new excavation blocks were opened at Topper. A 4m x 8m block was opened extending from N242 to N244 along the E128 to E136 grid lines, and a 2m x4m block excavation was opened along the N244grid line from E146 to E150 (Goodyear 2000). A map showing the extent of the 2000 field excavations at Topper is presented in Figure A22-3. Both of these block excavations were situated to the north of the 1999 48 square meter block excavation illustrated at the bottom of A22-3.

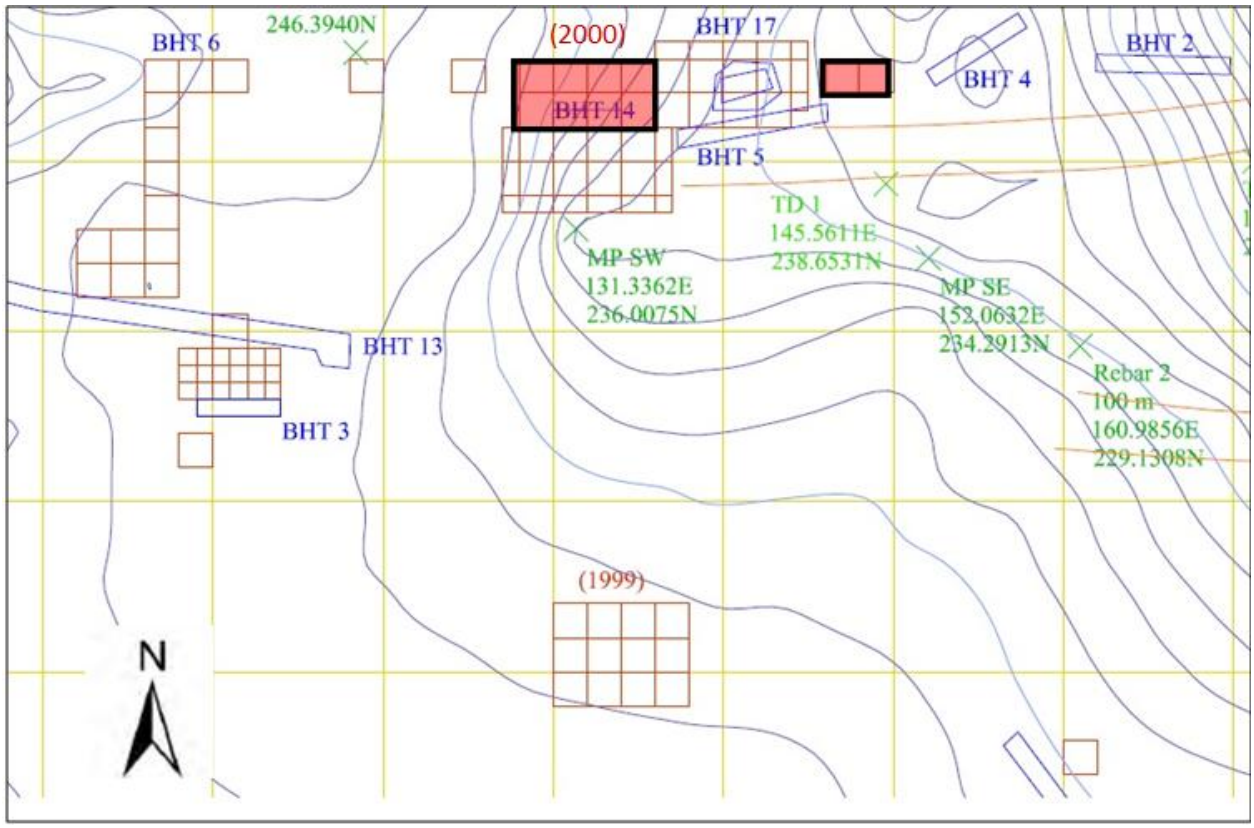


Figure A22-3
Locations of 2000 Excavations at Topper.
4x8 block excavation extending from N242 to N244 along the E128 to E136 grid lines at left.
Right; 2x4m block excavation along the N244grid line from E146 to E150.

2001 Excavations at the Topper Site (38AL23)

The excavation blocks opened in 2001 include:

1. A 5m x10m block opened up adjacent to the 4m x8m block that was completed in 2000. This block began at the N236 E127 gridlines and extended to the northeast corner of unit N242 E137 with a 1m baulk on the south, east and west margins of the excavation.

2. A 4m x6m block consisting of eleven 2m x2m units placed along the E102-106 grid line from N230-N240.

3. 10 1m x2m units that formed a U and served as a baulk on for the 5m x10 block excavation. These units were placed on the southern, eastern and western margins of the 5m x10m block (see Figure 4 of Appendix 22, Figure 4).

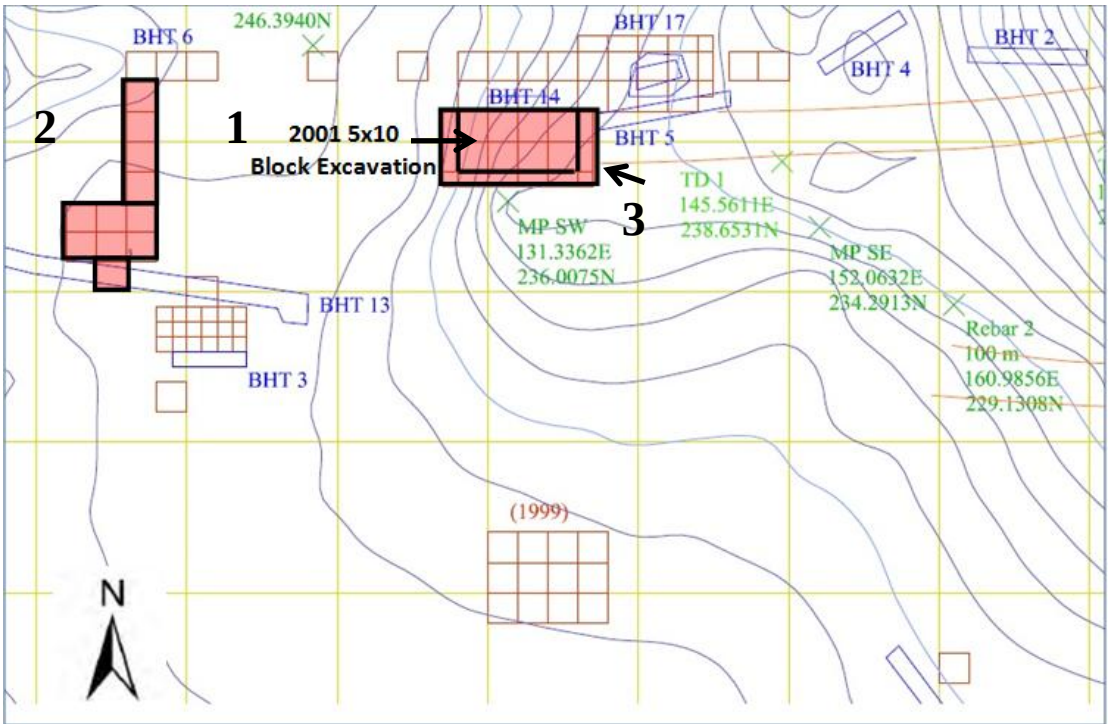


Figure A22-4

Locations of 2001 Excavations at Topper.
5x10 block excavation extending from N236 to N244 along the E128 to E138 grid lines at Right. At Left; excavations extending from N230 to N146 along the E106-108 gridline including a 4x6m block excavation.

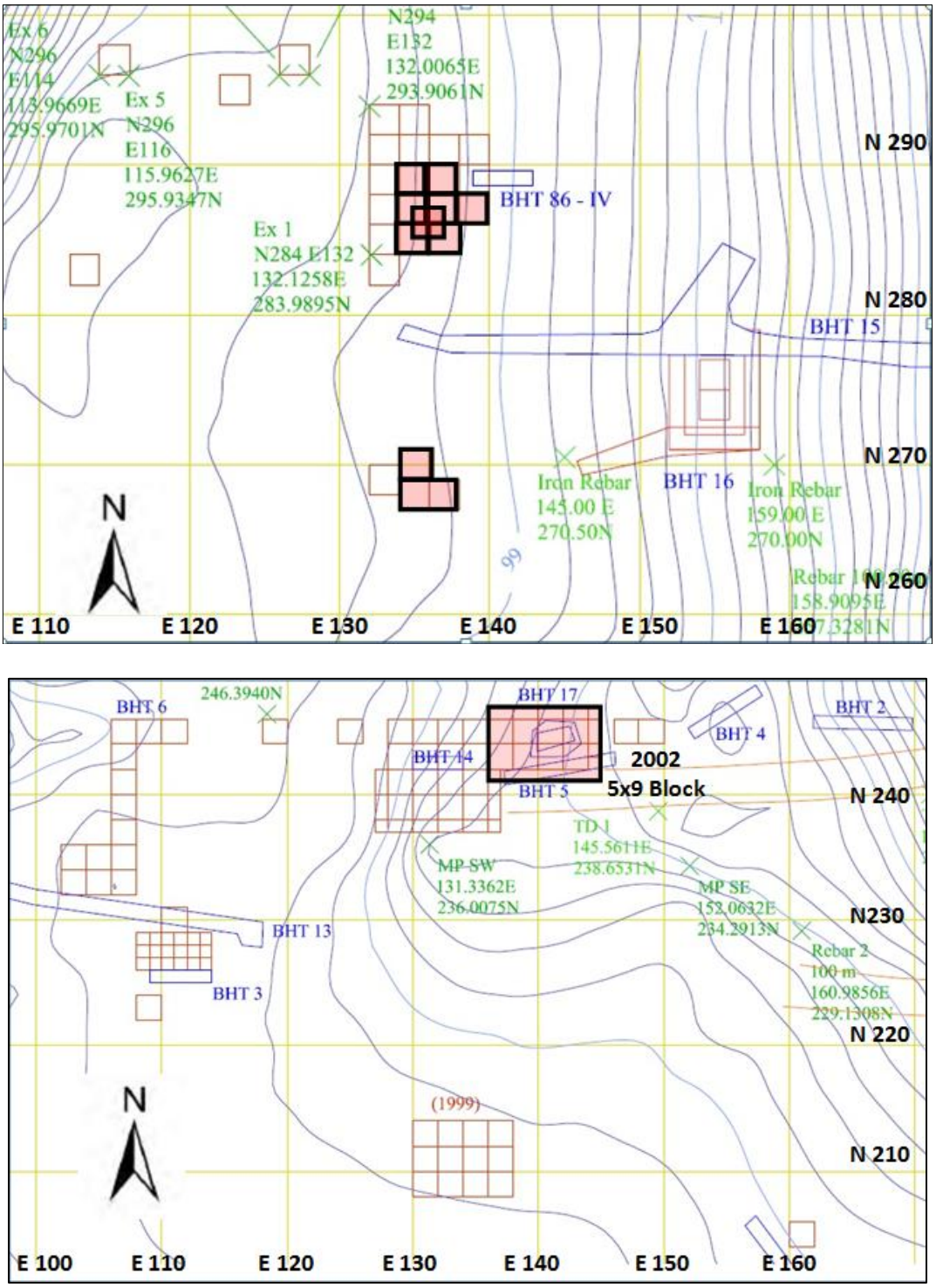


Figure A22-5

Locations of 2002 Excavations at Topper.

5x9 block excavation extending from N240 to N244 along the E136 to E144 grid lines at Bottom. Middle; Excavation block from N267 to N269 along the E 134-136 gridline. Top; 4x6 block excavation from N284 to N286 along the E134-138 gridline.

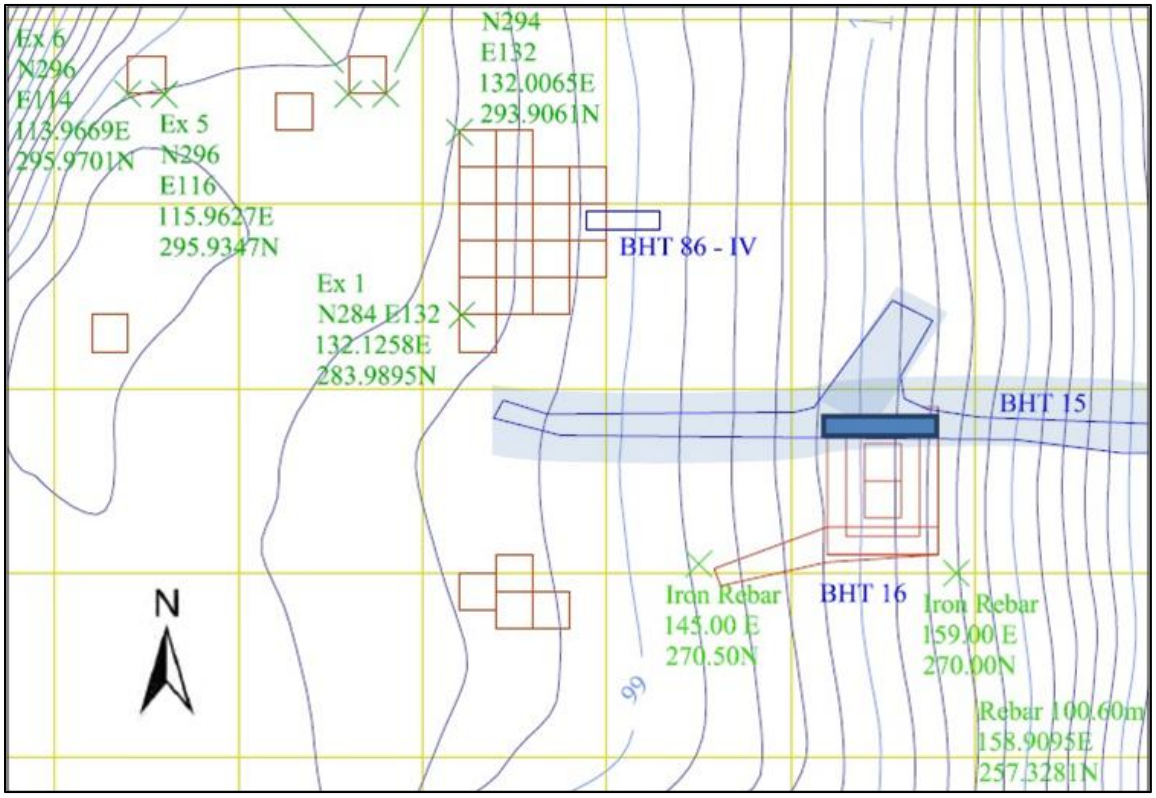


Figure A22-6
Map showing the location of Backhoe Trench 15 excavation in 2002 at Topper Site.

2003 Excavations at the Topper Site (38AL23)

Excavations at Topper in 2003 centered on three specific areas; the completion of the 2002 5x9m block to the Terrace surface, the opening of a 6m x6m block excavation, and a series of five 2m x3m units along the northern perimeter of the site between the N284 and N288 gridline (Figure A22-7). The 6m x6m block excavation is shown immediately to the South of 2002 BHT 15.

.

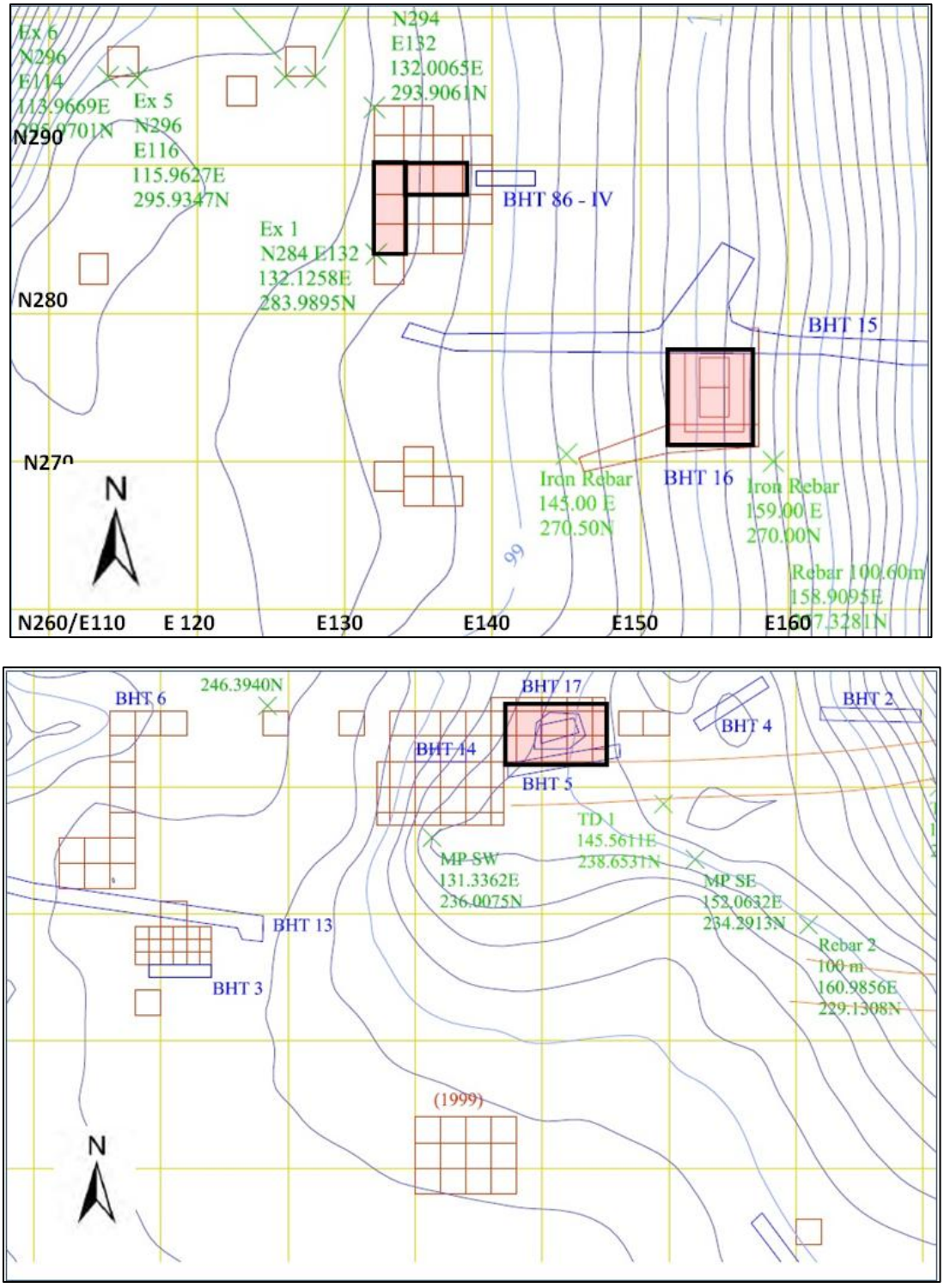


Figure A22-7
Excavations opened during the 2003 Field Season at Topper. At top; N284 E132,N286 E132, N288 E132, N288 E134, N288 E136. Center and Right; 6m x6m block extending from N270 E152 to N276 E158.

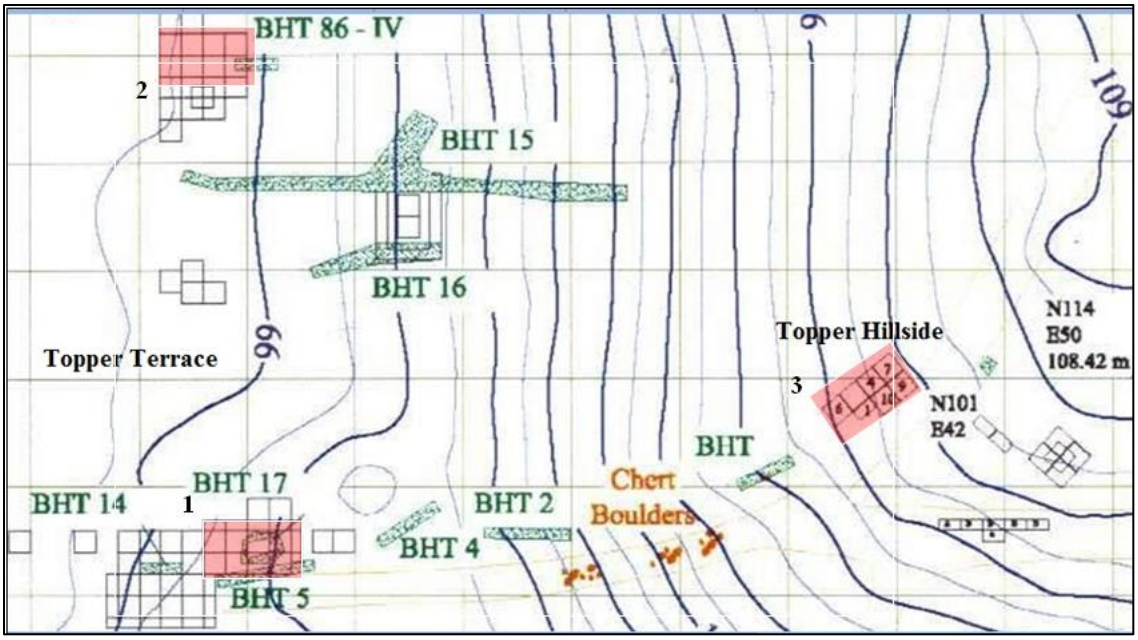


Figure A22-8

Map showing locations of excavations at Topper Site carried out during 2004 Field Season. 1;2002-2003 pre Clovis 5m x9m block, 2; 4m x8m block from N290 E132 to N292 E138, and 3; A series of eight test units were placed on the hillside slope.

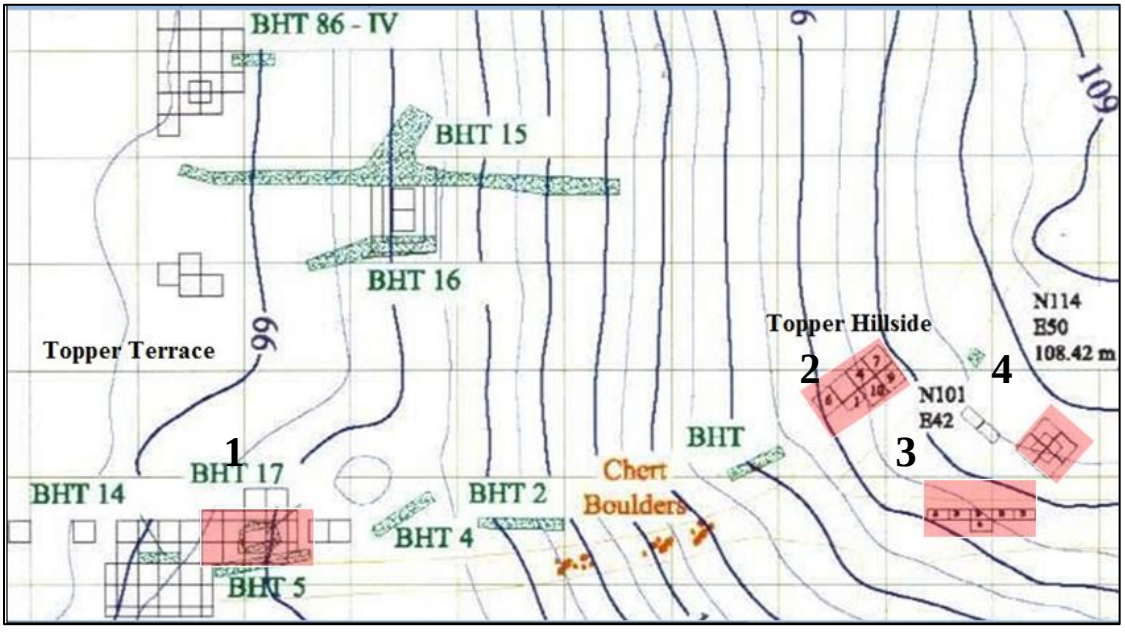


Figure A22-9
Unique grid systems implemented at Topper. 1; original Terrace grid, 2; 2004 TU grid, 3; 2005 Firebreak grid, 4; 2006-2014 Hilltop grid.

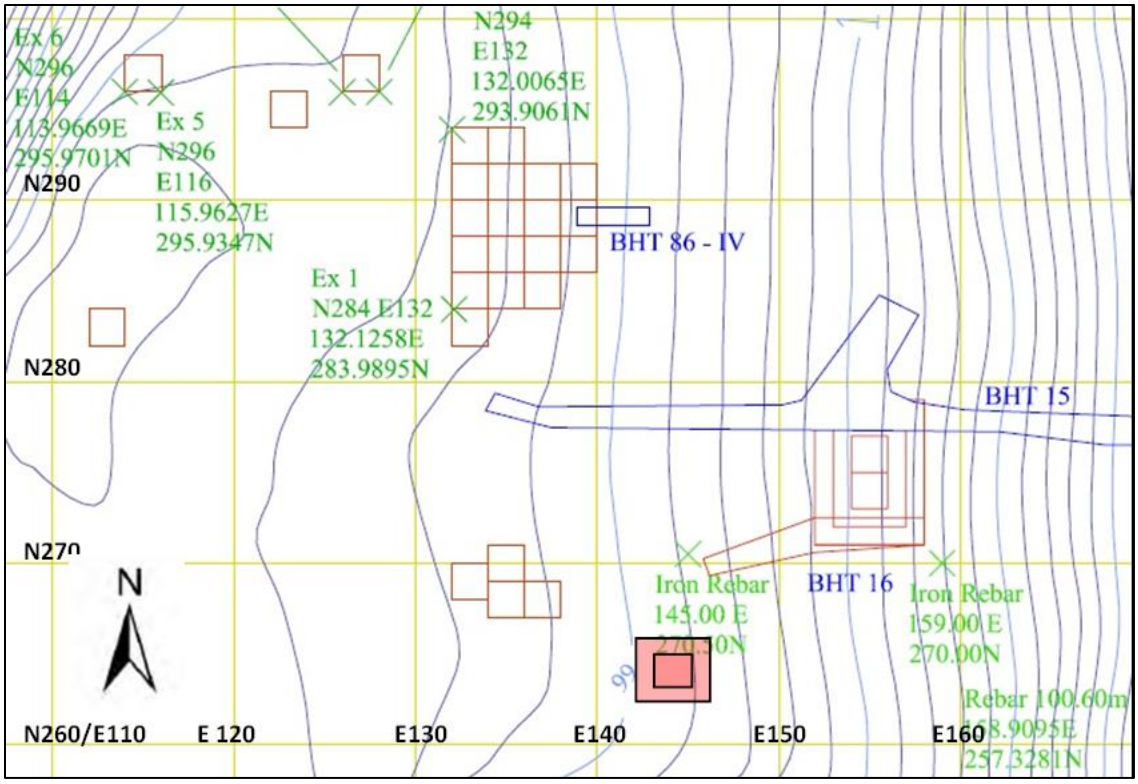


Figure A22-10
Location of 2010-2011 4m x4m block excavation and inset pre Clovis 2m x 2m unit highlighted

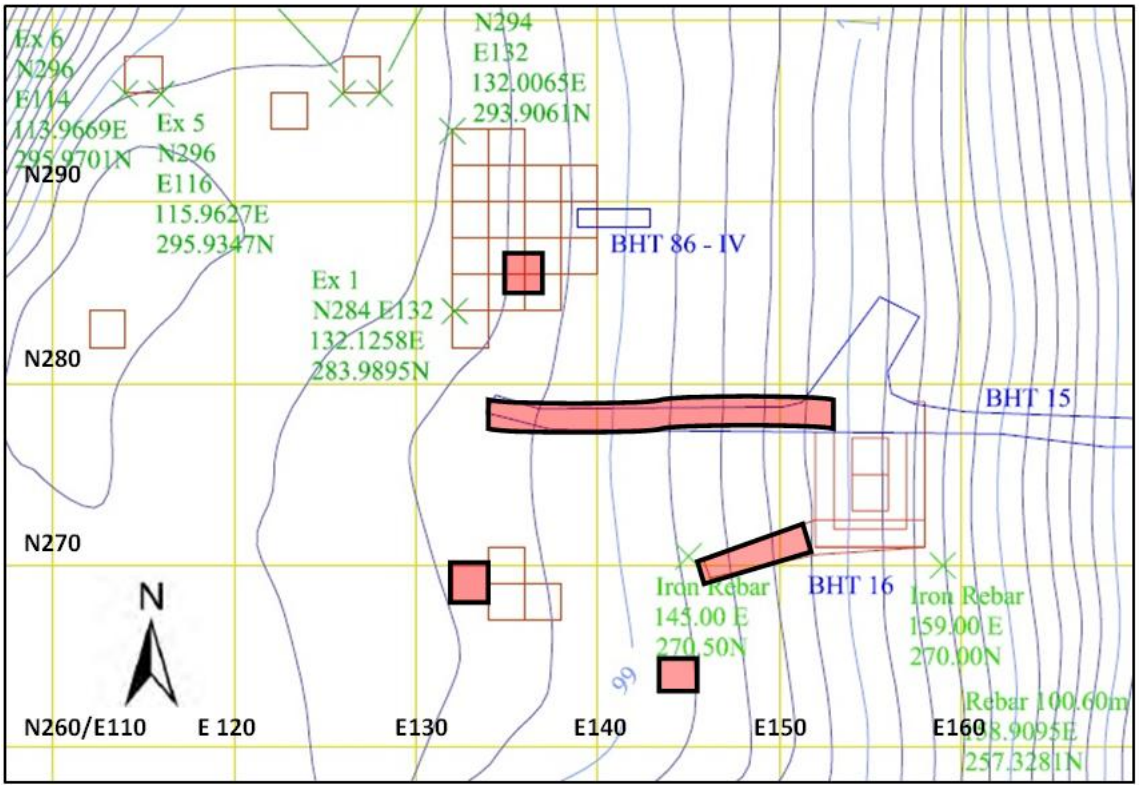


Figure A22-11
Excavations at Topper to the North of the Primary 5m x 9m Pleistocene Terrace block where evidence for pre Clovis chert cobble clusters have not been found.

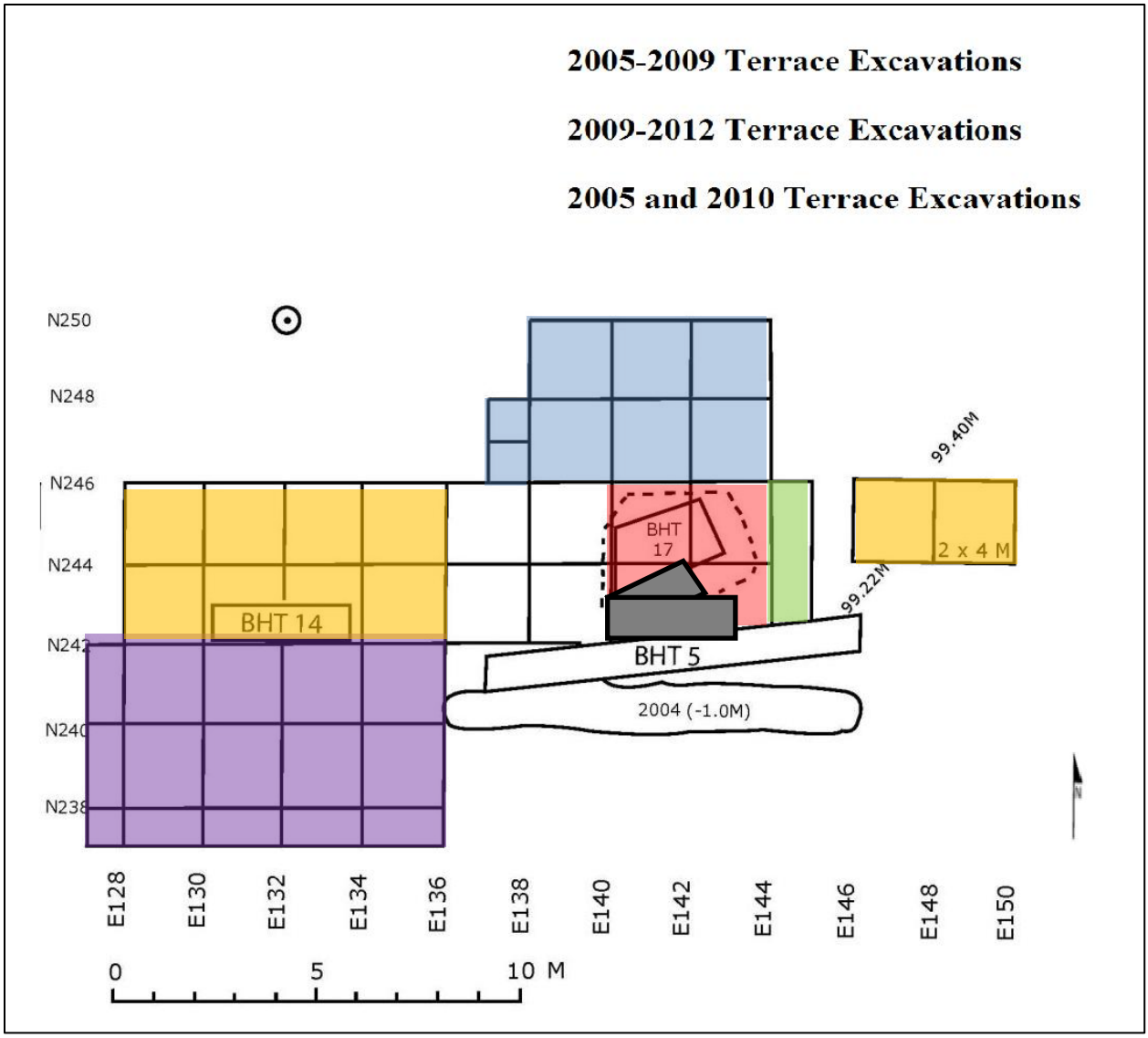


Figure A22-12
Excavations from the primary pre Clovis block at Topper from 2000-2012. Northern Terrace highlighted in blue; Southern Terrace highlighted in red; Western Terrace highlighted in green. All excavations prior to 2004 centered on the Holocene and Pleistocene colluvial and alluvial Sands. All excavations after 2004 centered on the Pleistocene clay Terrace (with the exception of 2005 and 2010 excavations highlighted in green.

APPENDIX 23

PROFILE AND PLAN-VIEW MAPS OF YEARLY EXCAVATIONS AT THE TOPPER SITE (38AL23)

Appendix 23 presents the vertical and horizontal distribution of mapped artifacts (by type and year of recovery) from the Topper Site. The distributions are in presented in plan – view and in profile. Where present, features are indicated by the feature designation letter "F". The Holocene deposits range between elevations 99.50 – 98.10 m. The Clovis deposits range from 98.30 – 97.75 m, the Pleistocene Sands from 97.75 – 97.00 m, and the Pleistocene Terrace from 97.00 – 95.25 m.

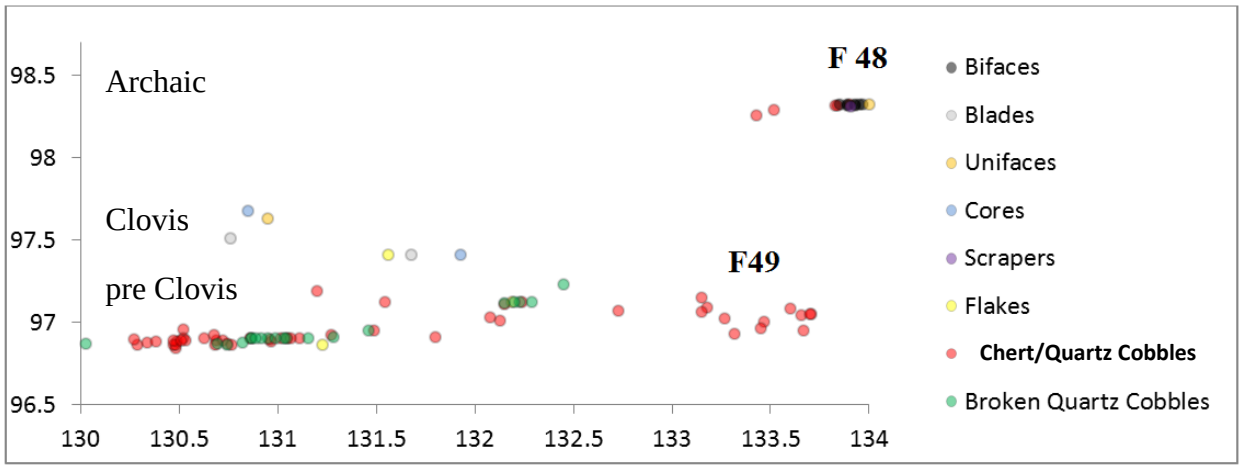


Figure A23-1
Profile map showing the distribution of plotted artifacts from N242 E130-134 in 1999. Feature 48 is an Archaic biface cache. Feature 49 is a possible pre Clovis lithic cluster with associated unifaces and utilized flake. Clovis deposits located between 97.60m and 97.40m.

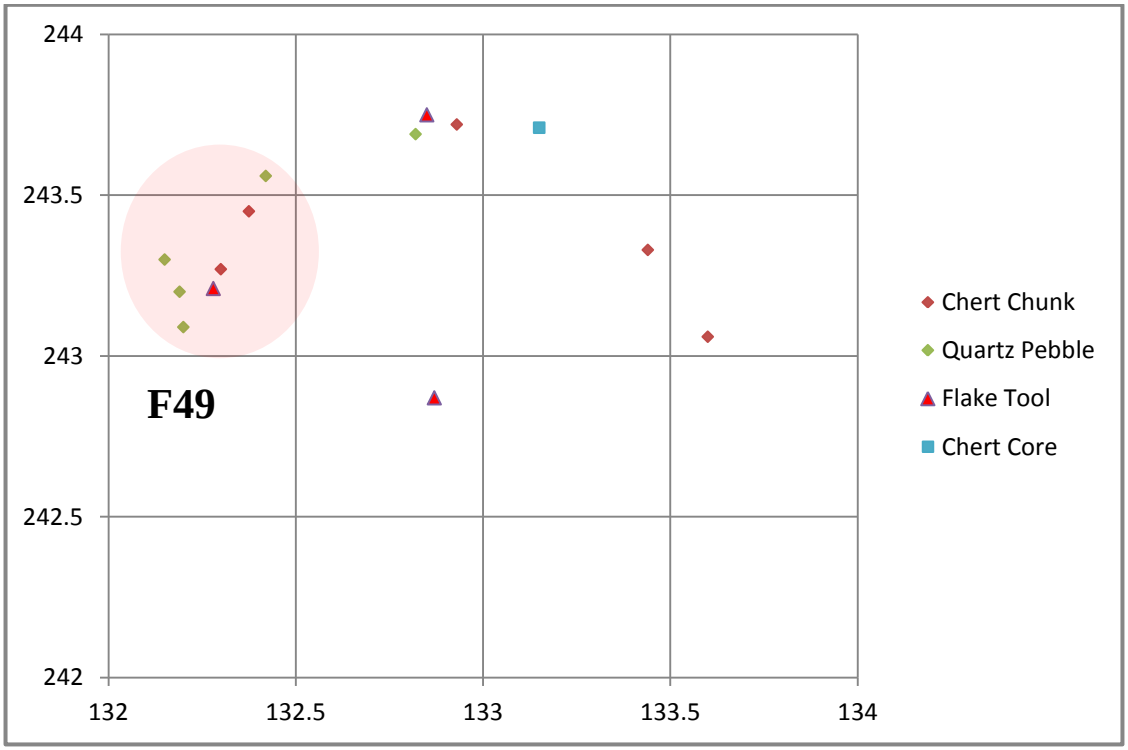


Figure A23-2
Plan View of Feature 49; A possible pre Clovis lithic cluster in NW corner of N242 E132 Level 15 140-150cmbs (97.15097.05m) (Area Highlighted F49).

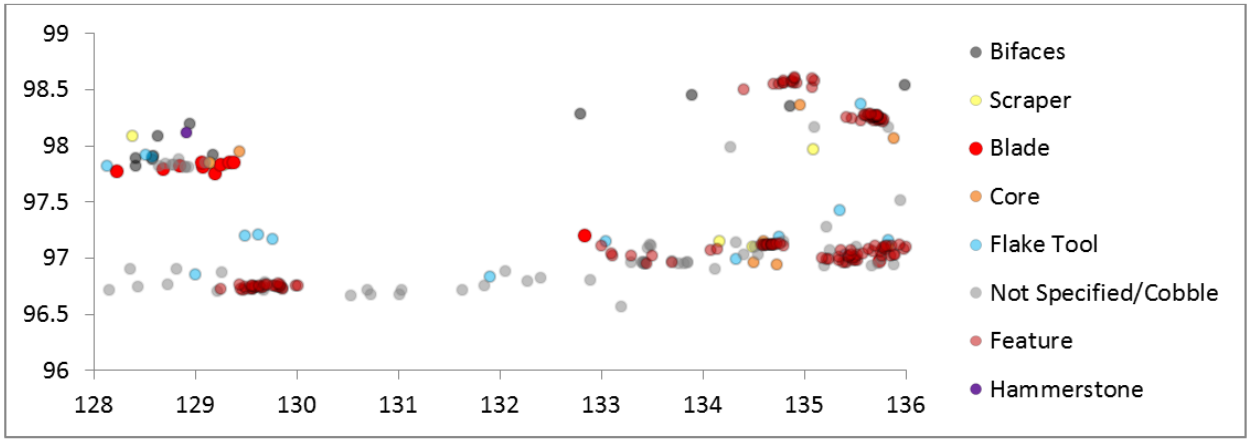


Figure A23-3
Profile map showing the distribution of plotted artifacts from N242-N244 E128-136 in 2000. The gap between E130-132 (Highlighted) was excavated in 1999 and thus is devoid of artifacts from the 2000 field season. Clovis deposits located between 97.75m and 97.50m. Datum elevation 98.55m.

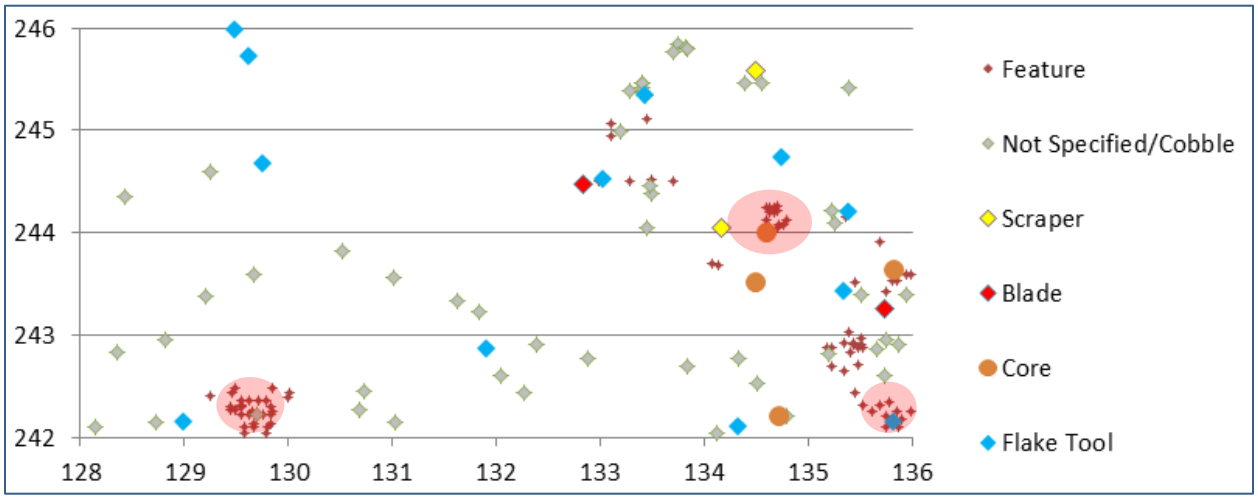


Figure A23-4
Planview map showing the distribution of items mapped from the pre Clovis deposits from units N242-N244 E128-136 (4m x 8m block) in 2000. Highlighted areas indicate Features.

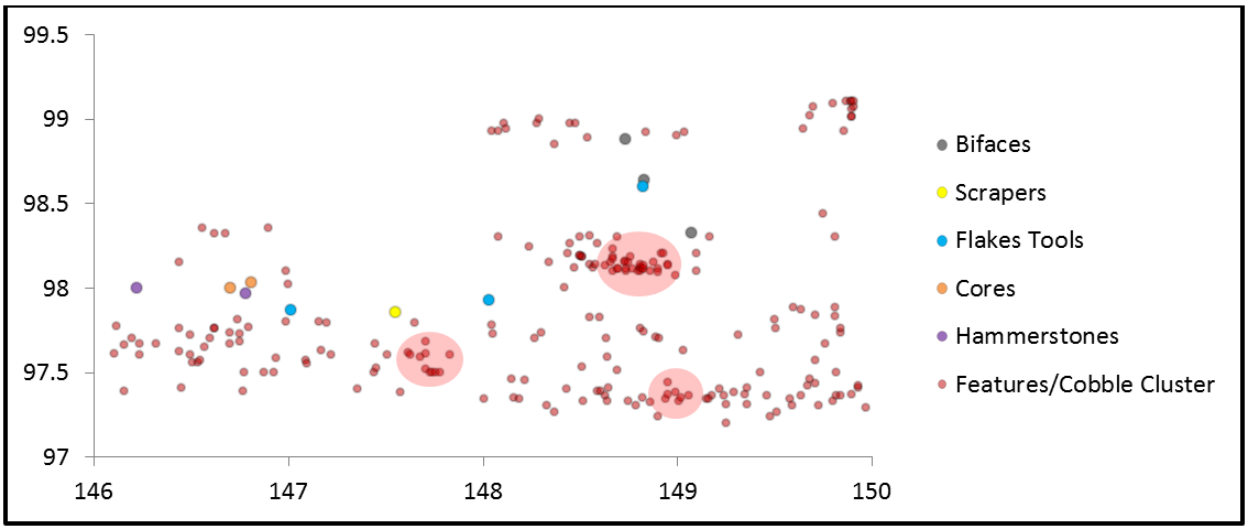


Figure A23-5
Profile map showing the distribution of plotted artifacts from the 2000 excavations of units N244-N246 E144-148 in 2000.

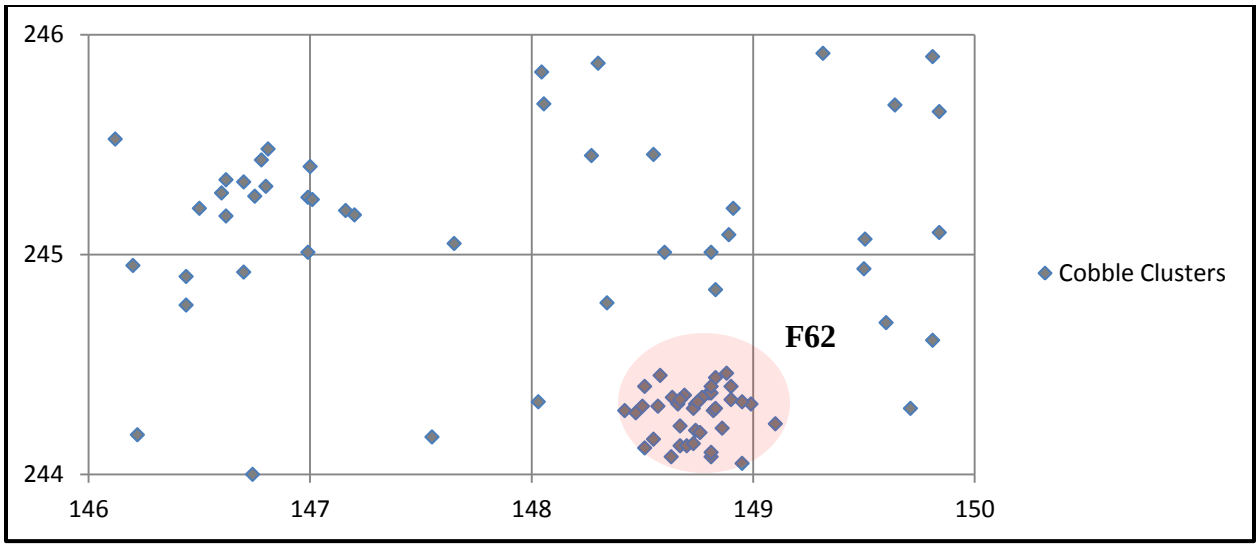


Figure A23-6
Planview map showing the distribution of Cobble clusters and Features from Clovis deposits in units N244-N246 E146-150 in 2000. (98.20-97.70m). Feature 62 from 98.20-98.10. Datum at 99.40m

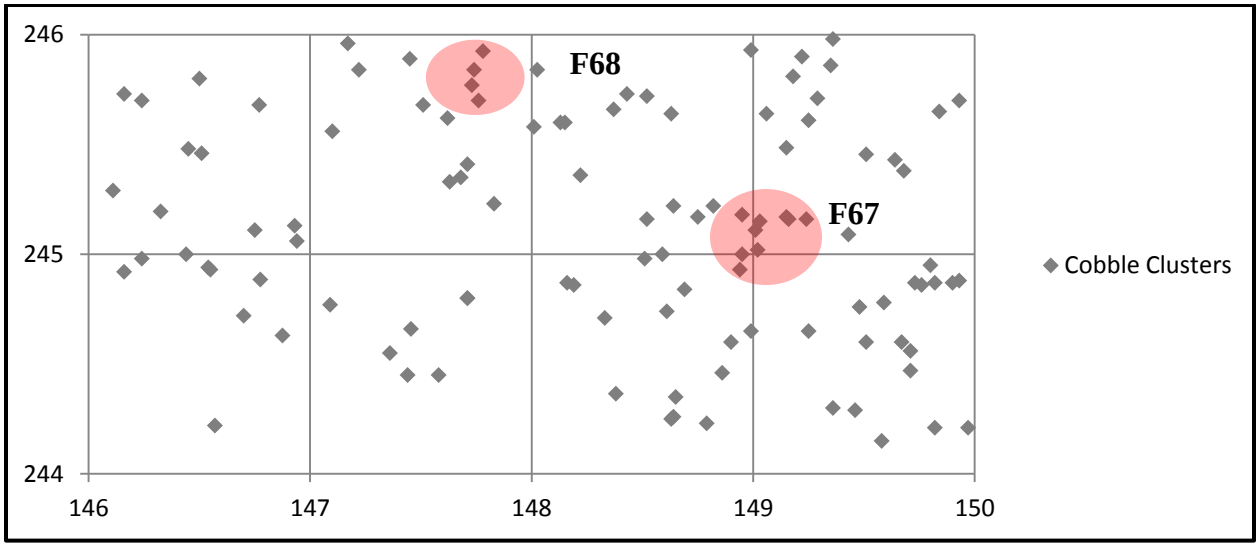


Figure A23-7
Planview map showing the distribution of Cobble clusters and Features from pre Clovis deposits in units N244-N246 E146-150 in 2000 (97.70m – 97.20m).

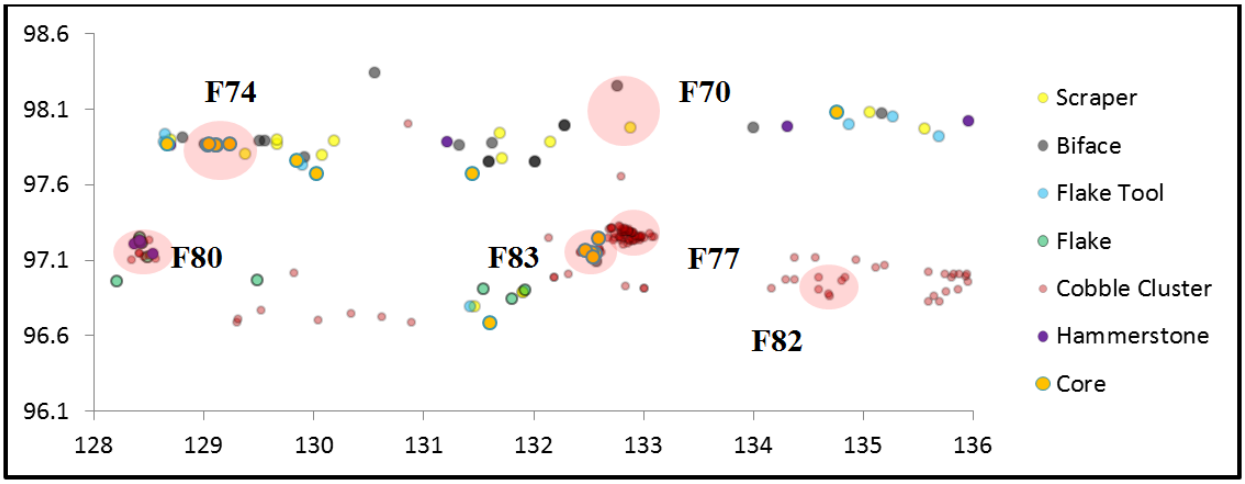


Figure A23-8

Profile map showing the distribution of plotted artifacts from 2001 5x10 block excavation (N236-N240 E128-136) in 2001. Clovis deposits from 98.00-97.65. pre Clovis deposits below 97.25m. Highlighted areas are Features.

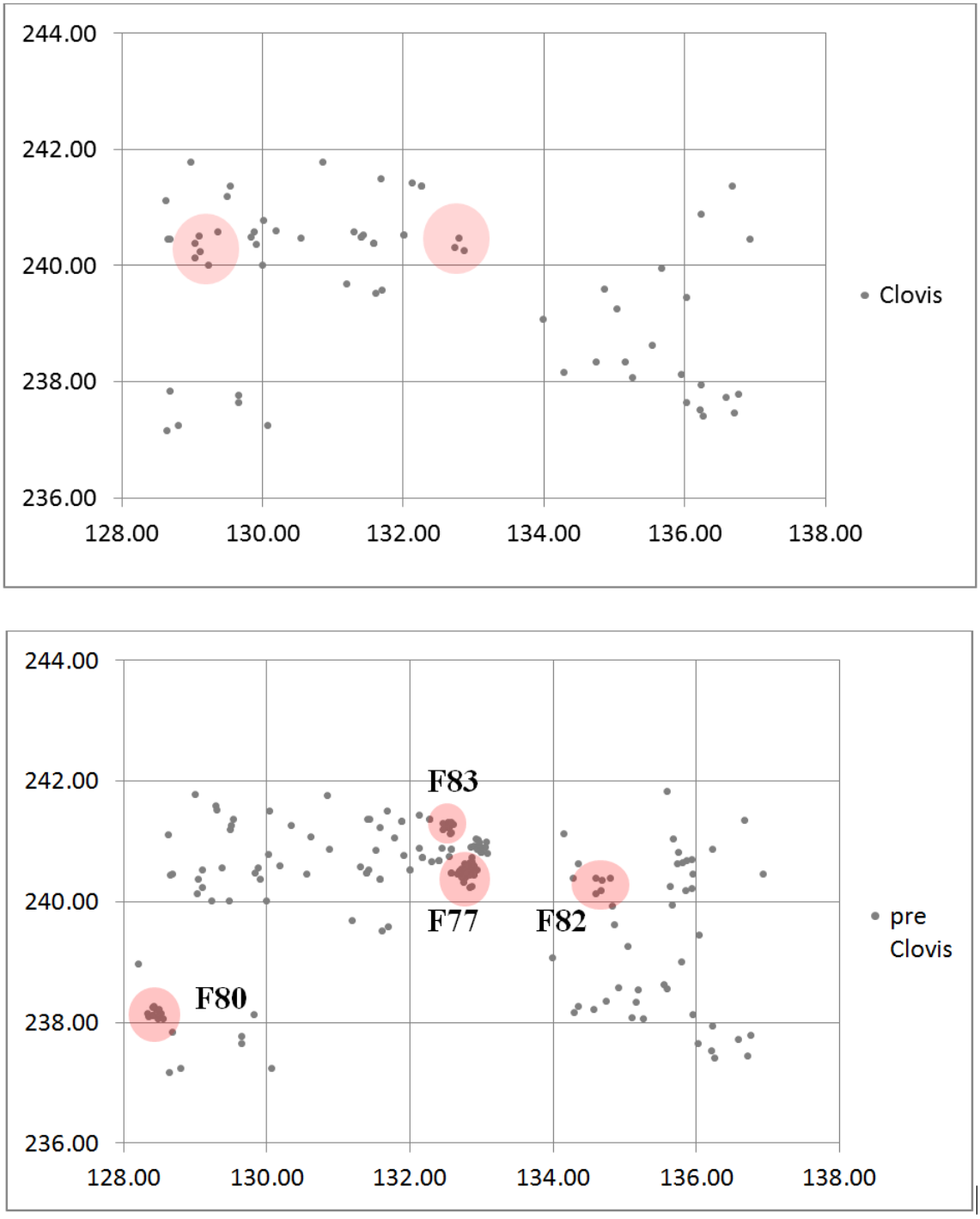


Figure A23-9
Plan view of mapped items from Archaic and Clovis deposits from 2001 5m x10m excavation block (Above) and pre Clovis deposits (Below). Features highlighted and numbered.

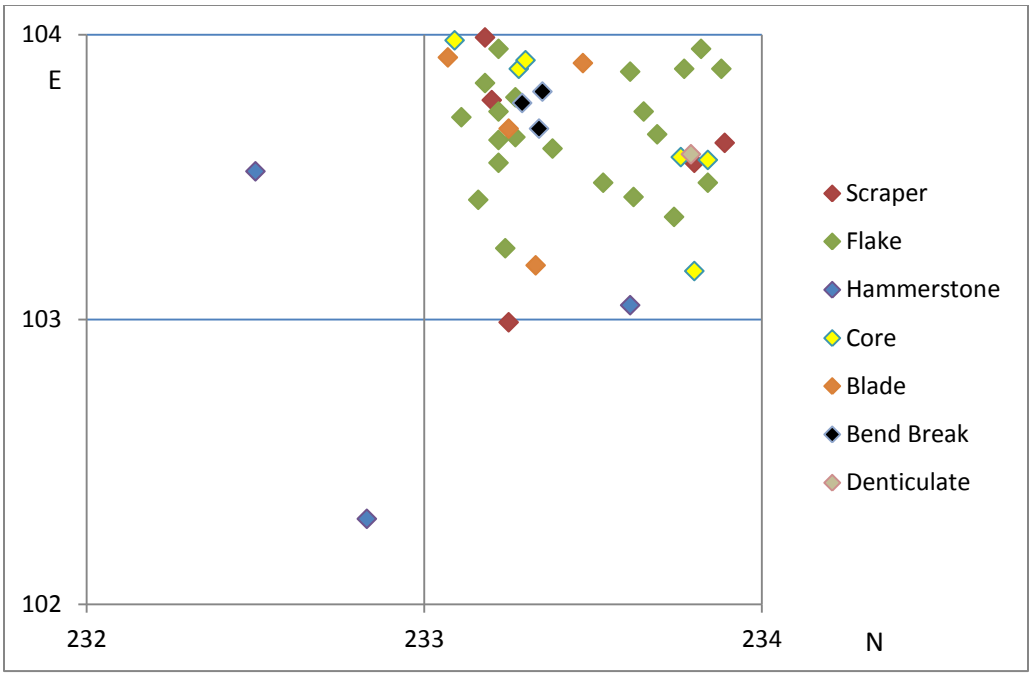


Figure A23-10
Plainview map showing spatial distribution of Early Archaic Feature 79 from Unit N232 E102 in the 2001 4m x 6m block excavation. Feature ranges in depth from 80-90cmbs.

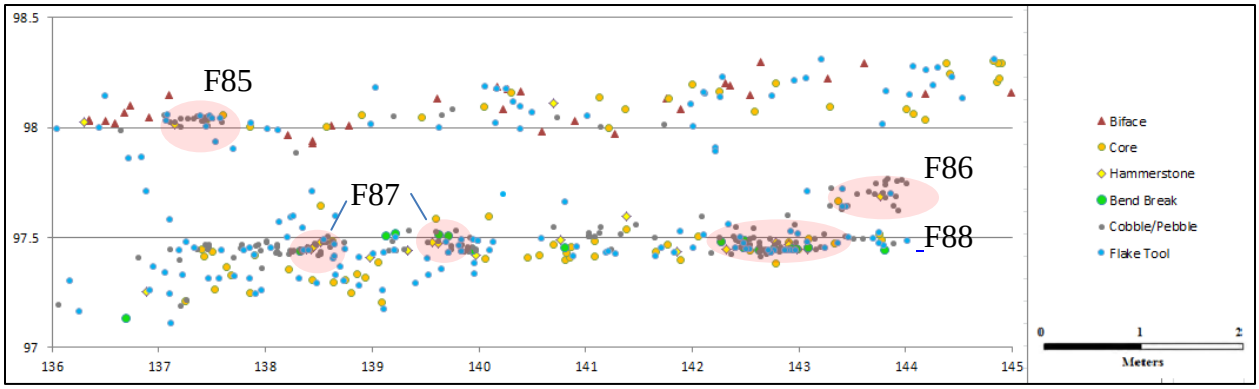


Figure A23-11
Profile map showing the distribution of plotted artifacts from 2002 5m x 9m block excavation (N242-N244 E136-146) in 2002. Clovis deposits from 98.40-97.85m. pre Clovis deposits below 97.75m. Features Highlighted.

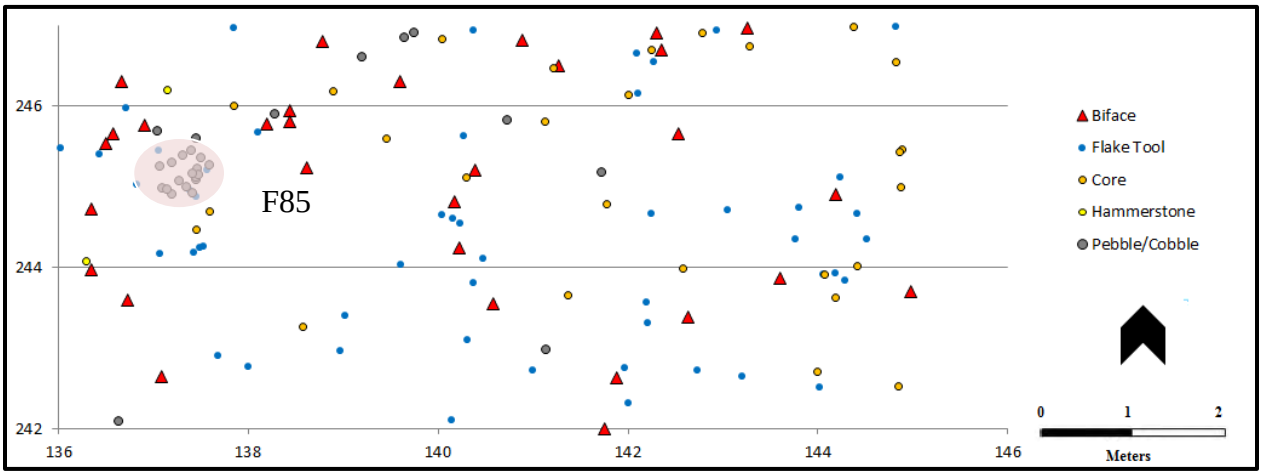


Figure A23-12
Planview of mapped items from Archaic and Clovis deposits from 2002 5m x 9m excavation block. Feature 85 highlighted and numbered.

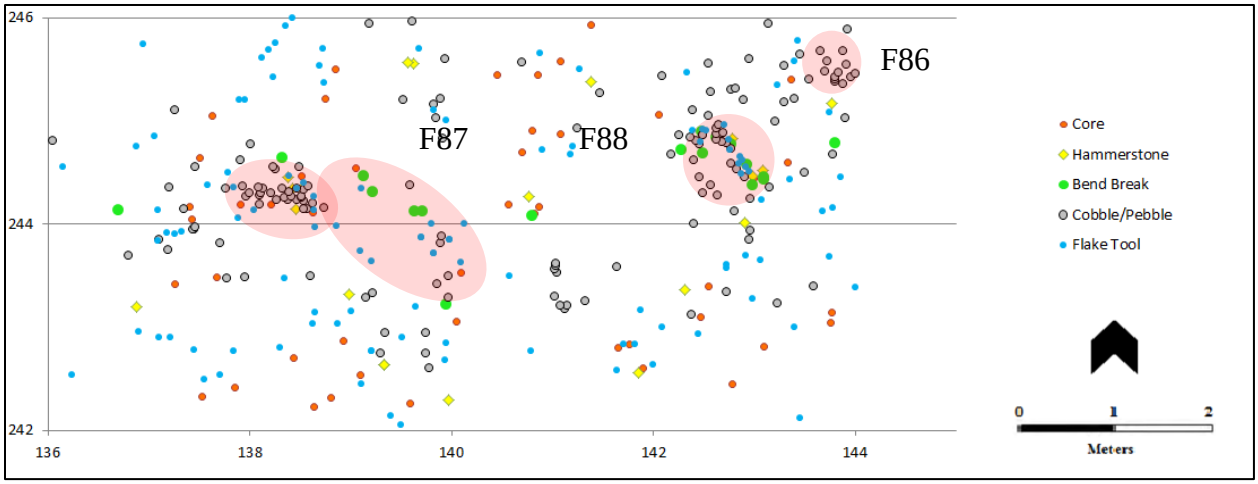


Figure A23-13A
Planview of mapped items from pre Clovis deposits from 2002 5m x9m excavation block.
Feature 86-88 highlighted and numbered.

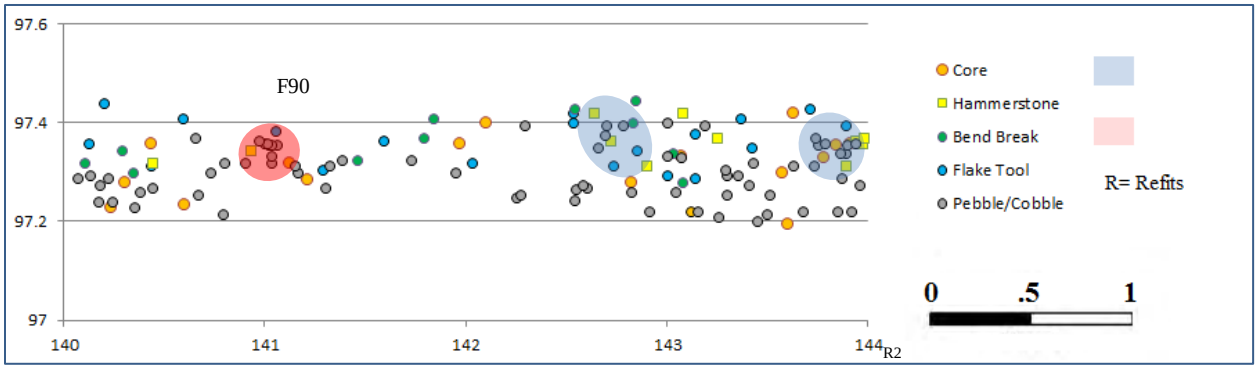


Figure A23-13B
Profile map showing the distribution of plotted artifacts from 2003 5m x 9m block excavation (N242-N244 E140-144). Pre Clovis features (red) and non-feature designated lithic lusters (blue) highlighted.

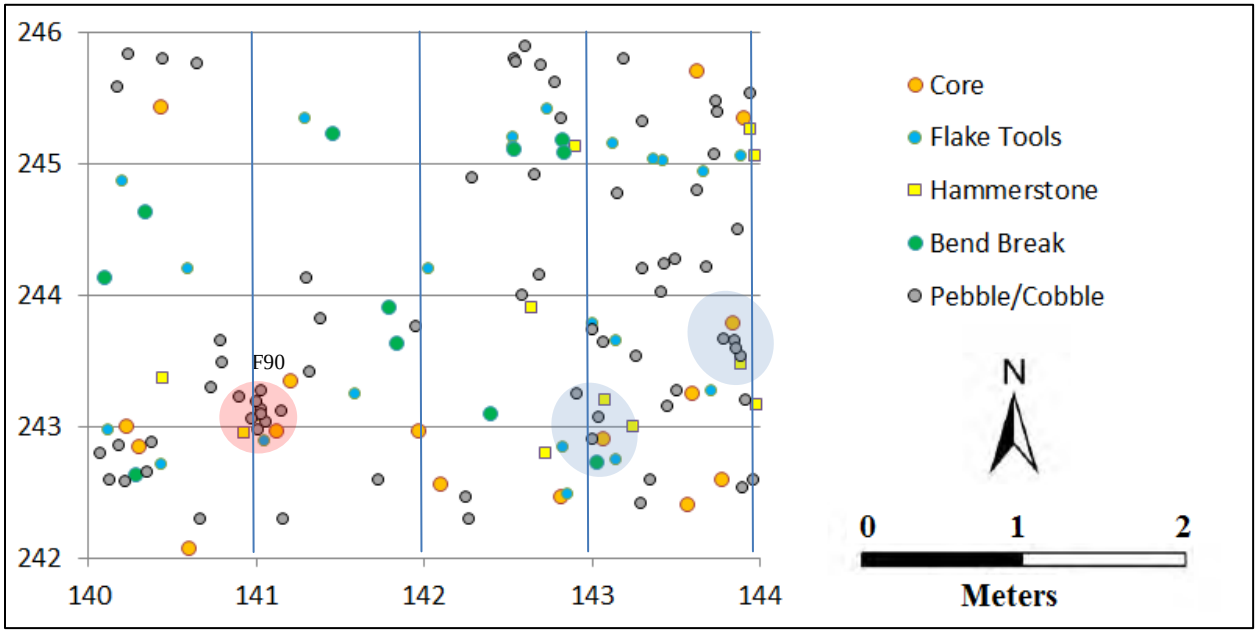


Figure A23-14
Planview of mapped items from pre Clovis deposits from 2003 5m x 9m excavation block. Feature 90 Highlighted in red. Other lithic clusters not provided feature numbers highlighted in blue.

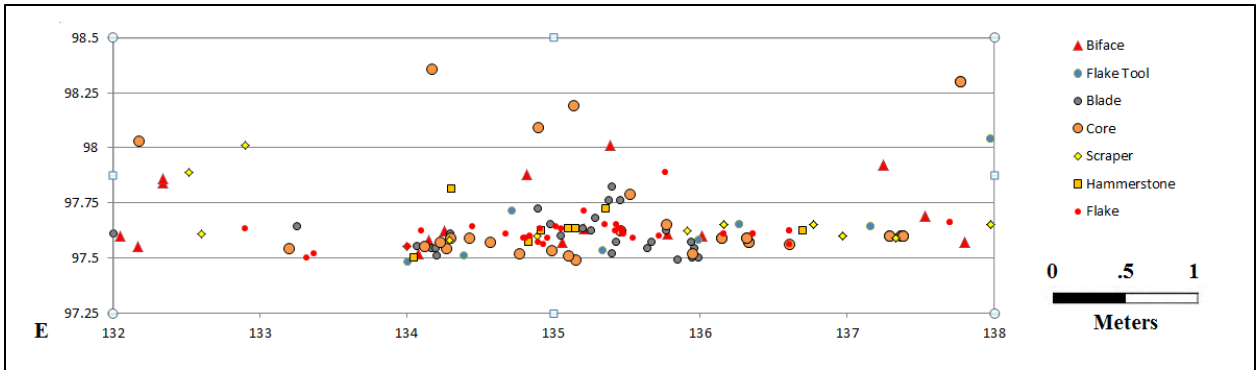


Figure A23-15
Profile map showing distribution of Woodland, Archaic and Clovis mapped artifacts by type from the 2004 4m x 6m block excavation. Units N290 E132 to N294 E136. No Features assigned from this excavation.

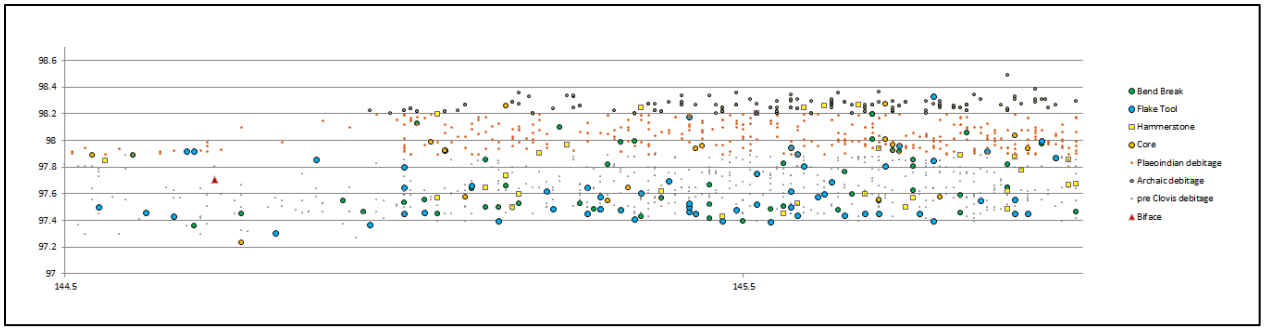
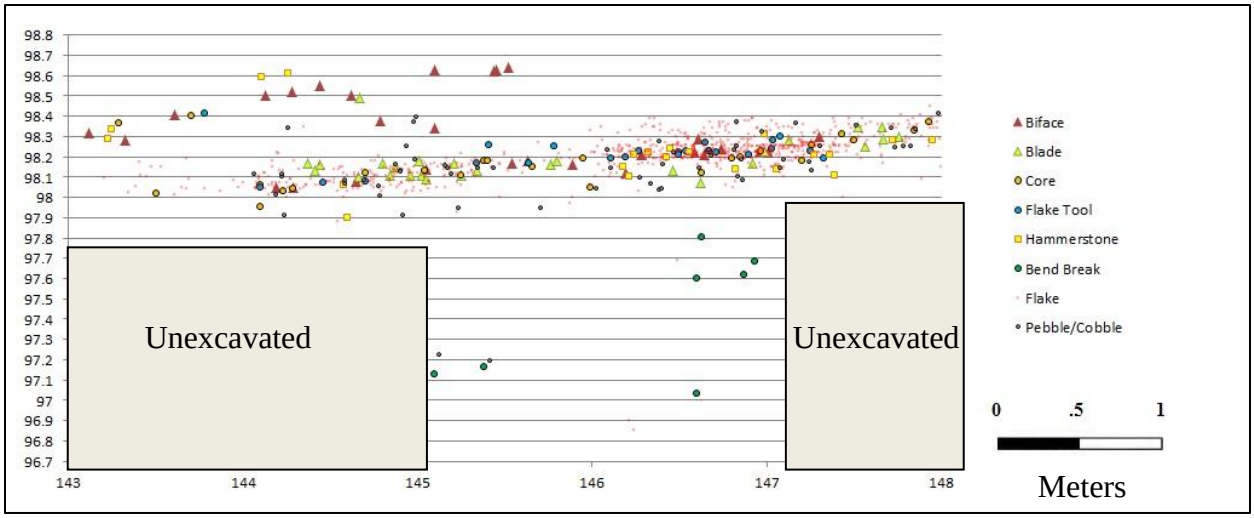
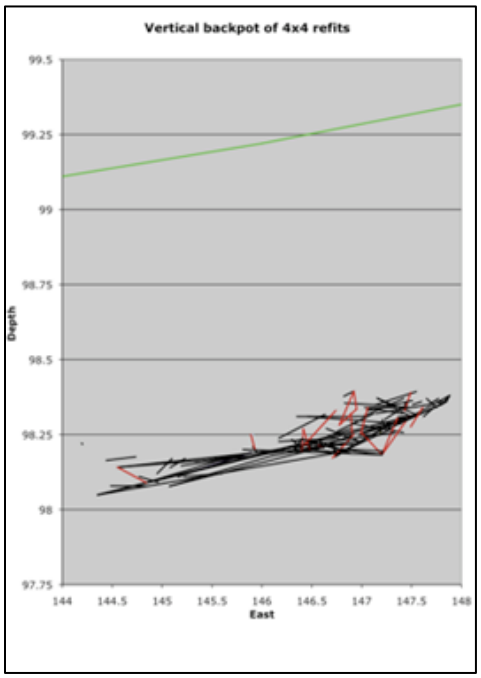


Figure A23-16
Profile map showing the distribution of mapped artifacts from 2011 Eastern Terrace 1m x 2m block excavation N244 E142-144-146. No artifacts were mapped west of E44.5 gridline. Paleoindian deposits consist of flakes, flake tools, hammerstones.





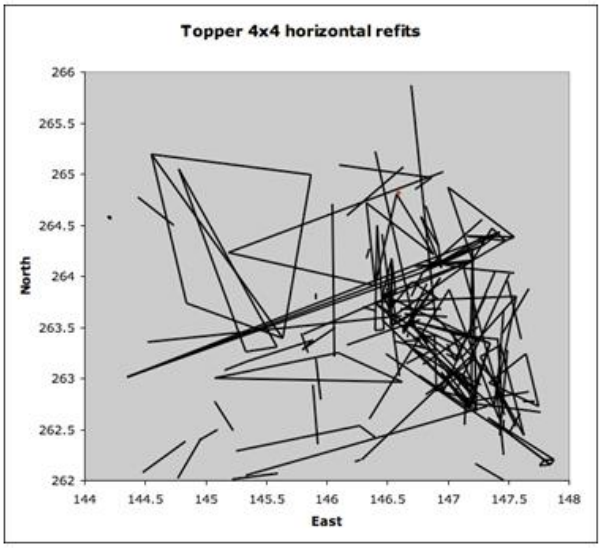


Figure A23-17
Top; Profile distribution of mapped artifacts from N262-N266 E144 E148 4x4m block excavation. Early Archaic and Clovis deposits between 98.30 and 98.00m. Very few bend breaks recovered from pre Clovis deposits (below 97.80m). Below; results of refit study from materials recovered from 2010-2011 4m x 4m excavation. (Refit images courtesy Derek Anderson 2011).

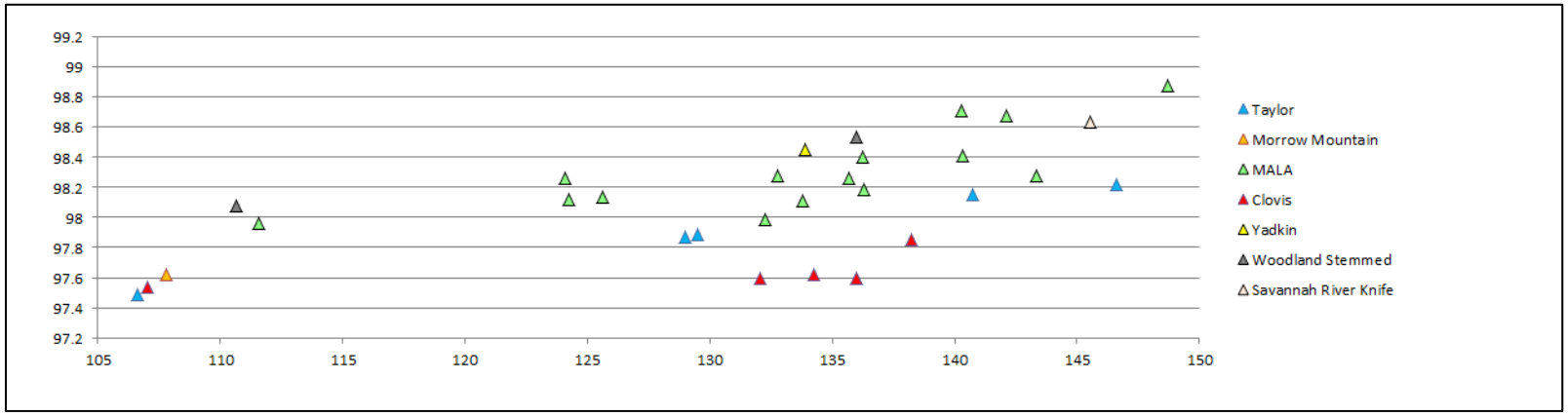


Figure A23-18

Spatial distribution of diagnostic projectile points and preforms from Holocene and Clovis Terrace at Topper Site (38AL23).

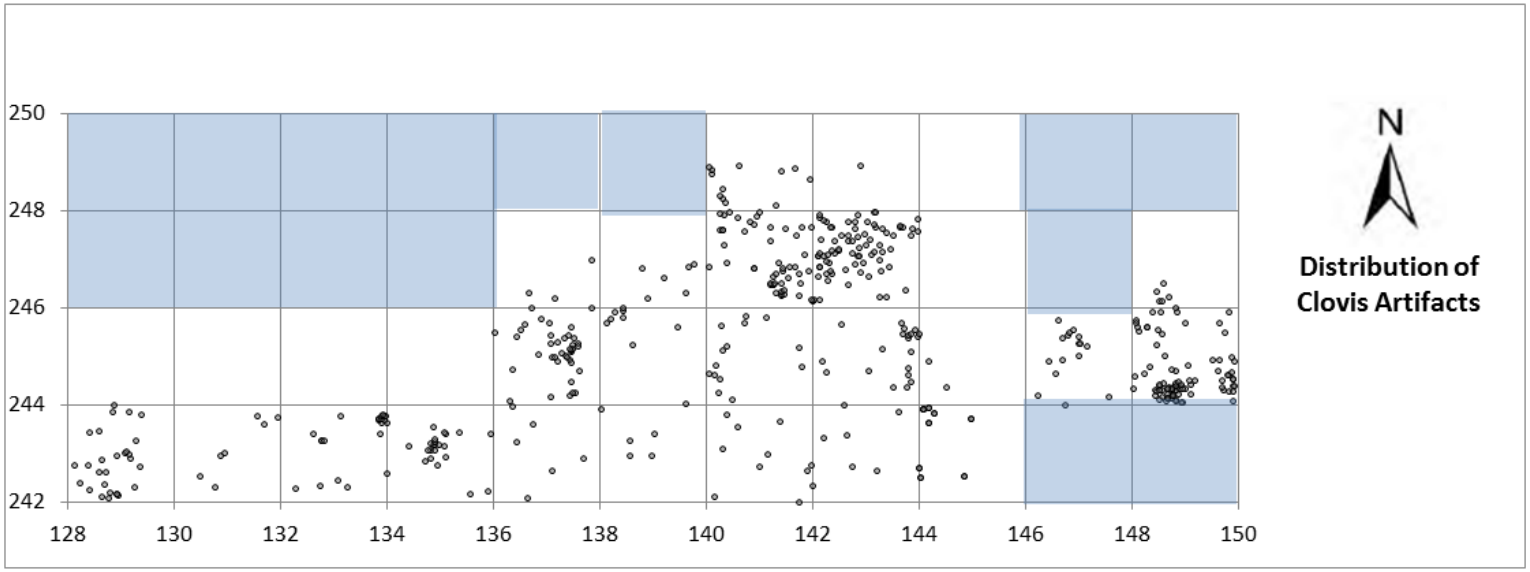


Figure A23-19

Planview map showing the distribution of Clovis Artifacts. Areas shaded in blue not examined. Areas shaded in blue not examined.

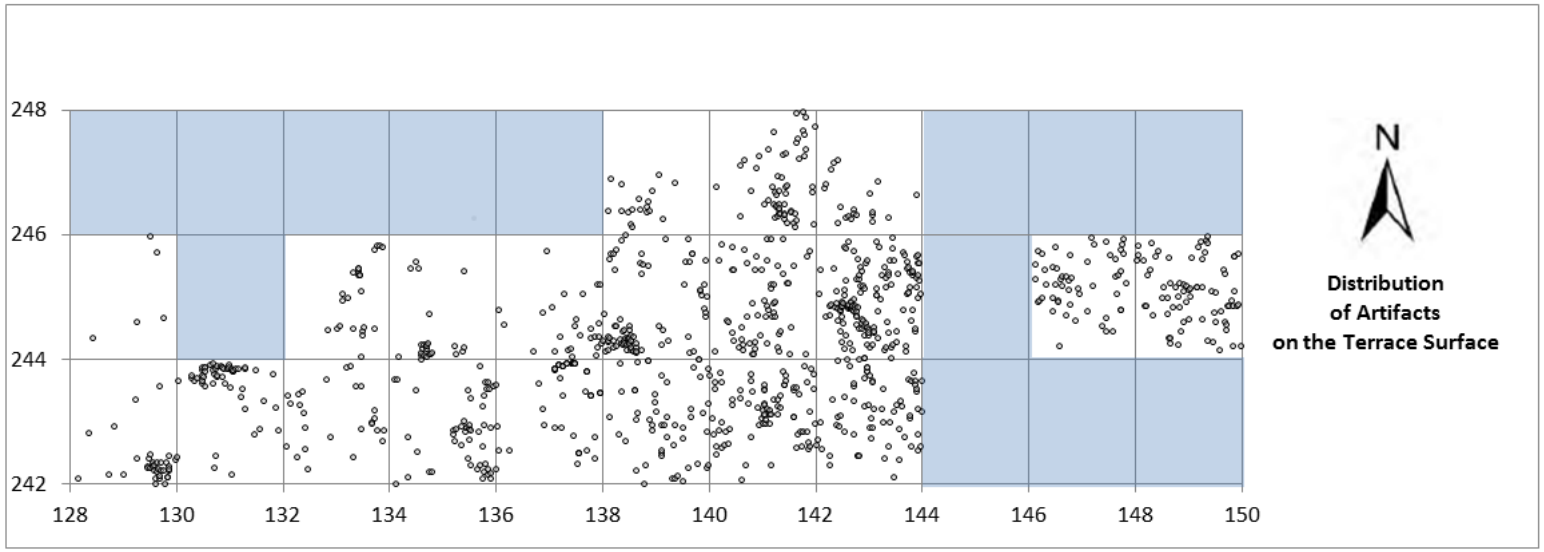


Figure A23-20
Planview map showing the distribution of mapped items on the terrace surface at the Topper Site (38AL23). Areas shaded in blue not examined

APPENDIX 24

ARTIFACT IMAGES AND PHOTOGRAPHS FROM THE TOPPER SITE (38AL23)

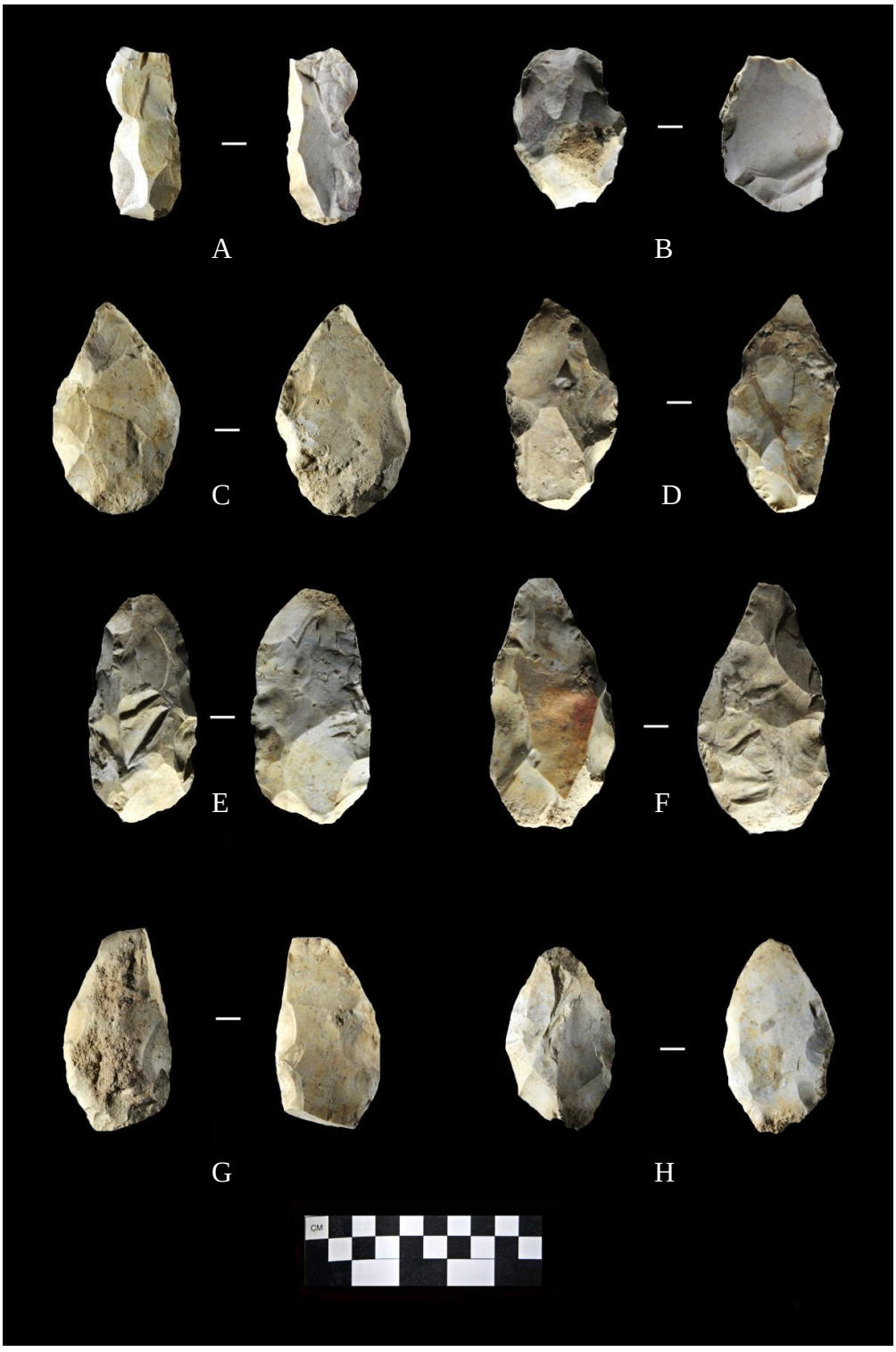


Figure A24-1
Archaic Biface cache recovered from unit N242 E132 in 1999 Level (98.35-98.25m) labeled as Feature 48. A; Scraper, B; Uniface, C-H Bifaces

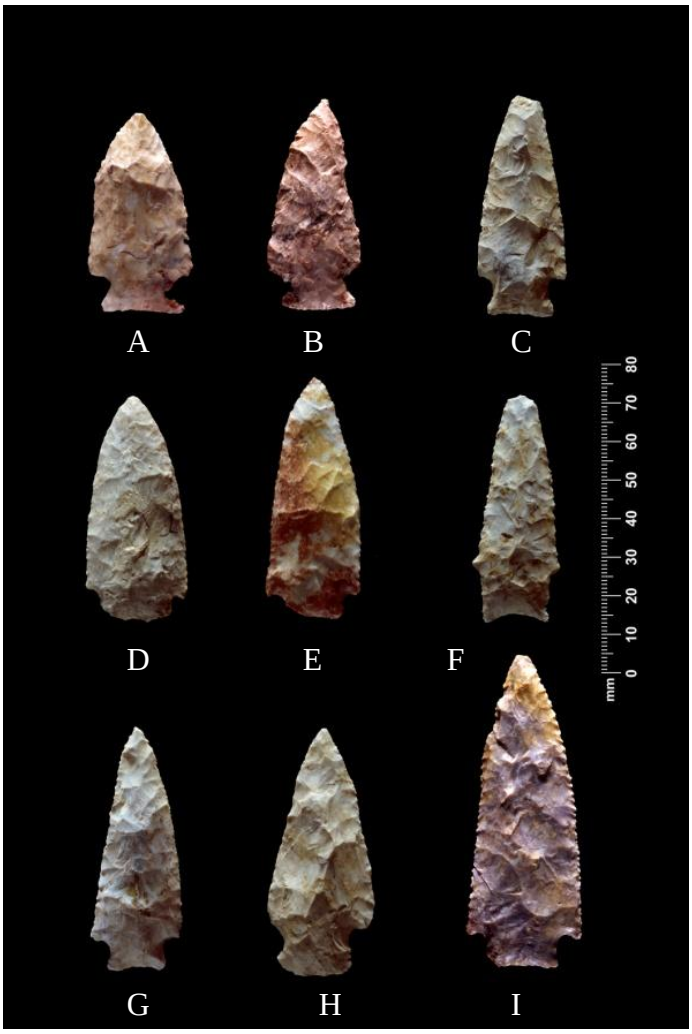


Figure A24-2

Middle to Late (MALA) Archaic points recovered from the Topper Site.(Image courtesy of Albert C. Goodyear).

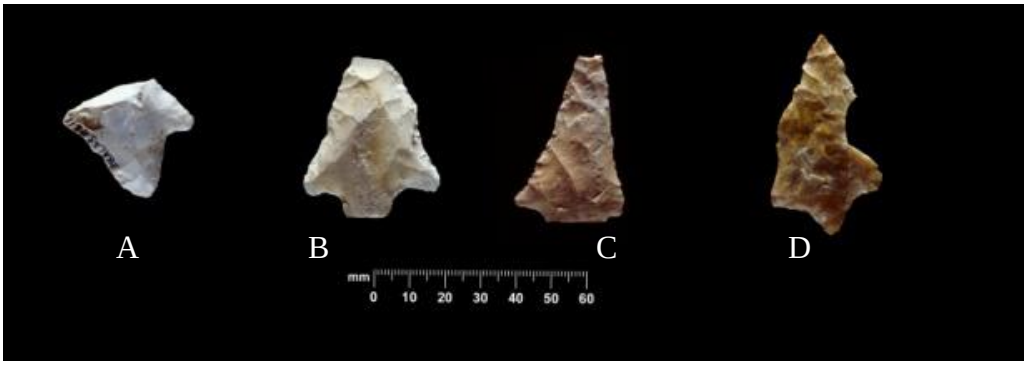


Figure A24-3

Archaic Morrow Mountain points recovered from the Topper Site.(Image courtesy of Albert C. Goodyear).

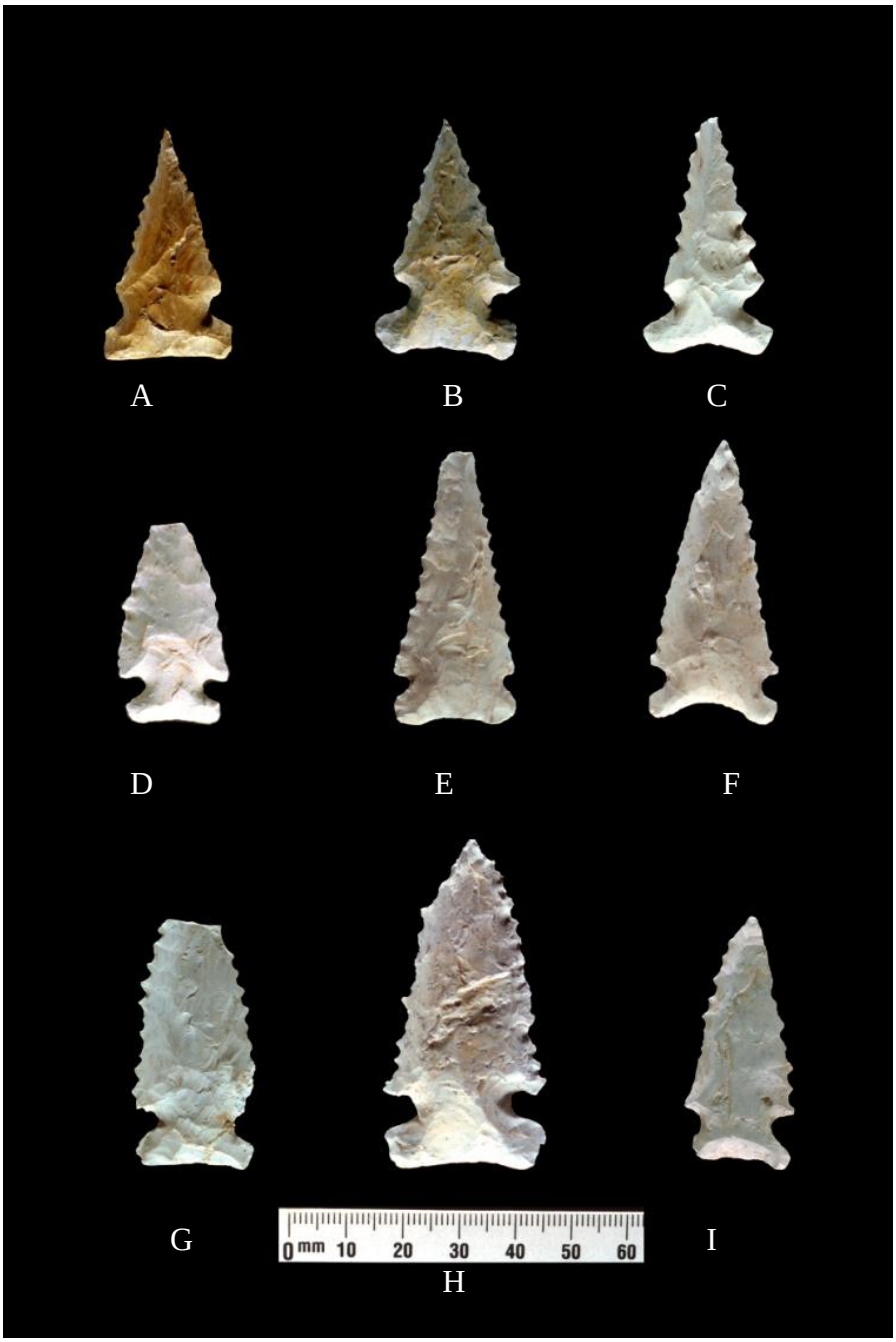


Figure A24-4
Archaic period Taylor points recovered from the Topper Site. (Image courtesy of Albert C. Goodyear).

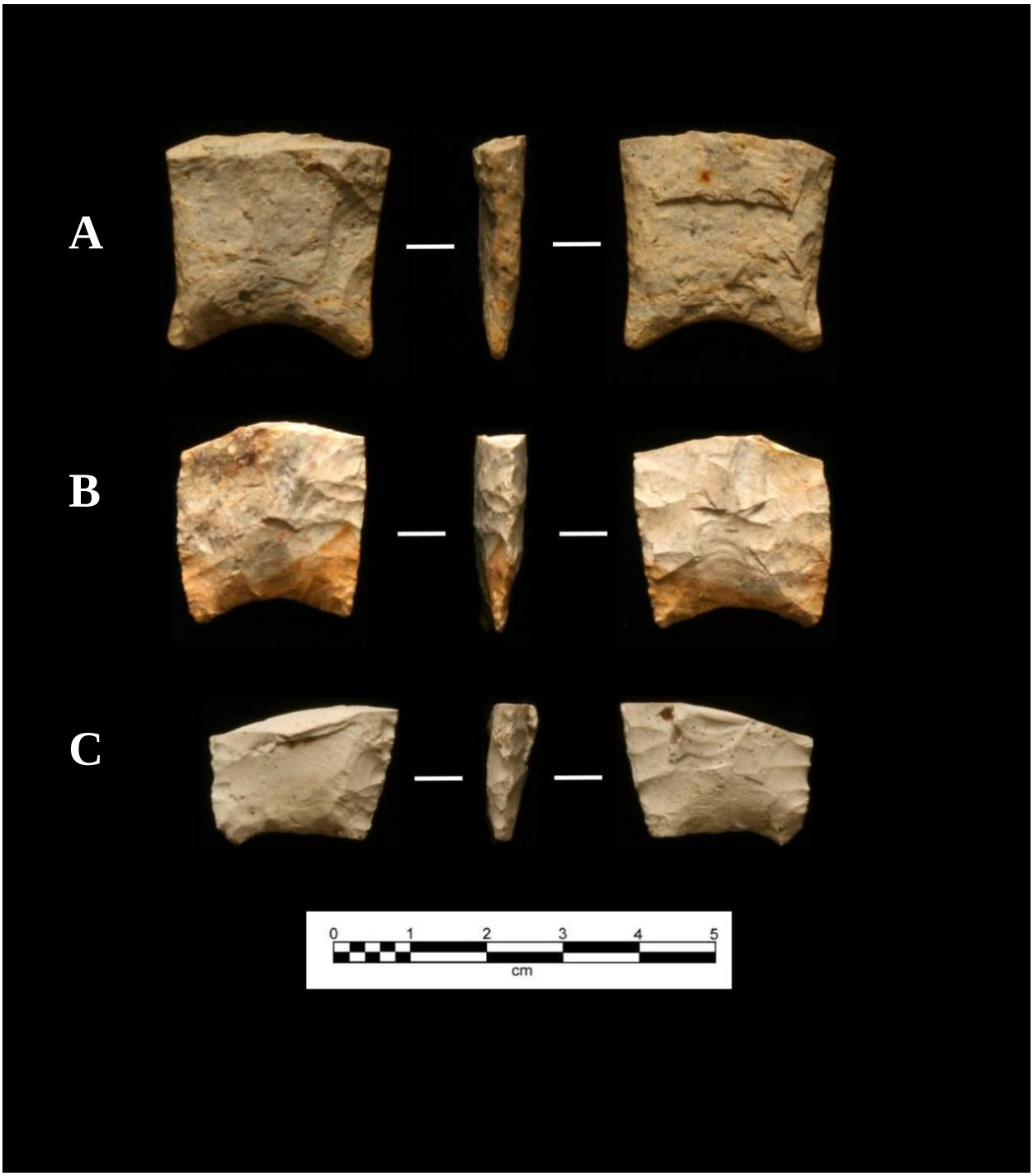


Figure A24-5
Finished but broken Clovis Points recovered from the Topper Site (38AL23). N293.1 E134.26 97.62m; N291.39 E136.01 97.60m; N291.66 E132.05 97.6m; N286.8 E138.25 97.85m; N239.89 E107.03 97.54m. Image adapted from Smallwood (2010).

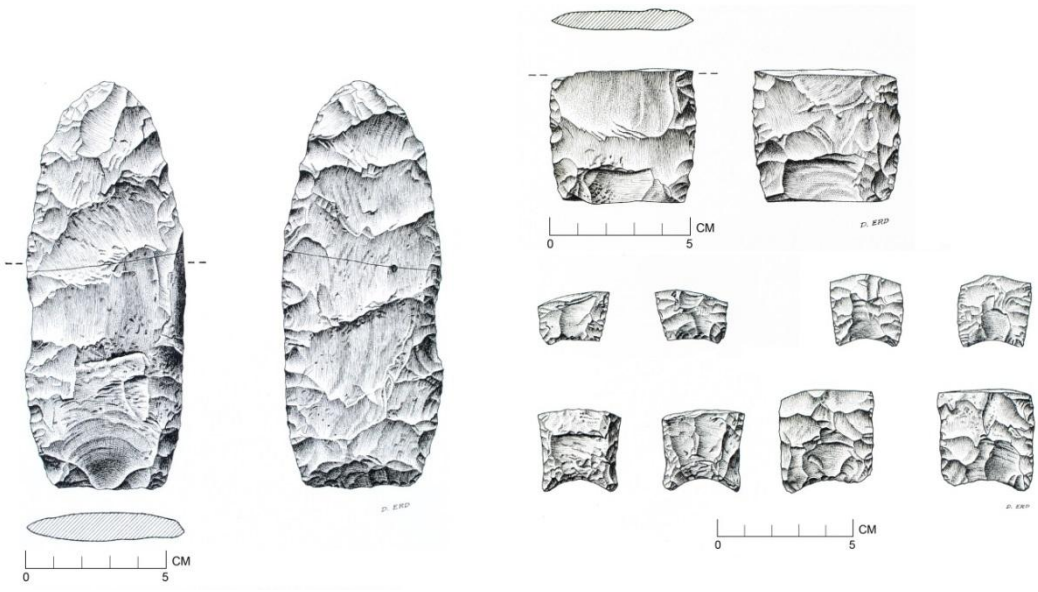


Figure A24-6A
Clovis Bifaces and preforms from the Topper Site (28AL23). (Drawings courtesy of Darby Erd).

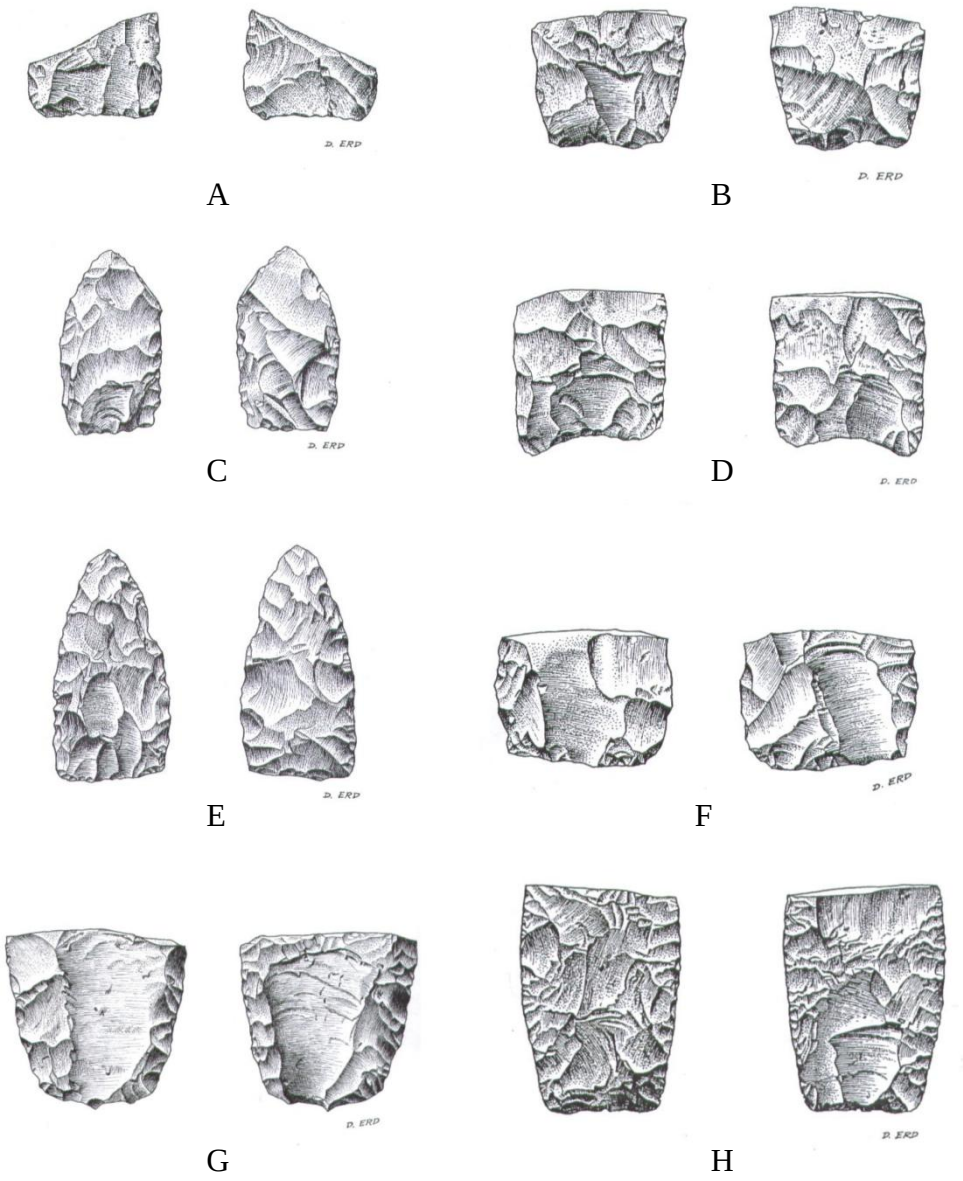


Figure A24-6B
Clovis Bifaces and preforms from the Topper Site (28AL23). (Drawings courtesy of Darby Erd).

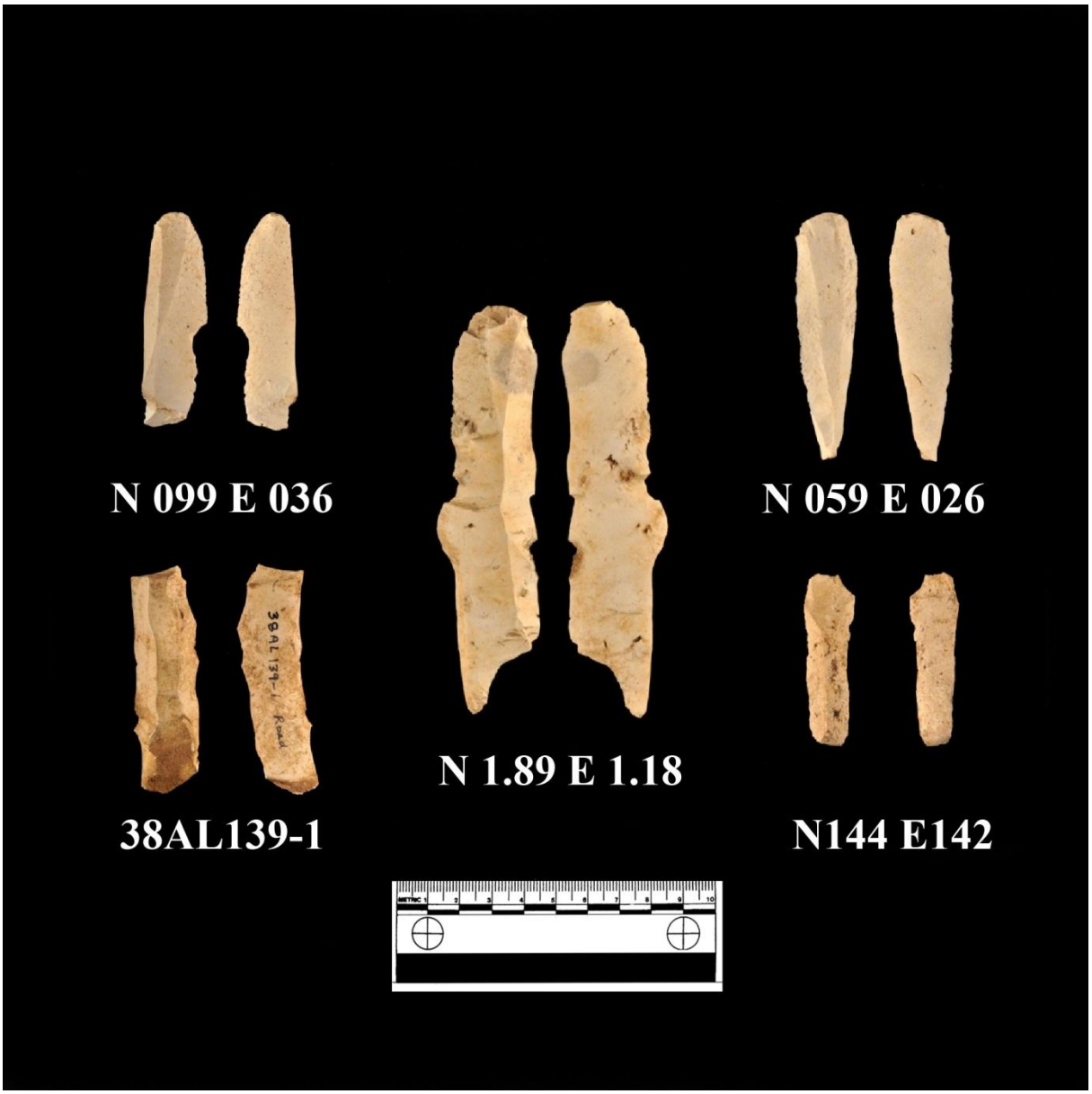


Figure A24-6-7
Clovis Blades recovered from the Topper Site. All examples were recovered from the Hillside and Hilltop excavations. Top and middle specimens from 2004 TU grid system. Specimen from lower right and lower left Hilltop and Hillside grid system.



Figure A24-6-8
Clovis Blades recovered from the Topper Site. (Photo courtesy of Albert Goodyear).

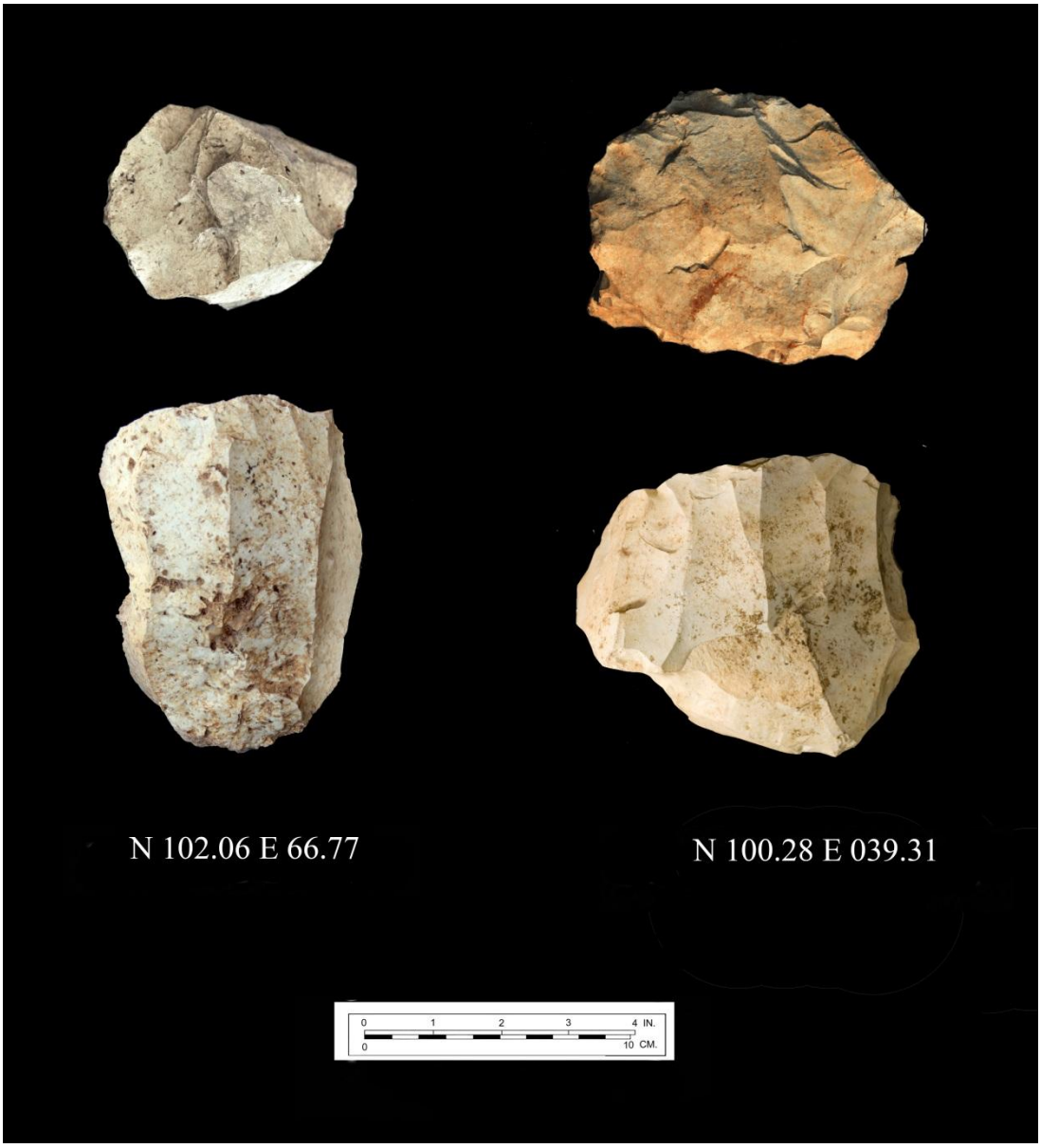


Figure A24-9
Clovis Cores recovered from the Topper Site (38AL23). Examples from Topper Hillside and Hilltop grid system.

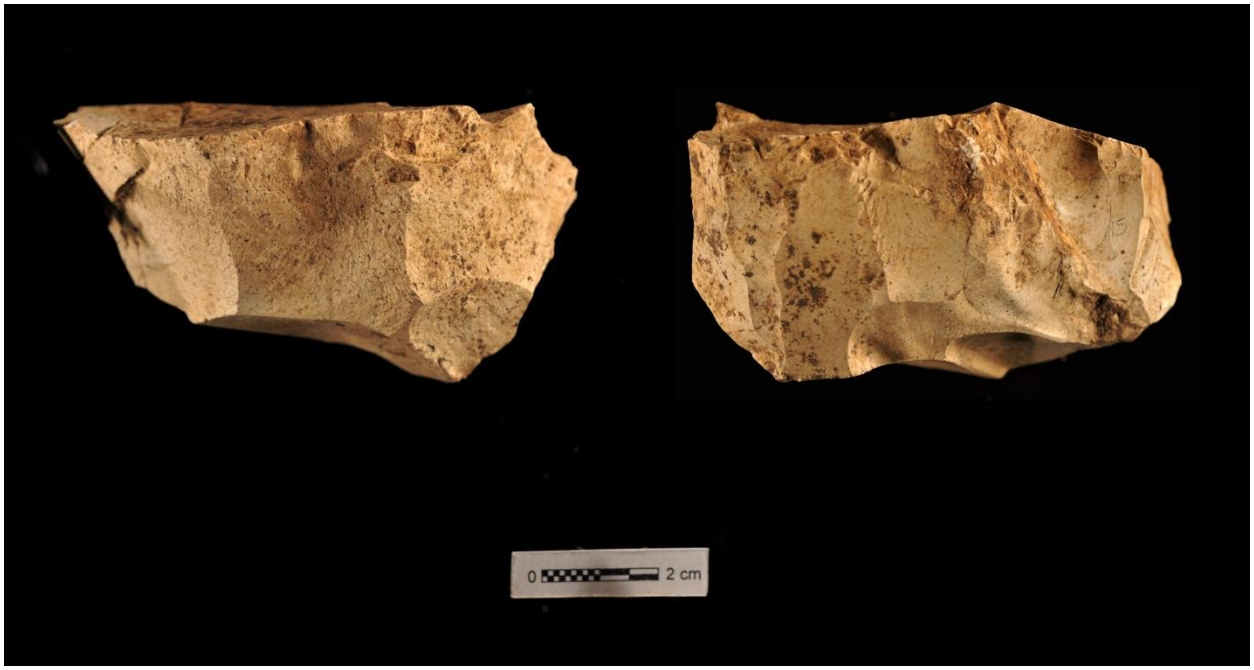


Figure A24-10
Clovis blade core from the Topper Site (38AL23)

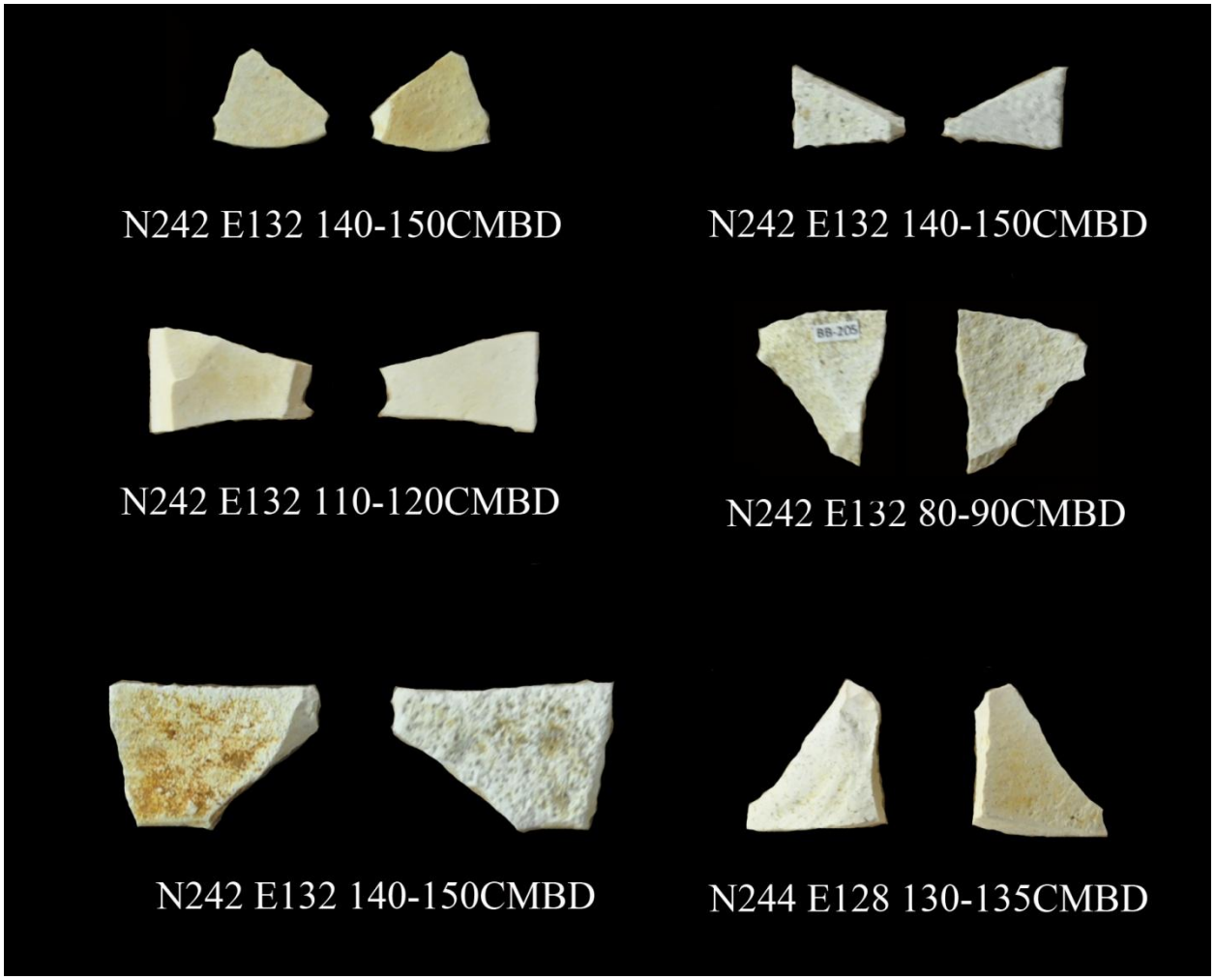


Figure A24-11
Pre Clovis Bend Breaks recovered from the Topper Site (38AL23). Examples from 1999 Terrace Excavations.

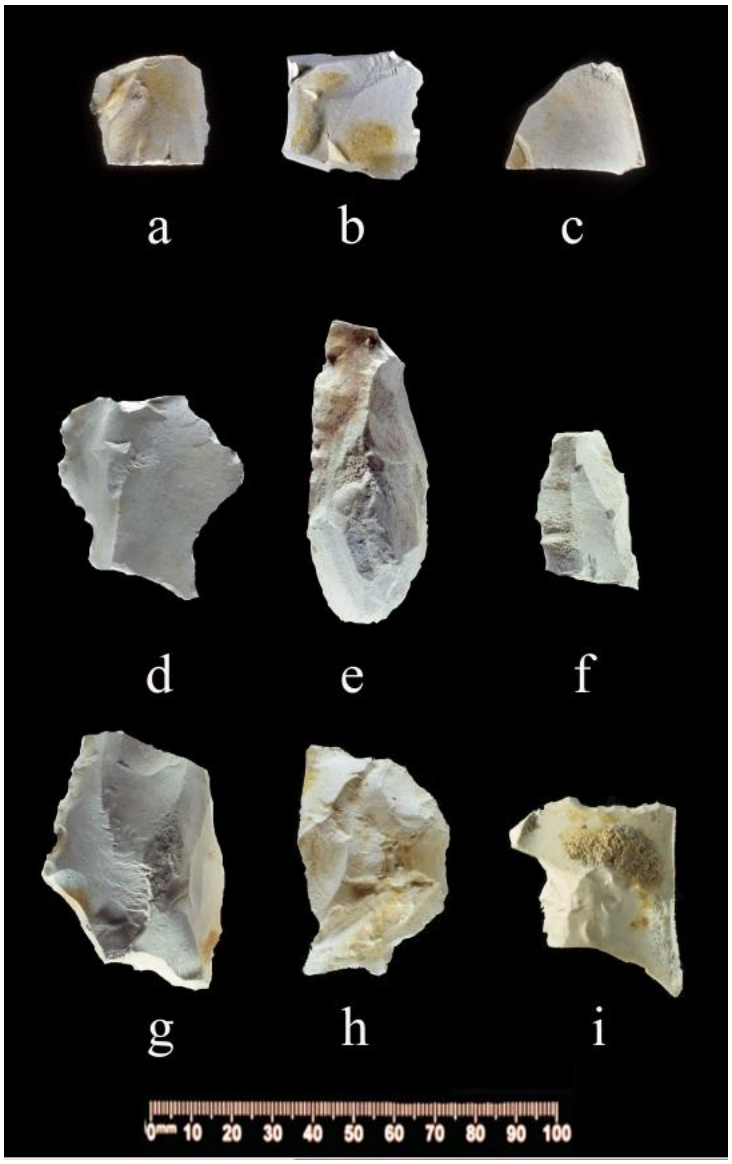


Figure A24-12
Pre Clovis Bend Breaks (a-c) and Flake Tools (d,e,g-i) recovered from the Topper Site pre Clovis deposits (38AL23).



Figure A24-13
Pre Clovis Chopper from the Pleistocene Terrace recovered from the Topper Site (38AL23).



Figure A24-14
Pre Clovis Cores from the Pleistocene Sands and Terrace recovered from the Topper Site (38AL23). Provenience N E depth 96.05 m.



Figure A24-15
Pre Clovis Cores from the Pleistocene Sands and Pleistocene Terrace recovered from the Topper Site (38AL23).

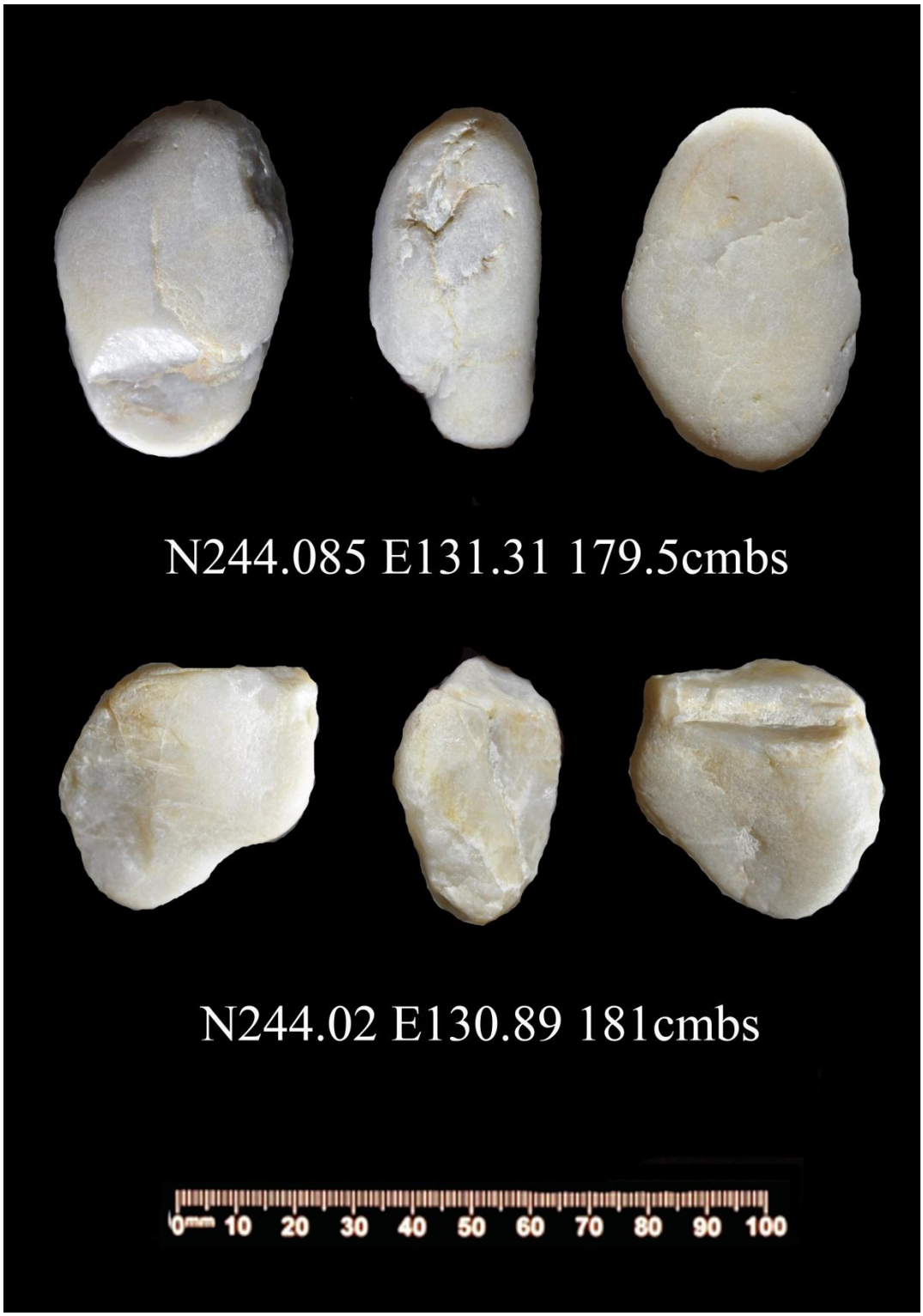


Figure A24-16
Pre Clovis Hammerstones from the Pleistocene Sands and Terrace recovered from the Topper Site (38AL23).

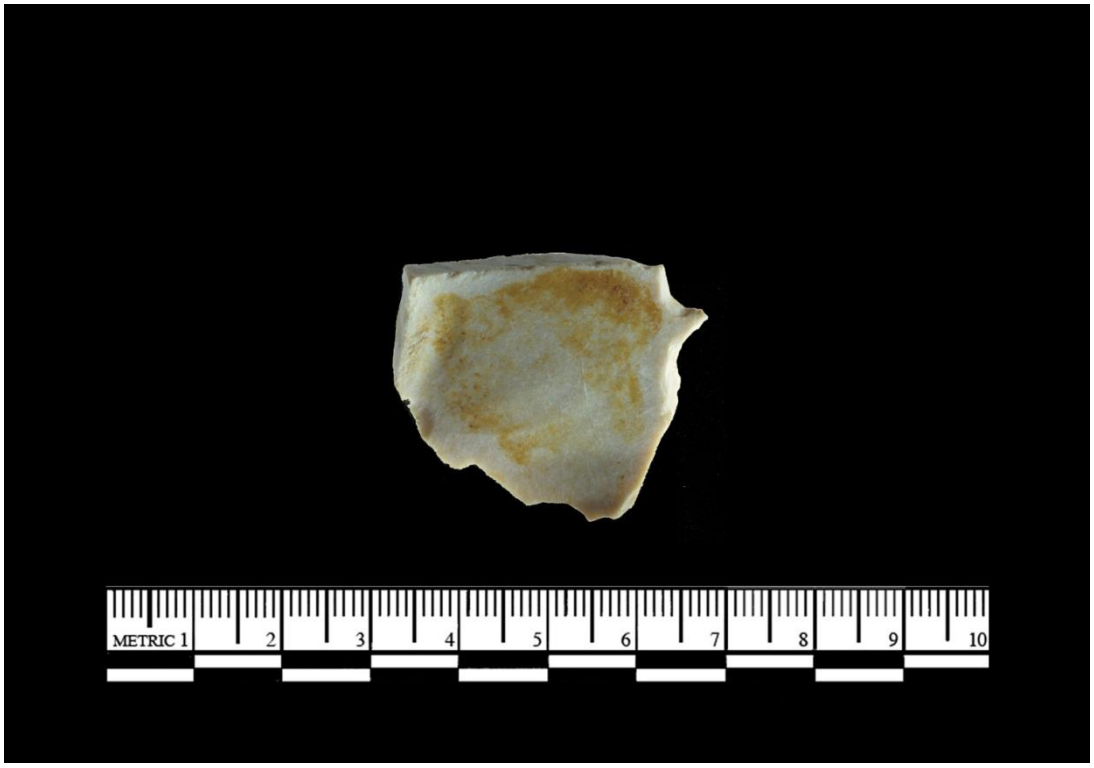


Figure A24-17
Bend Break graver from the pre Clovis Pleistocene Terrace at the Topper Site (38AL23).
Provenience N242.68 E139.93 depth 96.82 m

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Figure A24-18
Lithic items from the Pleistocene Terrace at the Topper Site N242 E140 NW quad level 27.



Figure A24 –19
Bend breaks from the Pleistocene Terrace at the Topper Site (Image courtesy of Albert Goodyear).



Figure A24 –20
Blades from the Pleistocene Terrace at the Topper Site (Image courtesy of Albert Goodyear).

Table A24-1
Provenience list for selected artifacts from Appendix 24.

Figure		Type	Provenience	Date
Figure A24-1	A	Scraper	N243.8 E133.91 98.31M	1999
Figure A24-1	B	Uniface	N243.62 E134 98.22M	1999
Figure A24-1	C	Archaic Biface	N243.78 E133.97 98.32M	1999
Figure A24-1	D	Archaic Biface	N243.76 E133.97 98.32M	1999
Figure A24-1	E	Archaic Biface	N243.76 E133.93 98.32M	1999
Figure A24-1	F	Archaic Biface	N243.72 E133.89 98.32M	1999
Figure A24-1	G	Archaic Biface	N243.68 E133.85 98.32M	1999
Figure A24-1	H	Archaic Biface	N243.69 E133.95 98.32M	1999
Figure A24-2	A	MALA Point	N246 E137.6 98.25M	2002
Figure A24-2	B	MALA Point	N246 E139.65 98.265M	2002
Figure A24-2	C	MALA Point	N244.83 E138.76 98.33M	2002
Figure A24-2	D	MALA Point	N245.8 E138.43 97.94M	2002
Figure A24-2	E	MALA Point	N242 E141.6 98.405	2002
Figure A24-2	F	MALA Point	N242.92 E140.66 98.365	2002
Figure A24-2	G	MALA Point	N240.45 E130.56 98.34M	2001
Figure A24-2	H	MALA Point	N240.3 E132.76 98.25M	2001
Figure A24-2	I	MALA Point	N231.35 E132.28 97.99M	2001
Figure A24-3	B	Morrow Mountain	N244.96 E107.82 97.62M	1998
Figure A24-4	A	Taylor Point	N220.45 E88.835 97.935	1985
Figure A24-4	B	Taylor Point	N241.755 E129.005 97.87M	2002
Figure A24-4	C	Taylor Point	N242.18 E129.51 97.89M	2002
Figure A24-4	D	Taylor Point	N241.60 E136.10	2001
Figure A24-4	E	Taylor Point	N212 E130 63cmbs	1999
Figure A24-4	F	Taylor Point	N41.345 E136.70 98.05M	2001
Figure A24-4	G	Taylor Point	Block 1 Level M Square D 97.42	1986
Figure A24-4	H	Taylor Point	38AL23 01-98	1998
Figure A24-4	I	Taylor Point	N289.07 E137.49 97.67	2003
Figure A24-6	A	Clovis Biface	Surface	
Figure A24-6	B	Clovis Biface	Backhoe Spoil	
Figure A24-6	C	Clovis Biface	TU 9 2004 grid N183 E190 106.75	2004
Figure A24-6	D	Clovis Biface	Savannah River	
Figure A24-6	E	Clovis Biface	N291.66 E132.05 70cmbs	
Figure A24-6	F	Clovis Biface	Surface	
Figure A24-6	G	Clovis Biface	Surface	
Figure A24-6	H	Clovis Biface	Hillside Grid N103.05 E050.49 106.745	

APPENDIX 25

FIELD SHOTS AND EXCAVATION PHOTOGRAPHS AT THE TOPPER SITE (38AL23)



Figure A25-1
Chert Quarry at the Topper Site, 1983.



Figure A25-2
Excavation of 1m x2m test pit at the Topper Site, 2-1-1984.
Photo credit: Al Goodyear



Figure A25-3
Excavation of Unit N212 E130, 1985 at the Topper Site (38AL23).







Figure A25-4
Excavation and Removal of burial urn, 1985 Excavations at the Topper Site (38AL23).

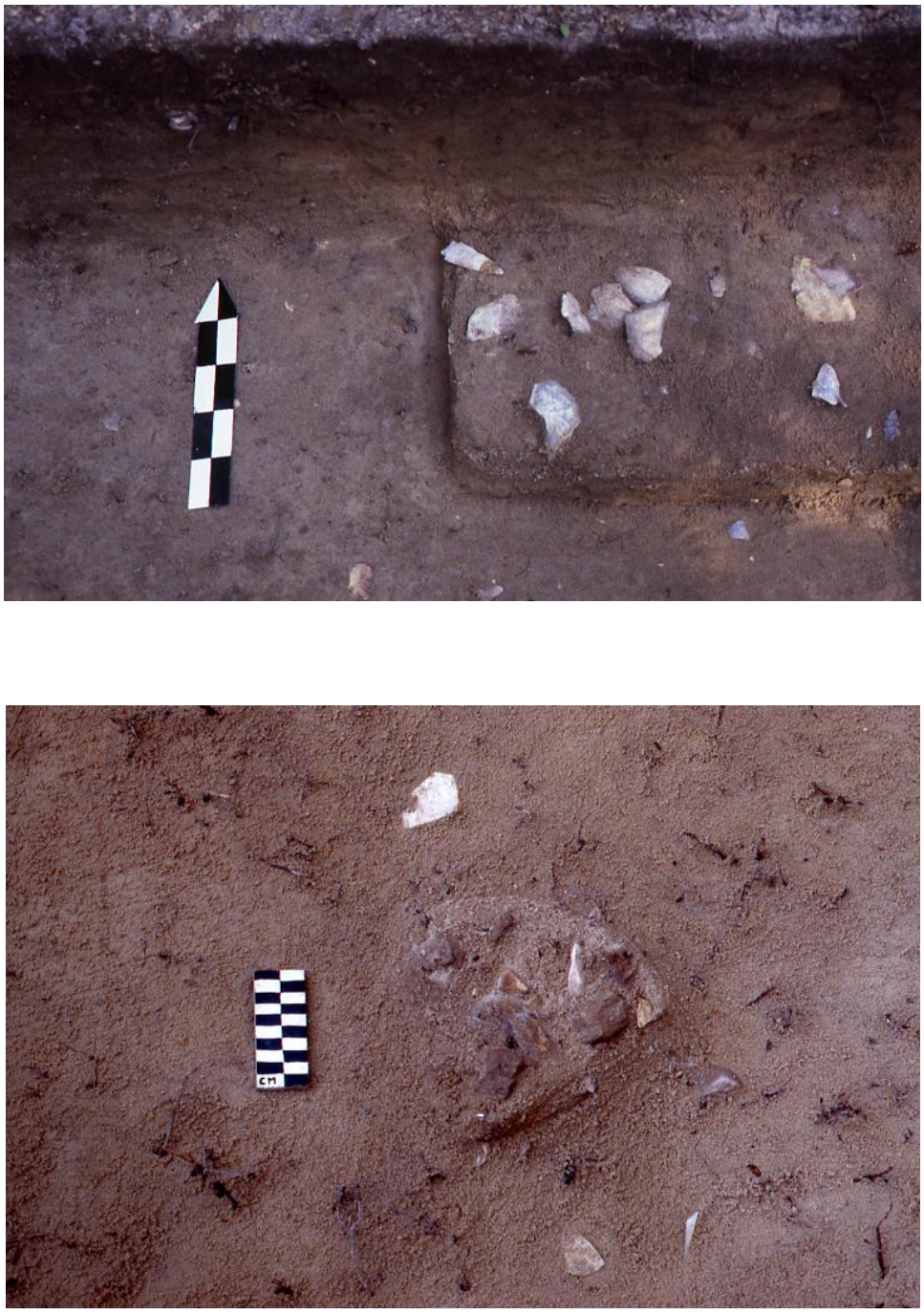


Figure A25-5
Archaic Lithic clusters uncovered during 1985 Excavations at the Topper Site (38AL23).





Figure A25-6
Archaic and Paleoindian lithic clusters uncovered from the1986 block excavation at the Topper Site (38AL23).





Figure A25-7
Lithic cluster (top), and stain in unit N282 E112 (bottom) from 1998 excavations at the Topper Site (38AL23).



Figure A25-8A
Base of 1999 excavation in unit N242 E132. Pre Clovis lithic cluster (F49) in foreground. Note tap root at right. Such roots form a possible source of bioturbation.



Figure A25-8B
Photograph of unit 242 E 132, 160cmbs showing Features 39 – 47. Features interpreted as natural stains.

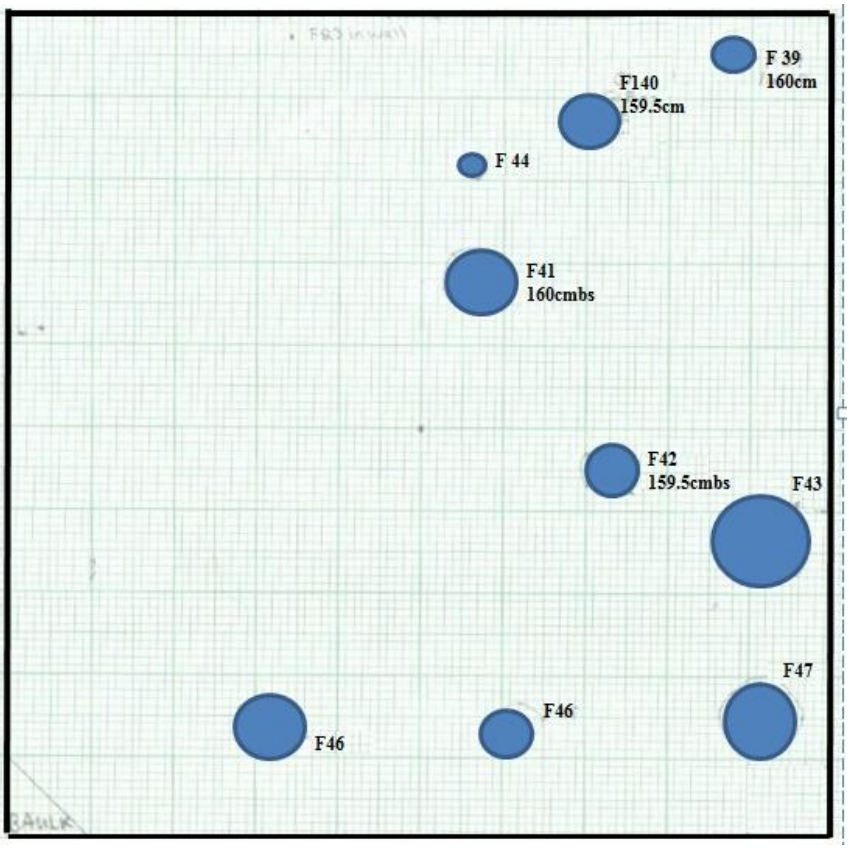


Figure A25-8C
Plan – view drawing of unit 242 E 132, 160cmbs showing Features 39 – 47. Features interpreted as natural stains.





Figure A25-9
Excavation in progress in 1999 48 square meter block excavation (N208-N214 to E130-E136).





Figure A25-10
At top; mapping in progress in pre Clovis deposits of 1999 48 square meter block excavation (N208-N214 to E130-E136). Below; Feature 49 from the pre Clovis Pleistocene Sands at the Topper Site.



Figure A25-11
Excavation in progress in 2000 4m x 8m excavation block in N242 to N244 along the E128 to E136 grid line, Topper Site (38AL23), Allendale County, S.C. (Image Courtesy Albert C. Goodyear).



Figure A25-12
Base of Excavation (Top of Terrace) in 2000 4m x8m excavation block in N242 to N244 along the E128 to E136 grid line, Topper Site (38AL23), Allendale County, S.C. (Image Courtesy Albert C. Goodyear).



Figure A25-13
Base of 2000 2m x4m block excavation (N246-N248 E144 E148). Pre Clovis cobble cluster (F-62) visible in profile wall at 130cmbs.



Figure A25-14
Dr Al Goodyear (Left) and Geoscience team members Dr. Foreman (center) and Dr. Mike Waters (right) discuss stratigraphy at Topper Site. 2000 4m x 8m excavation block in N242 to N244 along the E128 to E136 grid line



Figure A25-15
Feature 62 from pre Clovis deposits near Base of Pleistocene Sands 2000 N244 E148 Topper Site (38AL23).



Figure A25-16
1999 Flintknapping demonstration showing bipolar lithic manufacture technique.



Figure A25-17
Ongoing excavation in 2001 5m x10m block excavation. (N236-N242 to E127-E137).



Figure A25-18
Ongoing excavation in 2001 4m x6m block excavation.(N230-N240 to E102-E106).



Figure A25-19
Photograph showing ongoing excavation in Pleistocene Sands pre Clovis deposits of 2001 5m x10m block excavation. (N236-N242 to E127-E137).



Figure A25-20
Field shot of the 2002 5m x 9m block excavation (N242-N246 E136-144) underway in the pre Clovis levels at the Topper Site 38AL23. (Image courtesy of Albert C. Goodyear).



Figure A25-21
Field shot of the 2002 5m x 9m block excavation (N242-N246 E136-144) showing lithic cluster. Stain from IS from water spraying and only partially drying. (Image courtesy of Albert C. Goodyear).



Figure A25-22
Field shot of the 2003 6m x6m block excavation (N270-N276 E152-E158) showing distribution of Clovis artifacts. (Images courtesy of Albert C. Goodyear).



Figure A25-23
Before and after shot of 2002-2003 5m x 9 Pleistocene Terrace excavation. At top; Terrace surface at completion of hand excavation. At bottom; BHT 17 excavated into the top of the Terrace. (Images courtesy of Albert C. Goodyear). View East.



Figure A25-24
Clusters of chert cobbles and associated lithic materials from top of Terrace between 96.90-96.80m adjacent to BHT 17. Unit N242 E140 to N242 E143 2004 Topper Site Excavations. Image courtesy Albert C. Goodyear).



Figure A25-25
Photograph showing excavation of 2005 partial 1m x1m units from the Pleistocene Terrace at the Topper Site (38AL23). Units N242 E140 NW, NE, and N244 E140 SW; 96.90 – 95.30 m.



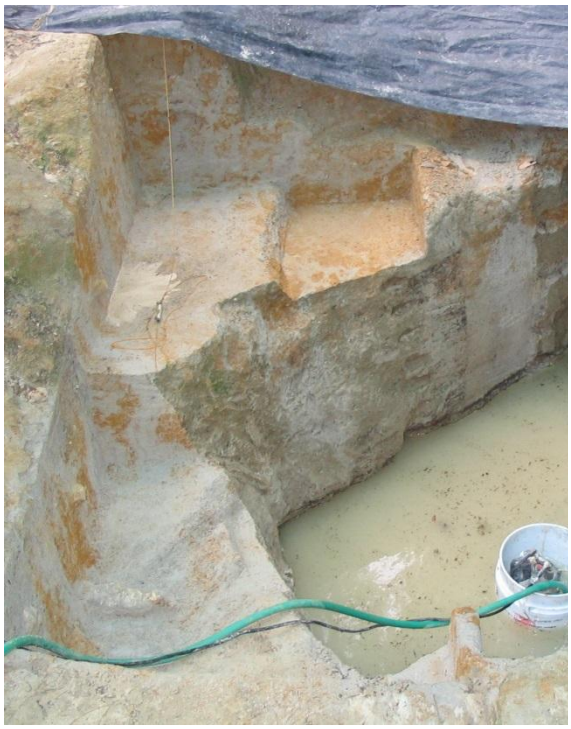




Figure A25-26A
Images showing 2005 excavation of partial units. At top, N242 E140 NW and N244 E140SW at base of excavation 95.35m view West. Bottom left, N242 E140 NW and N244 E140SW at elevation 96.00m view North. BHT 17 to left in water. Bottom right, South profile wall of N242 E140 NW view South. Chert cores and boulders in situ.

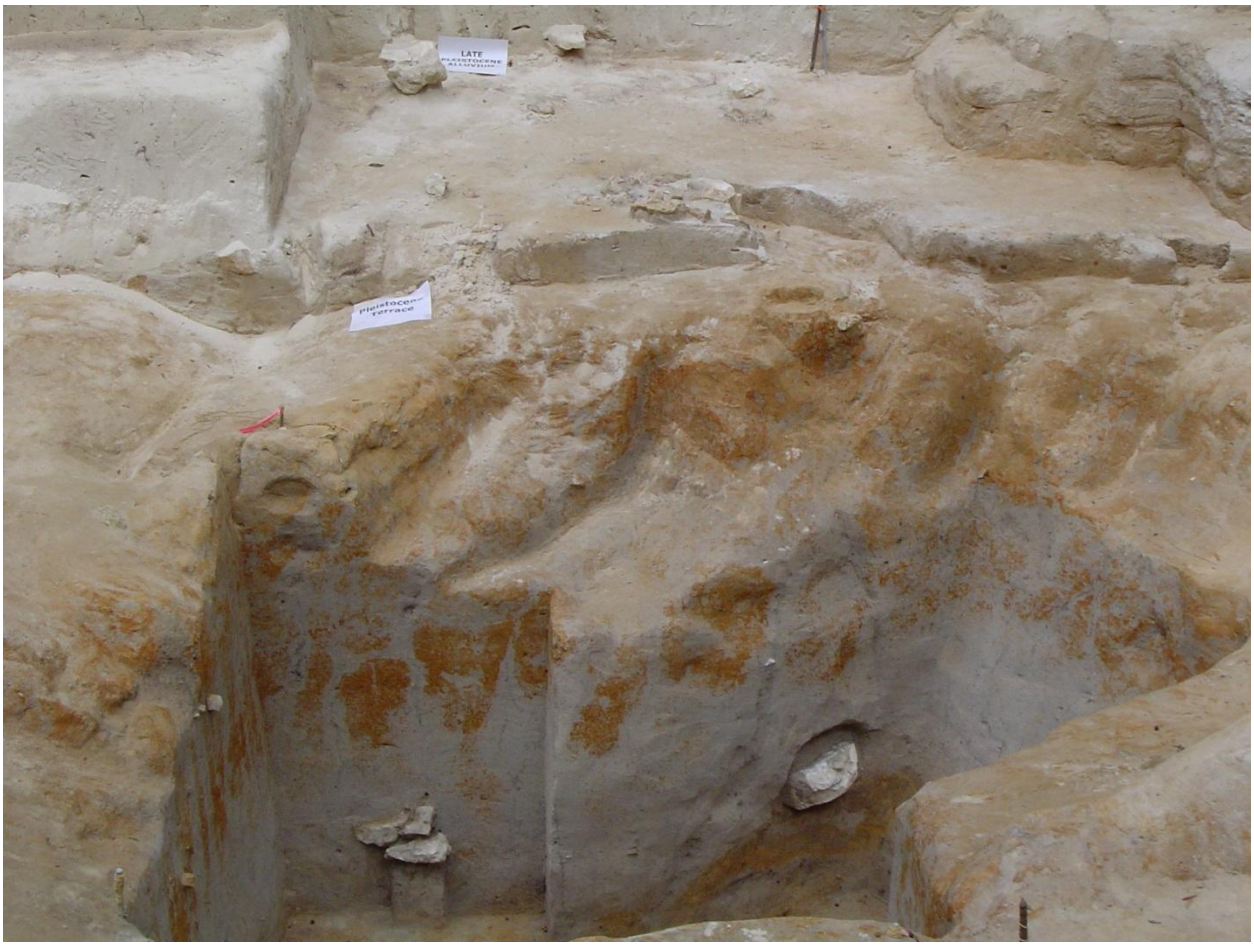


Figure A25-26B
Images showing 2005 Pleistocene Terrace exposed after excavation of partial units. Base of excavation 95.35m view North.



Figure A25-26C
Images showing 2005 Pleistocene Terrace exposed after excavation of partial units. Base of excavation 95.35m view East.



Figure A25-26D
Images showing 2005 Pleistocene Terrace exposed after excavation of partial units. Base of excavation 95.35m view West. Boulders on common surface in fine grained sediment.

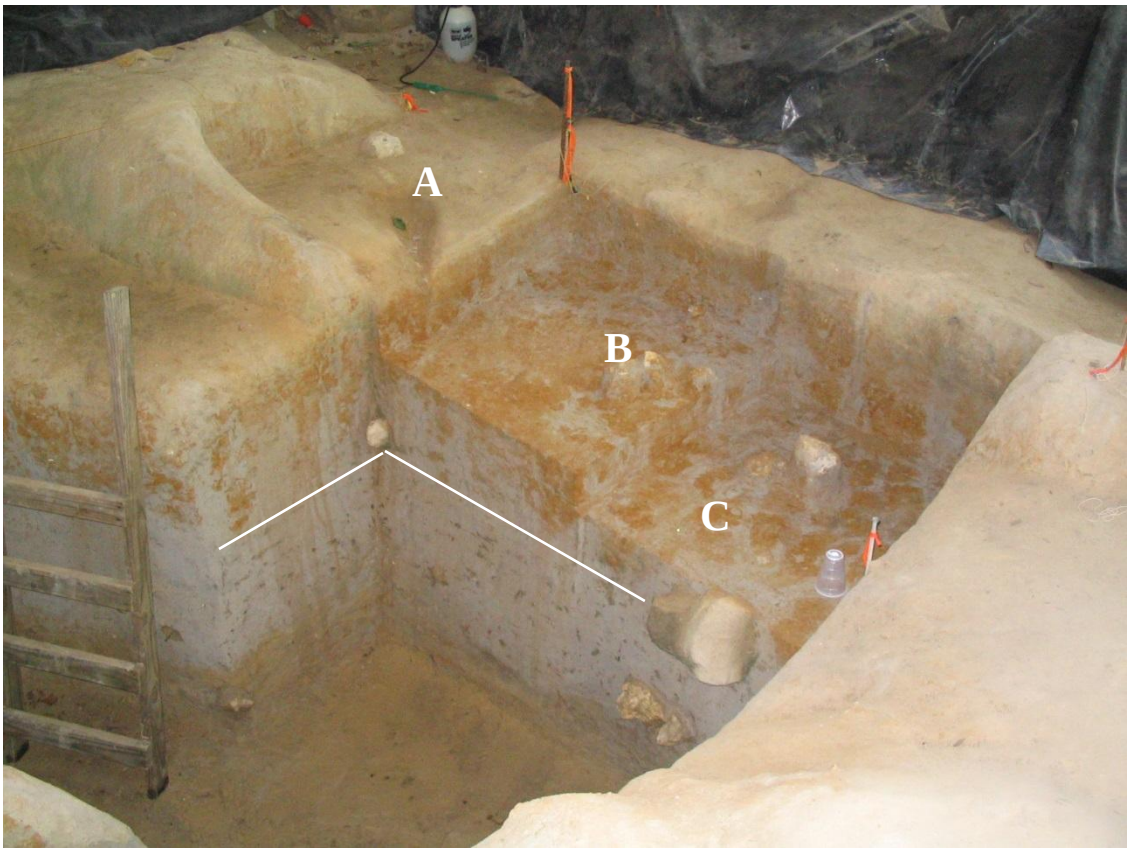


Figure A25-27
Terrace Excavation in progress in 2006 1x1m units N242E142 SW 96.70m (A), N242E140 SW 96.40m (B), and N242E140 SE 96.15m (C). View Southeast. Highlighted Line demarcates transition from oxidation stains above from grey sandy clay below. (Image courtesy of Bill Covington).







Figure A25-28
Chert boulder and associated lithic materials from elevation 95.70m of Pleistocene Clay Terrace in unit N242 E140SE quad (Bottom right) and N242 E140 SE and SW quads (Top). Bottom left; chert bounder core once recovered from context. No feature number was assigned to association. A number of lithic items refit to the chert boulder.



Figure A25-29
Extent of Pleistocene Terrace excavation by completion of 2007 field season/beginning of 2008 field season. Three 1m x1m units open in 2008 N242 E142 NW and SW (A and B) and N244 E1148NE (C). View Northwest. BHT 17 at center.



Figure A25-30
A Cluster of numerous small lithic items mapped in N242 E142 NW at elevation 95.65m.View North. Goodyear contends that this layer represents the deepest of three potential pre Clovis artifact bearing horizons from the Pleistocene Terrace. Excavation ceased as a result of rising groundwater.



A



B



B



D

Figure A25-31
Artifacts from 2005 Northern Holocene and Pleistocene Terrace Excavation from units N246 E140 and N246 E142. A; Broken ceramic vessel N248.5 E142.4 98.75m, B; MALA lithic clusters from N248 E140 98.20m, C; Early Archaic Taylor point from N247.58 E 140.72 98.15m, and pre Clovis Feature 94 N246.2 E141.40 97.35m



Figure A25-32
Artifacts from 2005 Northern Holocene and Pleistocene Terrace Excavation from units N246 E140 and N246 E142. A; At left, Early Archaic lithic clusters. At right, Early Archaic Taylor point in situ.



Figure A25-33
Sediment samples taken and analyzed by Alan West to test for evidence of microspherules at top of Clovis level in west profile wall of N246 E140. (Image courtesy of Albert C. Goodyear).



A



B

Figure A25-34

Pedogenic Feature in Unit N246 E142. A; pedogenic feature as initially exposed in 2005. B; pedogenic feature prepared for sediment sample extraction by Dr. David Leigh in 2007. Lamellae visible in upper portion of feature as banded layers. Feature ranges in depth from 97.40m to 96.95m. in elevation.



Figure A25-35
Extent of excavation of the nine 1m x1m Pleistocene Terrace test units begun in 2009.

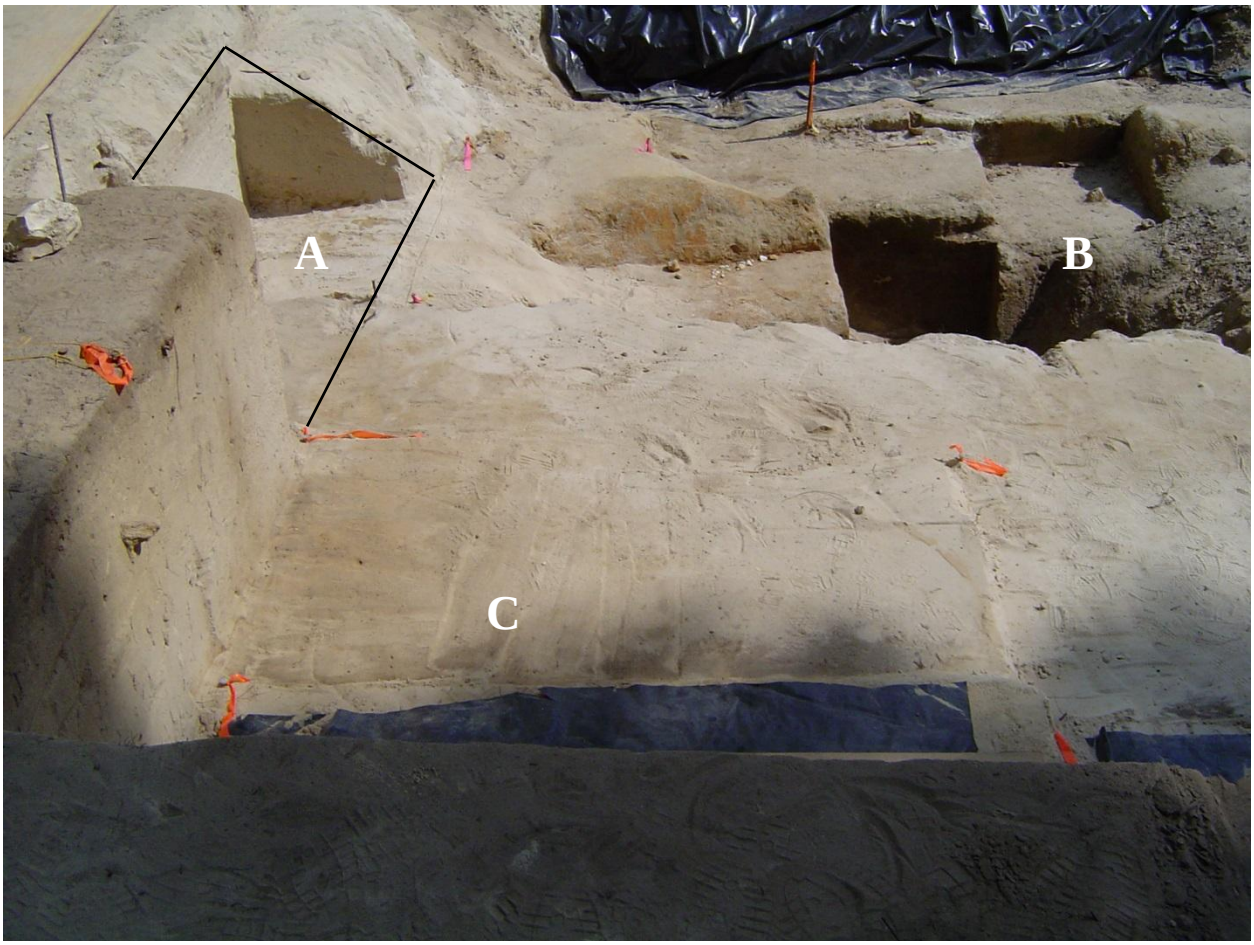


Figure A25-36
Image showing excavations on the Pleistocene Terrace in 2005. A; in box, 1m x2m block (N244 E144 SW, N242 E144NW) in the Eastern Terrace excavation, B; 2005 Southern clay Pleistocene Terrace excavation (N242 E140) C; 2005 Northern Terrace Excavation (N248E142 and N246E142).View South.



Figure A25-37
Excavation in unit N244E144 removing the pre Clovis Pleistocene Sands to the top of the clay Pleistocene Terrace. View East-Southeast. (Photo courtesy of Albert C. Goodyear).



Figure A25-38
Dense Early Archaic and Clovis lithic debitage and tools on a common surface from 1 2m x2m unit (N262 E144 SE 98.15-98.10m) from the 2010 4m x4m block excavation.

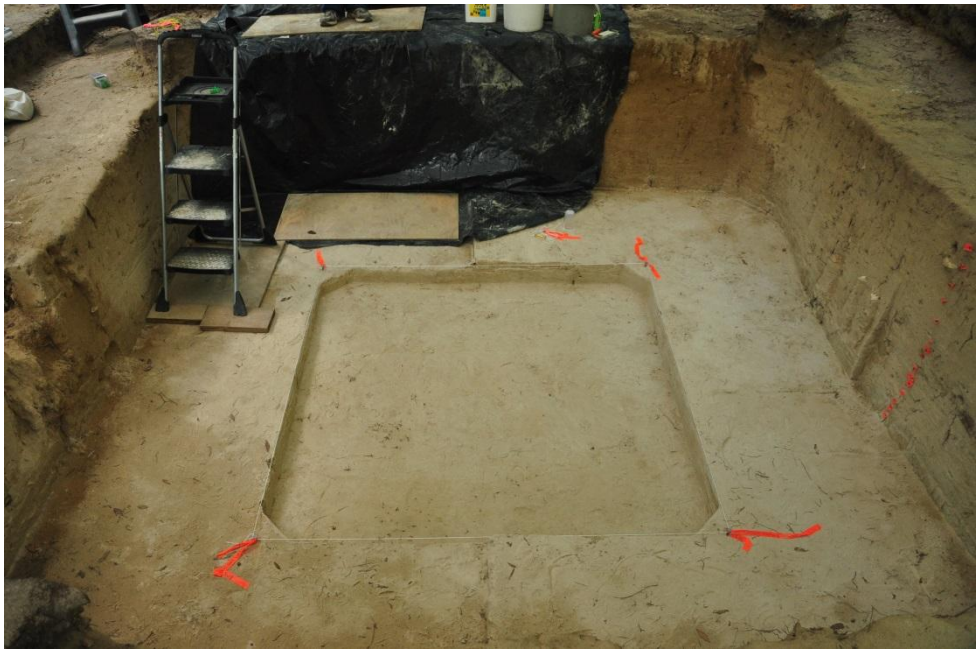




Figure A25-39
2x2m unit (N265 E143) placed at base of Clovis deposits in 2010 4m x4m block excavation (top). Top of Pleistocene Terrace exposed at base of Pleistocene Sands in unit N265 E143.11 lithic items mapped from ten 10cm levels of Pleistocene Sands from this unit.

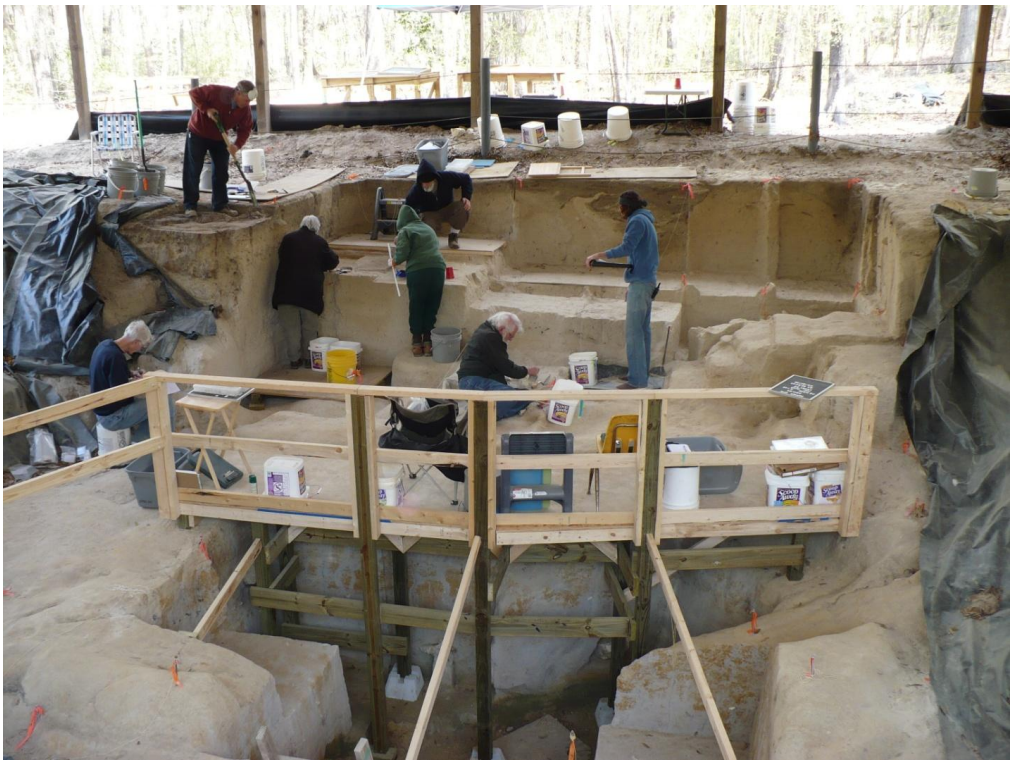


Figure A25-40
2009 Northern Pleistocene Sands and Terrace excavation. N242-N248 E136-E144



Figure A25-41
Excavation of Feature (lithic cluster) from the pre Clovis Lower Pleistocene Sands at the Topper Site (38AL23) (2009).

APPENDIX 26

ARTIFACT REFITS FROM THE STUDY SAMPLE AT THE TOPPER SITE (38AL23)

A preliminary refit analysis was conducted as an aid to establish the origin of the lithic deposits at Topper, and to evaluate whether or not site integrity has been preserved. Artifacts were examined to assess refit potentiality as encountered during the lithic attribute analysis. If refits were found among the assemblage, then I assume that their orientation and stratigraphic position within the vertical profile is either the result of human agency, or is the byproduct of natural processes. For this study, the refits that were identified were documented and examined with regard to their spatial association with other artifacts within the site grid. A total of 13 refit pairs were identified comprising 24 lithic items (Table A26-1) Of these, eleven refit pairs were classified as cultural and two were classified as the product of natural processes. Table A26-1 and Figures A26-1-4 present the results of the refit study.

Table A26-1

Artifact Refits identified from the study sample at the Topper Site (38AL23). Refits identified as encountered during the artifact attribute analysis.

Northing	Easting	Depth	Artifact Type	Refit	Interpretation	Max distance H. (N)	Max distance H. (E)	Max distance V.
243.61	142.15	95.88	Debris	1	Cultural	10	8	1
243.51	142.23	95.89	Debris	1	Cultural			
243.82	142.12	95.79	Debris	2	Cultural	78	15	0
243.04	142.27	95.79	Debris	2	Cultural			
242.95	142.79	96.04	Flake Fragment	3	Cultural	29	1	0
243.24	142.8	96.04	Flake Fragment	3	Cultural			
244.2	143.3	97.295	Amorphous Debris	4	Natural	0	0	7.5
244.2	143	97.22	core	4	Cultural			
244.03	143.41	97.275	Broken Flake	5	Cultural	17	41	5.5
244.2	143	97.22	core	5	Cultural			
244.24	143.43	97.22	Flake Fragment	6	Cultural	4	43	0
244.2	143	97.22	core	6	Cultural			
245	143.9	97.69	Broken Quartz	7	Cultural	32	2	5.5
245.32	143.88	97.745	Broken Quartz	7	Cultural			
238.32	135.17	98.07	Biface	8	Cultural	21	3	1
238.53	135.2	98.06	Biface	8	Cultural			
244.23	138.38	97.45	Broken Quartz	9	Cultural	3	4	1
244.26	138.34	97.44	Broken Quartz	9	Cultural			
244.34	138.42	97.45	Broken Quartz	10	Cultural	12	4	0
244.46	138.38	97.45	Broken Quartz	10	Cultural			
243.84	142.87	95.888	Debris	11	Cultural	1	53	6.88
243.83	142.34	95.82	Debris	11	Cultural			
243.77	140.365	96.3	Amorphous Debris	12	Natural	2	3.65	1
243.79	140.33	96.31	Pebble/Cobble	12	Natural			
243.78	140.36	96.3	Amorphous Debris	13	Natural	1	3	1
243.79	140.33	96.31	Pebble/Cobble	13	Natural			

Max distance H. (N)= Maximum horizontal distance (cm) Northing. Max distance H. (E) = Maximum horizontal distance (cm) Easting. Max distance V. = Maximum vertical distance (cm).

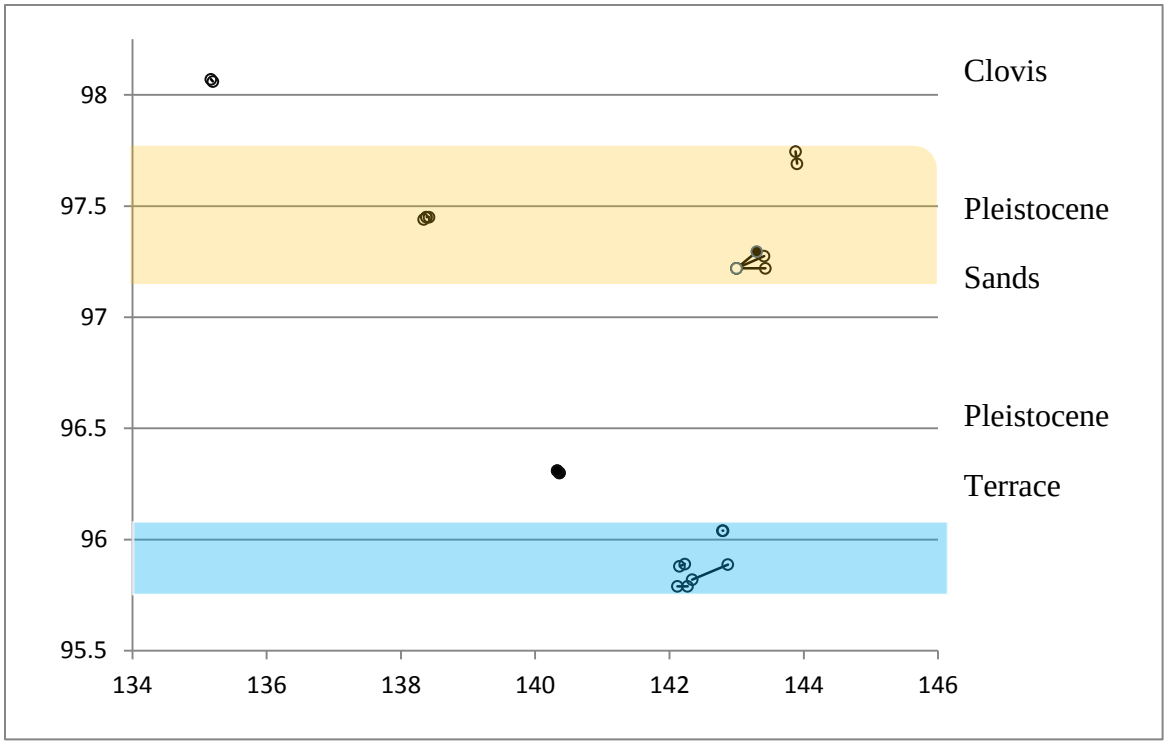


Figure A26-1
Spatial distribution of artifact refits from the Study sample at Topper. Highlighted sections reflect stratigraphic zones where artifact refits are most prevalent. shaded circles reflect natural refits. Unshaded circles reflect cultural refits Future refit research should be conducted to demonstrate general trends in greater detail.

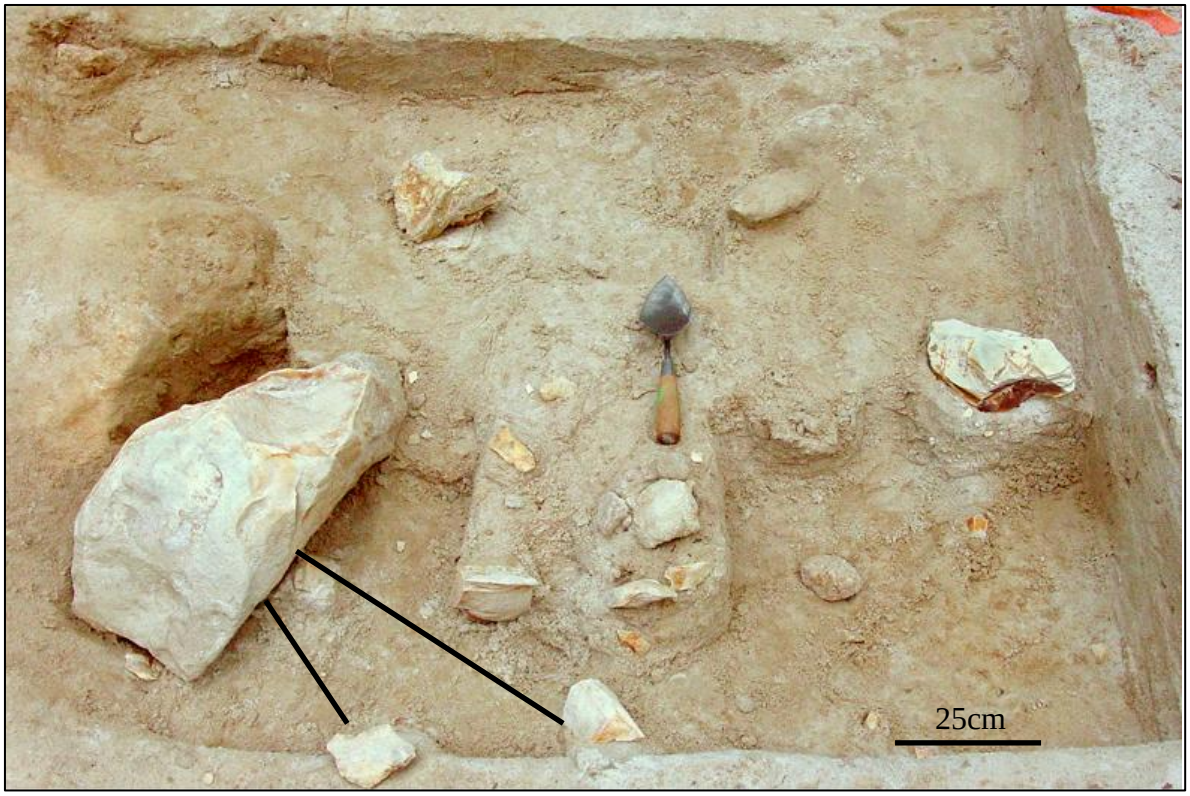


Figure A26-2
Chert cluster identified during 2003 5m x 9m block excavation at Topper. Cluster from unit N244 E142 level 19 (97.35-97.30). Highlighted artifacts refit to chert boulder at left. Association not assigned a feature number.



Figure A26-3
Broken chert cobble revealed in N242 E142 NW (top left) refits to cobble in N242 E142 SW Quad (bottom left). At Top left; Core with detachment scar at 96.30m. At Bottom left; Flake fragment at 96.08m that refits with core. Top right; both refits highlighted. Boulder is resting on common surface with flake detachment.



Figure A26-4
Image at top; broken chert cobble cluster revealed in N242 E142 NW quad at 95.90-95.85m from the Pleistocene Terrace. Two objects in upper left corner of quad refit. Image at bottom; a second flake refits to the cobble above it. Both flake refits resting on a common surface with associated cobbles.

APPENDIX 27

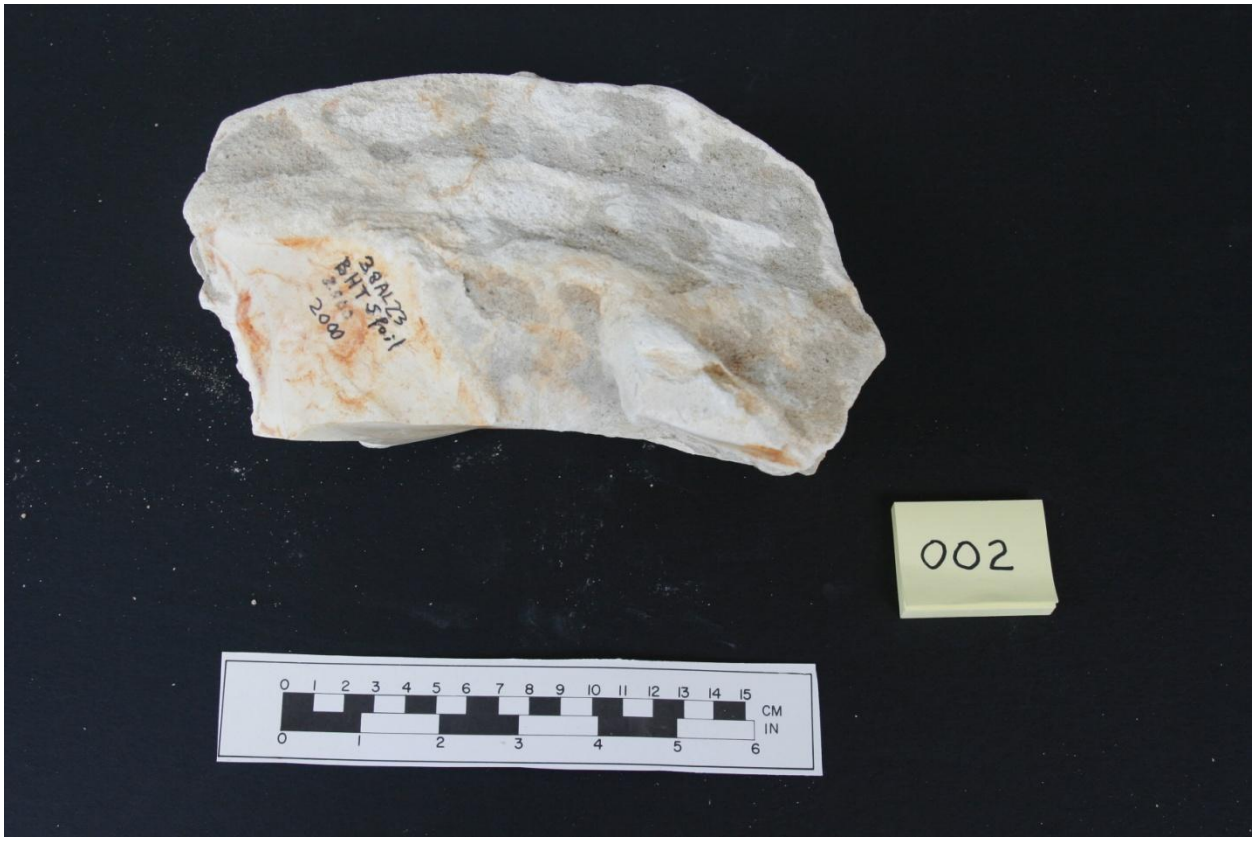
SELECTED CHERT BOULDERS COBBLES, AND CORE TOOLS FROM THE PLEISTOCENE SANDS AND PLEISTOCENE TERRACE AT THE TOPPER SITE (38AL23)

A survey of the materials recovered from the Topper Site identified at least 225 items that fit the classification of chert boulders, cobbles, and core tools. The following photographs depict a sample of these materials recovered from the pre Clovis deposits at the Topper Site. Items were recovered as 1) three dimensionally mapped piece plots, 2) items recovered from Backhoe trenches and 3) from features. All images courtesy of AL Goodyear. Two subsequent tables (Tables A27 – 1 and A27 – 2) provide provenience data as well as morphological and technological attributes of the items examined for the survey and depicted in the photographs. The frequency and distribution of platform bearing flakes at the Topper Site from a study by Goodyear and Wilkinson are presented in Tables A27 – 1a. The items illustrated below were all recovered from contexts below the Clovis deposits on the Alluvial Terrace at the Topper Site (38AL23). All data acquired by Al Goodyear and Joe Wilkins.


Topper
Spall
001
001
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


001
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6

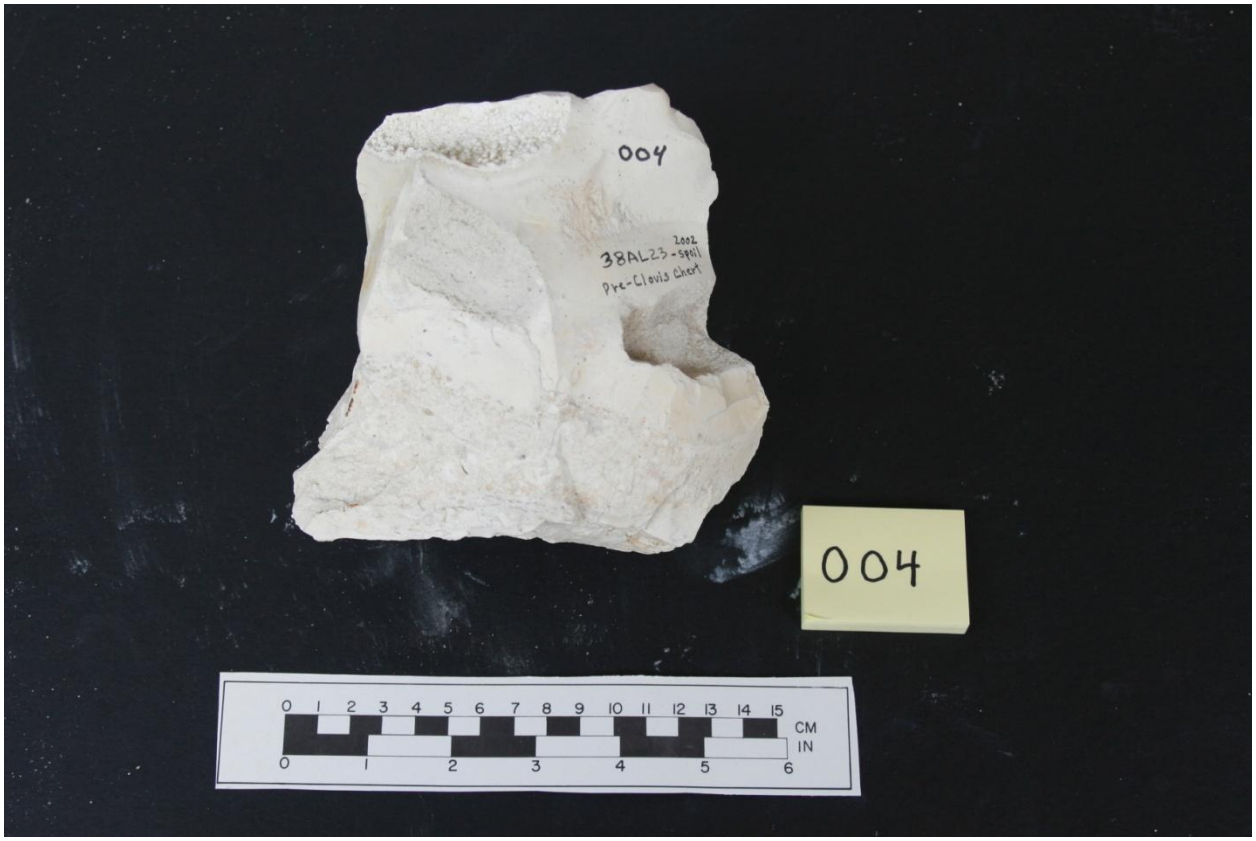

002
002
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


002
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6

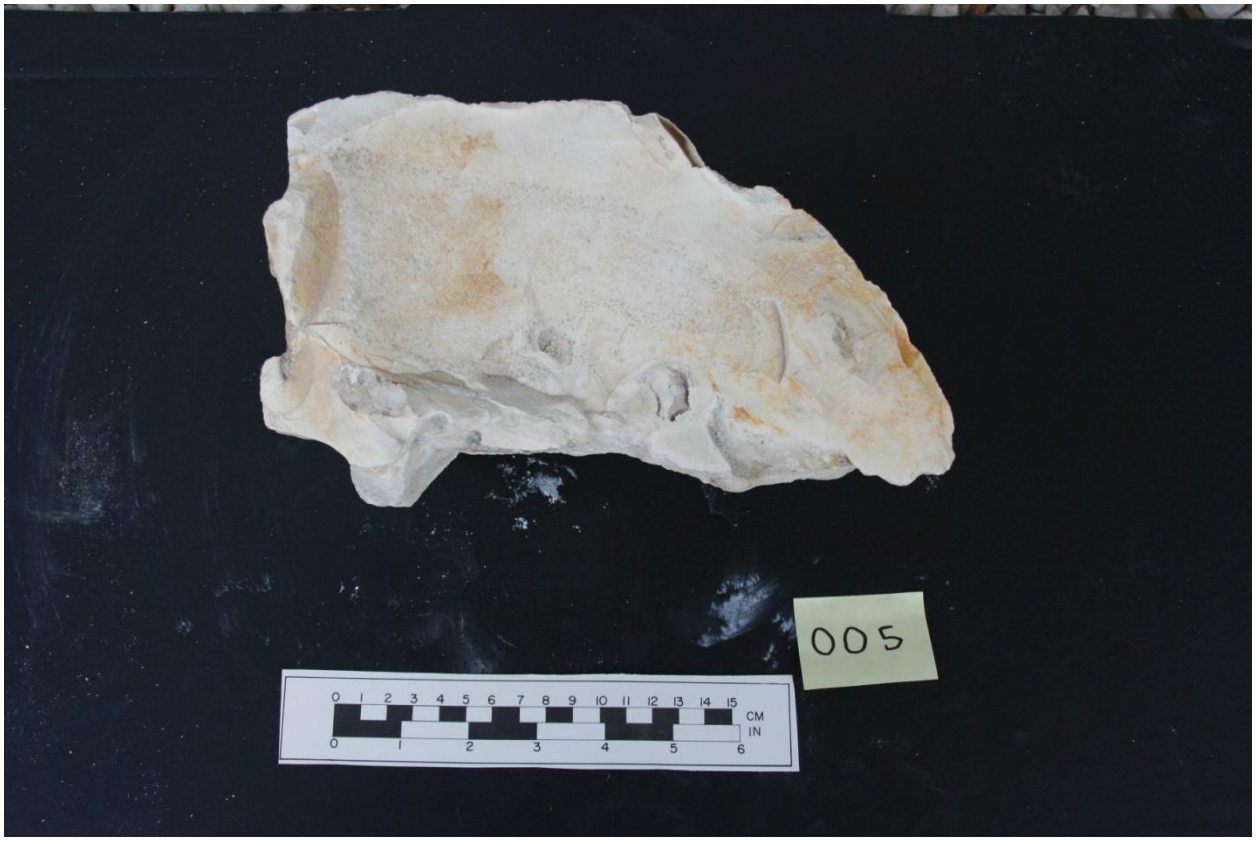

003
CM
IN


003
CM
IN


004
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6

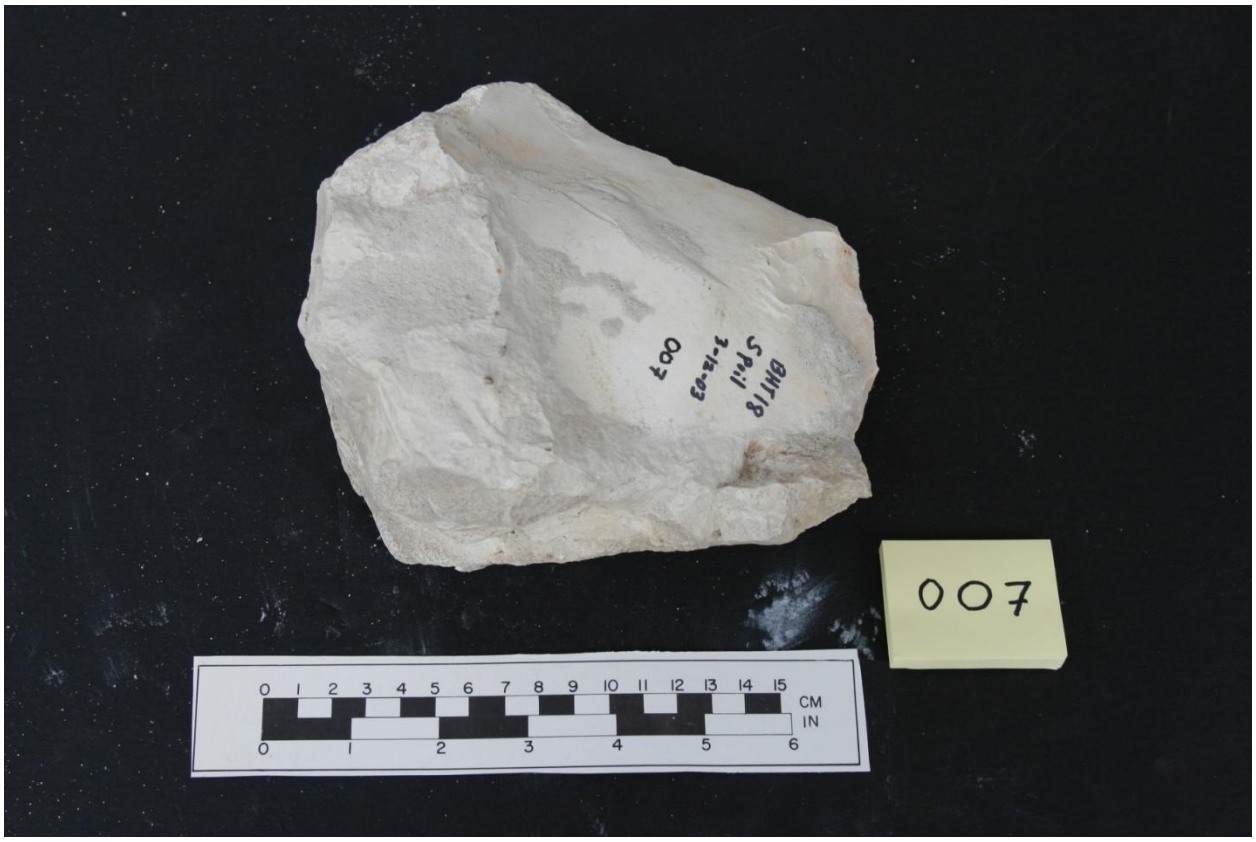

004
38AL23 - 2002
spall
Pre-Clovis Chert
004
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


005
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6

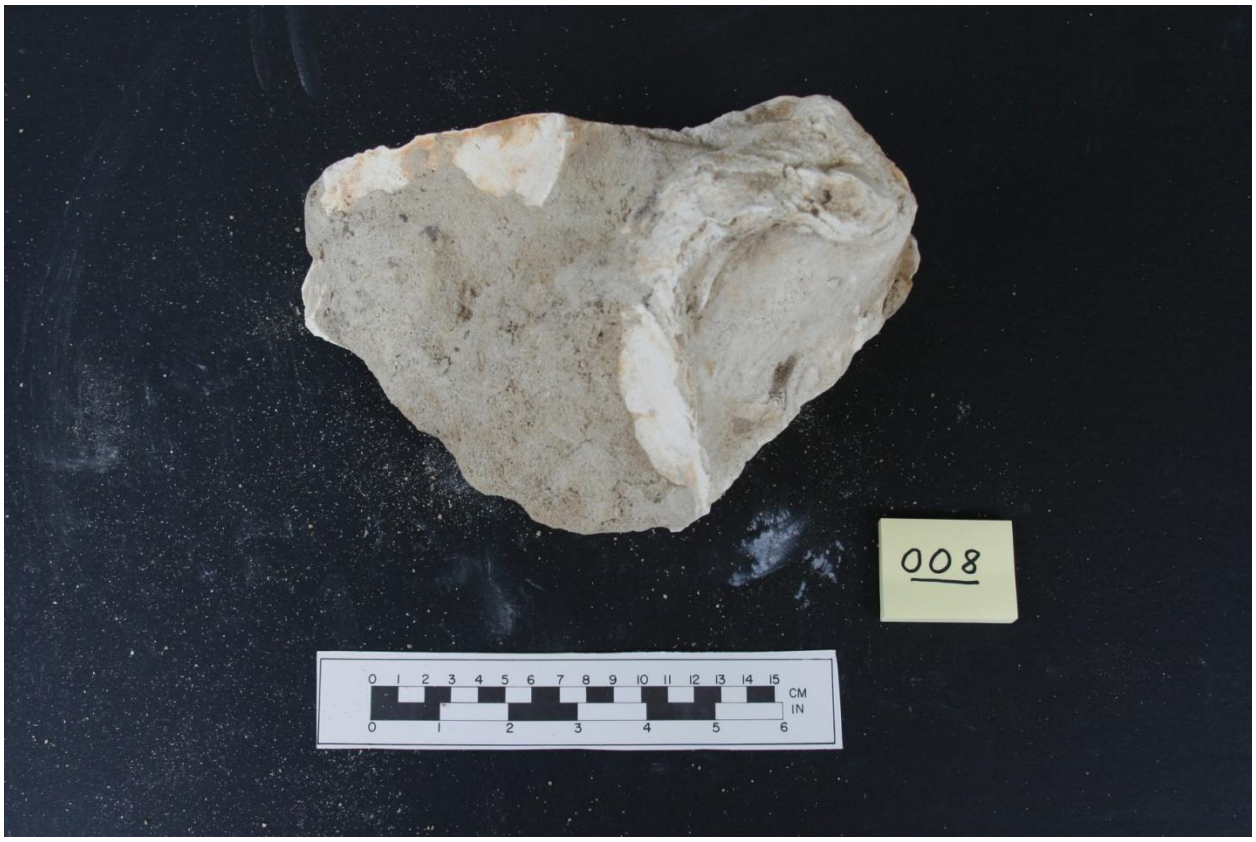

005
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


BHT 13
Spit 1
006
006
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 CM
0 1 2 3 4 5 6 IN

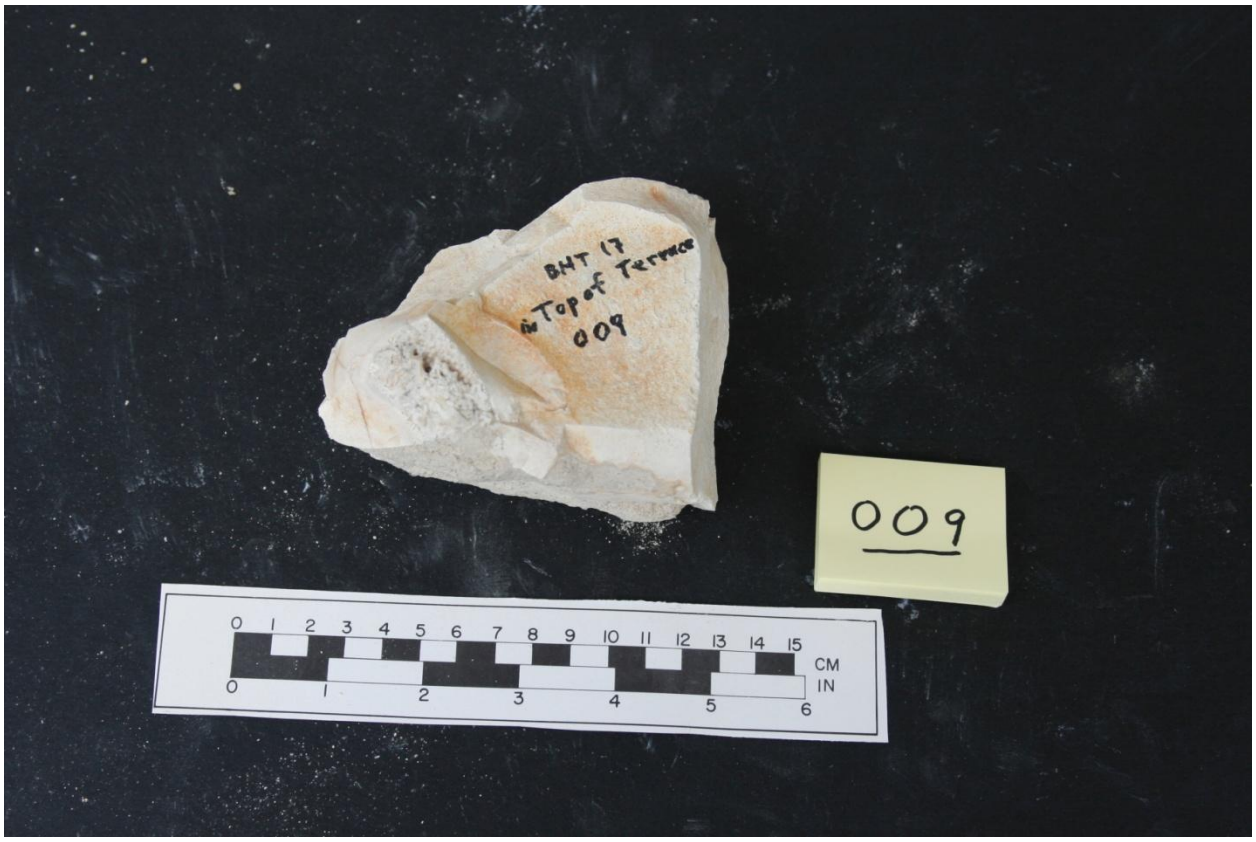

006
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 CM
0 1 2 3 4 5 6 IN

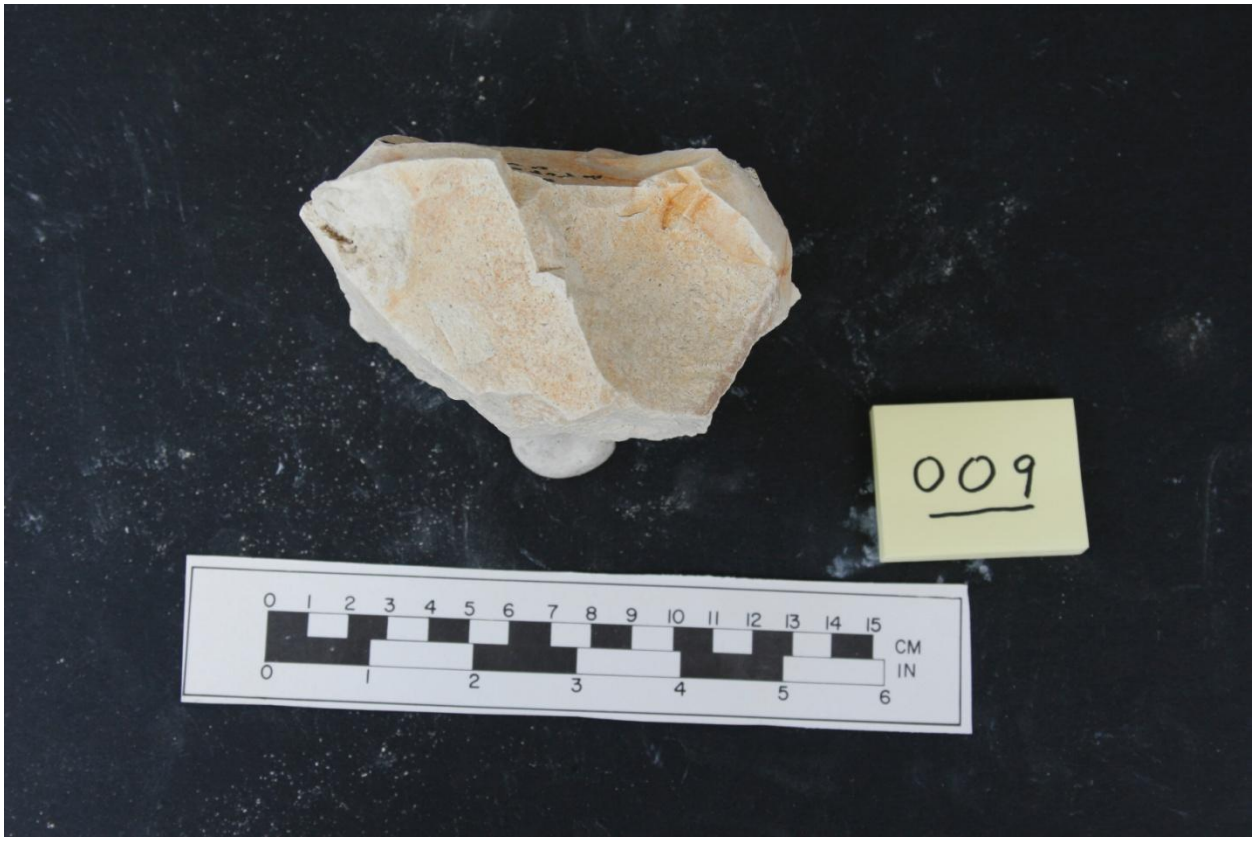

007
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


007
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


008
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


008
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


BHT 17
Top of Terrace
009
009
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


009
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6

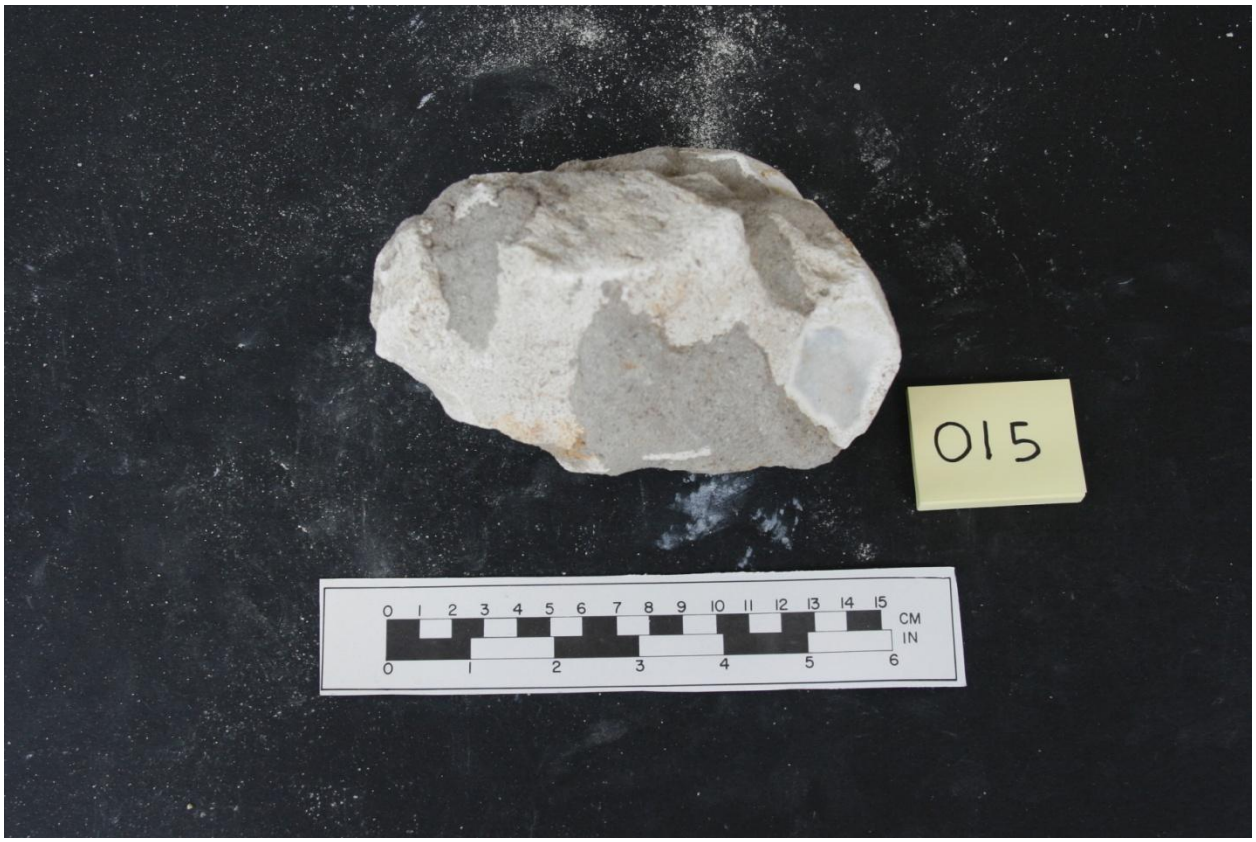

010
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6

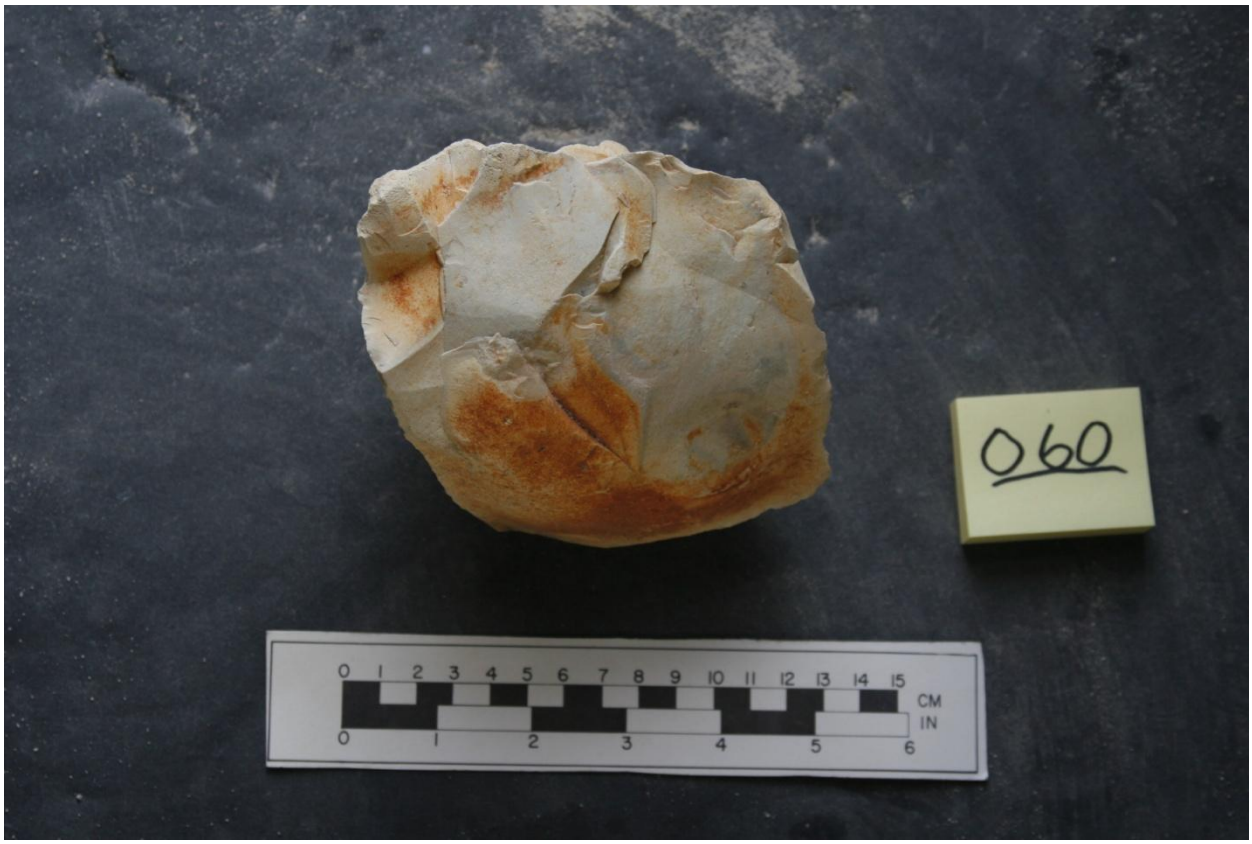

010
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6

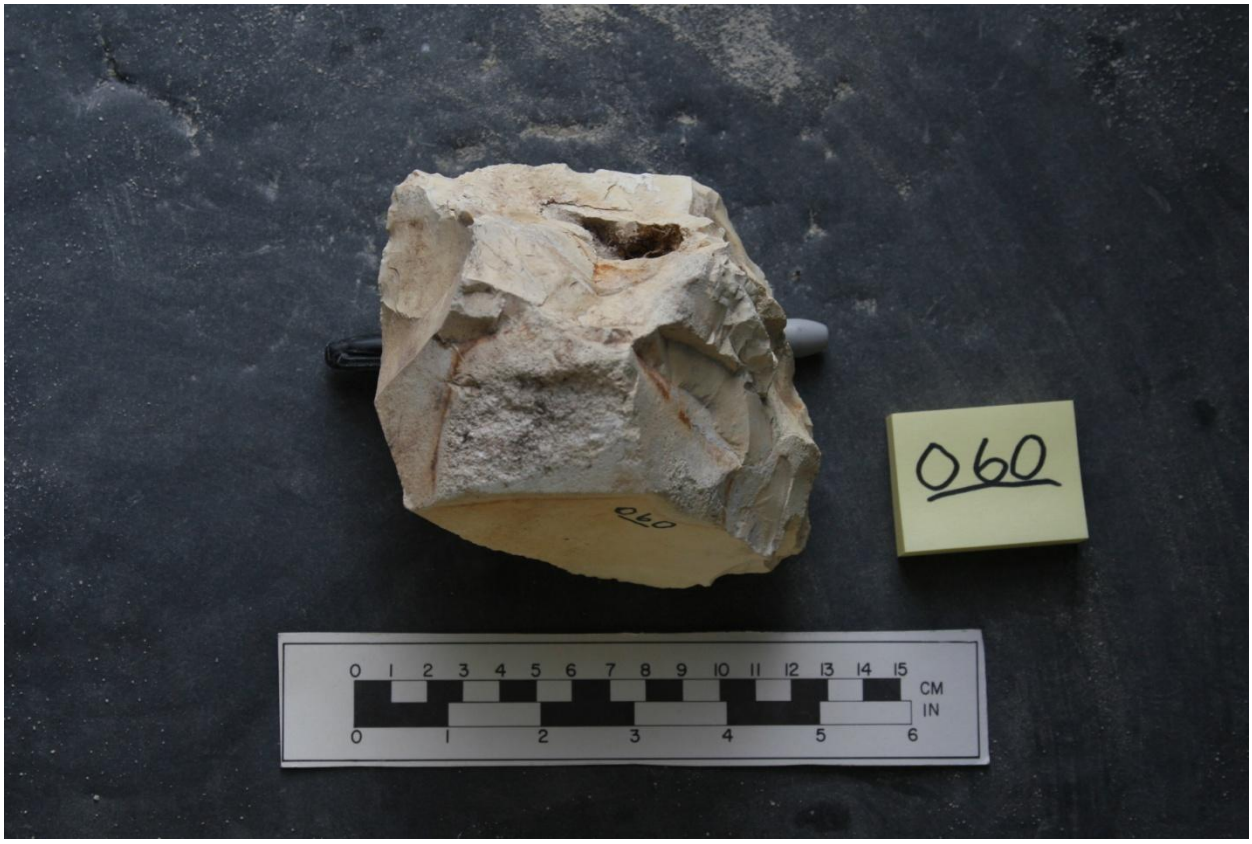

014


BACKHOE
014


015
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6

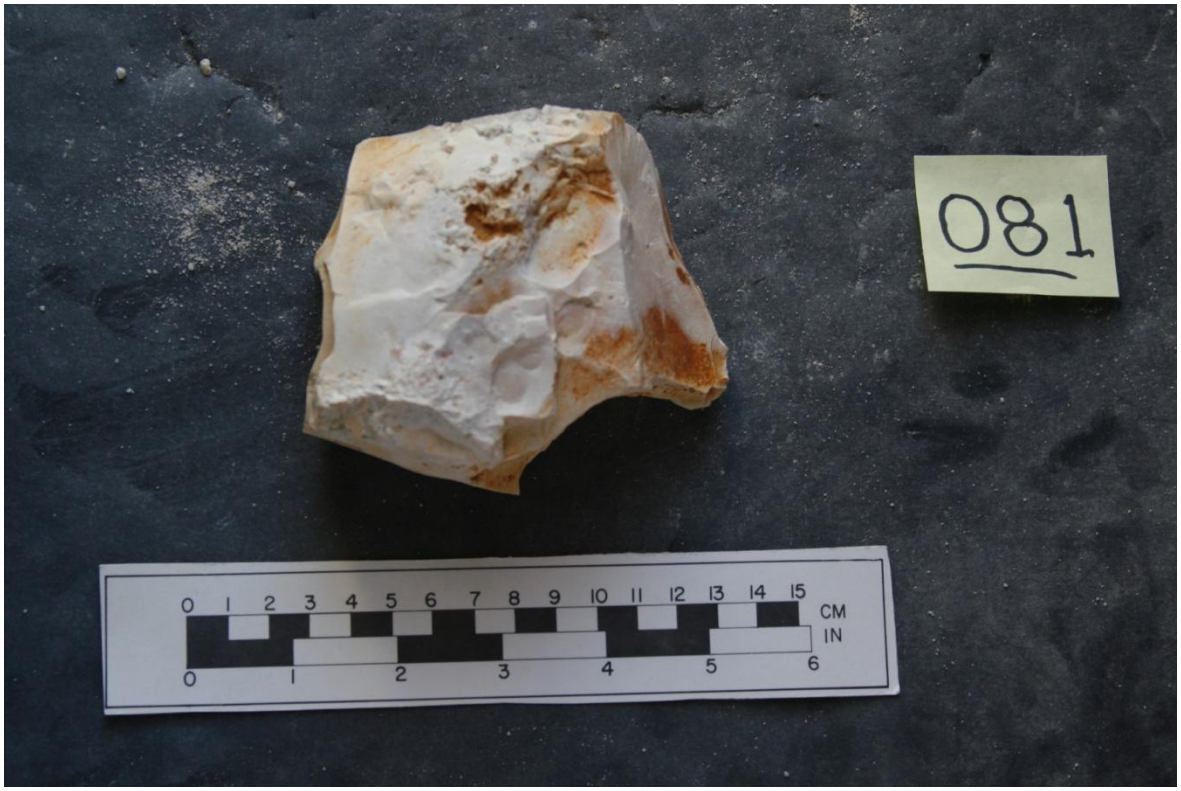

015
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


060
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


060
070
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


077
077
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6

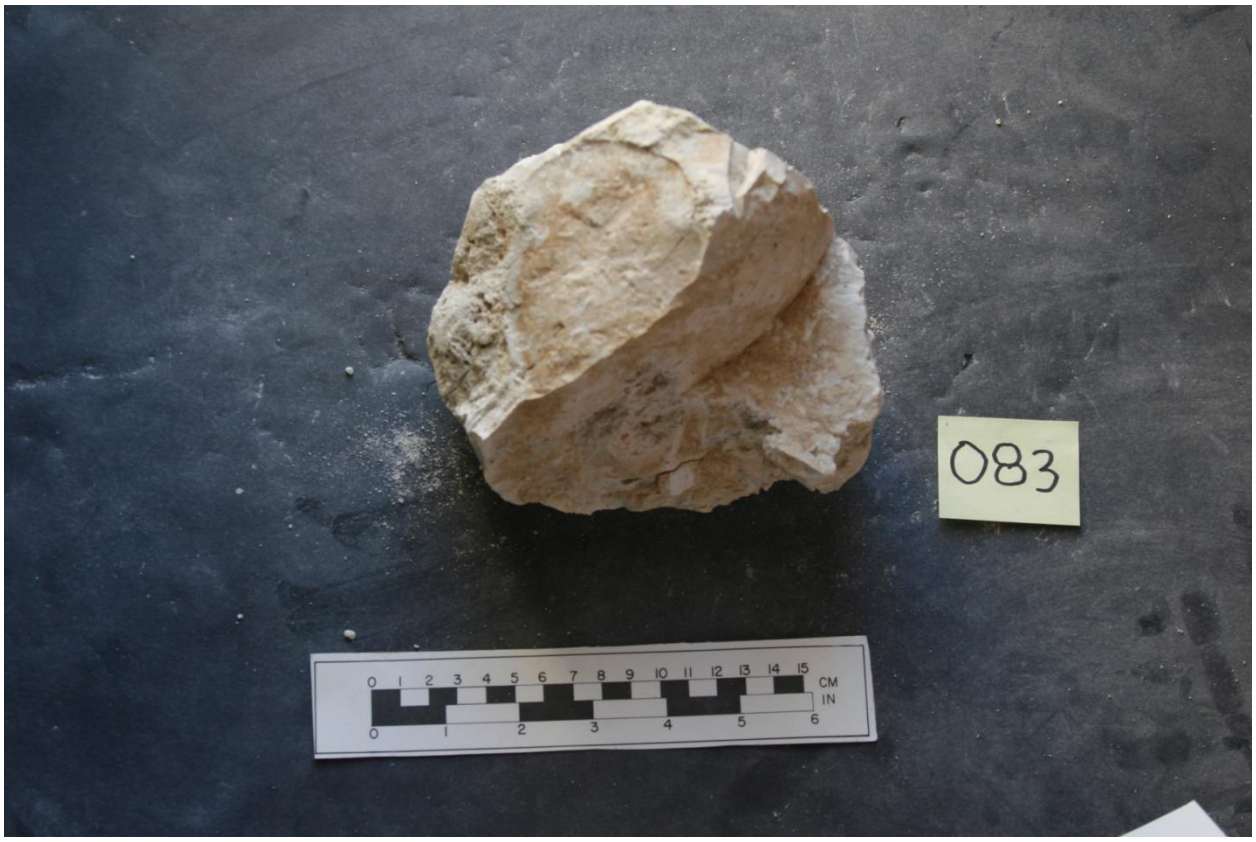

077
077
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


081
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


081
081
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


080
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


080
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


083
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


083
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


085
085
CM
IN


085
CM
IN


087
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


087
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


087
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


4 5 6 7 8 9 10 11 12


088
15-C 088
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


088
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


089
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 CM
0 1 2 3 4 5 6 IN

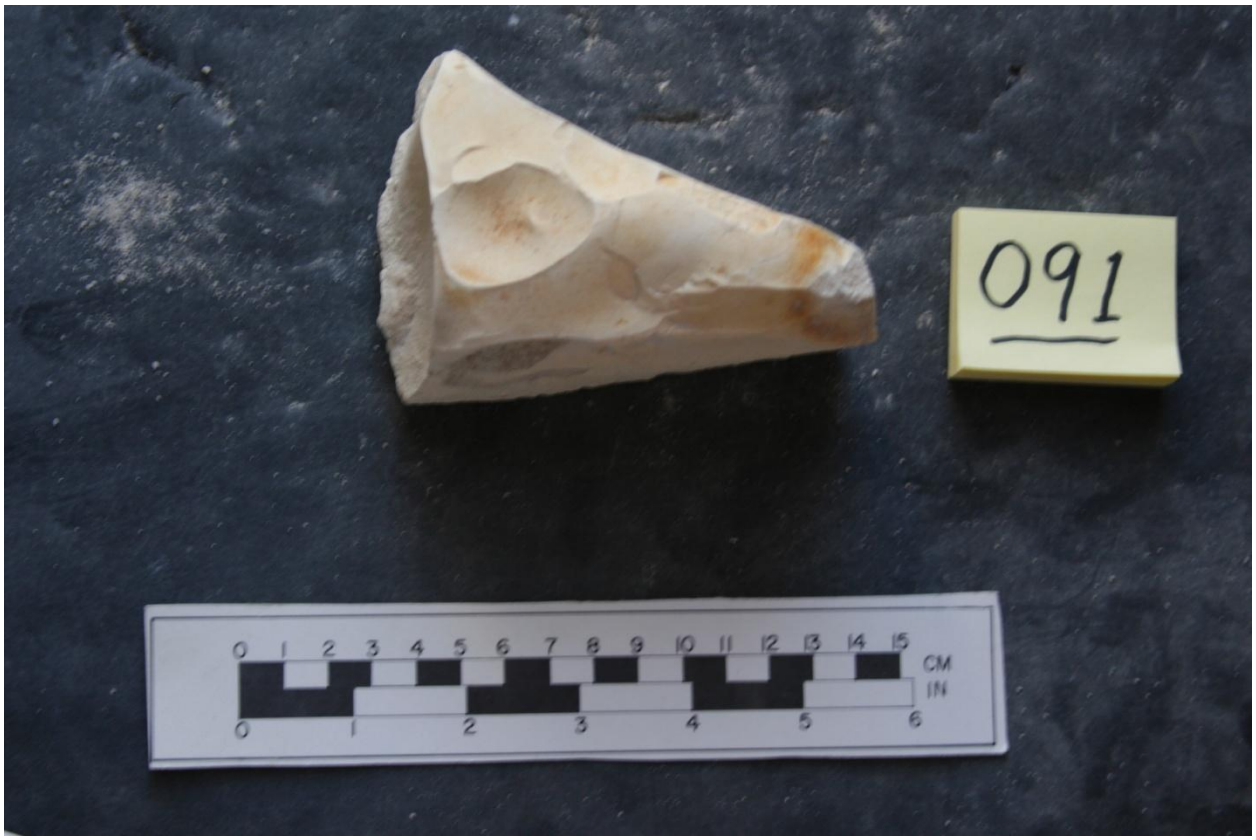

089
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 CM
0 1 2 3 4 5 6 IN





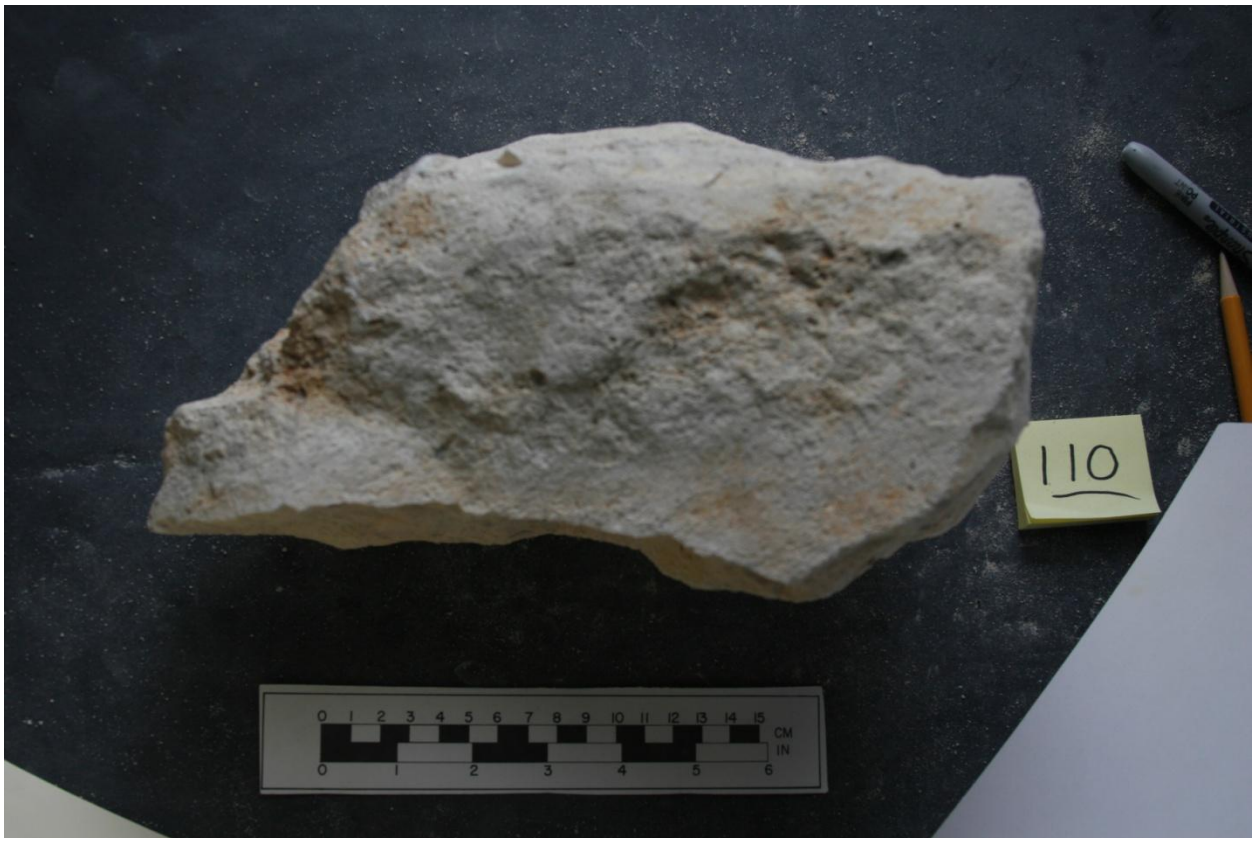

090
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6

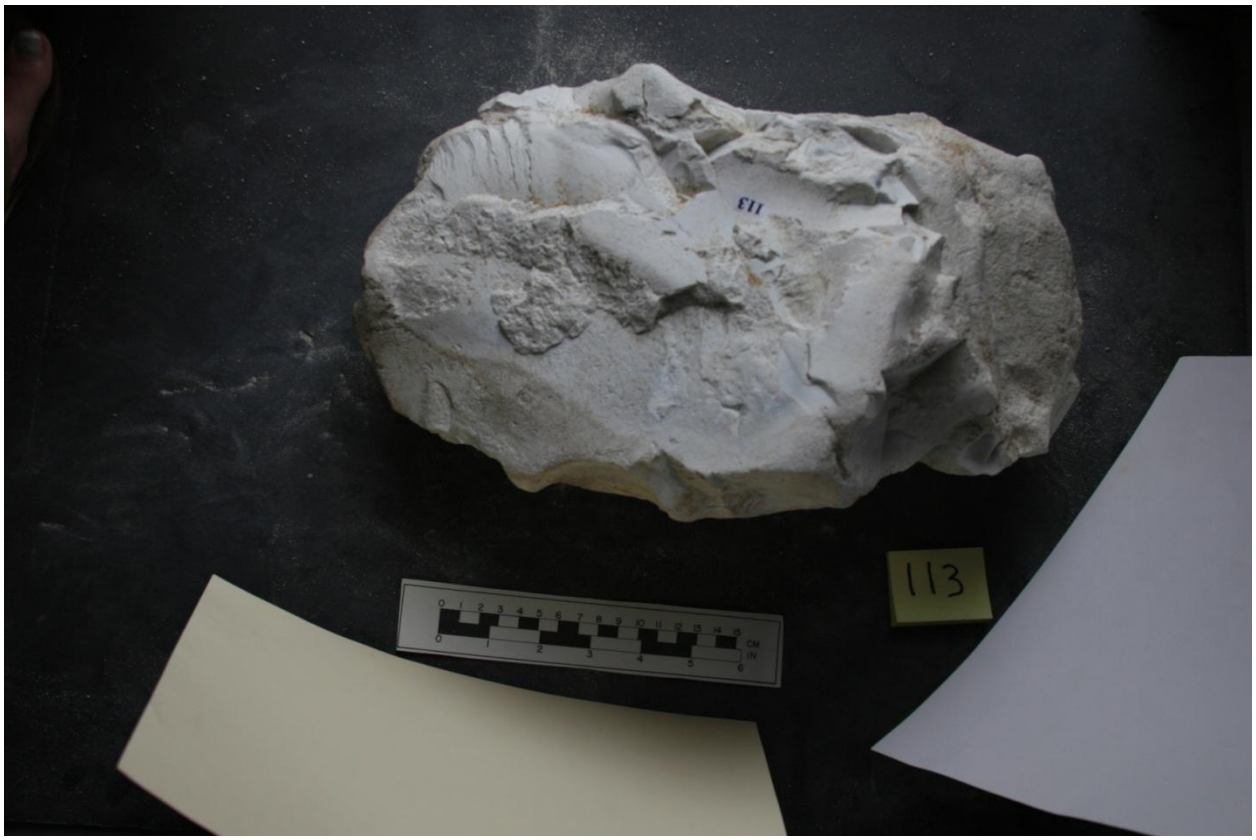

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6

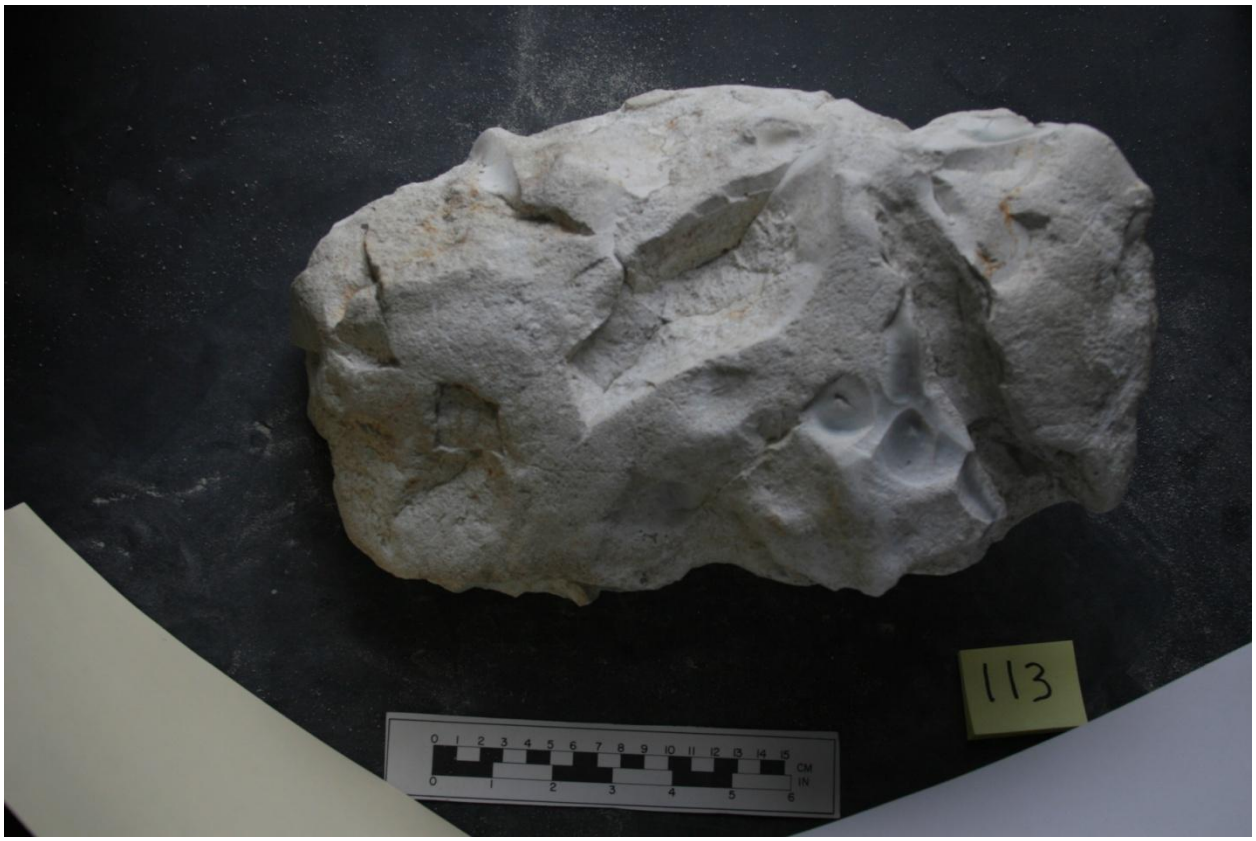

091
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


91
091
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


110
110
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


110
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


113

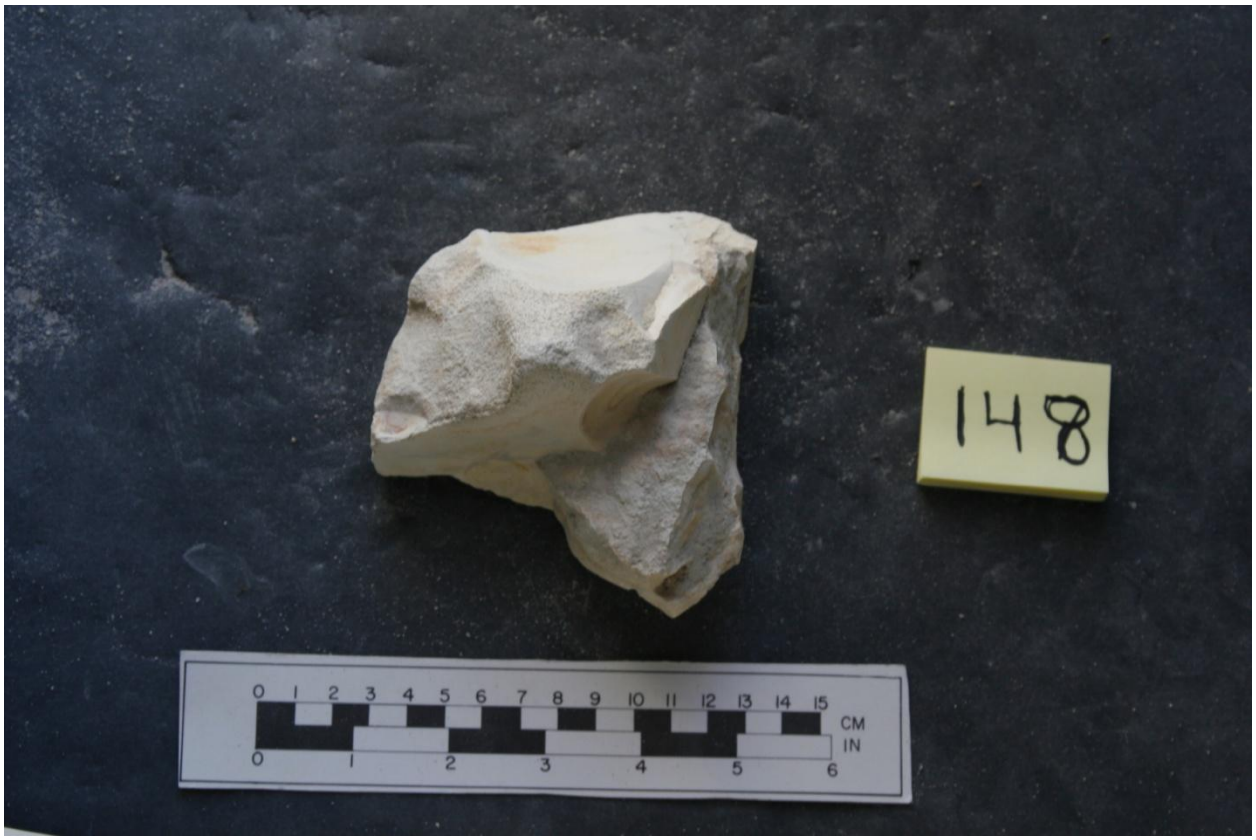

113


116
116
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


116
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


122
122
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


122
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


148
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6


148
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CM
IN
0 1 2 3 4 5 6

Table A27-1
Selected Chert Boulders Cobbles, and Core Tools from the Pleistocene Sands and Pleistocene Terrace at the Topper Site

Sample #	Strata	Provenience	Quad	Level	Depth	Year	Art #
001	General	Backhoe Spoil	-	-	-	-	-
002	General	Backhoe Spoil	-	-	-	2000	-
003	General	Backhoe Spoil	-	-	-	2003	-
004	General	Backhoe Spoil	-	-	-	2002	-
005	General	BHT 5	-	-	-		-
006	General	BHT 15	-	-	-		-
007	General	BHT 18	-	-	-	2003	-
008	General	BHT 17 Spoil	-	-	-	2003	-
009	Pleistocene terrace	BHT 17	-	-	-	2003	-
010	Pleistocene terrace	BHT 17	-	1	-	2003	-
011	Pleistocene terrace	BHT 14	-	-	-		-
012	General	Backhoe Spoil	-	-	-	2000	-
013	Pleistocene sands	N244E140		21		2003	ART2
014	Pleistocene terrace	BHT 5	-	-	-		-
015	Pleistocene terrace	BHT 14	-	-	-	2001	-
016	General	Backhoe Spoil	-	-	-	2000	-
017	General	Backhoe Spoil	-	-	-	2001	-
018	Pleistocene sands	N244E148			190-200 cmbd	2000	ART#1
019	Pleistocene sands	N244E142		16	97.50-97.38m	2002	F88-1
020	Pleistocene sands	N244E142		16	97.50-97.38m	2002	F88-2
021	Pleistocene sands	N244E142		16	97.50-97.38m	2002	F88-3
022	Pleistocene sands	N244E142		16	97.50-97.38m	2002	F88-4
023	Pleistocene sands	N244E142		16	97.50-97.38m	2002	F88-5
024	General	Backhoe Spoil	-	-	-	-	-
025	General	Backhoe Spoil	-	-	-	-	-
026	General	Backhoe Spoil	-	-	-	-	-
027	Pleistocene sands	N242E142	SW	19	97.305-97.30	2003	ART#17
028	Pleistocene sands	BHT 5	-	-	97.15m	2002	-
029	Pleistocene sands	N238E128			96.56m	2001	ART#1
030	Pleistocene sands	N245E144			98.00-97.50m	2002	-
031	Pleistocene sands	N245E144			98.00-97.50m	2002	-
032	Pleistocene sands	N245E144			98.00-97.50m	2002	-
033	Pleistocene terrace	BHT 14	-	-	-	2001	-
034	Pleistocene sands	N244E148	SW*	20	200-210cmbd	2000	ART#12
035	Pleistocene sands	N244E148	SE*	20	200-210cmbd	2000	ART#25
036	Pleistocene sands	N244E148	SW*	17	170-180cmbd	2000	ART#3
037	Pleistocene sands	N244E148	NW*	20	200-210cmbd	2000	ART#14
038	Pleistocene sands	N244E148	NE*	16	160-170cmbd	2000	F67 Item #4
039	Pleistocene sands	N244E148	SW*	20	200-210cmbd	2000	ART#3
040	Pleistocene sands	N244E148	NW*	20	200-210cmbd	2000	ART#24
041	Pleistocene sands	N244E148	SE*	20	200-210cmbd	2000	ART#30
042	Pleistocene sands	N244E148	SW*	20	200-210cmbd	2000	ART#27
043	Pleistocene sands	N244E148	SE*	20	200-210cmbd	2000	ART#26
044	Pleistocene sands	N244E148	SE*	19	190-200cmbd	2000	ART#11
045	Pleistocene sands	N244E148	SE*	20	200-210cmbd	2000	ART#22
046	Pleistocene sands	N244E148	SE*	20	200-210cmbd	2000	ART#20
047	Pleistocene sands	N244E148		19	190-200cmbd	2000	Bucket 19B
048	Pleistocene sands	N244E148	NE*	20	200-210cmbd	2000	ART#8
049	Pleistocene sands	N244E148	NW*	16	160-170cmbd	2000	F67 Item#3
050	Pleistocene sands	N244E148	NW*	16	160-170cmbd	2000	F67 Item#2

Table A27-1 continued

Sample #	Strata	Provenience	Quad	Level	Depth	Year	Art #
051	Pleistocene sands	N242E140	SE	18	97.36m	2003	ART#5
052	Pleistocene sands	N244E140	NW	18	97.36m	2003	ART#1
053	Pleistocene sands	N242E140	NW	20	97.21m	2003	ART#6
054	Pleistocene sands	N242E140	SW	20	97.30-97.25	2003	ART#7
055	Pleistocene sands	N242E140	SW	20	97.30-97.25	2003	ART#9
056	Pleistocene sands	N242E140	SW	20	97.25m	2003	ART#4
057	Pleistocene sands	N244E138	SE	13	97.55-97.50m	2002	ART#2
058	Pleistocene sands	N242E142	NE	14	97.57m	2002	ART#1
059	Pleistocene sands	N244E142	NW	14	97.54m	2002	ART#3
060	Pleistocene sands	N244E138	SW	10	97.65m	2002	ART#1
061	Pleistocene terrace	BHT 17	-	1	-	2003	A29
062	Pleistocene terrace	BHT 17	-	1	-	2003	2&2A
063	General	Backhoe Spoil	-	-	-	2000	-
064	Pleistocene terrace	BHT 17	-	2	95.71m	2003	A5
065	Pleistocene terrace	BHT 17		2	-	2003	A3
066	Pleistocene terrace	BHT 17	-	1	-	2003	A27
067	Pleistocene terrace	BHT 17	-	1	-	2003	A26
068	Pleistocene terrace	BHT 17	-	1	-	2003	A25
069	Pleistocene terrace	BHT 17	-	1	-	2003	A28
070	Pleistocene terrace	BHT 17	-	1	-	2003	A5
071	Pleistocene terrace	BHT 17	-	1	95.77	2003	A3
072	Pleistocene sands	N244E132			170-175cmbd	2000	
073	Pleistocene sands	N242E136	SW	23			
074	Pleistocene sands	N240E132	NW	18		2001	F83 #2
075	Pleistocene terrace	N244E140	SW	16	95.54m	2007	ART#4
076	Pleistocene terrace	N244E144	NW	19	97.56m	2005	
077	Pleistocene sands	N240E130		25	96.75-96.70m	2001	ART#4
078	Pleistocene sands	N244E132			170-175cmbd	2000	ART#5
079	Pleistocene sands	N244E132	NE		170-175cmbd	2000	ART#1
080	Pleistocene sands	N244E132	SW		174cmbd	2000	
081	Pleistocene sands	N244E148			190-200cmbd	2001	ART#16
082	Pleistocene sands	N242E140	SW	20	97.30-97.25m	2003	ART#3
083	Pleistocene sands	N240E132	NW	18		2001	F83 #3
084	Pleistocene sands	N240E132	NW	18		2001	F83 #4
085	General	Backhoe Spoil	-	-	-	2004	-
086	Pleistocene sands	N242E130	SW		185-190cmbd	2000	ART#4
087	Pleistocene sands	N244E144			97.68m	2005	
088	Pleistocene sands	N242E144	NW	10	97.50-97.45m	2005	ART#1
089	Pleistocene sands	N242E136	SE	17	97.32	2002	ART#4
090	Pleistocene sands	N238E138	SE		190-200cmbd	2000	ART#26
091	Pleistocene sands	N244E148	F67		160-170cmbd	2000	F67 Item#1
092	Pleistocene sands	N238E134	SE				Item 2
093	Pleistocene sands	N244E142	SW	19	97.215m	2003	ART#24
094	Pleistocene sands	N242E140	SW	20	97.30-97.25m	2003	ART#11
095	Pleistocene sands	N242E130		14	130-140cmbd	1999	
096	Pleistocene sands	N244E142			97.275m	2000	Art.17
097	Pleistocene sands	N244E142	SW	19	97.35-97.30	2003	ART.13
098	Pleistocene sands	N242E142	SW	19	97.40-97.35m	2003	Art.23
099	Pleistocene sands	N244E142	SW	19	97.35-97.30	2003	Art.12
100	Pleistocene sands	N244E142	SW	19	97.35-97.30	2003	Art.14&15
101	Pleistocene sands	N244E142	SW	19	97.35-97.30	2003	AA7
102	Pleistocene sands	N242E142	SW	19	97.40-97.35m	2003	AA.27

Table A27-1 continued

Sample #	Strata	Provenience	Quad	Level	Depth	Year	Art #
103	Pleistocene sands	N242E142	SW	19	97.40-97.35m	2003	AA.26
104	Pleistocene sands	N244E142	SW	18	97.40-97.35m	2003	AA.14
105	Pleistocene sands	N240E132	F83	18	97.12m	2001	F83 Art#5
106	Pleistocene sands	N240E132	F83	18	97.14m	2001	F83 Art#7
107	Pleistocene sands	N244E142	SW	18	97.40-97.35m	2003	AA.13
108	Pleistocene sands	N244E142	SW	18	97.40-97.35m	2003	AA.10
109	Pleistocene sands	N244E142	SW	18	97.40-97.35m	2003	AA.12
110	Pleistocene sands	N244E132			170-175cmbd	2000	Rock#3
111	Pleistocene sands						
112	Pleistocene terrace	N242E140	SW	21	95.50-95.55m	2007	Art#1
113	Pleistocene terrace	N242E140	SE	22	95.75-95.70	2007	Art#25
114	Pleistocene sands	N242E136	SE	18	97.30-97.25m	2002	Art#5
115	Pleistocene sands	N244E142	NW	17	97.65-97.60m	2002	Art#4
116	Pleistocene sands	N244E140	NE	16	97.50-97.45	2002	Art#3
117	Pleistocene sands	N244E140	SW	16	97.50-97.45m	2002	Art#1
118	Pleistocene sands	N244E140	NW	17	97.45-97.40	2002	Art#3
119	Pleistocene sands	N244E140	NW	17	97.45-97.40	2002	Art#2
120	Pleistocene sands	N244E136	NE	15	97.40-97.35	2002	Art#2
121	Pleistocene sands	N244E138	SW	17	97.45-97.40	2002	Art#5
122	Pleistocene sands	N242E138	SE	12	97.60-97.55	2002	Art#1
123	Pleistocene sands	N248E142	SW	26	97.50-97.45	2009	Art#1
124	Pleistocene sands	N244E144	SW			2011	-
125	Pleistocene sands	N244E138	NW	13		2003	-
126	Pleistocene sands	N246E142	SE	21		2005	A6
127	Pleistocene sands	N246E142	SE	22	135-140cmbd	2005	A4
128	Pleistocene sands	N246E142	NW	22	135-140cmbd	2005	A5
129	Pleistocene sands	N246E140	SW	18	115-120cmbd	2005	A4
130	Pleistocene sands	N246E140	SW	21	130-135cmbd	2005	A11
131	Pleistocene sands	N246E142	NW	25	150-155cmbd	2005	A16
132	Pleistocene sands	N246E140	NW	20	125-130cmbd	2005	A9
133	Pleistocene sands						F87 Art#12
134	Pleistocene sands	N244E142					F87 A#23
135	Pleistocene sands	N244E142?					F87 A#27
136	Pleistocene sands	N244E142				2002	F87 A#52
137	Pleistocene sands	N242E138?					F87 A#1
138	Pleistocene sands	N244E136?				2002	F87 A#10
139	Pleistocene sands	N242E138?				2002	F87 A#47
140	Pleistocene sands	N244E138?				2002	F87 A#27
141	Pleistocene sands						F87 A#7
142	Pleistocene sands						F87 A#13
143	Pleistocene sands	N244E142?					F87 A#25
144	Pleistocene sands	N244E138?				2002	F87 A#23?
145	Pleistocene sands	N244E138?				2002	F87 A#45
146	Pleistocene sands	N244E142?					F87 A#30
147	Pleistocene sands						F87 A#1?
148	Pleistocene sands	N244E138?					F87 A#34
149	Pleistocene sands	N244E142?					F87 A#9
150	Pleistocene sands	N244E148			97.8-97.7m	2000	
151	Pleistocene sands	N244E148			97.8-97.7m	2000	
152	Pleistocene sands	N244E148			97.8-97.7m	2000	
153	Pleistocene sands	N244E148			97.60-97.50m	2000	
154	Pleistocene sands	N242E136?				2002	F87 #48

Table A27-1 continued

Sample #	Strata	Provenience	Quad	Level	Depth	Year	Art #
155	Pleistocene sands	N242E138?					F87 A#46
156	Pleistocene sands	N244E128	SE				A#3
157	Pleistocene sands	N244E146			97.40-97.30	2000	
158	Pleistocene sands	N244E146			170-180cmbd	2000	
159	Pleistocene sands	N244E146			170-180cmbd	2000	
160	Pleistocene sands	N242E142		19		2003	Art#25
161	Pleistocene sands	N242E140		19		2003	Art#10
162	Pleistocene sands	N242E130	SW		185-190cmbd	2000	Art#3
163	Pleistocene sands	N242E142		19		2003	Art#22
164	Pleistocene sands	N242E130	SE		180-185cmbd	2000	Art#5
165	Pleistocene sands	N242E142		19		2003	Art#13
166	Pleistocene sands	N242E142		19		2003	Art#28
167	Pleistocene sands	N242E140		19		2003	Art#12
168	Pleistocene sands	N242E140		19		2003	Art#6
169	Pleistocene sands	N242E130	NE		180-185cmbd	2000	Art#1
170	Pleistocene sands	N242E142		19		2003	Art#2
171	Pleistocene sands	N242E142		19		2003	Art#12
172	Pleistocene sands	N242E142		19		2003	Art#11
173	Pleistocene sands	N242E140	NE	15	97.55-97.50	2002	Art#7
174	Pleistocene sands	N242E142		19		2003	Art#24
175	Pleistocene terrace	N242E142	SW	18		2008	Art#3
176	Pleistocene terrace	N242E140	NE	6	95.50-95.40	2005	Art#1
177	Pleistocene terrace	N242E140	NE	6	95.50-95.40	2005	Art#3
178	Pleistocene terrace	N242E140	SE	10	96.35-96.30	2006	Art#7
179	Pleistocene terrace	N242E140	SE	2	96.75-96.70	2006	Art#1
180	Pleistocene sands	N244E140	SW	17	97.45-97.40	2002	Art#7
181	Pleistocene sands	N244E140	SE	17	97.45-97.40	2002	Art#6
182	Pleistocene sands	N244E140	SW	17	97.45-97.40	2002	Art#8
183	Pleistocene sands	N244E138	NW	14	97.50-97.45m	2002	Art#13
184	Pleistocene sands	N244E140	SW	17	97.45-97.40m	2002	Art#9
185	Pleistocene terrace	N244E138	SE	13	96.55-96.50	2008	Art#11
186	Pleistocene terrace	N242E140	SE	25	95.60-95.55	2007	Art# 32
187	Pleistocene terrace	N242E140	SE	28		2008	Art#6
188	Pleistocene terrace	N244E140	SW		95.85-95.80	2008	Art#1
189	Pleistocene terrace	N242E140	SE	26		2008	Art#2
190	Pleistocene terrace	N242E140	SW	26	95.35	2008	Art#6
191	Pleistocene terrace	N242E140	SE	25	95.60-95.55	2007	Art#31
192	Pleistocene terrace	N242E140	SW	18	95.75-95.70	2007	Art#12
193	Pleistocene terrace	N244E140	SW		95.85-95.80	2008	Art#2
194	Pleistocene terrace	N242E140	SE	28		2008	Art#1
195	Pleistocene terrace	N242E140	SE	29	95.35	2008	Art#1
196	Pleistocene sands	N242E140	NE	13	97.65-97.60	2002	Art#1
197	Pleistocene terrace	N244E138	SE	10	96.65-96.60	2007	Art#2
198	Pleistocene terrace	N244E138	SE	9	96.70-96.65m	2007	Art#9
199	Pleistocene terrace	N244E138	SE		96.60-96.55m	2007	Art#4
200	Pleistocene terrace	N244E138	SE	10	96.65-96.60m	2007	Art#1
201	Pleistocene sands	N244E142	SE	11	97.75-97.70m	2002	Art#1
202	Pleistocene terrace	N242E140	SE	26		2008	Art#5
203	Pleistocene terrace	N244E138	SE	9	96.70-96.65	2007	Art#8
204	Pleistocene terrace	N242E140	SW	25	95.40-95.35		Art#10
205	General colelction	BHT 17	-	-	-		-
206	General collection	Backhoe spoil	-	-	-	-	-

Table A27-1 continued

Sample #	Strata	Provenience	Quad	Level	Depth	Year	Art #
207	General collection	Backhoe spoil	-	-	-	-	-
208	General collection	Backhoe spoil	-	-	-	-	-
209	Pleistocene terrace	N242E140	SE	28	95.40-95.35	2008	Art#10
210	Pleistocene terrace	N242E140	SE	28	95.40-95.35	2008	Art#12
211	Pleistocene sands	N244E132	NE?		180-185 cmbd	2000	F64 Art#2
212	Pleistocene sands	N242E132		15		1999	Art#8
213	Pleistocene sands	N242E132		15		1999	Art#5
214	Pleistocene sands	N242E132		15		1999	Art#6
215	Pleistocene sands	N242E132		15		1999	Art#7
216	Pleistocene sands	N244E132			170-180cmbd	2000	F#64 Art#1
217	Pleistocene sands	N248E142	SE	24	97.60-97.55	2009	Art#1
218	Pleistocene sands	N242E128	SE		180-185 cmbs	2000?	F#65 Art#22
219	Pleistocene sands	N244E132			140-150cmbs	2000	
220	Pleistocene sands	N242E132		16	150-160 cmbs	1999	Art#8
221	Pleistocene sands	N242E132		16	150-160cmbd	1999	Art#1
222	Pleistocene sands	N242E132		16	150-160cmbs	1999	Art#2
223	Pleistocene sands	N242E132		16	150-160cmbs	1999	Art#6
224	Pleistocene sands	N242E132		16	150-160cmbs	1999	Art#11
225	PLeistocene sands	N242E132		16	150-160cmbs	1999	Art#9

Table A27-2

Attributes for Selected Chert Boulders Cobbles, and Core Tools from the Pleistocene Sands and Pleistocene Terrace at the Topper Site

Art	Unit	L	W	T	Wt.	TA	N	E	D	Condition
001	PT	19.8	15.0	12.2	2800	No	-	-	-	Tested
002	PT	32.5	15.3	11.2	3100	No	-	-	-	Core
003	PS	28.3	15.5	13.6	2800	No	-	-	-	Core
004	PS	14.4	12.4	12.0	1955	No	-	-	-	Core
005	PS	26.8	15.2	12.6	3900	No	-	-	-	Core
006	PS	14.6	13.2	8.4	1491	No	-	-	-	Core
007	PT	17.0	16.2	9.6	2043	No	-	-	-	Core
008	PT	23.2	14.2	12.0	3700	No	-	-	-	Core
009	PT	10.0	8.4	8.0	747	No	-	-	-	Core
010	PT	11.0	8.6	6.6	405	Yes	-	-	-	Core
011	PT	47.2	21.3	12.0	9800	No	-	-	-	Core
012	PT	24.8	17.2	16.0	5100	No	-	-	-	Tested
013	PS	33.8	20.4	20.2	10600	No	245.58	140.17	97.14m	Core
014	PT	35.1	18.9	9.4	3400	No	-	-	-	Core
015	PT	15.7	10.2	8.0	1338	No	-	-	-	Tested
016	PT	14.6	10.3	9.2	1226	No	-	-	-	Tested
017	PT	24.3	15.2	10.8	3300	No	-	-	-	Core
018	PS	35.2	24.2	17.2	15700	No	245.18	148.95	196cmbd	Core
019	PS	11.0	6.8	5.8	432	No	-	-	-	Core
020	PS	12.5	5.7	4.0	382	No	-	-	-	Core
021	PS	18.5	11.9	10.0	1307	No	-	-	-	Core
022	PS	12.7	8.2	5.8	404	No	-	-	-	Core
023	PS	26.0	25.8	19.2	10400	No	-	-	-	Core
024	PT	26.4	14.2	12.3	4000	No	-	-	-	Core
025	PT	23.7	17.6	14.8	5400	No	-	-	-	Core
026	PS	44.7	12.6	9.0	4500	No	-	-	-	Tested
027	PS	37.8	21.3	14.3	9.4	No	243.25	143.60	97.195m	Core
028	PS	24.2	18.1	14.0	7100	No	241.18	139.73	97.15m	Core
029	PS	31.4	22.8	15.2	13100	No	238.50	128.75	96.56m	Core
030	PS	16.5	14.7	10.4	1786	No	-	-	-	Core
031	PS	17.8	10.0	7.6	1066	No	-	-	-	Core-Chopper
032	PS	9.0	7.7	6.2	362	No	-	-	-	Core-Chopper
033	PT	22.4	18.7	16.4	4500	No	-	-	-	Core
034	PS	16.2	11.8	10.4	2034	No	244.93	148.94	206cmbd	Nodule
035	PS	22.2	15.0	10.2	3300	No	244.60	149.51	214cmbd	Core-Chopper
036	PS	22.0	16.7	13.7	3100	No	244.26	148.64	181cmbd	Core-Chopper
037	PS	19.2	15.7	12.5	3500	No	245.16	148.56	207cmbd	Core

Table A27-2 continued

Art	Unit	L	W	T	Wt.	TA	N	E	D	Condition
038	PS	26.4	24.6	17.0	5900	No	245.15	149.03	173cmbd	Core
039	PS	18.7	16.1	12.0	3200	No	244.86	148.19	206cmbd	Nodule
040	PS	16.4	11.5	11.0	1275	No	245.66	148.37	214cmbd	Nodule
041	PS	19.8	19.0	15.4	5100	No	244.65	149.25	220cmbd	Core
042	PS	25.2	16.4	14.2	5300	No	244.60	148.90	216cmbd	Tested
043	PS	17.6	13.3	13.0	2600	No	244.76	149.48	216cmbd	Core
044	PS	22.0	16.6	13.4	4700	No	244.60	149.67	198cmbd	Core
045	PS	13.8	9.2	4.7	619	No	244.30	149.36	209cmbd	Core-Chopper
046	PS	15.3	12.5	6.9	796	No	245.86	149.35	204cmbd	Nodule
047	PS	26.0	21.9	15.0	8900	No				Core
048	PS	25.2	12.1	10.3	2700	Possible	244.87	148.16	199cmbd	Core-Chopper
049	PS	13.6	11.0	8.0	571	No	245.00	148.89	169cmbd	Nodule
050	PS	13.9	9.0	8.0	673	No	245.01	148.81	164cmbd	Core
051	PS	12.0	10.2	7.8	752	No	242.97	141.97	97.36m	Core
052	PS	15.2	9.1	4.3	570	No	245.43	140.43	97.36m	Tested
053	PS	18.0	11.6	9.2	1610	No	243.65	140.79	97.21m	Nodule
054	PS	18.4	12.4	9.6	2400	No	242.07	140.60	97.235m	Core
055	PS	9.1	6.7	4.5	169	No	242.88	140.38	97.26m	Core
056	PS	12.8	9.2	8.9	585	No	242.30	140.67	97.25m	Tested
057	PS	20.1	16.2	10.6	3100	No	244.37	139.59	97.53m	Core
058	PS	29.0	20.0	13.0	4900	No	243.58	145.62	97.57m	Tested
059	PS	27.2	12.5	9.6	1424	No	245.27	142.57	97.54m	Core
060	PS	12.1	11.3	9.1	1064	No	244.47	138.51	97.65m	Core-Chopper
061	PT	23.3	16.7	13.1	6100	No	-	-	-	Core
062	PT	30.5	21.5	14.0	8800	Possible	-	-	-	Core
063	PS	14.4	9.2	9.2	865	No	-	-	-	Core-Chopper
064	PT	17.0	10.5	10.1	1568	No	-	-	-	Core
065	PT	16.3	8.8	4.6	643	Possible	-	-	-	Core
066	PT	19.7	18.1	10.2	2700	No	-	-	-	Core
067	PT	11.9	10.3	7.0	1031	No	-	-	-	Core
068	PT	12.5	11.0	7.1	1045	No	-	-	-	Core-Chopper
069	PT	15.2	7.3	5.0	602	No	-	-	-	Core
070	PT	7.7	6.8	4.3	167	Possible	-	-	-	Core
071	PT	9.8	8.0	3.8	434	No	-	-	-	Core-Chopper
072	PS	12.7	9.8	9.0	704	No	244.50	133.30	178cmbd	Core Fragment
073	PS	14.3	10.5	9.1	815	No	242.30	136.64		Core
074	PS	9.0	8.0	6.5	361	No	241.17	132.47	97.16m	Core

Table A27-2 continued

Art	Unit	L	W	T	Wt.	TA	N	E	D	Condition
075	PT	27.4	26.8	15.0	9700	No	244.14	140.26	95.54m	Core
076	PT	16.0	12.2	9.0	1627	No	245.17	144.92	97.56m	Core
077	PS	11.8	8.1	6.0	598	No	241.20	131.60	96.68m	Core
078	PS	22.7	17.5	11.0	2500	No	244.52	133.50	178cmbd	Tested
079	PS	22.6	17.0	11.5	4500	No	245.06	133.11	178cmbd	Core
080	PS	19.4	12.8	8.6	1968	No				Core-Chopper
081	PS	11.0	9.4	5.5	479	Possible	245.16	149.24	204cmbd	Core
082	PS	20.6	14.5	9.7	3200	No	242.65	140.35	97.23m	Core
083	PS	16.0	14.5	12.0	2300	No	241.20	132.53	97.15m	Core
084	PS	15.5	11.9	9.1	1257	No	241.29	132.47	97.16m	Core
085	PS	17.6	14.0	4.7	803	No	-	-	-	Tool-Chopper
086	PS	23.3	14.5	11.7	3900	Possible	242.27	130.70	189cmbd	Core
087	PS	16.1	9.7	5.5	737	No	245.00	144.40	97.68m	Core-Chopper
088	PS	9.1	7.9	4.1	288	No	243.09	144.54	97.47m	Core-Chopper
089	PS	17.3	12.8	4.8	897	No	242.54	137.55	97.32m	Tool-Chopper
090	PS	20.0	10.7	7.2	1308	No	238.98	138.81	96.98m	Core-Chopper
091	PS	12.2	9.2	6.4	478	No	244.84	148.83	166cmbd	Core
092	PS	11.7	9.9	7.7	818	No	238.98	135.81	96.98m	Core
093	PS	21.4	14.5	9.0	2900	No	244.28	143.50	97.215m	Core
094	PS	21.1	20.9	13.4	3400	No	243.00	140.23	97.23m	Core
095	PS	16.6	10.5	9.1	1122	No	-	-	-	Nodule
096	PS	9.0	6.9	6.7	219	No	244.00	142.58	97.275m	Core Fragment
097	PS	19.7	10.6	9.0	1377	No	244.50	143.87	97.29m	Core-Chopper
098	PS	16.5	11.0	10.2	1930	No	243.65	143.85	97.22m	Nodule
099	PS	15.1	6.8	4.8	501	No	244.80	143.63	97.315m	Nodule
100	PS	14.7	11.0	5.5	720	No	244.20	143.30	97.295m	Core
101	PS	14.5	10.0	8.7	1112	No	245.90	142.60	97.27m	Nodule
102	PS	23.6	16.9	11.1	4100	No	242.46	142.25	97.1m	Tested
103	PS	18.3	14.4	11.9	1656	No	242.30	142.27	97.155m	Core
104	PS	15.3	13.0	8.1	1076	No	245.48	143.74	97.37m	Core
105	PS	10.1	8.3	5.2	273	No	241.30	132.54	97.12m	Core Fragment
106	PS	12.3	12.7	9.1	1018	No	241.20	132.56	97.14m	Core
107	PS	4.9	4.1	3.6	50	No	245.54	143.94	97.365m	Core
108	PS	5.4	3.7	3.3	50	No	245.16	143.89	97.355m	Core Fragment
109	PS	11.0	7.2	4.0	260	No	245.35	143.91	97.36m	Core
110	PS	25.7	14.7	12.5	5700	No	245.10	133.45	185.cmbd	Core
111	PS	34.9	27.0	17.8	12400	No	CHECK			Nodule

Table A27-2 continued

Art	Unit	L	W	T	Wt.	TA	N	E	D	Condition
112	PT	22.7	20.5	19.1	6100	No	242.99	140.50	95.59m	Tested
113	PT	35.3	21.5	12.7	11600	No	242.69	141.48	95.71m	Tested
114	PT	6.0	4.8	3.2	93	No	242.33	137.52	97.27m	Core Fragment
115	PS	14.2	11.8	9.5	1053	No	245.18	142.89	97.605m	Nodule
116	PS	16.9	8.3	6.8	826	No	245.58	141.08	97.49m	Core
117	PS	17.7	14.1	7.4	2800	No	244.70	140.70	97.47m	Core
118	PS	18.0	11.5	6.8	1099	No	245.45	140.45	97.41m	Core-Chopper
119	PS	14.3	9.5	5.5	683	No	245.45	140.85	97.41m	Core
120	PS	11.0	10.1	5.4	639	No	245.05	137.63	97.37m	Core-Chopper
121	PS	12.8	8.3	6.8	462	No	244.17	140.86	97.46m	Core
122	PS	10.5	7.3	4.8	202	No	242.26	139.59	97.59m	Core Fragment
123	PS	16.2	13.0	6.7	1165	No	248.80	142.85	97.515m	Core-Chopper
124	PS	35.0	18.2	14.0	7600	No	244.85	144.70	97.41m	Core
125	PS	19.1	18.3	10.5	2800	No	246.05	138.94	193cmbd	Tested
126	PS	14.1	10.6	9.4	1469	No	246.44	143.19	135cmbd	Tested
127	PS	8.7	6.6	6.2	359	No	246.64	143.25	97.63m	Tested
128	PS	15.4	9.3	6.1	872	No	247.55	142.34	97.60m	Tested
129	PS	14.5	13.4	5.8	956	No	246.20	140.96	97.65m	Core-Chopper
130	PS	17.3	9.0	7.5	1217	No	246.28	140.07	97.53m	Core-Chopper
131	PS	10.9	10.0	5.4	551	No	247.01	142.39	97.45m	Tested
132	PS	15.4	10.6	5.8	647	No	247.81	140.09	97.58m	Core
133	PS	18.7	15.6	8.5	2501	Possible				Core
134	PS	20.4	17.5	6.4	1859	No	244.81	142.42	97.49m	Nodule
135	PS	12.7	9.7	7.2	516	No	245.10	142.39	97.455m	Tested
136	PS	16.5	11.7	10.0	1616	No	244.27	137.96	97.365m	Nodule
137	PS	20.1	18.1	6.3	3200	No	243.50	138.60	97.46m	Tested
138	PS	17.5	16.7	13.2	4800	No	244.05	137.41	97.42m	Core
139	PS	18.7	12.8	7.4	1961	No	243.88	138.86	97.42m	Core
140	PS	10.2	7.1	4.1	287	No	244.34	138.13	97.43m	Core
141	PS	22.7	12.1	9.3	1936	No				Core
142	PS	20.6	13.9	5.3	2048	No				Tested
143	PS	16.7	13.8	9.1	1674	No	245.30	142.41	97.44m	Core
144	PS	29.5	22.4	15.8	9100	No	244.19	138.21	97.36m	Core
145	PS	12.6	7.7	5.4	463	No	244.15	138.73	97.48m	Nodule
146	PS	14.0	12.4	6.1	715	No	244.68	142.17	97.435m	Tested
147	PS	13.6	8.4	6.4	527	No				Tested
148	PS	12.3	12.1	6.2	543	No	244.47	138.39	97.45m	Core-Chopper

Table A27-2 continued

Art	Unit	L	W	T	Wt.	TA	N	E	D	Condition
149	PS	13.7	13.5	6.6	688	No	245.08	143.74	97.48m	Core
150	PS	11.8	6.8	6.1	443	No				Tested
151	PS	14.4	10.6	6.7	585	No				Nodule
152	PS	10.7	6.8	6.0	410	No				Nodule
153	PS	17.6	9.8	7.5	1107	No				Core
154	PS	7.6	7.2	6.0	271	No	243.82	137.70	97.41m	Core
155	PS	7.7	4.9	3.7	128	No	243.92	138.35	97.45m	Core
156	PS	23.4	16.5	10.7	4700	No	244.67	129.76	138.5cmbd	Core
157	PS	18.9	12.2	7.4	1499	No				Tested
158	PS	15.7	14	9.4	1985	No				Core
159	PS	17.2	14.4	7	2200	No				Core
160	PS	19.4	14.4	10.4	2400	No	242.47	142.82	97.28m	Core-Chopper
161	PS	10.6	7.6	5.3	316	No	243.30	140.73	97.30m	Core
162	PS	17.3	12.4	9.8	2800	No	242.45	130.73	188cmbd	Tested
163	PS	9.6	7.4	7.1	412	No	243.20	143.92	97.22m	Nodule
164	PS	12.8	10.9	6.8	672	No	242.15	131.05	184cmbd	Core
165	PS	15.5	8.5	6.3	901	No	242.90	143.07	97.335m	Core-Chopper
166	PS	11.8	11.6	6.4	779	No	243.25	142.91	97.22m	Tested
167	PS	10.7	7.8	7.7	376	No	242.60	141.73	97.325m	Nodule
168	PS	8.8	8	5	459	No	243.96	141.95	97.30m	Core
169	PS	13.7	11.7	6.2	784	No	243.23	131.85	180cmbd	Core-Chopper
170	PS	5.5	4.0	2.3	59	No	242.40	143.57	97.30m	Core
171	PS	10.6	7.6	3.5	217	No	242.89	143.57	97.335m	Core
172	PS	11.6	9.3	9.2	795	No	242.60	143.78	97.33m	Core-Chopper
173	PS	11.5	7.8	6.0	484	No	243.21	141.08	97.5m	Core
174	PS	12.8	10.3	3.8	390	No	243.74	143.00	97.335m	Tested
175	PT	10.4	9.3	6.5	380	No	242.17	142.49	95.90m	Core
176	PT	15.0	5.2	4.4	241	No	243.38	141.55*	95.47m	Core
177	PT	10.4	9.3	8.3	790	No	243.01	141.10	95.43m	Core
178	PT	4.8	4.2	3.0	34	No	242.27	141.73	96.34m	Core
179	PT	5.6	4.7	3.6	58	No	242.49	141.41	96.72m	Core
180	PS	7.6	4.9	4.4	166	No	244.91	140.80	97.40m	Core
181	PS	10.0	8.7	6.8	510	No	244.87	141.08	97.42m	Core
182	PS	9.4	6.3	6.0	316	No	244.10	140.82	97.435m	Core
183	PS	17.6	11.0	5.0	777	No	243.37	138.73	97.455m	Core-Chopper
184	PS	7.3	4.1	4.0	111	No	244.19	140.56	97.425m	Core
185	PT	6.3	4.4	4.2	116	No	244.26	139.12	96.50m	Core-Retouched

Table A27-2 continued

Art	Unit	L	W	T	Wt.	TA	N	E	D	Condition
186	PT	17	11	9.5	1869	No	242.71	141.22	95.57m	Core
187	PT	9.4	6.4	6	246	No	242.96	141.64	95.34m	Core
188	PT	21.1	12.1	8.7	2100	No	243.99	140.*	95.80m	Core
189	PT	10.3	8.8	6.6	526	No	242.27	141.26	95.47m	Nodule
190	PT	8.5	7.8	7.0	278	No	247.66	140.86	95.342m	Nodule
191	PT	15.1	11	8.9	1331	No	242.97	141.59	95.55m	Nodule
192	PT	19.0	11.5	7.8	1015	No	242.70	140.52	95.705m	Tested
193	PT	14.8	7.6	6.2	651	No	243.99	140.*	95.80m	Core
194	PT	13.1	5.6	4.8	276	No	242.64	141.86	95.335m	Tested
195	PT	7.8	5.6	5.5	220	No	242.73	141.26	95.282m	Tested
196	PS	7.6	5.9	5.8	191	No	243.53	140.09	97.60m	Core
197	PT	5.1	4.4	2.7	53	No	244.*	139.*	95.62m	Core
198	PT	9.7	5.7	5.1	277	No	244.21	139.93	96.635m	Core
199	PT	7.0	6.2	3.2	133	No	244.71	139.42	96.55m	Core
200	PT	6.5	5.5	4.8	112	No	244.29	139.82	96.62m	Core
201	PS	7.5	5.4	3.0	91	No	244.62	143.78	97.71m	Tested
202	PT	8.5	6.8	3.6	177	No	242.23	141.42	95.47m	Tested
203	PT	7.7	5.4	4.0	229	No	244.28	139.99	96.67m	Core
204	PT	4.6	4.6	2.3	40	No	242.65	140.59	95.392m	Core Fragment
205	PT	9.7	8.2	6.6	411	No	-	-	-	Core- Chopper
206	PS	30.9	24.2	8.7	10800	No	-	-	-	Nodule
207	PT	29.9	22.6	12.1	9000	No	-	-	-	Tested
208	PT	23.2	19.8	16.0	8300	No	-	-	-	Core
209	PT	14.4	11	4.3	454	No	242.76	141.45	95.39m	Core
210	PT	12.4	7.3	5.4	361	No	242.74	140.45	95.39m	Core
211	PS	10.6	6.4	5.0	285	No	245.8	133.85	184cmbs	Core
212	PS	10.4	6.4	4.6	356	No				Tested
213	PS	12.2	8.4	6.9	411	No				Tested
214	PS	9.4	6.1	4.8	167	No				Core
215	PS	7.0	5.8	3.8	213	No				Core-Chopper
216	PS	15.5	10.6	5.0	890	No	245.76	133.7	183 cmbs	Core
217	PS	11.6	9.5	6.8	455	No	248.76	143.66	97.59m	Tested
218	PS	16.1	11.5	7.1	1286	No	242.39	129.99	180 cmbd	Nodule
219	PS	14.7	9.2	7.3	974	No				Nodule
220	PS	7.5	6.4	3.9	187	No				Tested
221	PS	6.1	3.1	2.8	80	No				Core fragment
222	PS	9.2	8.0	4.0	205	No				Tested

Table A27-2 continued

Art	Unit	L	W	T	Wt.	TA	N	E	D	Condition
223	PS	13.7	12.6	10.5	1395	No				Tested
224	PS	15.0	9.9	5.4	652	No				Tested
225	PS	9.8	8.1	6.0	476	No				Nodule

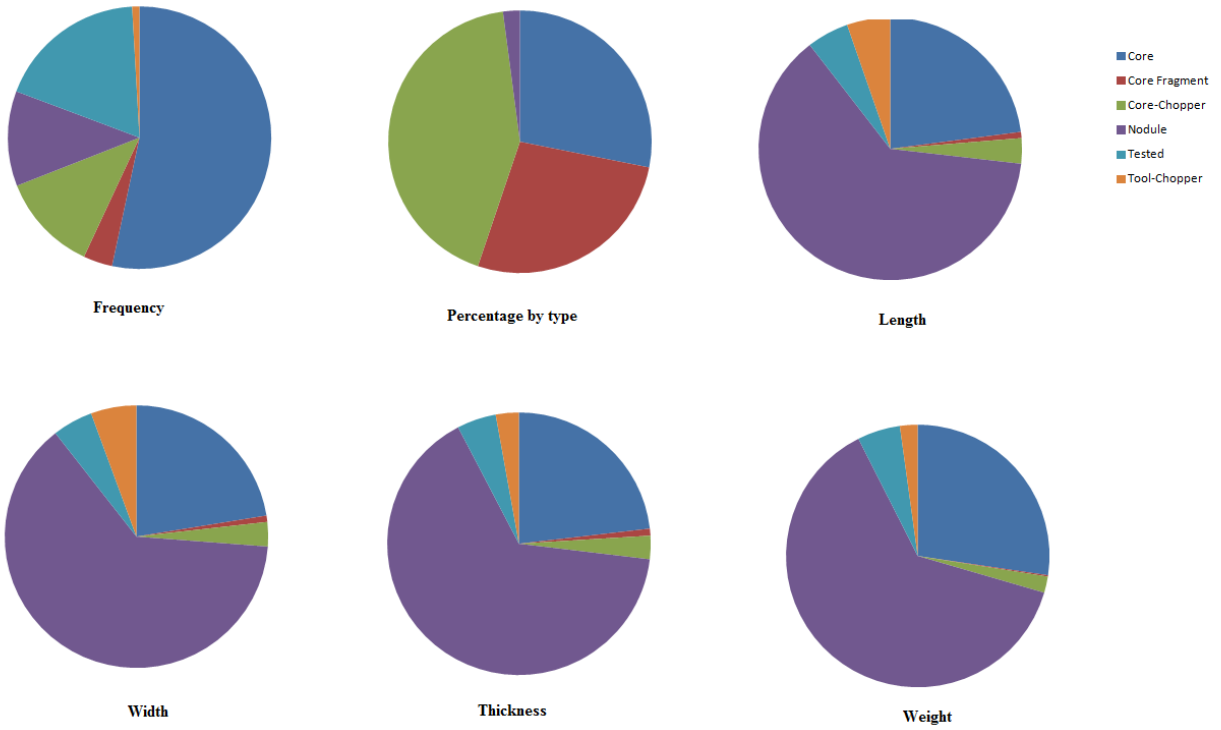


Figure A27 – 1
Distribution of chert boulders cobbles, and core tools from the Topper Site by frequency and morphology.

Table A27 – 3
Distribution of platform bearing flakes from unit N242 E128 from Goodyear and Wilkinson study.

N242 E128 Plat-Bulbs							
Level	**5 (>2")**	**4 (>1")**	**3 (>1/2")**	**2 (>1/4")**	**1 (>1/8")**	**Quantity**	**Size Value**
70-80	3	57	207	385	563	1215	1.80823045
80-90	2	4	45	132	279	462	1.52380952
90-100			9	23	45	77	1.53246753
100-110			1	10	8	19	1.63157895
110-120			1	14	21	41	1.*44444444*
120-130				21	13	34	1.61764706
130-140			2	7	9	18	1.6*1111111*
140-150			1	12	10	23	1.60869565
150-160			2	18	34	54	1.*407407407*
160-170			1	19	13	33	1.*63636363*
170-180			1	20	30	51	1.43137255
180-190				21	19	40	1.525
190-200				2	4	6	1.*33333333*
200-210							

Table A27 – 43
Distribution of River Cortex flakes from unit N242 E128 from Goodyear and Wilkinson study.

N242 E128 River Cortex							
Level	**5 (>2")**	**4 (>1")**	**3 (>1/2")**	**2 (>1/4")**	**1 (>1/8")**	**Quantity**	**Size Value**
70-80							
80-90	1	23	71	87	53	235	2.28510638
90-100		1	19	41	55	116	1.70689655
100-110			4	9	34	47	1.36170213
110-120					6	6	1
120-130							
130-140				1		1	2
140-150							

Table A27 – 5
Distribution of platform bearing flakes from unit N244 E128 from Goodyear and Wilkinson study.

N244 E128 Plat-Bulbs							
Level	**5 (>2")**	**4 (>1")**	**3 (>1/2")**	**2 (>1/4")**	**1 (>1/8")**	**Quantity**	**Size Value**
70-80		1	15	64	146	226	1.42920354
80-90			3	19	36	58	1.43103448
90-100		1	2	11	12	26	1.69230769
100-110			3	15	18	36	1.58333333
110-120			11	43	15	69	1.94202899
120-130			21	86	28	135	1.94814815
130-140			9	58	23	90	1.84444444
140-150			1	4	15	20	1.3
150-160				3	14	17	1.17647059
160-170				1	6	7	1.14285714
170-180				8	17	25	1.32
180-190			3	14	30	47	1.42553191
190-200			2	11	35	48	1.3125
200-210							

Table A27 – 6
Distribution of River Cortex flakes from unit N244 E128 from Goodyear and Wilkinson study.

N244 E128 River Cortex							
Level	**5 (>2")**	**4 (>1")**	**3 (>1/2")**	**2 (>1/4")**	**1 (>1/8")**	**Quantity**	**Size Value**
70-80			8	19	31	58	1.60344828
80-90				4	13	17	1.23529412
90-100				3	7	10	1.3
100-110					1	1	1
110-120							
120-130							
130-140							
140-150							

Table A27 – 7
Distribution of platform bearing flakes from unit N242 E130 from Goodyear and Wilkinson study.

N242 E130 Plat-Bulbs							
Level	**5 (>2")**	**4 (>1")**	**3 (>1/2")**	**2 (>1/4")**	**1 (>1/8")**	**Quantity**	**Size Value**
70-80	8	39	169	282	75	473	2.34205934
80-90	1	16	78	179	48	322	2.20186335
90-100	3	5	21	64	14	107	2.24299065
100-110		2	34	60	81	177	1.75706215
110-120		1	17	71	44	133	1.81203008
120-130			6	14	8	28	1.92857143
130-140			3	5	4	12	1.91*666666*
140-150				3	19	22	1.13*636363*
150-160			4	11	11	26	1.73076923
160-170				8	20	28	1.28571429
170-180			2	12	18	37	1.5
180-190				10	24	34	1.29411765

Table A27 – 8
Distribution of River Cortex flakes from unit N242 E130 from Goodyear and Wilkinson study.

N242 E130 River Cortex							
Level	**5 (>2")**	**4 (>1")**	**3 (>1/2")**	**2 (>1/4")**	**1 (>1/8")**	**Quantity**	**Size Value**
70-80	2	8	27	49	10	96	2.40625
80-90		1	10	25	7	43	2.11627907
90-100			3	7	4	14	1.92857143
100-110		1	9	18	31	59	1.66101695
110-120			3	10	16	29	1.55172414
120-130					3	3	1
130-140							
140-150							

Table A27 – 9
Distribution of platform bearing flakes from unit N242 E132 from Goodyear and Wilkinson study.

N242 E132 Plat-Bulbs							
Level	**5 (>2")**	**4 (>1")**	**3 (>1/2")**	**2 (>1/4")**	**1 (>1/8")**	**Quantity**	**Size Values**
70-80							
80-90		3	12	52	67	134	1.63432836
90-100		1	4	11	17	33	1.*66666666*
100-110		1	11	49	19	80	1.925
110-120			29	63	16	108	2.09*259259*
120-130			5	24	5	34	2
130-140			5	32	14	51	1.68627451
140-150			20	84	34	138	1.89855072
150-160			1	21	14	36	1.6*3888888*
160-170				6		6	2
170-180							
180-190							
190-200							
200-210							

Table A27 – 10
Distribution of River Cortex flakes from unit N242 E132 from Goodyear and Wilkinson study.

N242 E132 River Cortex							
Level	**5 (>2")**	**4 (>1")**	**3 (>1/2")**	**2 (>1/4")**	**1 (>1/8")**	**Quantity**	**Size Values**
70-80							
80-90		1	2	13	12	28	1.71428571
90-100			2	1	4	7	1.71428571
100-110		1	1			2	3.5
110-120					1	1	1
120-130				1		1	2
130-140							
140-150							

Table A27 – 11
Distribution of platform bearing flakes from unit N248 E142 from Goodyear and Wilkinson study.

N248 E142 SE Quad Plat-Bulbs							
Level	**5 (>2")**	**4 (>1")**	**3 (>1/2")**	**2 (>1/4")**	**1 (>1/8")**	**Quantity**	**Size Value**
98.10-98.00	1		1	5	5	12	1.91*666666*
98.00-97.90		1	3	16	2	22	2.13*636363*
97.90-97.80			4	22	11	37	1.*810810810*
97.80-97.70			5	51	12	68	1.89705882
97.70-97.60		1	5	12	4	22	2.13*636363*
97.60-97.50			1	3	1	5	2
97.50-97.40				2		2	2

Table A27 – 12
Distribution of River Cortex flakes from unit N248 E142 from Goodyear and Wilkinson study.

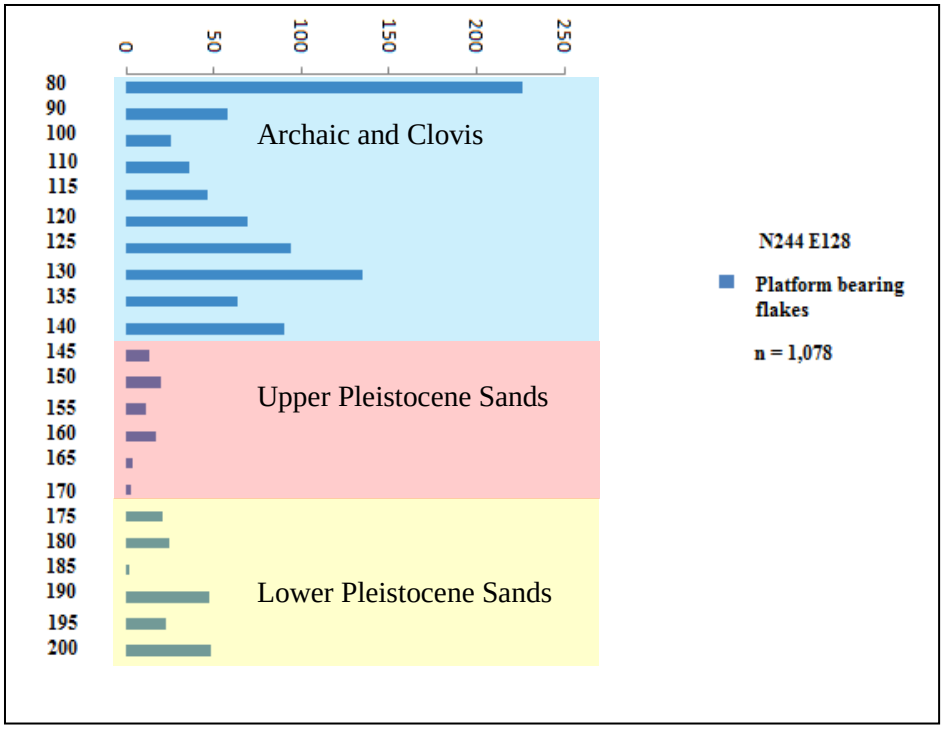
N248 E142 SE Quad Plat-Bulbs							
Level	**5 (>2")**	**4 (>1")**	**3 (>1/2")**	**2 (>1/4")**	**1 (>1/8")**	**Quantity**	**Size Value**
98.10-98.00							
98.00-97.90							
97.90-97.80				2	1	3	1.*66666666*
97.80-97.70							
97.70-97.60							
97.60-97.50					1	1	1
97.50-97.40							

Category	Frequency	Percentage	Thermal Alteration	
			Definitive	Possible
Core	119	52.89%	1	7
Core Fragment	8	3.56%	0	0
Core-Chopper	28	12.44%	0	0
Core-Tool Retouched	3	1.33%	0	0
Tested	41	18.22%	0	0
Nodule	26	11.56%	0	0
Totals	**225**			

Average Length (cm)	Average Width (cm)	Average Thickness (cm)	Average Weight (g)
14.8	**10.7**	**6.9**	**1410**

Figure A27 – 1

Frequency of Cores, Core tools, and tested cobbles from the pre Clovis Pleistocene Sands at the Topper Site (38AL23). Data obtained from 1998 – 2008 from a 2013 study by Goodyear and Wilkinson (n.d.). (Image courtesy of Al Goodyear).



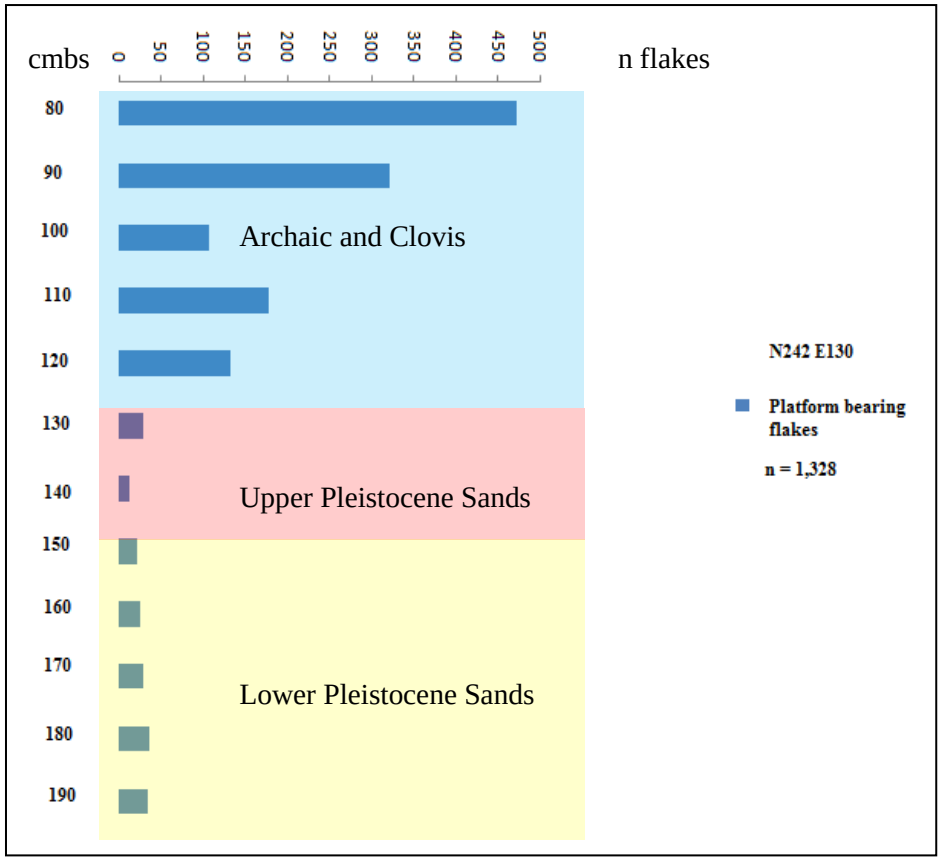
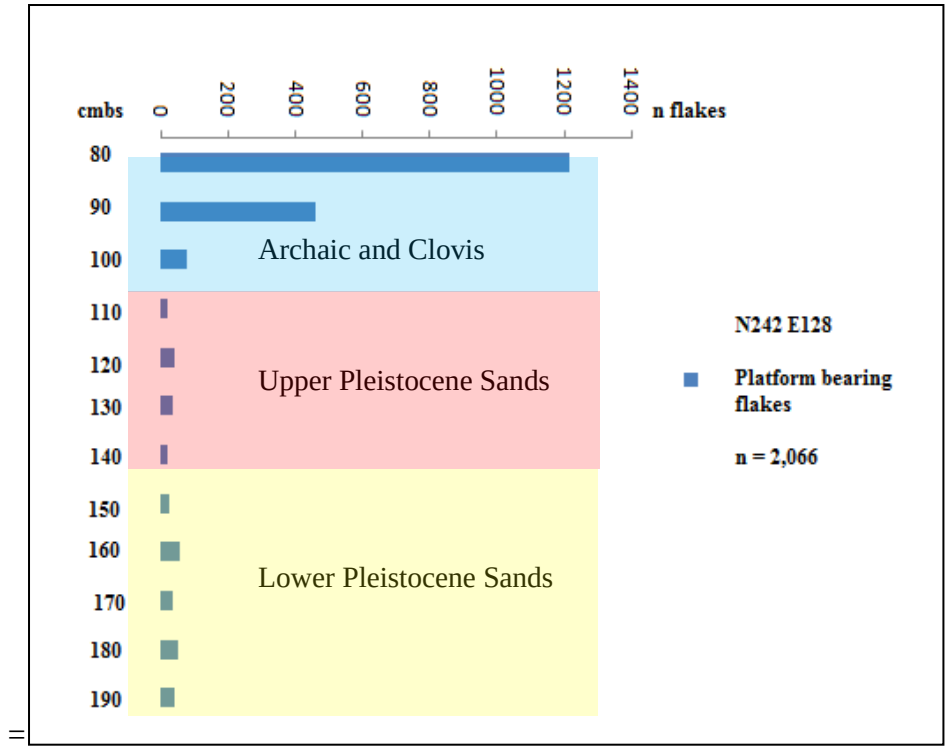


Figure A427 – 2
Vertical Distribution of platform bearing flakes from selected units at the Topper Site (38AL23).



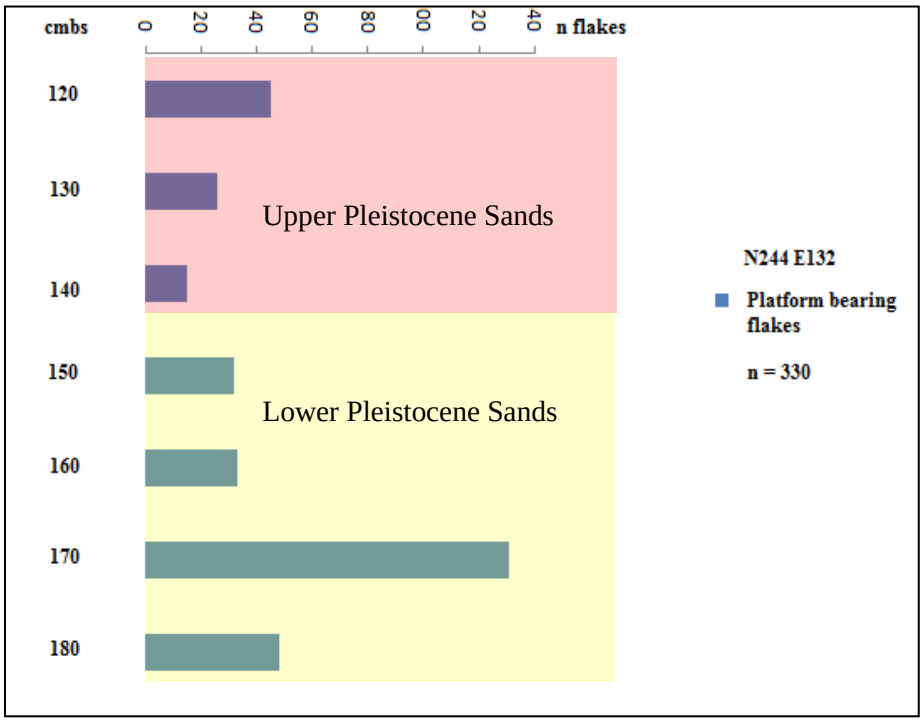


Figure A27 – 3
Vertical Distribution of platform bearing flakes from selected units at the Topper Site (38AL23).

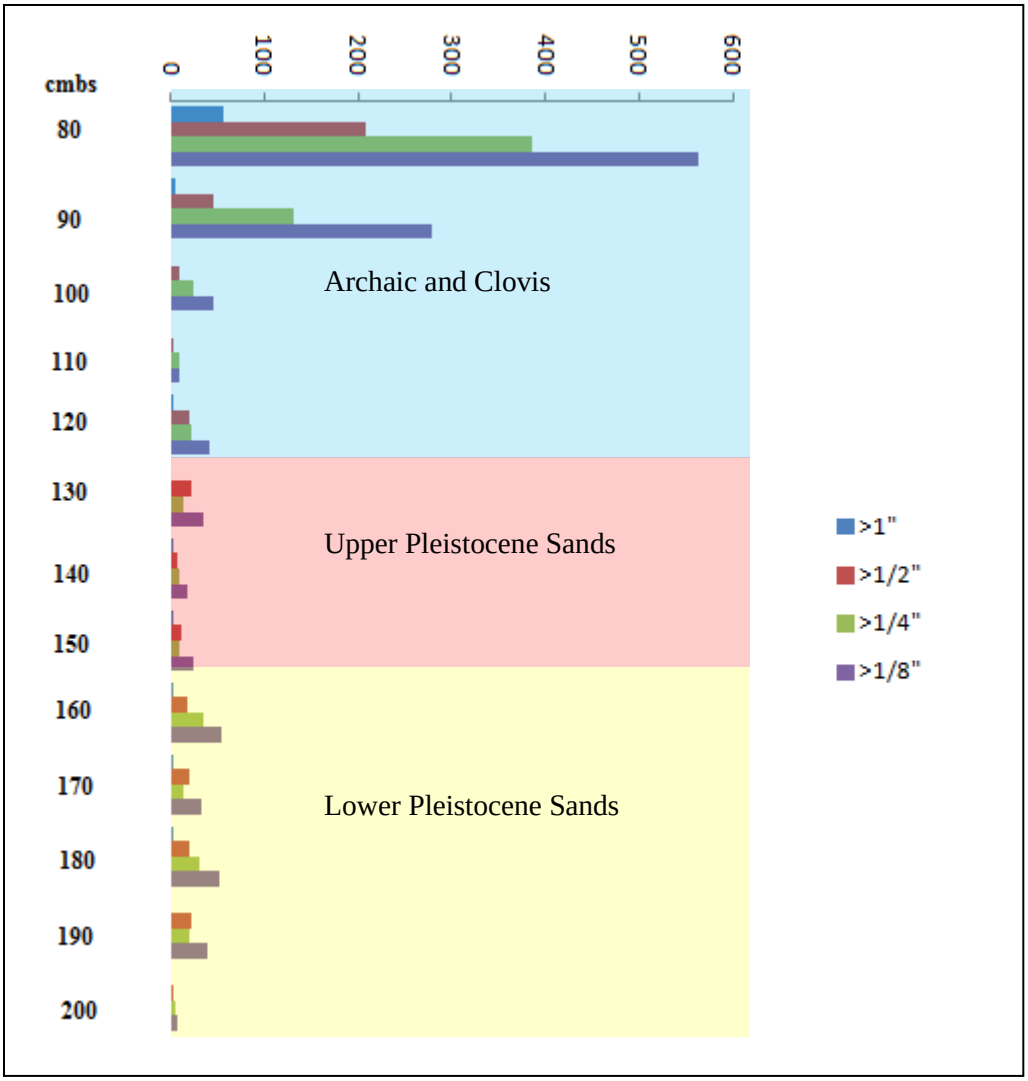


Figure A27–4
Vertical Distribution of platform bearing flakes by size from unit N242 E128 at the Topper Site (38AL23).

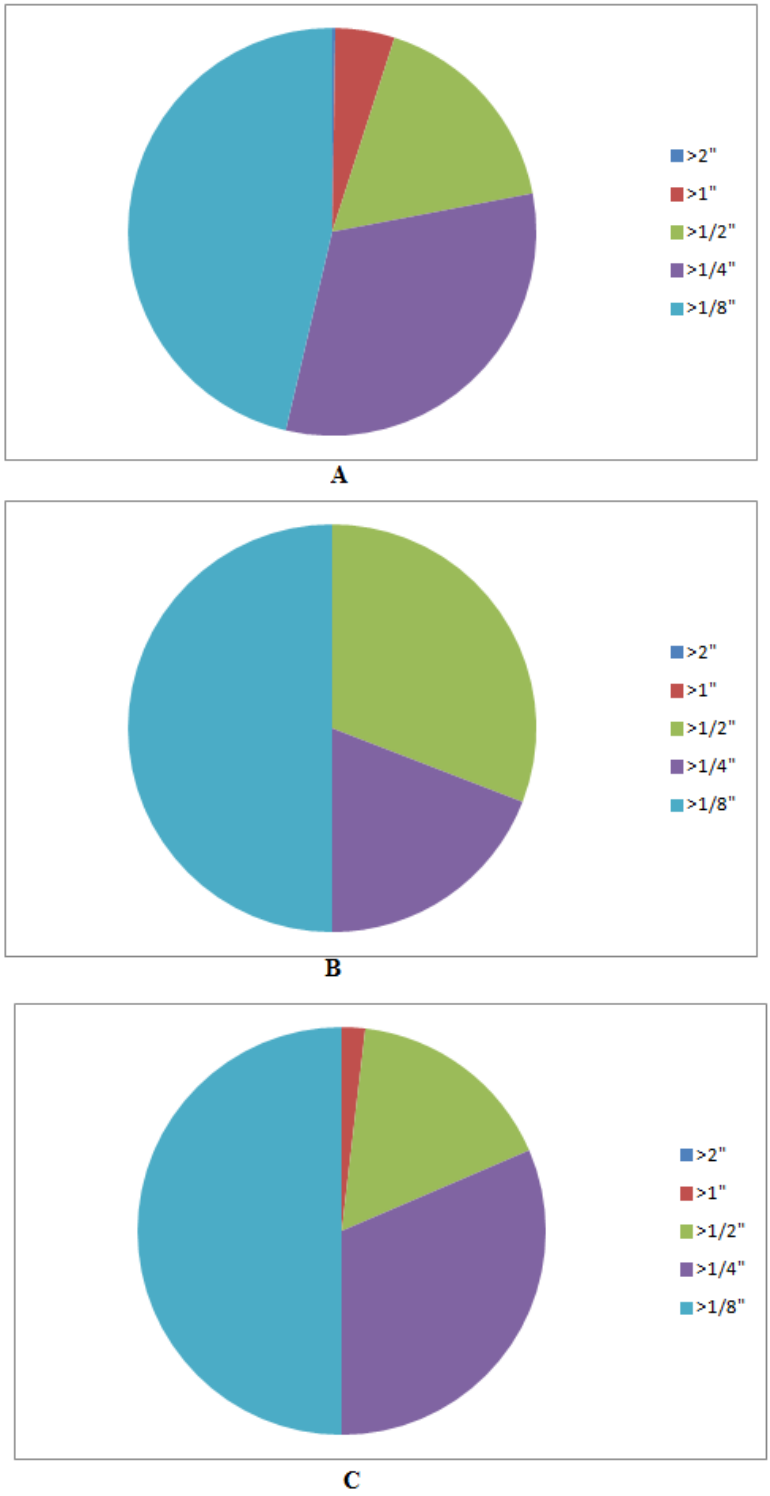


Figure A27–5
Distribution of platform bearing flakes by size grade from unit N242 E128 at the Topper Site (38AL23). A: Archaic and Clovis, B: Upper Pleistocene Sands, C; Lower Pleistocene Sands.

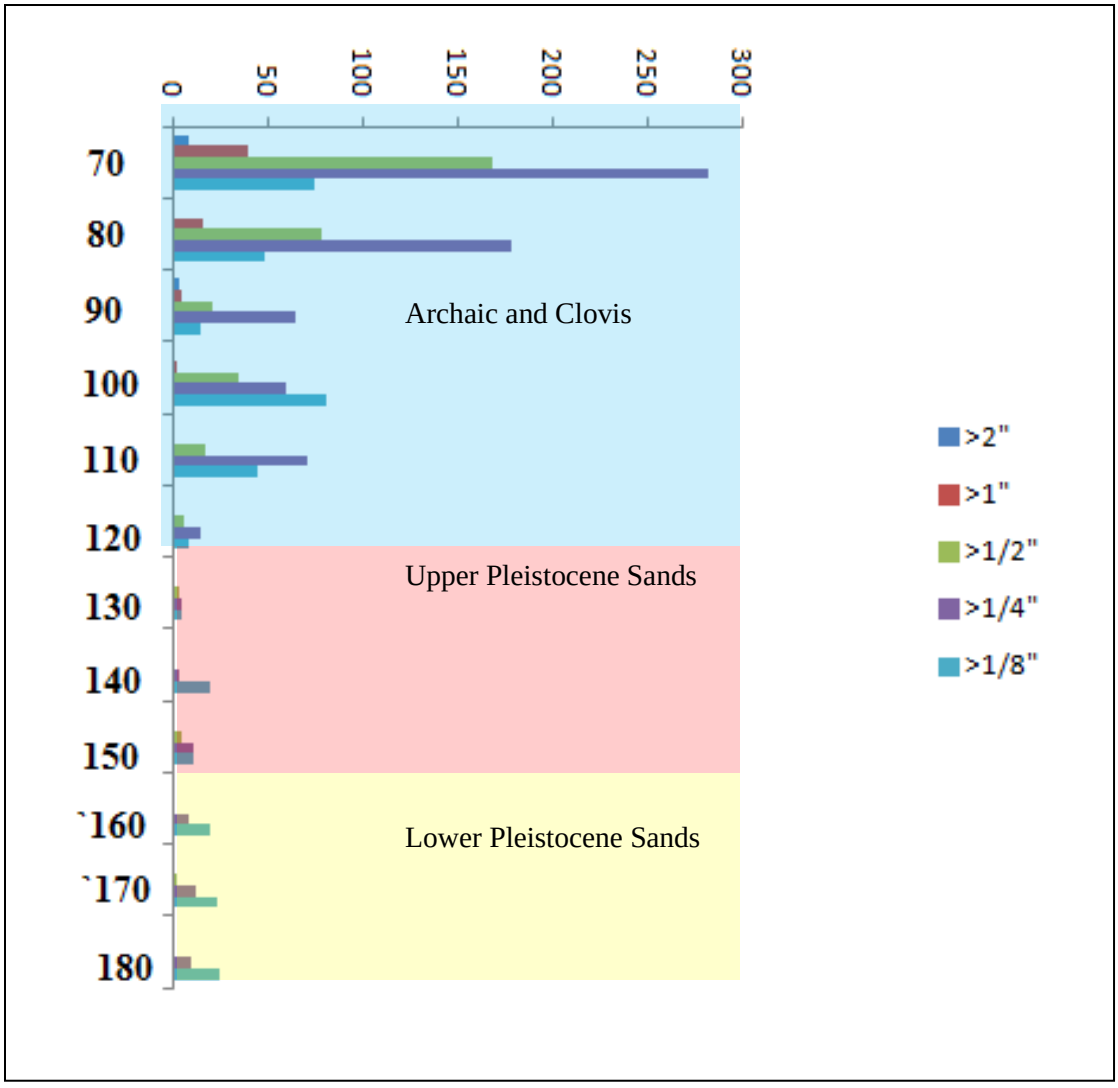


Figure A27–6
Vertical Distribution of platform bearing flakes by size from unit N242 E130 at the Topper Site (38AL23).

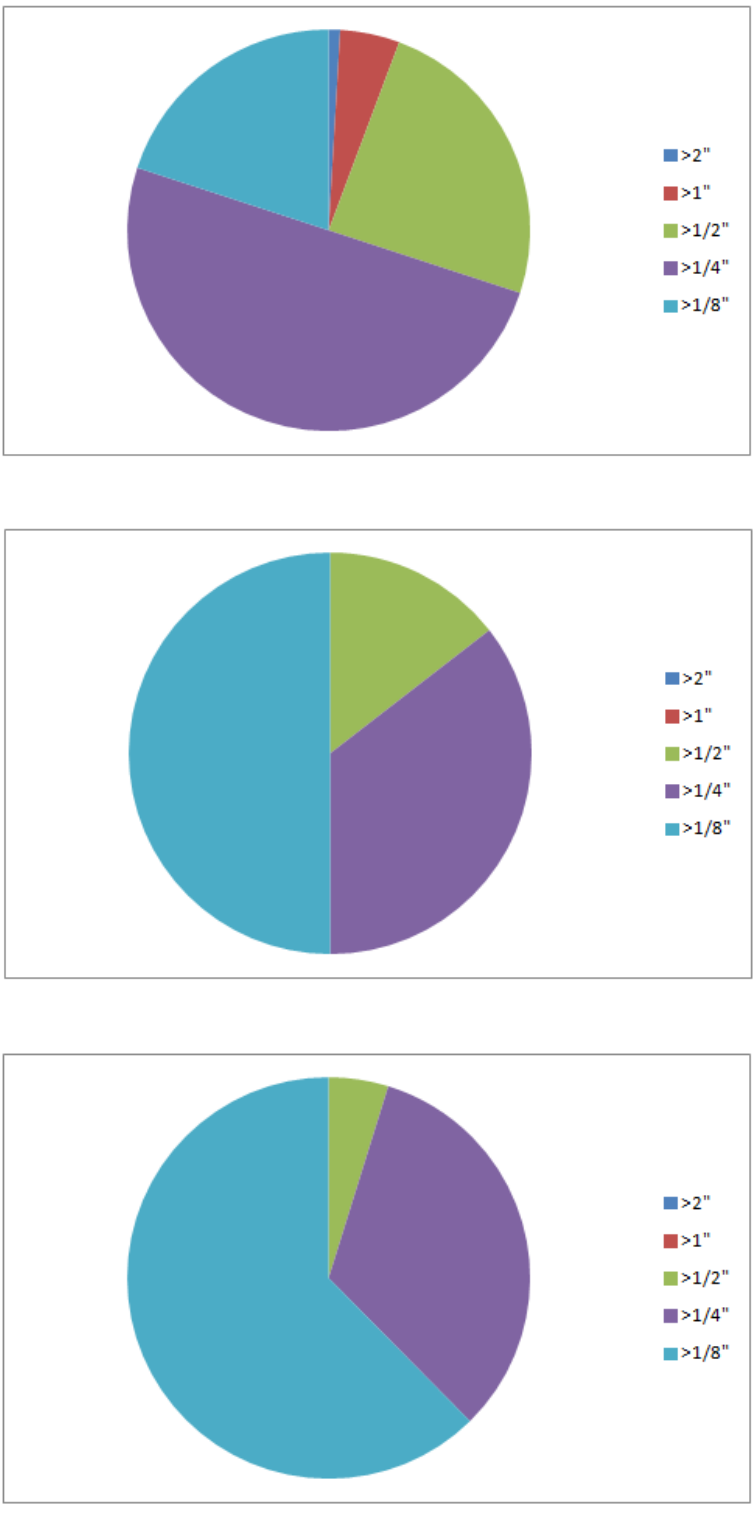


Figure A27–7
Distribution of platform bearing flakes by size grade from unit N242 E130 at the Topper Site (38AL23). A: Archaic and Clovis, B: Upper Pleistocene Sands, C; Lower Pleistocene Sands.

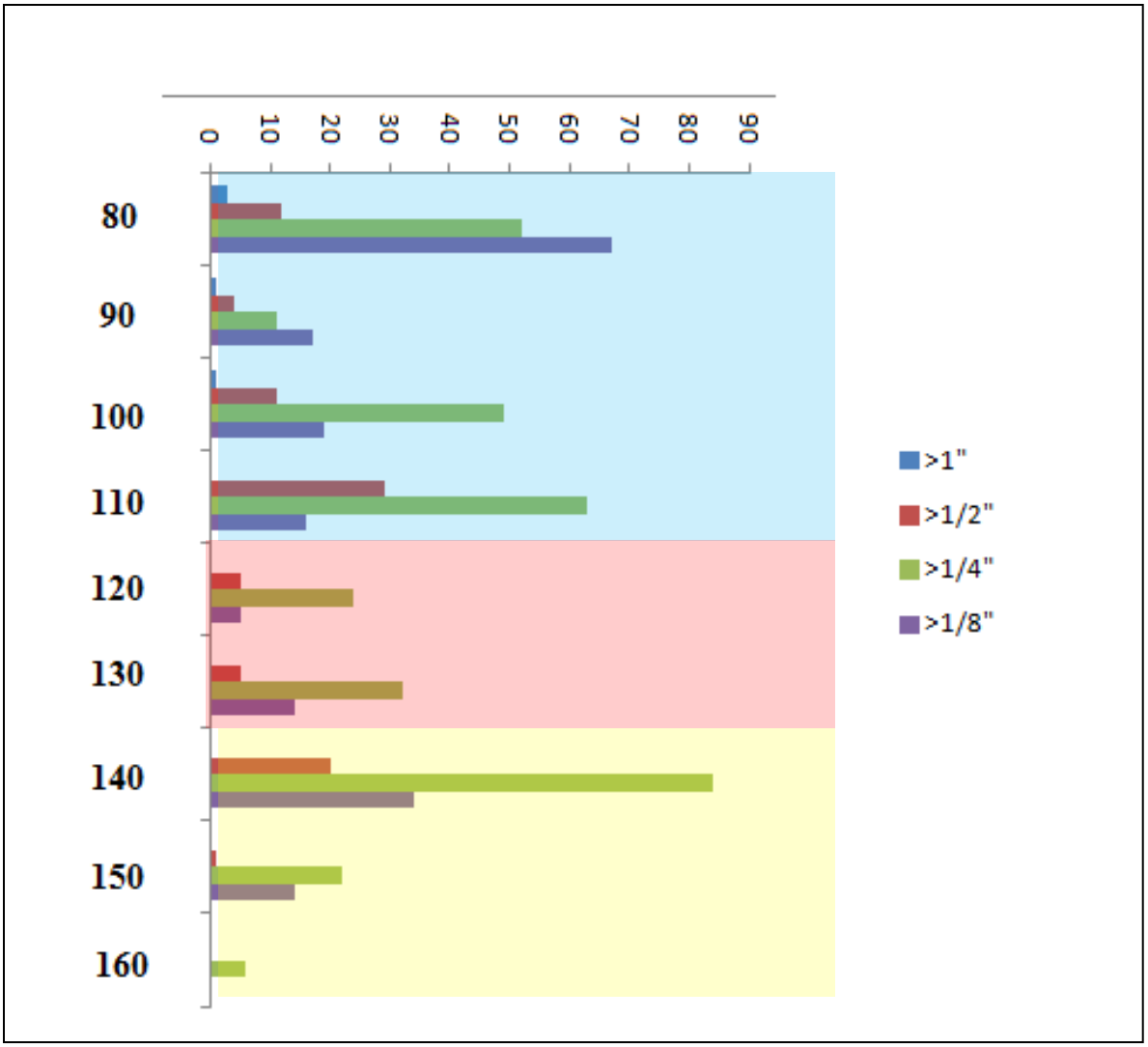


Figure A27–8
Vertical Distribution of platform bearing flakes by size from unit N242 E132 at the Topper Site (38AL23).

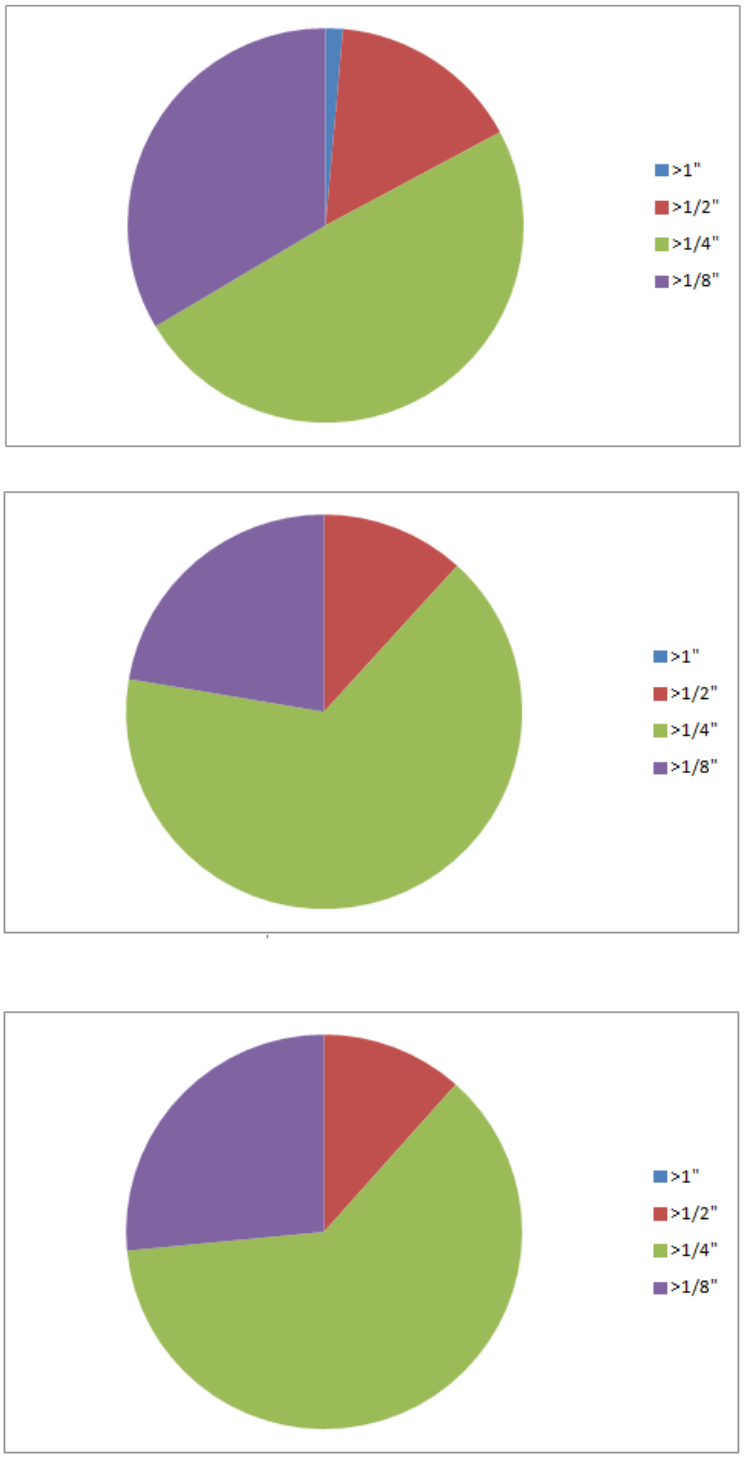


Figure A27–9
Distribution of platform bearing flakes by size grade from unit N242 E132 at the Topper Site (38AL23). A: Archaic and Clovis, B: Upper Pleistocene Sands, C; Lower Pleistocene Sands.

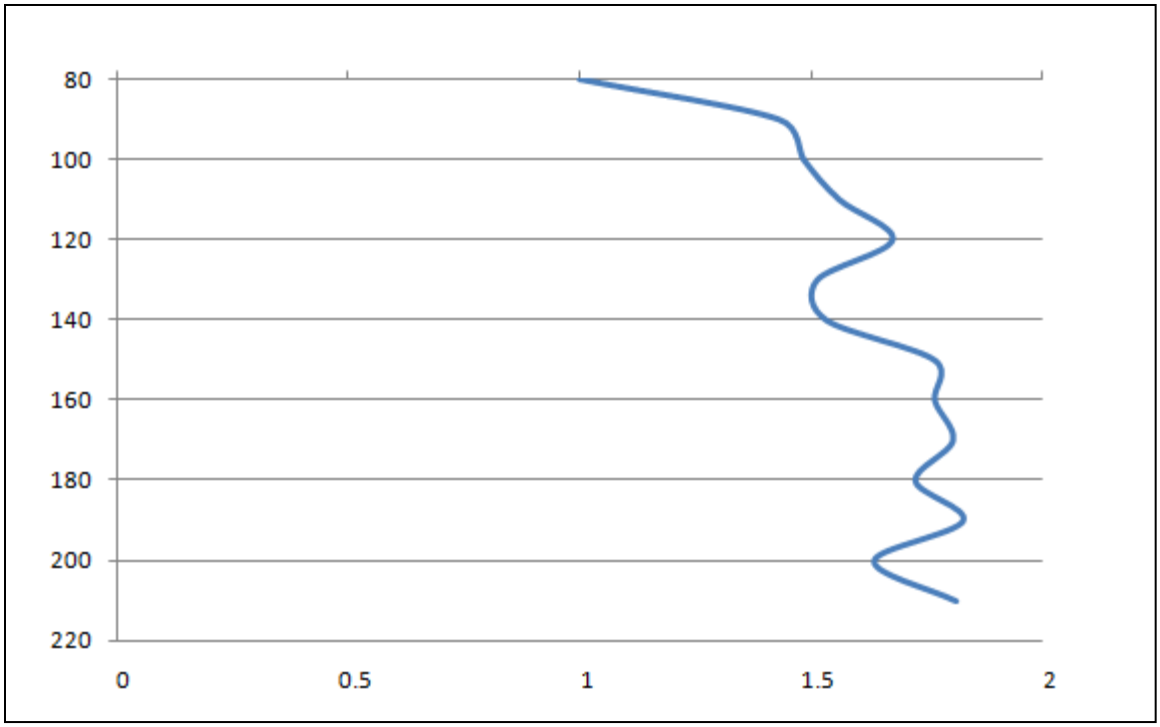


Figure A27–10
Platform bearing bulb size values (x axis) by overall depth in cm (y axis) from the Topper Site. Partial data from Al Goodyear and Joe Wilkinson.

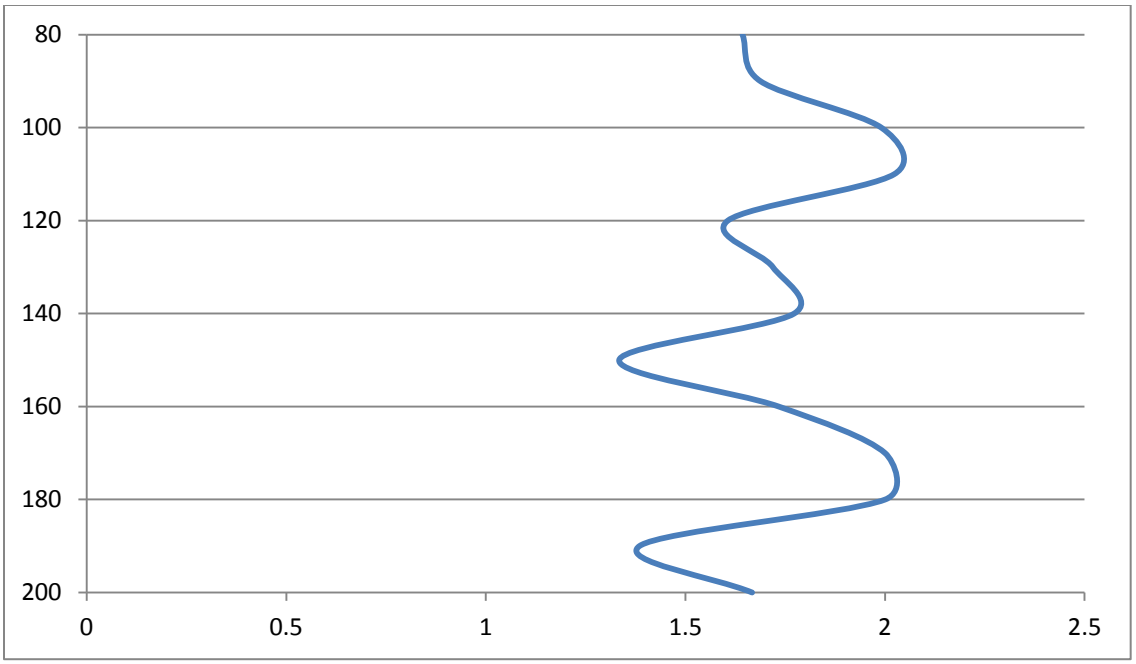


Figure A27–11
Platform bearing bulb size values (x axis) by overall depth in cm (y axis) for unit N244 E132 at the Topper Site. Partial data from Al Goodyear and Joe Wilkinson.

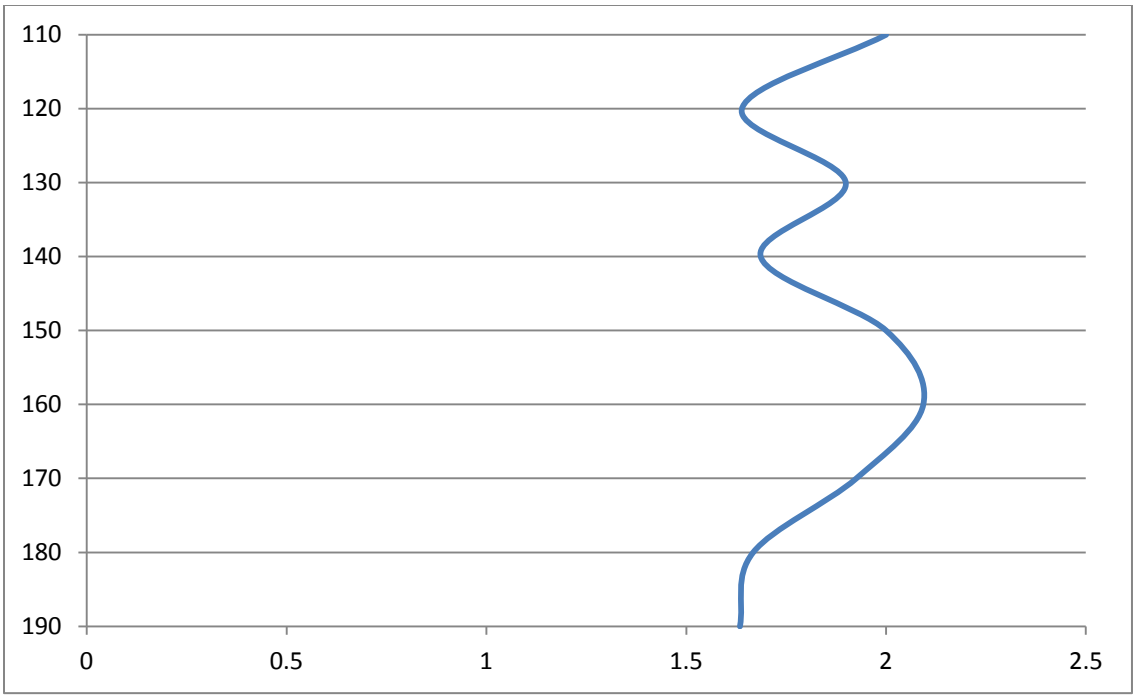


Figure A27–12
Platform bearing bulb size values (x axis) by overall depth in cm (y axis) for unit N242 E132 at the Topper Site. Partial data from Al Goodyear and Joe Wilkinson.

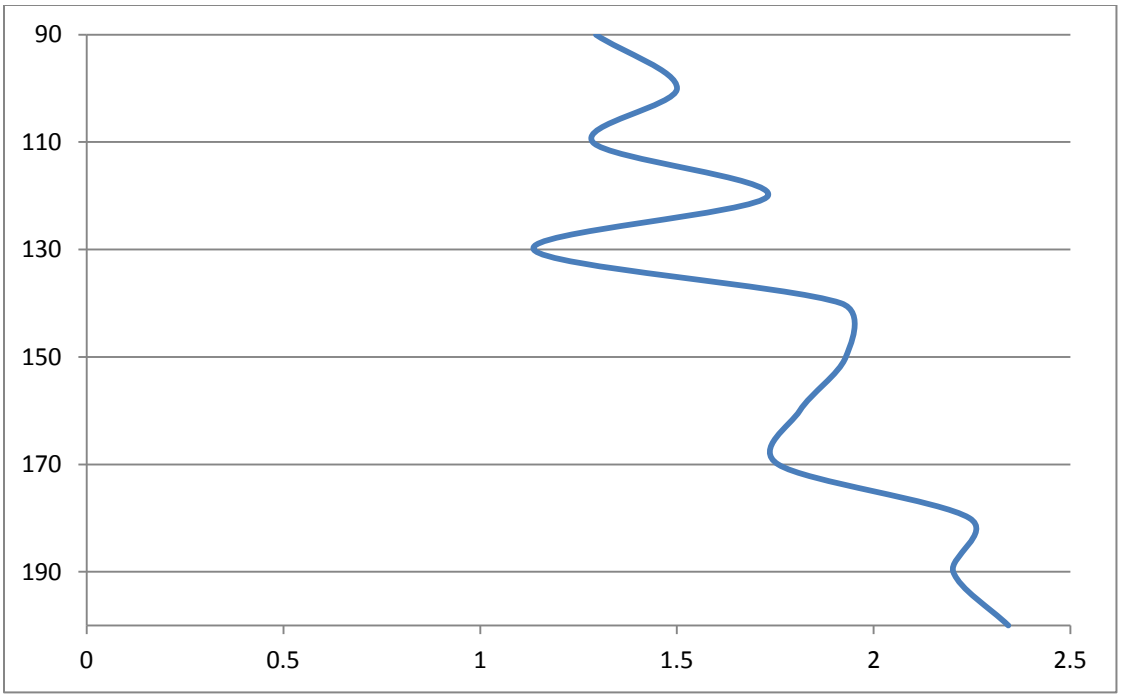


Figure A27–13
Platform bearing bulb size values (x axis) by overall depth in cm (y axis) for unit N242 E130 at the Topper Site. Partial data from Al Goodyear and Joe Wilkinson.

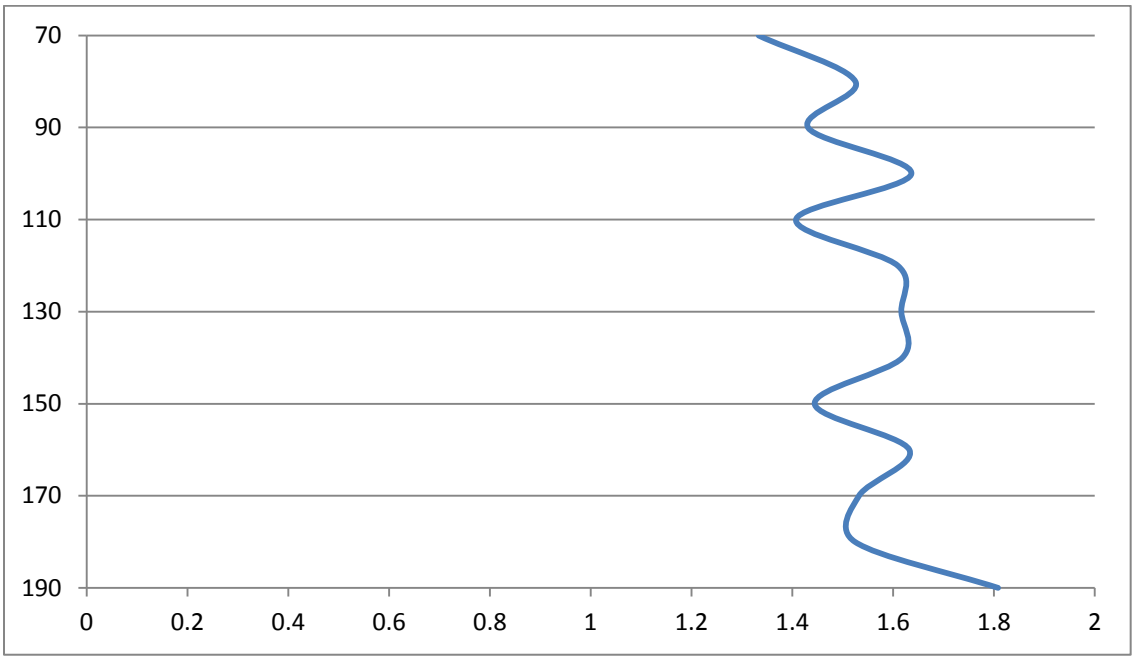


Figure A27–14
Platform bearing bulb size values (x axis) by overall depth in cm (y axis) for unit N242 E128 at the Topper Site. Partial data from Al Goodyear and Joe Wilkinson.

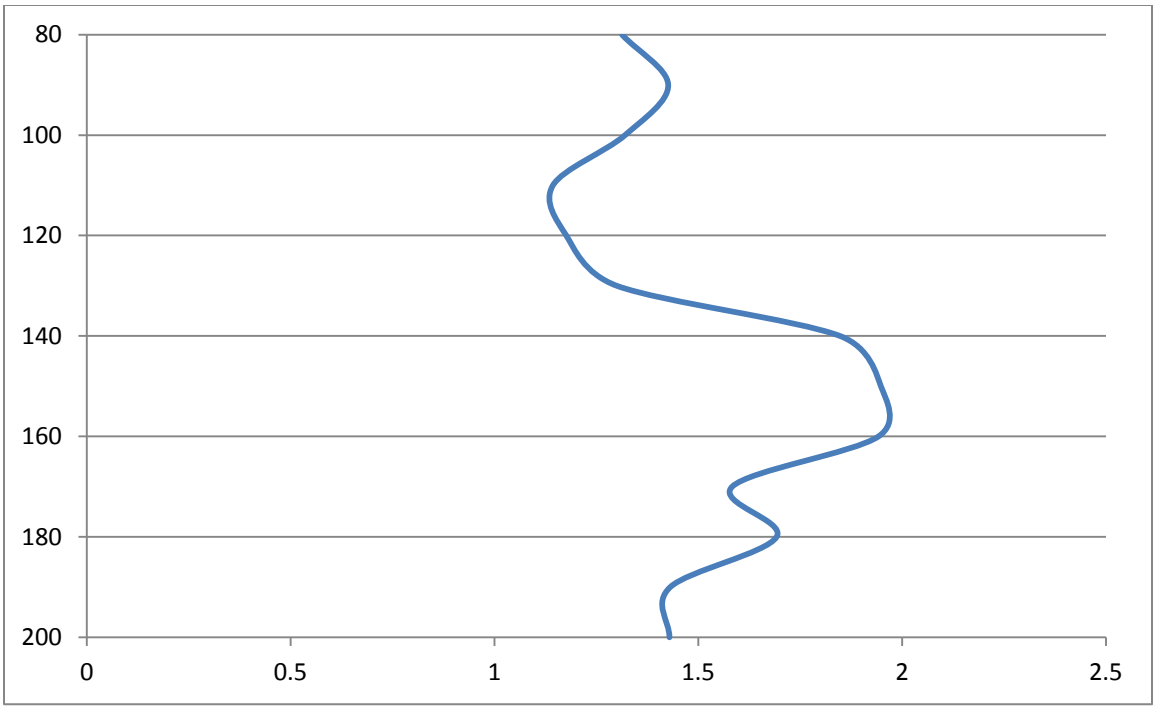


Figure A27–15
Platform bearing bulb size values (x axis) by overall depth in cm (y axis) for unit N244 E128 at the Topper Site. Partial data from Al Goodyear and Joe Wilkinson

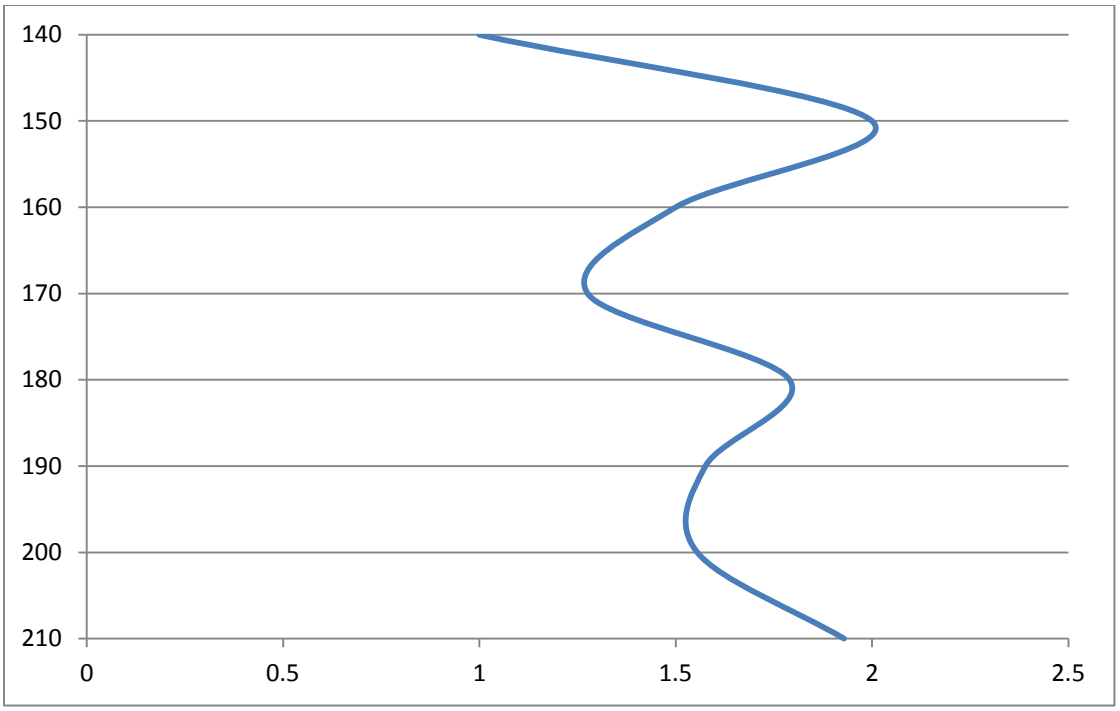


Figure A27–16
River cortex size values (x axis) by overall depth in cm (y axis) for the Topper Site. Partial data from Al Goodyear and Joe Wilkinson

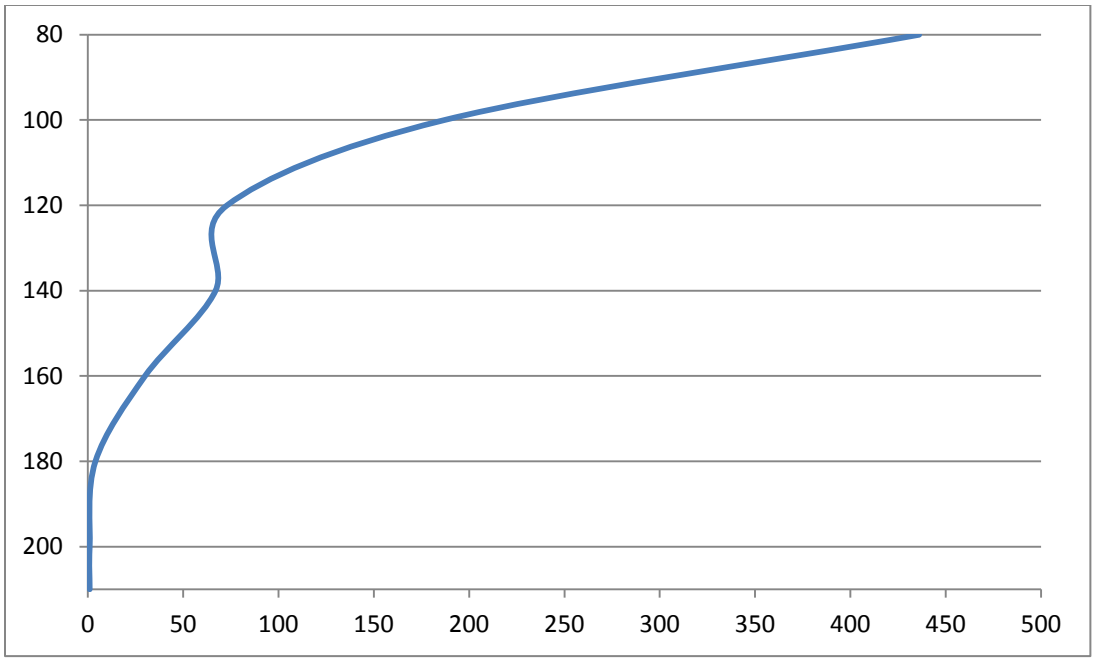


Figure A27–17
River Cortex quantity (x axis) by overall depth (y axis) for the Topper Site. Partial data from Al Goodyear and Joe Wilkinson.

APPENDIX 28

NUMBER OF ARTIFACTS BY UNIT AND LEVEL FOR EACH FIELD SEASON AT THE TOPPER SITE (38AL23)

Table A28-1
Number of Artifacts by Unit and Level for each Field Season at the Topper Site (38AL23)

N	E	Year	Depth	Level																										
N	**E**	**1998**	**Depth**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**			
244	106	2X2	0-100		0	1	4	32	5	8	8	4	0	0	0	0													
244	110	2X2	0-170	0	2	2	2	22	3	1	5	2	0	0	0	0	0	0	0	0	0	0	0						
244	118	2X2	0-200		0	7	4	19	4	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
244	124	2X2	0-170		0	0	6																						
244	130	1X2	0-194																										
244	130	1X2	0-210																										
250	92	2X2	0-140																										
254	110	2X2	0-100																										
282	112	2X2	0-100																										
N	**E**	**1999**	**Depth**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	
208	130	2X2	0-210	0	1	20	2																						
208	132	2X2	0-110	1	0	20	0	0	0	0	0	0	0	0	0	4	3	4	3	4	0	0	0	1	0	1	1	0	
208	134	2X2	97.50	1	2	9	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
208	136	2X2	95.599	0	0	9	1																						
210	130	2X2	96.06	18	0	0	0																						
210	132	2X2	97.60	0	0	2	1	0	0	0	0	0	0	11	11	10	5	9	20	4	6	5	0	0	0	0	1	0	
210	134	2X2	97.60	0	0	4	4	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0		
210	136	2X2	96.550	0	2	9																							
212	132	2X2	97.98	1	2	2																							
212	134	2X2	97.80	5	0	0																							
212	136	2X2	98.00	0	0	1																							
N	**E**	**1999**	**Depth**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	26
242	130	2X2	170	0	0	0	0	0		0	0	3	2	1	0	4	1	1	13	42									
242	132	2X2	165	0	0	15	0	1	2	5	1	0	0	2	0	0	1	15	14	1									
268	132	1X2	210	0	0	0	0	0	1	0	2	7	2	0	0	1	8	1	5	2	0	0	0	0	0	0			
282	132	2X2	230	0	0	0	0	0	0	0	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
N	**E**	**2000**	**Depth**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	26
242	128	2X2	Tert.	0	0	0	0	3	0	7	13	6	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	2
242	130	2X2	Tert.																		0	1	0	2	5				
242	132	2X2	205																		1	3	0						
242	134	2X2	195	0	16	0	2	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	3	6	0	23	28	2
244	108	2X2	95	0	0	1	0	4	1	0	1	0	0																

Table A28-1 continued

N	E	Year	Depth	Level																									
244	128	2X2	195	0	0	0	1	0	0	3	1	0	0	0	0	0	1	0	2	0	0	0	0	1	1	0	0	0	1
244	132	2X2	210	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	0	9	0	0
244	134	2X2	195	0	0	1	0	1	30	2	0	1	0	0	0	0	0	0	1	0	0	0	1	2	3	21	1	2	1
244	146	2X2	220	0	0	0	7	0	1	4	0	0	0	0	4	0	2	11	2	4	12	21	18	16	5				
244	148	2X2	210	0	0	44	16	0	0	2	1	0	5	5	44	0	0	12	18	3	5	27	32						
244	128	2X2	195	0	0	0	1	0	0	3	1	0	0	0	0	0	1	0	2	0	0	0	0	1	1	0	0	0	1
N	**E**	**2001**	**Depth**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	26
230	106			0	0	0	0	4	0	0	0	0	0	0															
232	102			0	0	0	0	0	0	0	49	0	0	0															
232	104			0	0	0	0	0	0	0	0	0	0	0															
232	106			0	0	0	0	0	0	0	0	0	0	0															
234	102			0	0	0	0	0	0	0	0	0	0	0															
234	104			0	0	0	0	0	0	0	0	0	0	0															
234	106			0	0	0	0	0	0	0	16	0	0	0															
236	106			0	0	1	0	32	0	0	0	0	0	0															
238	106			0	0	0	0	1	4	2	5	2	0	0															
240	106			0	0	0	0	0	0	0	0	0	0	0															
242	106			0	9	0	0	0	0	0	0	0	0	0															
N	**E**	**2001**	**Depth**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	26
238	128			-	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	2	0	0	0	0	0		-	0
238	130				1	1	1	0																					1
238	132			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						0	0
238	134			6	4	0	0	0	0	0	0	0	0	0	0	1	0	4	2	2	1	0	1	0				6	4
240	128			-	11	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	-	11
240	130			1	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	1	0	4		1	2
240	132			2	1	1	0	0	3	0	0	0	0	0	0	60	0	12	0	0	2	2	0	0				2	1
240	134			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	11	0	2				0	0
236	126			0	0	0	0																						
236	128			-	5	0	0																						
236	130			0	1	0																							
236	132			0	0	0																							
236	134			0	0	0																							
236	136			0	5	0																							
237	136			-																									
238	136			-	1	0	0																						
240	126			-	0	1	0																						
240	136			2	0	0																							

Table A28-1 continued

N	E	2002	Depth	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
242	136			0	0	2	2	2	0	0	0	0	0	0	0	0	0	2	0	10	6	5	4	5	5	1	0	0	2
242	138			0	0	0	2	0	0	0	0	0	0	1	4	1	17	7	1	11	7	11					0	0	0
242	140			0	0	5	5	2	0	0	0	1	1	1	12	11	11										0	0	5
242	142			0	3	2	1	1	1	0	0	2	1	0	2	12	8										0	3	2
242	144			0	3	3	2																				0	3	3
244	136			0	0	0	33	2	2	0	0	1	0	0	1	1	1	0	3	1	1	5	1				0	0	0
244	138			0	0	2	4	3	0	0	1	1	1	1	2	7	87	1	10	10	1	2	3				0	0	2
244	140			0	0	9	5	0	0	0	0	0	0	1	3	1	20	23									0	0	9
244	142			0	1	5	1	0	0	0	1	15	5	4	4	8	68										0	1	5
244	144			0	6	0	1																				0	6	0
246	136			0	0	0	4	0																			0	0	0
246	138			0	0	1	5	0																			0	0	1
246	140			0	0	1	2	3																			0	0	1
246	142			0	4	6	0																				0	4	6
246	144			3	0	0	0																				3	0	0
267	134				0	0	0	0	0	0	0	0	0	5	0	0	0		0	0	0	0	0	0	0	0	0	5	0
267	136				0	0	0	0	1	1	0	0	2	1	0	0			0	0	0	0	1	1	0	0	2	1	0
269	134			0	0	0	0	0	0	0	0	0	1	8	0			0	0	0	0	0	0	0	0	0	1	8	0
284	134			0	0	0	2	0	0	1	0	0	0	0	10	0	0	0	0	0	0	0	0						0
284	136			0	0	0	0	0	0	1	1	0	14	19	0	0	0	0	0	0	0	0	0						0
285	135																	0	0	0	0	0	0						
285	137																	0	0	0	0	0	0						
286	134			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						0
286	136			0	0	0	0	0	0	0	1	1	2	8	1	1													0
286	138			0	0	0	0	0	0	0	0	0	2	3	1	7	8	0	0	0									0
T	A			0	0	0	0	0	0																				
T	B			2	0	1	3	1	0																				
T	C			0	0	3	3	0	0																				
T	D			0	0	2	3	4	4																				
T	E			0	0	0	5	5	3																				
N	**E**	**2003**	**Depth**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	26
242	140			-	5	13	24	-																					
242	142			6	5	28	-	-																					
244	140			-	2	2	3	3																					
244	142			7	14	24	-	-																					
270	152					0	2	2	3																				
270	154				21	7																							
270	156			2	29																								
272	152			1																									

Table A28-1 continued

N	E	2003	Depth	Level																										
272	154				4	3																								
272	156				39																									
274	152						2																							
274	154				1	16	9	24									7													
274	156				45																									
N	E	2003	Depth	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
284	132			0	3	0	1	1	14	4	2	1	0	3	0	4	0	0	0	0	0									
286	132			0	2	1	0	1	3	1	1	1	2	1	2	2	4	1	0	1	1									
288	132			0	1	0	1	1	2	1	0	1	2	2	6	4	1	0	0	0	0									
288	134			0	0	0	0	1	2	2	0	5	3	6	26	16	3	1	0	0	0									
286	134			1	7	8	0	4	5	1	2	3	3	9	13	2	1	0	0	0	0									
N	E	2004	Depth	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
288	138			0	0	0	0	0	0	0	0	0	0	3	6	2	5	0	0	0	0	0	0	0	0	0	0	0	0	
290	132			0	0	0	0	2	0	3	0	0	0	5	2	2	3	0	0	0	0	0	0	0	0	2	0	3	0	
290	134			0	0	0	0	0	0	0	0	0	0	0	25	17	4	0	0	0	0	0	0	0	0	0	0	0	0	
290	136			0	0	0	0	1	1	0	0	0	0	4	6	12	0	0	0		0	0	0	0	0	1	1	0	0	
292	134			0	0	0	1	1	1	3	2	3	4	4	2	6	11	4	0	0	0	0	0	0	1	1	1	3	2	
292	136			0	0	0	0	1	1	0	0	0	0	4	6	12	0	0	0	0	0	0	0	0	0	1	1	0	0	
290	138			0	1	0	10	0	0	0	0	2	2	11	19	0	3	1	0	0	0	0	1	0	10	0	0	0	0	
292	132					3	1	0	0	2	1	2	0	1	1	4	2	0	0					3	1	0	0	2	1	
294	122								0	0	0	2	1	2	1	2	1	1	0				0	0	0	2	1	2	1	
296	114								0	0	0	2	1	2	1	2	1	1	0				0	0	0	2	1	2	1	
296	126							0	1	0	0	1	0	2	0	0	1	0	0	0	0	0	1	0	0	1	0	2	0	
238	138			0	0	4	0	27																						
242	140							0	1	4	2	3	1	0	0	1	4	2	3	1	0									
242	140			0	0	2	2	2	10	11																				
242	140			1	1	6	3	2	1	3	1	4	4	4																
242	142			0	1	4	5	1	12	6																				
246	140				0	2	1	0	0	0	0	1	6	3	0	1	1	5	6	2	14	18	4	12	24	4	0	0	0	
246	142			1	0	6	1	1	3	1	6	3	3	2	2	4	4	24	5	2	0	2	6	5	6	6	16	1		
248	140				1	4	0	0	5	0	0	4	3	0	0	0	0													

Table A28-1 continued

N	E	2004	Depth	Level																										
248	142			0	2	16	3	3	2	0	0	0	1	2	0	0	0													
244	140SW			1	0	0	4	3	5	2	0	0	1	0	2	0	3	2	3	1										
244	144SW			0	3	1	2	3	8	16	4	4	5	10	6	4	5													
242	140NE				4	16	12	15	6	3																				
N	**E**	**2004**	**Depth**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	26	
242	140NW			0	0	2	14	11	40	23	0	0	5	3	6	2														
242	144NW			3	4	4	4	1	4	2	6	2	5	11	16	20	4	0												

APPENDIX 29

RESULTS OF INTERPRETATION FREE ANALYSIS

Appendix 29 presents the results of the Interpretation Free Analysis. The Tables that follow show the provenience information and classification of all mapped items from the study sample, including the Holocene, Pleistocene Clovis, Pleistocene Sands, and Pleistocene Terrace. Level and artifact numbers are also provided. Items were classified according to the Interpretation free categories and include pebble, Amorphous debris, debris, flake fragment, broken flake, and flake. The Attributes used to classify each item are presented in Appendix 31.

Table A29–1
Results Of Interpretation Free Analysis

Year	N	E	N	E	Art	Level	Classification
1999	242	130	242.94	130.85	1	9	Flake Fragment
1999	242	130	243.01	130.95	1	11	Flake Fragment
1999	242	130	242.31	130.76	1	12	Amorphous Debris
1999	242	130	243.75	131.93	1	14	
1999	242	130	243.61	131.68	1	17	Pebble
1999	242	130	243.78	131.56	1	X	Amorphous Debris
1999	242	130	243.4	131.2	2	10	Flake
1999	242	130	242.8	131.46	2	12	Flake
1999	242	130	243.84	131.49	3	12	Flake Fragment
1999	242	130	243.725	130.86	6	17	Pebble
1999	242	130	243.61	130.485	18	17	Pebble
1999	242	130	243.565	130.535	19	17	Debris
1999	242	130	243.885	130.49	24	17	Pebble
1999	242	130	243.775	130.695	25	17	Amorphous Debris
1999	242	130	243.83	130.69	26	17	Amorphous Debris
1999	242	130	243.86	131.275	30	17	Pebble
1999	242	130	243.89	130.82	30	17	Amorphous Debris
1999	242	130	243.88	131.285	31	17	Amorphous Debris
1999	242	130	243.88	130.865	31	17	Amorphous Debris
1999	242	130	243.88	130.865	35	17	Pebble
1999	242	130	243.81	131.045	36	17	Pebble
1999	242	130	243.86	131.035	39	17	Amorphous Debris
1999	242	130	243.85	131.155	40	17	Broken Flake
1999	242	130	243.54	131.23	41	17	Pebble
1999	242	130	243.76	131.8	X	16	Pebble
1999	242	130	243.85	130.95	X	16	Amorphous Debris
1999	242	130	243.625	130.685	X	17	Amorphous Debris
1999	242	130	243.825	131.02	X	17	Pebble
1999	242	130	243.88	130.52	X	17	Pebble
1999	242	130	243.8	131.05	X	17	Pebble
1999	242	130	243.84	131.065	X	17	Amorphous Debris
1999	242	130	243.715	130.745	X	17	Pebble
1999	242	130	243.925	130.63	X	17	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
1999	242	130	243.86	130.72	X	17	Pebble
1999	242	130	243.74	130.47	X	17	Amorphous Debris
1999	242	130	243.745	130.29	X	17	Pebble
1999	242	130	243.85	131.11	X	17	Pebble
1999	242	130	243.67	130.34	X	17	Pebble
1999	242	130	243.72	130.51	X	17	Pebble
1999	242	130	243.9	130.765	X	17	Pebble
1999	242	130	243.7	130.385	X	17	Pebble
1999	242	130	243.655	130.485	X	17	Pebble
1999	242	130	243.92	130.97	X	17	Pebble
1999	242	130	243.695	130.275	X	17	Pebble
1999	242	130	243.95	130.68	X	17	Pebble
1999	242	130	243.88	130.99	X	17	Pebble
1999	242	130	243.85	130.89	X	17	Pebble
1999	242	130	243.84	130.47	X	17	Pebble
1999	242	130	243.65	130.03	X	17	Pebble
1999	242	130	243.62	130.915	X	17	Amorphous Debris
1999	242	130	243.755	130.745	X	17	Amorphous Debris
1999	242	130	243.86	130.96	X	17	Amorphous Debris
1999	242	130	243.88	130.52	X	17	Pebble
1999	242	130	242.52	130.97	X	17	Pebble
1999	242	132	243.588	133.52	1	3	Flake Fragment
1999	242	132	242.075	133.43	1	3	Flake Fragment
1999	242	132	X	X	1	14	Amorphous Debris
1999	242	132	243.78	133.97	1	15	Amorphous Debris
1999	242	132	243.62	134	1	15	Amorphous Debris
1999	242	132	243.69	133.95	1	17	Pebble
1999	242	132	243.78	133.93	1	X	X
1999	242	132	243.76	133.93	1	X	X
1999	242	132	243.72	133.89	1	X	X
1999	242	132	243.76	133.89	1	X	X
1999	242	132	243.68	133.85	1	X	X
1999	242	132	243.8	133.91	1	X	X
1999	242	132	243.7	133.83	1	X	X
1999	242	132	243.64	133.9	1	X	X
1999	242	132	243.72	133.84	1	X	X
1999	242	132	242.25	132.45	2	3	Flake Fragment
1999	242	132	243.145	131.545	2	3	Flake Fragment
1999	242	132	243.21	132.29	2	16	Amorphous Debris
1999	242	132	243.3	132.15	2	X	X
1999	242	132	243.09	132.2	2	X	X
1999	242	132	243.2	132.19	2	X	X
1999	242	132	243.06	133.6	2	X	X
1999	242	132	243.2	132.15	2	X	X
1999	242	132	243.33	133.18	3	3	Flake Fragment
1999	242	132	243.23	132.24	3	3	Flake Fragment
1999	242	132	243.71	133.15	3	15	Amorphous Debris
1999	242	132	243.21	132.23	3	16	Pebble
1999	242	132	243.73	132.73	3	X	X
1999	242	132	243.75	133.15	3	X	X
1999	242	132	243.29	132.13	4	3	Flake Fragment

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
1999	242	132	243.43	132.08	4	15	Amorphous Debris
1999	242	132	243.57	133.47	4	X	X
1999	242	132	243.9	133.27	4	X	X
1999	242	132	242.88	133.45	4	X	X
1999	242	132	243.18	133.71	5	3	Flake Fragment
1999	242	132	243.07	133.7	5	15	Flake Fragment
1999	242	132	243	133.66	5	16	Amorphous Debris
1999	242	132	242.98	133.67	5	X	X
1999	242	132	242.43	133.32	5	X	X
1999	242	132	242.27	132.26	6	3	Flake Fragment
1999	242	132	242.33	132.73	6	15	Debris
1999	242	132	242.45	133.08	6	15	Pebble
1999	242	132	242.52	130.47	6	X	X
1999	242	132	243.22	131.27	7	3	Flake Fragment
1999	242	132	243.4	132.6	7	15	Pebble
1999	242	132	243.4	133.87	7	15	Amorphous Debris
1999	242	132	243.49	132.35	7	X	X
1999	242	132	243.78	133.97	8	3	Amorphous Debris
1999	242	132	242.3	133.25	8	15	Flake Fragment
1999	242	132	243.27	132.3	8	15	Amorphous Debris
1999	242	132	243.76	133.93	8	16	Debris
1999	242	132	243.78	133.13	8	X	X
1999	242	132	242.58	134	9	3	Pebble
1999	242	132	243.26	132.8	9	15	Debris
1999	242	132	243.72	133.89	9	16	Amorphous Debris
1999	242	132	243.25	132.75	9	X	X
1999	242	132	243.44	132.28	10	3	Pebble
1999	242	132	243.68	133.85	10	15	Flake Fragment
1999	242	132	243.25	132.75	10	16	Debris
1999	242	132	243.69	133.95	10	X	X
1999	242	132	243.76	133.89	11	3	Flake Fragment
1999	242	132	243.78	133.93	11	16	Debris
1999	242	132	243.72	133.84	11	X	X
1999	242	132	243.64	133.9	12	3	Flake Fragment
1999	242	132	243.7	133.83	12	16	Amorphous Debris
1999	242	132	243.8	133.91	12	X	X
1999	242	132	243.62	134	13	X	X
1999	242	132	242.86	133.88	14	16	Flake Fragment
1998	244	130	244.17	131.64	1	19	Amorphous Debris
1998	244	130	245.33	131.13	1	21	Debris
1998	244	130	245.92	131.36	1	21 F	Amorphous Debris
1998	244	130	245.14	131.93	1	X	Debris
1998	244	130	244	131.04	2	19	Amorphous Debris
1998	244	130	244.055	131.2	2	21 F	Flake Fragment
1998	244	130	244.1	130.75	2	X	Debris
1998	244	130	244.09	130.88	3	21 F	Amorphous Debris
1998	244	130	244.12	131.12	4	21 F	Pebble
1998	244	130	244.05	131.12	5	21 F	Pebble
1998	244	130	244.02	131.12	6	21 F	Amorphous Debris
1998	244	130	244.08	131.16	7	21 F	Amorphous Debris
1998	244	130	244.025	131.28	8	21 F	Amorphous Debris
1998	244	130	244	130.81	9	21 F	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
1998	244	130	244.04	130.85	10	21 F	Pebble
1998	244	130	244	130.94	11	21 F	Amorphous Debris
1998	244	130	244	131.09	12	21 F	Flake Fragment
1998	244	130	244	131.15	13	21 F	Pebble
1998	244	130	244.065	130.92	14	21 F	Amorphous Debris
1998	244	130	244.03	130.965	15	21 F	Pebble
1998	244	130	244.09	130.94	16	21 F	Amorphous Debris
1998	244	130	244.08	131.12	17	21 F	Amorphous Debris
1998	244	130	244.035	131.31	18	21 F	Debris
1998	244	130	244.02	130.89	19	21 F	Pebble
1998	244	130	244	131.19	20	21 F	Pebble
1998	244	130	244.035	131.07	21	21 F	Pebble
1998	244	130	245.36	130.92	22	21 F	Pebble
1998	244	130	245.22	131.37		21	Broken Flake
2000	242	130	243.56	131.01	2	X	Debris
2000	242	130	243.33	131.63	2	X	Flake Fragment
2000	242	128	242.02	129.59	6	X	Flake Fragment
2000	244	146	245.84	147.22	8	180	Debris
2000	242	130	242.15	131.05	5	185	Debris
2000	242	130	243.23	131.85	1	185	Debris
2000	242	130	242.27	130.7	4	190	Debris
2000	242	130	243.82	130.53	1	190	Flake Fragment
2000	242	130	242.45	130.73	3	190	Debris
2000	242	130	242.43	130.01	25	X	X
2000	242	130	242.86	131.9	1	X	X
2000	242	132	242.44	132.27	2	X	X
2000	242	132	242.75	132.89	3	X	X
2000	242	132	242.9	132.4	1	X	X
2000	242	132	242.6	132.06	1	X	X
2000	242	132	242.7	133.85	6	X	X
2000	242	136	242.54	136.04	1	X	X
2000	242	136	242.94	136.02	3	X	X
2000	242	136	243.24	136.42	1	X	X
2000	242	136	243.59	136	9	X	X
2000	244	132	244.52	133.5	5		Pebble
2000	242	130	243.56	131.01	2	X	X
2000	242	130	243.33	131.63	2	X	X
2000	242	128	242.02	129.59	6	X	X
2000	244	146	245.84	147.22	8	180	X
2001	240	130	241.36	131.46	1	23	Flake
2001	240	130	241.2	131.6	4	25	
2001	240	130	240.86	130.9	3	X	X
2001	240	130	241.06	130.63	2	X	X
2001	240	130	241.24	130.35	1	X	X
2001	240	130	241.05	131.8	1	X	X
2001	240	130	241.31	131.9	1	X	X
2001	240	130	240.74	131.92	2	X	X
2001	240	130	240.84	131.54	1	X	X
2001	240	130	240.47	131.41	2	X	X
2001	240	130	240.51	131.44	3	X	X
2001	240	130	240.76	130.03	1	X	X
2001	240	130	240.36	131.59	1	X	X

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2001	240	130	240.56	131.32	2	X	X
2001	240	130	240.57	130.19	1	X	X
2001	240	130	241.49	131.695	1	X	X
2001	240	130	240.45	130.56	18		Broken Flake
2001	240	132	240.3	132.76	19	2	Broken Flake
2001	240	132	240.7	132.87	1	16	Debris
2001	240	132	240.46	132.805	9	16	Debris
2001	240	132	240.58	132.91	4	16	Flake Fragment
2001	240	132	240.6	132.87	3	16	Debris
2001	240	132	240.49	132.91	6	16	Amorphous Debris
2001	240	132	240.435	132.84	8	16	Flake
2001	240	132	240.48	132.715	12	X	Amorphous Debris
2001	240	132	240.55	132.82	19	X	Amorphous Debris
2001	240	132	240.475	132.72	11	X	Amorphous Debris
2001	240	132	240.58	132.795	17	X	Amorphous Debris
2001	240	132	240.51	132.78	16	X	Amorphous Debris
2001	240	132	240.605	132.8	18	X	Amorphous Debris
2001	240	132	240.49	132.71	14	X	Amorphous Debris
2001	240	132	240.51	132.935	20	X	Amorphous Debris
2001	240	132	240.46	132.69	15	X	Amorphous Debris
2001	240	132	240.52	132.9	45	X	Flake
2001	240	132	240.54	132.8	46	X	Debris
2001	240	132	240.65	132.87	2	X	Flake Fragment
2001	240	132	240.46	132.82	41	X	Debris
2001	240	132	240.51	132.96	5	X	Flake Fragment
2001	240	132	240.52	132.87	44	X	Debris
2001	240	132	240.45	132.68	42	X	Debris
2001	240	132	240.91	132.91	49	X	Debris
2001	240	132	240.88	132.14	48	X	Debris
2001	240	132	240.47	132.59	10	X	Debris
2001	240	132	240.89	132.86	50	X	Debris
2001	240	132	240.5	132.83	43	X	Debris
2001	240	132	240.83	132.98	47	X	Debris
2001	240	132	241.12	132.58	1	18	Amorphous Debris
2001	240	132	241.3	132.6	1	18	Debris
2001	240	132	241.27	132.62	8	18	Flake Fragment
2001	240	132	241.3	132.54	5	18	Debris
2001	240	132	241.17	132.47	2	18	Debris
2001	240	132	241.20	132.56	7	18	Amorphous Debris
2001	240	132	241.29	132.47	4	18	Debris
2001	240	132	241.2	132.53	3	18	Debris
2001	240	132	241.13	132.60	6	18	X
2001	240	132	241.36	131.42			X
2001	240	132	240.67	132.43	2	18	Amorphous Debris
2001	240	132	240.87	132.45	3	18	Flake
2001	240	132	240.85	132.6	4	18	Amorphous Debris
2002	240	134	240.36	135.45	11	5X10	Flake
2002	242	136	243.84	137.09	4	18	Flake Fragment
2002	242	136	243.2	136.88	2	18	Pebble
2002	242	136	242.42	137.85	3	18	Amorphous Debris
2002	242	136	242.33	137.52	5	18	Flake Fragment
2002	242	136	242.96	136.9	1	18	Flake Fragment

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2002	242	138	243.9	138.02	12	2	Debris
2002	242	138	242.96	138.57	1	4	Flake Fragment
2002	242	138	243.26	138.57	2	4	Flake Fragment
2002	242	138	243.97	138.64	1	11	Flake Fragment
2002	242	138	242.34	139.78	3	12	Amorphous Debris
2002	242	138	242.95	139.34	2	12	Amorphous Debris
2002	242	138	243.64	139.21	1	13	Flake Fragment
2002	242	138	243.22	139.965	PP7	14	Debris
2002	242	138	243.26	139.97	PP6	14	Amorphous Debris
2002	242	138	243.75	139.89	PP11	14	Amorphous Debris
2002	242	138	243.85	139.9	PP12	14	Pebble
2002	242	138	243.49	139.965	PP8	14	Pebble
2002	242	138	243.5	139.9	PP9	14	Amorphous Debris
2002	242	138	243.4	139.855	PP10	14	Pebble
2002	242	138	243.29	139.15	PP4	14	Amorphous Debris
2002	242	138	242.77	139.2	1	14	Broken Flake
2002	242	138	242.64	139.33	2	14	Amorphous Debris
2002	242	138	243.72	139.82	4	14	Debris
2002	242	138	243.87	139.7	5	14	Amorphous Debris
2002	242	138	242.61	139.3	PP1	14	Pebble
2002	242	138	243.3	139.215	PP5	14	Pebble
2002	242	138	242.75	139.86	PP3	14	Amorphous Debris
2002	242	138	243.85	139.98	3	14	Debris
2002	242	138	242.75	139.74	PP2	14	Amorphous Debris
2002	242	138	242.05	139.5	3	15	Amorphous Debris
2002	242	138	243.16	139	1	15	Flake Fragment
2002	242	138	243.48	138.34	4	15	Pebble
2002	242	138	243.03	138.62	5	15	Flake Fragment
2002	242	138	242.3	139.97	4	15	Amorphous Debris
2002	242	138	243.32	138.98	6	15	Amorphous Debris
2002	242	138	243.43	138.16	PP1	15	Amorphous Debris
2002	242	138	243.2	139.64	1	16	Flake
2002	242	138	243.14	138.64	1	17	Flake Fragment
2002	242	138	242.14	139.39	4	17	Flake
2002	242	138	242.85	139.95	2	17	Flake
2002	242	138	242.7	138.43	8	17	Debris
2002	242	138	242.9	139.51	3	17	Debris
2002	242	138	242.09	139.3	2	17	Pebble
2002	242	138	242.8	138.3	6	17	Flake
2002	242	138	242.87	138.93	7	17	Amorphous Debris
2002	242	138	242.23	138.63	5	17	Debris
2002	242	138	242.27	139.94	1	17	Pebble
2002	242	138	242.96	139.14	3	17	Pebble
2002	242	138	243.74	139.09	1	18	Broken Flake
2002	242	138	243.08	138.18	4	18	Amorphous Debris
2002	242	138	243.03	138.87	2	18	Flake Fragment
2002	242	138	242.5	139.09	1	18	Debris
2002	242	138	242.96	139.11	2	18	Pebble
2002	242	138	243.45	138.98	5	18	Pebble
2002	242	138	243.09	139.2	3	18	Pebble
2002	242	138	243.14	139.87	PP7	19	Pebble
2002	242	138	243.09	139.64	PP6	19	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2002	242	138	243.3	139.97	PP9	19	Amorphous Debris
2002	242	138	242.74	139.5	PP4	19	Pebble
2002	242	138	243.75	139.99	PP8	19	Debris
2002	242	138	242.95	138.92	PP2	19	Pebble
2002	242	138	242	138.78	PP1	19	Debris
2002	242	138	242.1	139.34	PP3	19	Debris
2002	242	138	242.54	139.09	2	19	Debris
2002	242	138	242.46	139.08	PP5	19	Pebble
2002	242	138	242.32	138.8	1	19	Debris
2002	242	138	243.93	138.32	7	F87	Flake Fragment
2002	242	138	242.45	139.1	2	X	Flake Fragment
2002	242	138	242.26	139.59	1	X	Amorphous Debris
2002	242	138	242.32	138.97	1	X	X
2002	242	140	242	141.75	4	4	Flake Fragment
2002	242	140	242.63	141.88	2	4	Flake Fragment
2002	242	140	243.39	139.02	1	4	Flake
2002	242	140	242.75	141.97	5	4	Flake Fragment
2002	242	140	243.1	140.31	3	4	Flake
2002	242	140	243.55	140.58	2	6	Flake Fragment
2002	242	140	243.88	140.37	1	6	Flake Fragment
2002	242	140	243.63	140.23	1	11	Flake Fragment
2002	242	140	243.77	140.79	1	12	Flake Fragment
2002	242	140	243.5	140.57	3	15	Flake Fragment
2002	242	140	243.53	141.04	6	15	Pebble
2002	242	140	243.6	141.02	5	15	Pebble
2002	242	140	243.23	141.4	12	15	Pebble
2002	242	140	243.18	141.323	10	15	Pebble
2002	242	140	243.63	141.14	8	15	Pebble
2002	242	140	243.65	141.42	PP3	16	Amorphous Debris
2002	242	140	242.84	141.7	2	16	Debris
2002	242	140	244	140.12	3	16	Debris
2002	242	140	242.84	141.76	1	16	Debris
2002	242	140	243.55	141.57	PP5	16	Amorphous Debris
2002	242	140	243.6	141.4	PP2	16	Pebble
2002	242	140	243.5	141.57	PP6	16	Amorphous Debris
2002	242	140	243.12	141.28	PP1	16	Amorphous Debris
2002	242	140	243.74	141.44	PP4	16	Pebble
2002	242	140	243.45	141.69	PP&	16	Pebble
2002	242	140	243.12	140.09	4	16	Debris
2002	242	140	242.64	142	4	17	Broken Flake
2002	242	140	242.84	141.82	3	17	Amorphous Debris
2002	242	140	242.58	141.64	1	17	Flake Fragment
2002	242	140	242.56	141.85	5	17	Debris
2002	242	140	242.8	141.65	2	17	Pebble
2002	242	140	242.6	141.89	6	17	Debris
2002	242	140	243.06	140.05	7	17	Debris
2002	242	140	243.54	141.95	PP2	17	Pebble
2002	242	140	243.85	141.9	PP3	17	Amorphous Debris
2002	242	140	243.12	141.12	PP4	17	Amorphous Debris
2002	242	140	242.67	141.86	PP1	17	Pebble
2002	242	140	243.17	141.87	1	19	X
2002	242	140	X	141.6	3	C2	Broken Flake

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2002	242	140	242.92	140.66	6	C2	Broken Flake
2002	242	140	244.75	140.04	5	C2	Broken Flake
2002	242	140	243.53	140.09	1		Broken Flake
2002	242	140	243.21	141.08	7		Debris
2002	242	140	243.29	141.12	9	X	Amorphous Debris
2002	242	140	243.56	141.02	2	X	Amorphous Debris
2002	242	140	243.39	141.64	11	X	Debris
2002	242	140	242.12	140.79	1	X	X
2002	242	140	242.7	141.37	1	X	X
2002	242	140	242.72	141.14	2	X	X
2002	242	140	243.98	141	3	X	X
2002	242	140	243.86	141.03	4	X	X
2002	242	140	242.65	140.14	4	X	X
2002	242	140	242.94	142	5	X	X
2002	242	142	243.71	142.21	1	7	Flake
2002	242	142	243.65	143.06	2	11	Flake
2002	242	142	243	143.39	1	11	Flake Fragment
2002	242	142	243.12	143.45	1	12	Broken Flake
2002	242	142	243.27	145.09	2	14	Flake Fragment
2002	242	142	243.28	142.98	3	15	Flake Fragment
2002	242	142	242.81	143.9	10	15	Debris
2002	242	142	243.68	143.74	9	15	Flake
2002	242	142	243.33	142.72	4	15	Pebble
2002	242	142	243.7	142.91	2	15	Broken Flake
2002	242	142	243.05	143.75	12	15	Debris
2002	242	142	243	142.09	6	15	Pebble
2002	242	142	243.34	143.59	11	15	Pebble
2002	242	142	243.975	142.4	1	15	Pebble
2002	242	142	242.95	142.38	7	15	Amorphous Debris
2002	242	142	243.61	142.72	6	16	Flake Fragment
2002	242	142	243.39	144	1	16	Broken Flake
2002	242	142	243.57	142.72	7	16	Broken Flake
2002	242	142	243.1	143.77	2	16	Debris
2002	242	142	243.21	143.23	5	16	Pebble
2002	242	142	242	142	1	16	Flake
2002	242	142	243.4	142.54	3	16	Debris
2002	242	142	243.36	142.31	5	16	Amorphous Debris
2002	242	142	243.1	142.46	4	16	Debris
2002	242	142	243.58	145.62	1	X	Amorphous Debris
2002	244	136	244.25	137.525	2	5	Broken Flake
2002	244	136	245.48	136.03	1	5	Flake Fragment
2002	244	136	244.14	137.09	1	12	Flake Fragment
2002	244	136	245.74	136.94	1	15	Flake Fragment
2002	244	136	244.85	137.05	3	15	Flake Fragment
2002	244	136	245.05	137.63	2	15	Flake Fragment
2002	244	136	244.14	136.69	1	20	Amorphous Debris
2002	244	136	244.5	137.78	16	F87	Flake Fragment
2002	244	136	243.95	137.46	9	F87	Debris
2002	244	136	244.38	137.58	14	F87	Flake Fragment
2002	244	136	243.9	137.25	6	F87	Debris
2002	244	136	244.55	137.46	12	F87	Flake Fragment
2002	244	136	244.36	137.84	18	F87	Flake

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2002	244	136	243.85	137.1	4	F87	Pebble
2002	244	136	244.46	137.5	13	F87	Flake Fragment
2002	244	136	244.37	137.93	21	F87	Pebble
2002	244	136	243.92	137.18	5	F87	Flake Fragment
2002	244	136	243.47	137.95	2	F87	Amorphous Debris
2002	244	136	243.42	137.77	3	F87	Pebble
2002	244	136	244.59	137.91	19	F87	Debris
2002	244	136	244.17	137.4	11	F87	Flake
2002	244	136	244.06	137.88	17	F87	Flake
2002	244	136	244.35	137.76	15		Amorphous Debris
2002	244	138	244.93	139.12	2	2	Distal
2002	244	138	245.38	138.18	2	3	Flake Fragment
2002	244	138	244	138	1	3	Flake Fragment
2002	244	138	245.67	138.91	1	4	Flake Fragment
2002	244	138	245.24	138.61	2	4	Flake Fragment
2002	244	138	244.03	139.61	4	4	Broken Flake
2002	244	138	244.59	139.46	3	4	X
2002	244	138	245.8	138.43	1	5	Flake Fragment
2002	244	138	245.94	138.44	2	5	Flake Fragment
2002	244	138	245.78	138.2	1	8	Flake Fragment
2002	244	138	246	138.42	1	9	Flake
2002	244	138	244.47	138.51	1	10	Debris
2002	244	138	245.43	138.23	1	12	Broken Flake
2002	244	138	245.61	138.12	2	12	Flake
2002	244	138	243.63	138.19	1	13	Flake Fragment
2002	244	138	244.13	139.71	3	13	Debris
2002	244	138	244.82	139.91	7	13	Pebble
2002	244	138	244	139.8	12	14	Flake Fragment
2002	244	138	244.67	139.555	PP2	14	Amorphous Debris
2002	244	138	245.42	138.78	PP5	14	Amorphous Debris
2002	244	138	245.56	139.62	6	14	Amorphous Debris
2002	244	138	245.11	139.82	10	14	Amorphous Debris
2002	244	138	244.76	139.93	2	14	Flake Fragment
2002	244	138	245.2	139.52	8	14	Pebble
2002	244	138	244.955	139.86	PP4	14	Debris
2002	244	138	245.57	139.56	5	14	Amorphous Debris
2002	244	138	245.03	139.84	11	14	Pebble
2002	244	138	245.94	139.18	3	14	Pebble
2002	244	138	245.99	139.49	PP1	14	Amorphous Debris
2002	244	138	245.94	139.61	4	14	Debris
2002	244	138	245.21	139.89	9	14	Pebble
2002	244	138	244.91	139.35	PP3	14	Debris
2002	244	138	245.58	139.93	7	14	Pebble
2002	244	138	245.7	139.68	1	14	Debris
2002	244	138	245.37	138.73	13	14	Flake
2002	244	138	244.47	139.13	6	15	Debris
2002	244	138	244.31	139.22	5	15	Amorphous Debris
2002	244	138	244.12	139.63	4	15	Debris
2002	244	138	244.37	139.59	2	15	Amorphous Debris
2002	244	138	245.7	139.93	2	15	Amorphous Debris
2002	244	138	244.73	139.68	1	15	Amorphous Debris
2002	244	138	245.54	138.69	2	16	Flake Fragment

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2002	244	138	245.01	139.95	3	16	Flake Fragment
2002	244	138	244.54	139.05	1	16	Debris
2002	244	138	244.19	138.21	25	16	Debris
2002	244	138	244.35	138.47	1	17	Flake Fragment
2002	244	138	245.5	138.85	2	17	Flake Fragment
2002	244	138	245.7	138.72	3	17	Flake Fragment
2002	244	138	245.52	138.74	4	17	Flake Fragment
2002	244	138	X	X	1	19	Pebble
2002	244	138	244.24	139.1	1	20	Amorphous Debris
2002	244	138	244	138	3	20	Flake Fragment
2002	244	138	244	138	2	20	Debris
2002	244	138	244	138	1	20	Pebble
2002	244	138	244.83	138.76	7	D2	Flake
2002	244	138	244.64	138.32	30	F87	Flake Fragment
2002	244	138	243.95	137.43	8	F87	Debris
2002	244	138	244.14	138.63	44	F87	Amorphous Debris
2002	244	138	244.19	137.9	51	F87	Amorphous Debris
2002	244	138	244.35	138.51	62	F87	Amorphous Debris
2002	244	138	244.23	138.38	57	F87	Pebble
2002	244	138	244.36	138.58	41	F87	Pebble
2002	244	138	244.27	138.63	64	F87	Amorphous Debris
2002	244	138	244.3	138.11	54	F87	Pebble
2002	244	138	244.26	138.34	32	F87	Pebble
2002	244	138	244.13	138.57	65	F87	Pebble
2002	244	138	244.4	138.53	40	F87	Amorphous Debris
2002	244	138	244.2	138.53	38	F87	Pebble
2002	244	138	244.23	138.46	36	F87	Pebble
2002	244	138	244.34	138.42	58	F87	Amorphous Debris
2002	244	138	244.46	138.38	56	F87	Amorphous Debris
2002	244	138	X	X	9	F87	X
2002	244	138	244.26	138.41	59	F87	Pebble
2002	244	138	244.19	138.62	42	F87	Pebble
2002	244	138	244.27	138.51	66	F87	Pebble
2002	244	138	244.16	138.1	24	F87	Amorphous Debris
2002	244	138	243.94	137.45	49	F87	Amorphous Debris
2002	244	138	X	X	6	F87	Pebble
2002	244	138	244.25	138.51	67	F87	Pebble
2002	244	138	X	X	8	F87	Pebble
2002	244	138	244.53	138.49	63	F87	Pebble
2002	244	138	243.5	139.46	3	F87	Amorphous Debris
2002	244	138	X	X	3	F87	Amorphous Debris
2002	244	138	244.73	138.01	20	F87	Pebble
2002	244	138	X	X	10	F87	Pebble
2002	244	138	244.55	138.23	55	F87	Amorphous Debris
2002	244	138	244.11	138.62	43	F87	Debris
2002	244	138	244.34	138.47	61	F87	Pebble
2002	244	138	X	X	4	F87	Pebble
2002	244	138	244.15	137.35	50	F87	Pebble
2002	244	138	X	X	11	F87	Pebble
2002	244	138	244.36	138.09	53	F87	Pebble
2002	244	138	244.15	138.53	37	F87	Amorphous Debris
2002	244	138	244.22	138.26	33	F87	Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2002	244	138	X	X	2	F87	Pebble
2002	244	138	244.15	138.45	60	F87	Pebble
2002	244	138	245.92	138.35	46	F87	Debris
2002	244	138	X	X	5	F87	Pebble
2002	244	138	244.31	138.53	39	F87	Pebble
2002	244	138	243.82	137.7	48	F87	Amorphous Debris
2002	244	138	244.34	138.13	27	F87	Amorphous Debris
2002	244	138	244.14	138.04	23	F87	Flake
2002	244	138	244.28	138	22	F87	Pebble
2002	244	138	243.5	138.6	1	F87	Debris
2002	244	138	244.53	138.25	29	F87	Pebble
2002	244	138	243.88	138.86	47	F87	Debris
2002	244	138	244.64	137.5	13	F87	Amorphous Debris
2002	244	138	243.5	138.6	1	F87	Debris
2002	244	138	244.3	138.21	28	F87	Flake Fragment
2002	244	138	243.47	137.95	2	F87	X
2002	244	138	244.28	138.1	26	X	Debris
2002	244	138	243.32	138.32	31	X	Pebble
2002	244	138	244.3	138.39	35	X	Pebble
2002	244	138	244.15	138.73	45	X	Pebble
2002	244	138	244.27	137.96	52	X	X
2002	244	138	245.69	138.14	X	X	X
2002	244	138	243.95	137.46	9	X	Pebble
2002	244	140	244.6	140.16	6	4	Flake
2002	244	140	244.54	140.24	5	4	Flake
2002	244	140	245.63	140.27	1	4	Flake Fragment
2002	244	140	245.81	141.12	2	4	Flake Fragment
2002	244	140	244.78	141.78	9	4	Flake Fragment
2002	244	140	245.11	140.3	4	4	Debris
2002	244	140	244.24	140.22	3	5	Flake Fragment
2002	244	140	244.11	140.48	1	5	Debris
2002	244	140	245.67	140.7	2	5	Pebble
2002	244	140	245.18	141.73	5	5	Pebble
2002	244	140	245.82	140.73	4	5	Pebble
2002	244	140	245.38	141.38	1	13	Amorphous Debris
2002	244	140	245.22	141.47	2	14	Pebble
2002	244	140	245.54	140.7	1	14	Amorphous Debris
2002	244	140	245.93	141.38	1	15	Flake
2002	244	140	244.08	140.8	4	16	Broken Flake
2002	244	140	244.72	140.9	5	16	Debris
2002	244	140	244.43	140.44	2	16	Amorphous Debris
2002	244	140	244.1	141.81	15	16	Pebble
2002	244	140	244.6	140.35	4	16	Amorphous Debris
2002	244	140	245.2	141.2	13	16	Pebble
2002	244	140	244.27	140.76	2	16	Amorphous Debris
2002	244	140	245.51	141.58	8	16	Pebble
2002	244	140	245.93	141.15	10	16	Amorphous Debris
2002	244	140	245.93	141.08	X	16	Pebble
2002	244	140	244.52	140.6	5	16	Pebble
2002	244	140	245.73	141.88	12	16	Pebble
2002	244	140	244.4	140.96	14	16	Pebble
2002	244	140	245.21	141.15	6	16	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2002	244	140	244.3	140.46	1	16	Pebble
2002	244	140	245.66	141.84	11	16	Pebble
2002	244	140	244.32	140.6	5	16	Pebble
2002	244	140	245.13	141.16	7	16	Amorphous Debris
2002	244	140	244.68	141.18	12	17	Debris
2002	244	140	244.93	141.24	10	17	Flake Fragment
2002	244	140	244.75	141.2	11	17	Amorphous Debris
2002	244	140	244.25	140.62	10	17	Amorphous Debris
2002	244	140	244.8	141.11	11	17	Amorphous Debris
2002	244	140	244.27	141.07	6	17	Amorphous Debris
2002	244	140	244.16	140.63	9	17	Pebble
2002	244	140	245.66	140.87	1	17	Flake Fragment
2002	244	140	244.69	141.06	7	17	Pebble
2002	244	140	244.19	141.29	4	17	Amorphous Debris
2002	244	140	244.09	141.5	1	17	Pebble
2002	244	140	244.29	140.85	8	17	Amorphous Debris
2002	244	140	245.45	140.85	2	17	Flake
2002	244	140	244.45	141.33	2	17	Debris
2002	244	140	244.7	141.23	3	17	Pebble
2002	244	140	244.9	141.2	5	17	Pebble
2002	244	140	244.51	141.54	1	18	Debris
2002	244	140	245.5	141.27	4	X	Flake Fragment
2002	244	140	244.19	140.56	9	X	Debris
2002	244	140	244.91	140.8	7	X	Debris
2002	244	140	244.1	140.82	8	X	Debris
2002	244	140	244.17	140.86	5	X	Debris
2002	244	140	244.87	141.08	6	X	Amorphous Debris
2002	244	140	245.58	141.08	3	X	Debris
2002	244	140	245.45	140.45	3	X	Debris
2002	244	140	244.7	140.7	1	X	Debris
2002	244	142	244.7	143.05	1	3	Flake
2002	244	142	245.27	142.57	3	3	Amorphous Debris
2002	244	142	244.66	142.25	5	4	Flake Fragment
2002	244	142	244.9	142.18	1	4	Amorphous Debris
2002	244	142	244.74	143.8	1	4	Flake Fragment
2002	244	142	244.35	143.52	4	4	Debris
2002	244	142	245.65	142.53	3	4	Debris
2002	244	142	244.35	143.77	1	5	Flake
2002	244	142	245.16	143.3	1	10	Pebble
2002	244	142	244.46	143.85	2	11	Flake Fragment
2002	244	142	245.58	143.39	3	12	Flake Fragment
2002	244	142	245.48	143.29	5	12	Pebble
2002	244	142	245.6	143.45	4	12	Amorphous Debris
2002	244	142	245.4	143.8	1	12	Pebble
2002	244	142	245.65	143.88	2	13	Amorphous Debris
2002	244	142	245.2	143.4	1	13	Pebble
2002	244	142	245.68	143.92	3	13	Pebble
2002	244	142	245.6	142.95	4	14	Pebble
2002	244	142	245.43	142.08	2	14	Pebble
2002	244	142	245.47	142.33	1	14	Flake Fragment
2002	244	142	244.46	143.5	5	15	Amorphous Debris
2002	244	142	245.96	143.43	4	15	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2002	244	142	244.62	143.78	1	15	Pebble
2002	244	142	245.55	142.94	2	15	Amorphous Debris
2002	244	142	244.58	142.51	6	15	Pebble
2002	244	142	245.89	143.14	3	15	Pebble
2002	244	142	244.83	142.25	7	15	Pebble
2002	244	142	245.06	142.05	8	15	Amorphous Debris
2002	244	142	244.45	143.09	5	16	Debris
2002	244	142	244.43	143.09	4	16	Flake Fragment
2002	244	142	244.24	143.07	1	16	Debris
2002	244	142	244.43	143.35	2	16	Flake Fragment
2002	244	142	244.16	143.28	1	16	Debris
2002	244	142	244.35	143.15	3	16	
2002	244	142	244.87	142.1	2	B2	Broken Flake
2002	244	142	244.87	142.1	2	B2	Flake
2002	244	142	244.65	142.86	45	F 88	Debris
2002	244	142	244.91	142.39	63	F87	Flake Fragment
2002	244	142	244.86	142.66	65	F87	Pebble
2002	244	142	245.1	142.39	27	F87	Amorphous Debris
2002	244	142	244.68	142.17	30	F87	Amorphous Debris
2002	244	142	245.3	142.81	25	F87	Debris
2002	244	142	245	143.9	12	F87	Pebble
2002	244	142	244.6	143.33	7	F87	Amorphous Debris
2002	244	142	244.81	142.42	23	F87	Amorphous Debris
2002	244	142	244.84	142.62	64	F88	Amorphous Debris
2002	244	142	244.38	142.98	37	F88	Flake Fragment
2002	244	142	244.9	142.48	59	F88	Debris
2002	244	142	244.69	142.49	62	F88	Flake Fragment
2002	244	142	244.92	142.49	58	F88	Amorphous Debris
2002	244	142	244.96	142.7	53	F88	Flake Fragment
2002	244	142	244.44	142.99	38	F88	Flake Fragment
2002	244	142	244.72	142.76	47	F88	Flake Fragment
2002	244	142	244.58	142.93	42	F88	Flake Fragment
2002	244	142	244.59	142.85	43	F88	Flake Fragment
2002	244	142	244.68	142.77	46	F88	Amorphous Debris
2002	244	142	244.62	142.88	44	F88	Flake Fragment
2002	244	142	244.84	142.49	67	F88	Pebble
2002	244	142	244.78	142.72	50	F88	Pebble
2002	244	142	244.49	142.87	40	F88	Amorphous Debris
2002	244	142	244.78	142.45	68	F88	Pebble
2002	244	142	244.88	142.62	66	F88	Pebble
2002	244	142	244.55	142.91	41	F88	Flake Fragment
2002	244	142	244.79	142.68	51	F88	Pebble
2002	244	142	244.81	142.62	56	F88	Amorphous Debris
2002	244	142	244.91	142.52	57	F88	Debris
2002	244	142	244.87	142.62	55	F88	Amorphous Debris
2002	244	142	244.86	142.49	60	F88	Pebble
2002	244	142	244.47	142.98	39	F88	Amorphous Debris
2002	244	142	244.87	142.69	52	F88	Amorphous Debris
2002	244	142	244.93	142.65	54	F88	Debris
2002	244	142	244.79	143.8	8	X	Debris
2002	244	142	244.78	142.77	48	X	Amorphous Debris
2002	244	142	244.72	142.27	29	X	Flake Fragment

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2002	244	142	244.82	142.74	49	X	Flake Fragment
2002	244	142	243.88	142.96	16	X	Pebble
2002	244	142	244.83	142.78	35	X	Amorphous Debris
2002	244	142	243.82	142.95	14	X	Pebble
2002	244	142	244.46	142.45	21	X	Pebble
2002	244	142	244.35	143.15	3	X	Pebble
2002	244	142	244	142.8	15	X	Flake Fragment
2002	244	142	244.02	142.98	17	X	Pebble
2002	244	142	244.52	143.08	6	X	Pebble
2002	244	142	244.8	142.47	61	X	Debris
2002	244	142	244.56	142.77	33	X	Pebble
2002	244	142	244.5	142.82	34	X	Pebble
2002	244	142	244.27	142.63	19	X	Debris
2002	244	142	244.38	142.9	32	X	Pebble
2002	244	142	244.28	142.49	20	X	Pebble
2002	244	142	245.28	142.77	26	X	Pebble
2002	244	142	244.51	142.59	31	X	Flake
2002	244	142	245.32	143.88	11	X	Amorphous Debris
2002	244	142	244.02	142.9	13	X	Flake Fragment
2002	244	142	244.62	142.4	22	X	Pebble
2002	244	142	244.6	143.33	7	X	Debris
2002	244	142	245.08	143.74	9	X	Broken Flake
2002	244	142	244.96	143.2	10	X	Flake Fragment
2002	244	142	244.45	142.72	18	X	Flake Fragment
2002	244	142	245.35	143.23	12	X	Flake Fragment
2002	244	142	245.18	142.89	4	X	Pebble
2002	244	142	244.83	142.36	28	X	Pebble
2002	244	142	245.1	143.85	4	X	Debris
2002	244	242	245.01	143.8	7	B2	Flake Fragment
2002	246	136	246	137.6		E7	Flake
2002	246	138	246.3	139.6	1	3	Flake Fragment
2002	246	138	246.8	138.78	2	4	Flake Fragment
2002	246	138	246.18	138.9	1	4	Flake Fragment
2002	246	138	246.9	139.75	5	4	Pebble
2002	246	138	246.6	139.2	3	4	Pebble
2002	246	138	246.85	139.65	4	4	Pebble
2002	246	138	246.8	139.65	9	D12	Broken Flake
2002	246	140	246.14	142	1	3	Flake Fragment
2002	246	142	246.85	143.9	6	2	Flake Fragment
2002	246	142	246.55	142.27	1	3	Flake Fragment
2002	246	142	246.97	143.26	4	3	Flake Fragment
2002	246	142	246.91	142.3	3	3	Flake Fragment
2002	246	142	246.93	142.94	2	3	Flake Fragment
2002	246	142	246.7	142.35	3	4	Flake Fragment
2002	246	142	246.9	142.78	4	4	Flake Fragment
2002	246	142	246.7	142.25	2	4	Flake Fragment
2002		140		141.8	2	C2	Broken Flake
2002	X	140	X	141.9	4	C2	Broken Flake
2002	X	140	X	141.85	2	C4	Broken Flake
2003	242	140	242.97	141.97	5	18	Debris
2003	242	140	243.3	140.73	10	19	Pebble
2003	242	140	242.6	141.73	12	19	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2003	242	140	243.76	141.95	6	19	Pebble
2003	242	140	243.42	141.32	5	19	Pebble
2003	242	140	242.3	141.16	13	19	Pebble
2003	242	140	243.37	140.44	8	19	Amorphous Debris
2003	242	140	243.49	140.8	9	19	Debris
2003	242	140	242.63	140.29	3	19	Amorphous Debris
2003	242	140	243.08	141.59	1	19	Debris
2003	242	140	243.08	141.59	1	19	Debris
2003	242	140	242.86	140.18	10	20	Chert Pebble
2003	242	140	243.65	140.79	6	20	Pebble
2003	242	140	242.65	140.35	3	20	Pebble
2003	242	140	242.6	140.13	1	20	Amorphous Debris
2003	242	140	242.3	140.67	4	20	Amorphous Debris
2003	242	140	242.88	140.38	9	20	Debris
2003	242	140	242.58	140.22	2	20	Amorphous Debris
2003	242	140	242.07	140.6	7	20	Debris
2003	242	140	242.8	140.07	5	20	Amorphous Debris
2003	242	140	242.84	140.3	8	20	Flake Fragment
2003	242	140	243	140.23	11	20	Amorphous Debris
2003	242	140	243.28	141.03	11	F90	Pebble
2003	242	140	243.1	141.03	10	F90	Pebble
2003	242	140	243.04	141.06	6	F90	Pebble
2003	242	140	243.13	141.03	13	F90	Pebble
2003	242	140	242.95	140.93	1	F90	Amorphous Debris
2003	242	140	243.19	141	4	F90	Amorphous Debris
2003	242	140	243.06	140.97	7	F90	Amorphous Debris
2003	242	140	242.98	141.01	5	F90	Amorphous Debris
2003	242	140	242.98	141.05	12	F90	Flake Fragment
2003	242	140	243.23	140.9	3	F90	Flake Fragment
2003	242	140	243.12	141.15	9	F90	Flake Fragment
2003	242	140	242.97	141.12	8	F90	Flake Fragment
2003	242	140	243.35	141.21	2	F90	Flake Fragment
2003	242	140	242.49	140.12	11	X	Broken Flake
2003	242	140	243.82	141.38	4	X	Flake Fragment
2003	242	140	243.27	140.43	7	X	Debris
2003	242	142	242.71	142.03	3	17	Broken Flake
2003	242	142	242.75	143.66	5	17	Flake
2003	242	142	242.9	143	5	18	Pebble
2003	242	142	243	143.25	3	18	Formless Debris
2003	242	142	243.17	143.98	4	18	Formless Debris
2003	242	142	242.8	142.72	2	18	Formless Debris
2003	242	142	243.28	143.51	15	19	Pebble
2003	242	142	243.54	143.89	7	19	Pebble
2003	242	142	242.6	143.96	19	19	Pebble
2003	242	142	243.64	143.07	16	19	Pebble
2003	242	142	243.16	143.45	21	19	Pebble
2003	242	142	242.6	143.35	3	19	Pebble
2003	242	142	242.42	143.29	4	19	Pebble
2003	242	142	242.54	143.9	10	19	Pebble
2003	242	142	243.6	143.86	8	19	Pebble
2003	242	142	243.2	143.92	22	19	Pebble
2003	242	142	242.3	142.27	26	19	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2003	242	142	243.65	143.85	23	19	Pebble
2003	242	142	242.46	142.25	27	19	Pebble
2003	242	142	243.48	143.89	5	19	Amorphous Debris
2003	242	142	243.25	142.91	28	19	Amorphous Debris
2003	242	142	242.73	143.03	1	19	Debris
2003	242	142	243.74	143	24	19	Amorphous Debris
2003	242	142	243.66	143.99	18	19	Broken Flake
2003	242	142	243.07	143.04	14	19	Amorphous Debris
2003	242	142	243.79	143.84	6	19	Broken Flake
2003	242	142	243.67	143.79	9	19	Amorphous Debris
2003	242	142	242.4	143.57	2	19	Debris
2003	242	142	242.89	143.57	12	19	Debris
2003	242	142	242.6	143.78	11	19	Debris
2003	242	142	242.47	142.82	25	19	Debris
2003	242	142	242.9	143.07	13	19	Debris
2003	242	142	242.85	142.53	1	X	Flake Fragment
2003	244	138	245.76	138.25	1	11	Broken Flake
2003	244	140	245.76	140.65	2	18	Pebble
2003	244	140	245.43	140.43	1	18	Flake Fragment
2003	244	140	245.8	140.44	1	20	Pebble
2003	244	140	244.13	140.1	2	20	Amorphous Debris
2003	244	140	244.63	140.34	3	20	Debris
2003	244	142	245.21	143.12	7	17	Flake Fragment
2003	244	142	244.17	142.53	3	17	Flake Fragment
2003	244	142	245.71	143.63	6	17	Flake
2003	244	142	244.87	142.73	2	17	Flake Fragment
2003	244	142	245.75	142.7	1	18	Pebble
2003	244	142	245.62	142.78	2	18	Pebble
2003	244	142	244.89	142.29	4	18	Pebble
2003	244	142	245.8	143.19	6	18	Pebble
2003	244	142	244.16	142.69	5	18	Pebble
2003	244	142	245.54	143.94	13	18	Debris
2003	244	142	245.26	143.94	11	18	Amorphous Debris
2003	244	142	245.06	143.97	9	18	Amorphous Debris
2003	244	142	245.18	142.83	3	18	Amorphous Debris
2003	244	142	245.48	143.74	14	18	Debris
2003	244	142	245.35	143.37	7	18	Debris
2003	244	142	245.06	143.71	8	18	Flake
2003	244	142	245.35	143.91	12	18	Broken Flake
2003	244	142	245.16	143.89	10	18	Debris
2003	244	142	245.35	142.82	10	19	Pebble
2003	244	142	244.21	143.68	20	19	Pebble
2003	244	142	245.78	142.55	8	19	Pebble
2003	244	142	245.8	142.54	9	19	Pebble
2003	244	142	245.4	143.75	21	19	Pebble
2003	244	142	244.24	143.43	19	19	Pebble
2003	244	142	244.8	143.63	12	19	Amorphous Debris
2003	244	142	245.9	142.6	7	19	Pebble
2003	244	142	245.32	143.3	22	19	Amorphous Debris
2003	244	142	244.2	143.3	15	19	Amorphous Debris
2003	244	142	245.07	143.73	3	19	Flake
2003	244	142	245.42	142.85	5	19	Flake Fragment

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2003	244	142	244.2	143.42	18	19	Flake
2003	244	142	244.28	143.5	24	19	Debris
2003	244	142	245.03	143.14	1	19	Broken Flake
2003	244	142	244.92	142.66	23	19	Debris
2003	244	142	244	142.58	17	X	Amorphous Debris
2003	244	142	245.13	143.14	2	X	Flake Fragment
2003	244	142	245.13	142.9	6	X	Amorphous Debris
2003	244	142	244.03	143.41	14	X	Broken Flake
2003	244	142	244.77	143.15	11	X	Debris
2003	244	142	245.48	142.83	4	X	Broken Flake
2003	244	142	244.5	143.87	13	X	Debris
2004	242	140	242.28	140.78	1	1	Amorphous Debris
2004	242	140	242.54	142.64	1	2	Pebble
2004	242	140	243.34	141.27	1	2	Debris
2004	242	140	243.39	141.73	2	3	Pebble
2004	242	140	242.52	141.5	2	3	Pebble
2004	242	140	242.55	140.82	5	3	Amorphous Debris
2004	242	140	242.16	140.36	6	3	Amorphous Debris
2004	242	140	242.37	140.56	4	3	Amorphous Debris
2004	242	140	242.3	140.66	2	3	Amorphous Debris
2004	242	140	242.26	140.83	1	3	Pebble
2004	242	140	242.3	140.78	3	3	Pebble
2004	242	140	243.39	141.74	1	3	Amorphous Debris
2004	242	140	243.595	141.425	1	4	Flake Fragment
2004	242	140	242.54	141.28	2	4	Debris
2004	242	140	242.92	141.9	1	4	Pebble
2004	242	140	242.11	140.42	1	4	Debris
2004	242	140	242.24	140.74	3	4	Pebble
2004	242	140	242.18	140.41	2	4	Debris
2004	242	140	243.56	141.61	1	5	Debris
2004	242	140	242.04	140.34	2	5	Pebble
2004	242	140	242.63	140.56	1	5	Amorphous Debris
2004	242	140	242.7	141.57	2	5	Amorphous Debris
2004	242	140	242.69	141.65	1	5	Debris
2004	242	140	242.4	142.18	7	6	Amorphous Debris
2004	242	140	242.35	141.25	5	6	Debris
2004	242	140	242.74	141.02	6	6	Pebble
2004	242	140	242.65	141.67	2	6	Pebble
2004	242	140	242.56	141.15	9	6	Pebble
2004	242	140	242.11	141.78	8	6	Pebble
2004	242	140	242.69	141.12	4	6	Pebble
2004	242	140	242.76	141.15	10	6	Amorphous Debris
2004	242	140	242.12	141.88	1	6	Pebble
2004	242	140	242.78	141.18	3	6	Amorphous Debris
2004	242	140	242.19	140.06	1	6	Flake Fragment
2004	242	140	242.54	141.16	9	7	Pebble
2004	242	140	242.92	141.71	4	7	Amorphous Debris
2004	242	140	242.78	141.64	1	7	Pebble
2004	242	140	242.36	141.22	7	7	Amorphous Debris
2004	242	140	242.51	141.33	6	7	Pebble
2004	242	140	242.93	141.72	5	7	Debris
2004	242	140	242.87	141.57	2	7	Flake Fragment

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2004	242	140	242.22	141.75	10	7	Amorphous Debris
2004	242	140	242.41	140.5	11	7	Flake Fragment
2004	242	140	242.93	141.65	3	7	Pebble
2004	242	140	242.31	141.12	8	7	Pebble
2004	242	140	242.73	140.82	1	7	Amorphous Debris
2004	242	140	242.07	140.82	3	7	Pebble
2004	242	140	242.33	140.73	2	7	Amorphous Debris
2004	242	140	243.06	141.165	2	8	Flake Fragment
2004	242	140	243.185	141.22	1	8	Flake
2004	242	140	242.15	140.09	1	8	Pebble
2004	242	140	242.12	140.21	1	9	Amorphous Debris
2004	242	140	242.14	140.25	2	9	Pebble
2004	242	140	242.6	140.35	4	9	Amorphous Debris
2004	242	140	242.3	140.31	3	9	Flake Fragment
2004	242	140	242.31	140.21	3	10	Flake Fragment
2004	242	140	242.32	140.35	4	10	Amorphous Debris
2004	242	140	242.33	140.2	1	10	Debris
2004	242	140	242.27	140.3	2	10	Pebble
2004	242	140	242.61	140.17	1	11	Debris
2004	242	140	242.37	140.21	2	11	Pebble
2004	242	140	242.55	140.17	4	11	Pebble
2004	242	140	242.36	140.18	3	11	Pebble
2004	242	140	243.84	141.89		X	Flake Fragment
2004	242	140	243.29	141.69	1	X	Flake
2004	242	140	242.6	141.8	1	X	
2004	242	142	242.24	142.69	1	1	Debris
2004	242	142	242.66	142.01	2	3	Debris
2004	242	142	242.39	142.08	3	3	Flake Fragment
2004	242	142	242.15	142.24	4	3	Debris
2004	242	142	242.71	142.06	1	3	Pebble
2004	242	142	242.75	142.75	5	4	Broken Flake
2004	242	142	242.41	142.64	2	4	Amorphous Debris
2004	242	142	242.17	142.54	3	4	Amorphous Debris
2004	242	142	242.67	142.11	1	4	Amorphous Debris
2004	242	142	242.51	142.08	4	4	Pebble
2004	242	142	242.84	142.13	1	5	Flake Fragment
2004	242	142	242.92	143	6	6	Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2004	242	142	242.18	142.46	4	6	Amorphous Debris
2004	242	142	242.14	142.62	3	6	Amorphous Debris
2004	242	142	242.67	142.77	2	6	Amorphous Debris
2004	242	142	242.92	142.88	5	6	Pebble
2004	242	142	242.52	142.81	1	6	Pebble
2004	242	142	242.59	142.64	6	7	Broken Flake
2004	242	142	242.39	142.8	3	7	Debris
2004	242	142	242.38	142.84	2	7	Debris
2004	242	142	242.64	142.77	5	7	Flake Fragment
2004	242	142	242.78	142.79	9	7	Amorphous Debris
2004	242	142	242.17	142.01	11	7	Amorphous Debris
2004	242	142	242.91	142.86	10	7	Amorphous Debris
2004	242	142	242.64	142.8	12	7	Amorphous Debris
2004	242	142	242.79	142.94	8	7	Pebble
2004	242	142	242.49	142.93	4	7	Pebble
2004	242	142	242.7	142.92	7	7	Pebble
2004	242	142	242.42	142.55	1		
2004	244	142	244.13	142.25			Flake Fragment
2005	242	140	243.08	141.84	1	1	Pebble
2005	242	140	243.08	141.87	2	1	Amorphous Debris
2005	242	140	243.27	141.92	3	1	Amorphous Debris
2005	242	140	243.23	141.92	4	1	Debris
2005	242	140	243.1	141.96	1	2	Pebble
2005	242	140	243.34	141.84	2	2	Debris
2005	242	140	243.18	140.18	2	2	Amorphous Debris
2005	242	140	243.31	141.745	3	2	Amorphous Debris
2005	242	140	243.965	141.89	4	2	Flake
2005	242	140	243.38	141.65	5	2	Pebble
2005	242	140	243.03	141.27	6	2	Pebble
2005	242	140	243.18	141.42	7	2	Pebble
2005	242	140	243.39	141.73	8	2	Pebble
2005	242	140	243.35	141.69	9	2	Flake
2005	242	140	243.1	141.61	10	2	Amorphous Debris
2005	242	140	243.22	141.49	11	2	Pebble
2005	242	140	243.47	141.74	12	2	Pebble
2005	242	140	243.29	141.74	14	2	Pebble
2005	242	140	243.09	141.57	16	2	Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2005	242	140	243.34	140.77	17	2	Debris
2005	242	140	243.1	142	18	2	Amorphous Debris
2005	242	140	243.13	141.74	1	3	Pebble
2005	242	140	243.43	140.21	1	3	Pebble
2005	242	140	243.41	141.75	2	3	Pebble
2005	242	140	243.75	140.1	2	3	Amorphous Debris
2005	242	140	243.12	141.77	3	3	Pebble
2005	242	140	243.42	141.75	4	3	Flake Fragment
2005	242	140	243.18	141.75	5	3	Debris
2005	242	140	243.49	141.95	6	3	Debris
2005	242	140	243.66	140.28	6	3	Pebble
2005	242	140	243.5	141.54	7	3	Amorphous Debris
2005	242	140	243.22	140.28	8	3	Amorphous Debris
2005	242	140	243.23	141.4	9	3	Debris
2005	242	140	243.89	140.12	9	3	Pebble
2005	242	140	243.22	141.1	10	3	Amorphous Debris
2005	242	140	243	141.91	11	3	Amorphous Debris
2005	242	140	243.16	141.17	12	3	Amorphous Debris
2005	242	140	243.78	140.07	12	3	Pebble
2005	242	140	243.91	140	13	3	Amorphous Debris
2005	242	140	243.5	141.7	1	4	Debris
2005	242	140	243.77	140.365	1	4	Amorphous Debris
2005	242	140	243.25	141.8	2	4	Debris
2005	242	140	243.79	140.33	2	4	Pebble
2005	242	140	243.05	141.94	3	4	Pebble
2005	242	140	243.82	140.335	3	4	Amorphous Debris
2005	242	140	243.17	141.35	4	4	Amorphous Debris
2005	242	140	243.74	140.37	4	4	Pebble
2005	242	140	243.15	141.92	5	4	Amorphous Debris
2005	242	140	243.78	140.36	5	4	Amorphous Debris
2005	242	140	243.57	141.8	6	4	Debris
2005	242	140	243.48	141.57	7	4	Pebble
2005	242	140	243.79	140.2	7	4	Pebble
2005	242	140	243.05	141.7	8	4	Amorphous Debris
2005	242	140	243.77	140.33	8	4	Pebble
2005	242	140	243.42	141.82	9	4	Amorphous Debris
2005	242	140	243.47	141.84	10	4	Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2005	242	140	243.88	140.2	10	4	Pebble
2005	242	140	243.37	141.64	11	4	Amorphous Debris
2005	242	140	243.67	140.05	11	4	Pebble
2005	242	140	243.3	141.19	12	4	Amorphous Debris
2005	242	140	243.34	141.2	13	4	Broken Flake
2005	242	140	243.25	141.35	14	4	Amorphous Debris
2005	242	140	243.93	140.05	14	4	Amorphous Debris
2005	242	140	243.35	141.09	15	4	Flake Fragment
2005	242	140	243.38	141.72	1	5	Amorphous Debris
2005	242	140	243.05	141.92	2	5	Amorphous Debris
2005	242	140	243.17	141.29	3	5	Flake
2005	242	140	243.66	140.18	3	5	Amorphous Debris
2005	242	140	243.07	141.4	4	5	Flake Fragment
2005	242	140	243.52	140.275	4	5	Amorphous Debris
2005	242	140	243.3	141.94	5	5	Debris
2005	242	140	243.89	140.21	5	5	Amorphous Debris
2005	242	140	243.77	140.145	6	5	Amorphous Debris
2005	242	140	243.8	140.16	7	5	Pebble
2005	242	140	243.84	140.23	8	5	Pebble
2005	242	140	243.85	140.125	9	5	Amorphous Debris
2005	242	140	243.94	140.14	10	5	Amorphous Debris
2005	242	140	242.82	140.05	11	5	Flake Fragment
2005	242	140	243.38	141.55	1	6	Amorphous Debris
2005	242	140	243.55	140.19	1	6	Debris
2005	242	140	243.82	140.35	1	6	Amorphous Debris
2005	242	140	243.5	141.86	2	6	Flake Fragment
2005	242	140	243.37	140.2	2	6	Pebble
2005	242	140	243.01	141.1	3	6	Debris
2005	242	140	243.41	140.22	4	6	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2005	242	140	243.79	140.02	5	6	Amorphous Debris
2005	242	140	243.55	141.72	6	6	Amorphous Debris
2005	242	140	243.6	140.255	7	6	Amorphous Debris
2005	242	140	243.53	140.24	8	6	Amorphous Debris
2005	242	140	243.53	140.23	9	6	Amorphous Debris
2005	242	140	243.52	140.2	10	6	Pebble
2005	242	140	243.71	140.08	11	6	Debris
2005	242	140	243.77	140.175	12	6	Amorphous Debris
2005	242	140	243.75	140.14	13	6	Pebble
2005	242	140	243.74	140.09	14	6	Amorphous Debris
2005	242	140	243.92	140.15	15	6	Amorphous Debris
2005	242	140	243.825	140.02	16	6	Amorphous Debris
2005	242	140	243.725	140	17	6	Amorphous Debris
2005	242	140	243.755	140.21	18	6	Amorphous Debris
2005	242	140	243.515	140.15	19	6	Pebble
2005	242	140	243.415	140.21	20	6	Amorphous Debris
2005	242	140	243.325	140.29	21	6	Pebble
2005	242	140	243.3	140.37	22	6	Pebble
2005	242	140	243.53	140.11	23	6	Pebble
2005	242	140	243.5	140.1	24	6	Amorphous Debris
2005	242	140	243.29	140.34	25	6	Pebble
2005	242	140	243.38	140.12	26	6	Amorphous Debris
2005	242	140	243.38	140.15	27	6	Amorphous Debris
2005	242	140	243.54	140.13	28	6	Pebble
2005	242	140	243.54	140.13	29	6	Amorphous Debris
2005	242	140	243.52	140.06	30	6	Amorphous Debris
2005	242	140	243.51	140.08	31	6	Amorphous Debris
2005	242	140	243.54	140.07	32	6	Amorphous Debris
2005	242	140	243.345	140.15	33	6	Pebble
2005	242	140	243.54	140.04	34	6	Pebble
2005	242	140	243.52	140.08	35	6	Pebble
2005	242	140	243.56	140.04	36	6	Flake
2005	242	140	243.52	140.08	37	6	Pebble
2005	242	140	243.06	140.69	38	6	Amorphous Debris
2005	242	140	243	140.64	39	6	Pebble
2005	242	140	243.15	140.88	40	6	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2005	242	140	243.735	140.41	1	7	Pebble
2005	242	140	243.16	140.255	2	7	Flake
2005	242	140	243.11	140.485	3	7	Pebble
2005	242	140	243.2	140.605	4	7	Amorphous Debris
2005	242	140	243.22	140.69	5	7	Pebble
2005	242	140	243.195	140.67	6	7	Pebble
2005	242	140	243.17	140.71	7	7	Pebble
2005	242	140	243.095	140.58	8	7	Pebble
2005	242	140	243.08	140.71	9	7	Pebble
2005	242	140	243.22	140.875	10	7	Pebble
2005	242	140	243.08	140.55	11	7	Pebble
2005	242	140	243.08	140.83	12	7	Pebble
2005	242	140	243.18	140.89	13	7	Pebble
2005	242	140	243.15	140.88	14	7	Amorphous Debris
2005	242	140	243.07	140.26	15	7	Quartz Pebble
2005	242	140	243.58	140.23	16	7	Amorphous Debris
2005	242	140	243.56	140.18	17	7	Amorphous Debris
2005	242	140	243.585	140.15	18	7	Pebble
2005	242	140	243.585	140.12	19	7	Pebble
2005	242	140	243.69	140.22	20	7	Amorphous Debris
2005	242	140	243.65	140.15	21	7	Amorphous Debris
2005	242	140	243.18	140.425	22	7	Amorphous Debris
2005	242	140	243.4	140.64	1	10	Flake Fragment
2005	242	140	243.34	140.24	2	10	Amorphous Debris
2005	242	140	243.3	140.9	3	10	Debris
2005	242	140	243.07	140.88	4	10	Amorphous Debris
2005	242	140	243.3	140.66	5	10	Flake Fragment
2005	242	140	243.7	140.56	1	11	Flake Fragment
2005	242	140	243.52	140.14	2	11	Flake
2005	242	140	243.68	140.09	3	11	Debris
2005	242	140	243.56	140.36	2	12	Debris
2005	242	140	243.58	140.18	3	12	Debris
2005	242	140	243.88	140.37	4	12	Amorphous Debris
2005	242	140	243.59	140.27	5	12	Amorphous Debris
2005	242	140	243.61	140.19	6	12	Amorphous Debris
2005	242	140	243.38	140.91	2	13	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2005	242	140	243	140.55	2	13	Amorphous Debris
2005	242	140	243	140.55	2	13	Amorphous Debris
2005	242	144	243.09	144.54	1	10	Debris
2005	244	140	244.31	140.02	1	4	Pebble
2005	244	140	244.64	140.07	2	4	Debris
2005	244	140	244.7	140.15	3	4	Amorphous Debris
2005	244	140	244.44	140.3	1	5	Flake
2005	244	140	244.21	140.05	2	5	Amorphous Debris
2005	244	140	244.28	140.03	3	5	Flake Fragment
2005	244	140	244.87	140.87	1	6	Flake Fragment
2005	244	140	244.875	140.635	2	6	Flake Fragment
2005	244	140	244.375	140.145	3	6	Debris
2005	244	140	244.46	140.04	4	6	Flake Fragment
2005	244	140	244.51	140.08	5	6	Debris
2005	244	140	244.46	140.37	1	7	Flake Fragment
2005	244	140	244.48	140.08	2	7	Amorphous Debris
2005	244	140	244.9	140.17	1	10	Amorphous Debris
2005	244	140	244.65	140.05	1	10	Debris
2005	244	140	244.43	140.53	1	12	Flake Fragment
2005	244	140	244.23	140.14	2	12	Amorphous Debris
2005	244	140	244.9	140.44	1	14	Flake Fragment
2005	244	140	244.9	140.3	2	14	Debris
2005	244	140	244.84	140.16	3	14	Debris
2005	244	140	244.42	140.49	1	15	Debris
2005	244	140	244.35	140.41	2	15	NA
2005	244	140	244.11	140.1	1	16	Amorphous Debris
2005	244	140	244.5	140.17	2	16	Debris
2005	244	140	244.28	140.24	3	16	Debris
2005	244	140	244.21	140.1	1	17	Debris
2005	244	144	244.3	144.8			Flake Fragment
2005	246	140	247.62	141.48	1	1	Amorphous Debris
2005	246	140	247.6	140.26	2	1	Broken Flake
2005	246	140	247.96	141	1	9	Amorphous Debris
2005	246	140	247.89	140.93	3	9	Flake Fragment
2005	246	140	247.38	141.19	4	9	Debris
2005	246	140	247.77	140.82	5	9	Flake Fragment

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2005	246	140	247.92	140.32	6	9	Amorphous Debris
2005	246	140	247.3	140.32	1	10	Flake Fragment
2005	246	140	247.49	141.69	2	10	Flake Fragment
2005	246	140	247.96	140.43	3	10	Broken Flake
2005	246	140	247.95	140.25	1	12	Flake
2005	246	140	247.1	141.85	1	13	Amorphous Debris
2005	246	140	246.85	141.56	1	14	Broken Flake
2005	246	140	246.84	141.67	2	14	Flake
2005	246	140	246.69	141.73	3	14	Broken Flake
2005	246	140	246.5	141.76	4	14	Broken Flake
2005	246	140	246.46	141.25	5	14	Flake
2005	246	140	247.71	140.88	1	15	Pebble
2005	246	140	246.28	141.4	2	15	Broken Flake
2005	246	140	246.3	141.3	3	15	Debris
2005	246	140	246.8	141.42	4	15	Flake
2005	246	140	246.37	141.46	5	15	Flake
2005	246	140	246.28	141.46	6	15	Flake
2005	246	140	247.65	141.97	1	17	Debris
2005	246	140	246.62	141.53	2	17	Flake
2005	246	140	246.7	141.3	3	17	Flake Fragment
2005	246	140	246.76	141.93	4	17	Flake Fragment
2005	246	140	246.5	141.41	5	17	Debris
2005	246	140	246.46	141.26	6	17	Debris
2005	246	140	246.25	141.4	7	17	Flake Fragment
2005	246	140	246.16	141.96	8	17	Amorphous Debris
2005	246	140	246.33	141.4	9	17	Broken Flake
2005	246	140	246.93	141.35	10	17	Debris
2005	246	140	246.76	141.43	11	17	Flake
2005	246	140	246.64	141.25	12	17	Flake Fragment
2005	246	140	246.8	140.9	13	17	Pebble
2005	246	140	246.25	141.74	14	17	Debris
2005	246	140	246.68	141.92	1	18	Flake Fragment
2005	246	140	246.36	141.54	2	18	Broken Flake
2005	246	140	246.15	141.58	3	18	Pebble
2005	246	140	246.2	140.96	4	18	Debris
2005	246	140	247.1	140.18	5	18	Flake Fragment

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2005	246	140	247.06	141.68	6	18	Debris
2005	246	140	246.13	141.6	1	19	Amorphous Debris
2005	246	140	247.2	140.65	2	19	Flake
2005	246	140	247.3	141.25	3	19	Pebble
2005	246	140	247.48	141.63	4	19	Debris
2005	246	140	246.8	141.96	1	20	Pebble
2005	246	140	246.35	140.48	2	20	Amorphous Debris
2005	246	140	246.26	140.92	3	20	Pebble
2005	246	140	246.24	140.03	4	20	Flake Fragment
2005	246	140	246.12	140.8	5	20	Pebble
2005	246	140	247.27	140.93	6	20	Amorphous Debris
2005	246	140	247.07	140.87	7	20	Debris
2005	246	140	247.03	140.25	8	20	Amorphous Debris
2005	246	140	247.81	140.09	9	20	Debris
2005	246	140	247.23	141.23	10	20	Pebble
2005	246	140	247.31	141.44	11	20	Amorphous Debris
2005	246	140	247.08	141.28	12	20	Amorphous Debris
2005	246	140	246.18	141.33	1	21	Amorphous Debris
2005	246	140	246.57	141.3	2	21	Flake
2005	246	140	146.95	141.28	3	21	Debris
2005	246	140	246.22	141.08	4	21	Amorphous Debris
2005	246	140	146.77	141.17	5	21	Debris
2005	246	140	146.49	141.04	6	21	Pebble
2005	246	140	143.37	141.29	7	21	Debris
2005	246	140	246.46	141.26	8	21	Debris
2005	246	140	246.5	140.295	9	21	Debris
2005	246	140	246.38	140.33	10	21	Pebble
2005	246	140	246.28	140.07	11	21	Flake Fragment
2005	246	140	246.36	140.41	12	21	Amorphous Debris
2005	246	140	246.3	140.57	13	21	Amorphous Debris
2005	246	140	246.36	140.92	14	21	Amorphous Debris
2005	246	140	246.92	140.53	15	21	Debris
2005	246	140	246.3	140.28	16	21	Amorphous Debris
2005	246	140	246.78	140.12	17	21	Debris
2005	246	140	247.285	141.38	18	21	Flake Fragment
2005	246	140	247.66	141.79	1		Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2005	246	140	247.6	140.3	1		Flake Fragment
2005	246	140	246.5	141.2	2	16	Flake Fragment
2005	246	142	247.76	142.25	1	5	Amorphous Debris
2005	246	142	247.66	143.18	1	6	Flake
2005	246	142	247.5	143.5	2	6	Debris
2005	246	142	247.58	143.98	3	6	Broken Flake
2005	246	142	247.19	142.35	1	8	Flake
2005	246	142	247.68	143.63	1	9	Flake Fragment
2005	246	142	247.83	143.98	2	9	Flake Fragment
2005	246	142	247.2	143.45	3	9	Pebble
2005	246	142	247.63	143.3	4	9	Flake Fragment
2005	246	142	247.72	143.16	6	9	Flake Fragment
2005	246	142	247.63	143.86	1	10	Flake
2005	246	142	247.12	142.11	3	10	Flake Fragment
2005	246	142	247.5	143.85	1	11	Pebble
2005	246	142	247.38	142.74	2	11	Flake Fragment
2005	246	142	247.91	142.83	3	11	Flake Fragment
2005	246	142	247.96	143.15	1	12	Flake Fragment
2005	246	142	246.84	142.12	2	12	Flake Fragment
2005	246	142	247.3	143.25	2	13	Debris
2005	246	142	247.96	143.17	1	14	Debris
2005	246	142	247.4	143.08	2	14	Amorphous Debris
2005	246	142	247.28	143	3	14	Amorphous Debris
2005	246	142	247.66	143.64	4	14	Amorphous Debris
2005	246	142	247.1	143.09	5	14	Amorphous Debris
2005	246	142	246.96	142.25	1	15	NA
2005	246	142	246.36	143.73	2	15	Amorphous Debris
2005	246	142	246.83	143.44	3	15	Pebble
2005	246	142	247.15	143.3	4	15	Debris
2005	246	142	246.76	142.33	1	16	Amorphous Debris
2005	246	142	246.77	142.6	2	16	Amorphous Debris
2005	246	142	247.05	142.85	3	16	Pebble
2005	246	142	247.66	142.33	4	16	Pebble
2005	246	142	247.07	142.86	5	16	Flake
2005	246	142	247.64	142.78	6	16	Flake Fragment
2005	246	142	247.46	142.83	7	16	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2005	246	142	247.13	142.74	8	16	Amorphous Debris
2005	246	142	247.77	142.67	9	16	Pebble
2005	246	142	247.49	142.66	10	16	Flake Fragment
2005	246	142	247.38	142.66	11	16	Amorphous Debris
2005	246	142	247.49	142.53	12	16	Pebble
2005	246	142	247.2	142.49	13	16	Pebble
2005	246	142	247.1	142.28	14	16	Amorphous Debris
2005	246	142	247.8	142.2	15	16	Pebble
2005	246	142	247.06	142.1	16	16	Flake
2005	246	142	247.24	142.86	17	16	Pebble
2005	246	142	247.76	142.8	18	16	Debris
2005	246	142	247.06	142.1	19	16	Pebble
2005	246	142	247.78	143.01	20	16	Amorphous Debris
2005	246	142	247.52	142.97	21	16	Debris
2005	246	142	246.64	143.05	22	16	Flake
2005	246	142	246.21	143.39	23	16	Flake Fragment
2005	246	142	246.21	143.26	24	16	Flake Fragment
2005	246	142	246.48	142.66	1	17	Broken Flake
2005	246	142	246.84	142.12	2	17	Debris
2005	246	142	246.73	142.89	3	17	Flake Fragment
2005	246	142	247.12	142.4	4	17	Pebble
2005	246	142	247.06	142.19	5	17	Flake Fragment
2005	246	142	246.15	142.01	1	18	Amorphous Debris
2005	246	142	247.65	142.36	2	18	Amorphous Debris
2005	246	142	247.39	142.14	1	20	Amorphous Debris
2005	246	142	247.84	142.12	2	20	Debris
2005	246	142	247.6	142.31	1	21	Pebble
2005	246	142	247.87	142.13	2	21	Amorphous Debris
2005	246	142	246.8	142.375	3	21	Pebble
2005	246	142	246.63	143.15	4	21	Pebble
2005	246	142	246.37	143.07	5	21	Pebble
2005	246	142	246.44	143.19	6	21	Debris
2005	246	142	246.64	143.88	1	22	Pebble
2005	246	142	246.67	143.02	2	22	Pebble
2005	246	142	246.66	143.01	3	22	Amorphous Debris
2005	246	142	246.64	143.25	4	22	Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2005	246	142	247.55	142.34	5	22	Debris
2005	246	142	247.91	142.25	1	23	Debris
2005	246	142	247.64	142.03	2	23	Amorphous Debris
2005	246	142	246.44	142.04	3	23	Amorphous Debris
2005	246	142	246.2	142.04	4	23	Amorphous Debris
2005	246	142	246.57	142.69	5	23	Flake Fragment
2005	246	142	246.31	143.06	6	23	Amorphous Debris
2005	246	142	246.24	142.02	1	24	Pebble
2005	246	142	246.09	142.39	2	24	Pebble
2005	246	142	246.18	142.4	3	24	Broken Flake
2005	246	142	246.4	142.71	4	24	Flake Fragment
2005	246	142	246.34	142.72	5	24	Amorphous Debris
2005	246	142	246.205	142.45	6	24	Pebble
2005	246	142	246.28	143.37	1	25	Flake
2005	246	142	246.31	142.76	2	25	Amorphous Debris
2005	246	142	246.27	142.56	4	25	Amorphous Debris
2005	246	142	246.22	142.74	5	25	Flake Fragment
2005	246	142	246.74	142.15	6	25	Flake
2005	246	142	246.85	143.15	7	25	Debris
2005	246	142	246.79	142.1	8	25	Amorphous Debris
2005	246	142	246.81	142.18	9	25	Amorphous Debris
2005	246	142	246.72	142.11	10	25	Debris
2005	246	142	247.04	142.29	11	25	Amorphous Debris
2005	246	142	247.1	142.33	12	25	Pebble
2005	246	142	247.15	142.34	13	25	Pebble
2005	246	142	247.2	142.42	14	25	Flake Fragment
2005	246	142	247.01	142.39	16	25	Debris
2005	246	142	246.21	143.07	1	26	Amorphous Debris
2005	246	142	248.93	142.9	1	X	Amorphous Debris
2005	246	142	247.36	142.4	2	X	Broken Flake
2005	248	140	248.6	141	1	8	Flake Fragment
2005	248	140	248.4	140.7	2	8	Flake Fragment
2005	248	140	248	140.9	3	8	Flake
2005	248	140	248.65	141.1	4	8	Flake Fragment
2005	248	140	248.9	140.85	2	9	Amorphous Debris
2006	242	140	242.57	141.37	2	1	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2006	242	140	242.66	141.75	3	1	Amorphous Debris
2006	242	140	242.78	141.6	4	1	Pebble
2006	242	140	242.82	141.63	5	1	Amorphous Debris
2006	242	140	242.83	141.64	6	1	Pebble
2006	242	140	242.855	141.635	7	1	Pebble
2006	242	140	242.8	141.58	8	1	Pebble
2006	242	140	242.655	141.325	9	1	Amorphous Debris
2006	242	140	242.77	141.56	1	1	Debris
2006	242	140	242.31	141.66	2	2	Amorphous Debris
2006	242	140	242.3	141.68	3	2	Amorphous Debris
2006	242	140	242.49	141.41	1	2	Debris
2006	242	140	242.35	141.85	4	2	Debris
2006	242	140	242.35	141.63	1	3	Amorphous Debris
2006	242	140	242.15	141.6	2	3	Pebble
2006	242	140	242.33	141.7	3	3	Pebble
2006	242	140	242.3	141.56	4	3	Amorphous Debris
2006	242	140	242.11	141.89	5	3	Amorphous Debris
2006	242	140	242.75	141.8	1	4	Debris
2006	242	140	242.52	141.32	3	4	Amorphous Debris
2006	242	140	242.29	141.47	4	4	Pebble
2006	242	140	242.96	141.76	2	4	Flake Fragment
2006	242	140	242.82	141.73	1	5	Amorphous Debris
2006	242	140	242.12	141.33	1	6	Pebble
2006	242	140	242.4	141.05	3	6	Amorphous Debris
2006	242	140	242.65	141.31	4	6	Amorphous Debris
2006	242	140	242.98	141.89	5	6	Pebble
2006	242	140	242.98	141.56	6	6	Amorphous Debris
2006	242	140	242.49	141.2	7	6	Amorphous Debris
2006	242	140	242.562	141.23	8	6	Pebble
2006	242	140	242.602	141.22	9	6	Pebble
2006	242	140	242.84	141.08	1	7	Flake
2006	242	140	242.83	141.24	2	7	Debris
2006	242	140	242.92	141.69	4	7	Amorphous Debris
2006	242	140	242.35	140.84	3	7	Amorphous Debris
2006	242	140	242.58	141.29	1	8	Flake Fragment
2006	242	140	242.99	141.35	1	9	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2006	242	140	242.22	141.88	2	9	Debris
2006	242	140	242.81	141.83	3	9	Amorphous Debris
2006	242	140	242.48	141.25	4	9	Pebble
2006	242	140	242.95	141.23	5	9	Amorphous Debris
2006	242	140	242.8	141.32	7	9	Debris
2006	242	140	242.19	141.21	8	9	Amorphous Debris
2006	242	140	242.7	141.11	9	9	Amorphous Debris
2006	242	140	242.86	141.07	1	10	Amorphous Debris
2006	242	140	242.78	141.13	2	10	Debris
2006	242	140	242.72	141.82	4	10	Amorphous Debris
2006	242	140	242.98	141.13	5	10	Debris
2006	242	140	242.775	141.77	6	10	Broken Flake
2006	242	140	242585	141.76	9	10	Debris
2006	242	140	242.19	141.84	11	10	Amorphous Debris
2006	242	140	242.64	141.68	12	10	Flake Fragment
2006	242	140	242.47	141.73	7	10	Debris
2006	242	140	242.64	141.865	8	10	Amorphous Debris
2006	242	140	242.83	141.27	3	10	Amorphous Debris
2006	242	140	242.83	141.47	10	10	Flake Fragment
2006	242	140	242.97	141.09	1	11	Flake
2006	242	140	242.42	141.59	2	11	Debris
2006	242	140	242.85	141.05	3	11	Debris
2006	242	140	242.45	141.52	4	11	Pebble
2006	242	140	242.15	141.54	5	11	Amorphous Debris
2006	242	140	242.14	141.39	6	11	Debris
2006	242	140	242.13	141.71	7	11	Debris
2006	242	140	242.03	141.84	8	11	Debris
2006	242	140	242.315	141.79	9	11	Pebble
2006	242	140	242.9	141.38	1	12	Debris
2006	242	140	242.96	141.78	2	12	Amorphous Debris
2006	242	140	242.83	141.23	3	12	Debris
2006	242	140	242.61	141.24	4	12	Amorphous Debris
2006	242	140	242.33	141.82	6	12	Amorphous Debris
2006	242	140	242.98	141.7	7	12	Flake
2006	242	140	242.09	141.81	8	12	Debris
2006	242	140	242.15	141.43	9	12	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2006	242	140	242.12	141.33	11	12	Broken Flake
2006	242	140	242.03	141.265	12	12	Amorphous Debris
2006	242	140	242.31	141.47	5	12	Debris
2006	242	140	242.04	141.71	10	12	Broken Flake
2006	242	140	242.53	141.92	1	13	Debris
2006	242	140	242.33	141.92	2	13	Debris
2006	242	140	242.12	141.9	3	13	Amorphous Debris
2006	242	140	242.11	141.19	5	13	Flake Fragment
2006	242	140	242.39	141.18	4	13	Amorphous Debris
2006	242	140	242.99	141.97	1	14	Broken Flake
2006	242	140	242.9	141.99	2	14	Debris
2006	242	140	242.99	141.22	3	14	Chert Flake
2006	242	140	242.4	141.07	5	14	Amorphous Debris
2006	242	140	242.43	141.71	6	14	Pebble
2006	242	140	242.54	141.18	7	14	Pebble
2006	242	140	242.26	141.21	8	14	Debris
2006	242	140	242.68	141.35	9	14	Amorphous Debris
2006	242	140	242.4	141.46	4	14	Debris
2006	242	140	242.83	141	1	15	Amorphous Debris
2006	242	140	242.57	141.15	2	15	Debris
2006	242	140	242.56	141.03	3	15	Amorphous Debris
2006	242	140	242.46	141.05	4	15	Pebble
2006	242	140	242.81	141.92	5	15	Debris
2006	242	140	242.45	141.75	6	15	Amorphous Debris
2006	242	140	242.07	141.71	7	15	Pebble
2006	242	140	242.82	141.82	1	16	Amorphous Debris
2006	242	140	242.9	141.82	2	16	Pebble
2006	242	140	242.82	141.97	3	16	Amorphous Debris
2006	242	140	242.97	141.63	4	16	Broken Flake
2006	242	140	242.8	141.1	5	16	Pebble
2006	242	140	242.2	141.5	7	16	Debris
2006	242	140	242.28	142.185	8	16	Flake
2006	242	140	242.23	141.28	6	16	Debris
2006	242	140	242.22	140.15	1	1	Amorphous Debris
2006	242	140	242.54	140.18	2	1	Amorphous Debris
2006	242	140	242.12	140.11	3	1	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2006	242	140	242.2	140.35	4	1	Pebble
2006	242	140	242.32	140.72	1	2	Amorphous Debris
2006	242	140	242.32	140.72	1	2	Broken Flake
2006	242	140	242.28	140.12	2	2	Amorphous Debris
2006	242	140	242.28	140.12	2	2	Debris
2006	242	140	242.38	140.5	3	2	Debris
2006	242	140	242.22	140.97	4	2	Amorphous Debris
2006	242	140	242.91	140.3	5	2	Amorphous Debris
2006	242	140	242.53	140.18	6	2	Amorphous Debris
2006	242	140	242.12	140.2	8	2	Amorphous Debris
2006	242	140	242.48	140.3	9	2	Amorphous Debris
2006	242	140	242.07	140.51	10	2	Amorphous Debris
2006	242	140	242.5	140.45	7	2	Flake Fragment
2006	242	140	242.13	140.28	1	3	Pebble
2006	242	140	242.37	140.2	1	4	Debris
2006	242	140	242.44	140.68	2	4	Debris
2006	242	140	242.09	140.27	3	4	Amorphous Debris
2006	242	140	242.14	140.25	4	4	Amorphous Debris
2006	242	140	242.24	140.68	1	5	Amorphous Debris
2006	242	140	242.5	140.45	2	5	Pebble
2006	242	140	242.75	140.2	1	6	Amorphous Debris
2006	242	140	242.46	140.68	2	6	Pebble
2006	242	140	242.42	141.24	2	6	Amorphous Debris
2006	242	140	242.86	140.93	1	7	Debris
2006	242	140	242.74	140.24	2	7	Amorphous Debris
2006	242	140	242.27	140.45	3	7	Debris
2006	242	140	242.4	140.53	4	7	Amorphous Debris
2006	242	140	242.04	140.29	7	7	Amorphous Debris
2006	242	140	242.02	140.52	8	7	Amorphous Debris
2006	242	140	242.94	140.23	9	7	Debris
2006	242	140	242.9	140.32	10	7	Debris
2006	242	140	242.17	140.19	6	7	Amorphous Debris
2006	242	140	242.31	140.68	5	7	Flake Fragment
2006	242	140	242.95	140.7	1	8	Debris
2006	242	140	242.95	140.7	2	8	Pebble
2006	242	140	242.79	140.19	3	8	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2006	242	140	242.53	140.3	4	8	Amorphous Debris
2006	242	140	242.31	140.225	5	8	Amorphous Debris
2006	242	140	242.98	140.8	1	9	Debris
2006	242	140	242.665	140.185	2	9	Amorphous Debris
2006	242	140	242.93	140.61	3	9	Debris
2006	242	140	242.68	140.66	5	9	Amorphous Debris
2006	242	140	242.7	140.68	4	9	Debris
2006	242	140	242.8	140.68	1	10	Debris
2006	242	140	242.92	140.6	2	10	Amorphous Debris
2006	242	140	242.82	140.72	3	10	Debris
2006	242	140	242.96	140.21	5	10	Amorphous Debris
2006	242	140	242.93	140.18	6	10	Debris
2006	242	140	242.025	140.09	8	10	Debris
2006	242	140	242.76	140.88	7	10	Amorphous Debris
2006	242	140	242.99	140.39	9	10	Pebble
2006	242	140	242.84	140.535	1	11	Amorphous Debris
2006	242	140	242.19	140.58	2	11	Broken Flake
2006	242	140	242.96	140.65	3	11	Amorphous Debris
2006	242	140	242.74	140.665	4	11	Amorphous Debris
2006	242	140	242.92	140.24	4	11	Debris
2006	242	140	242.95	140.22	5	11	Flake
2006	242	140	242.93	140.13	6	11	Pebble
2006	242	140	242.85	140.85	7	11	Amorphous Debris
2006	242	140	242.72	140.67	8	11	Pebble
2006	242	140	242.98	140.99	10	11	Debris
2006	242	140	242.63	140.7	11	11	Flake Fragment
2006	242	140	242.59	140.91	13	11	Flake Fragment
2006	242	140	242.58	140.8	14	11	Amorphous Debris
2006	242	140	242.54	140.84	15	11	Amorphous Debris
2006	242	140	242.04	140.37	16	11	Amorphous Debris
2006	242	140	242.13	140.9	17	11	Debris
2006	242	140	242.12	140.41	18	11	Amorphous Debris
2006	242	140	242.04	140.55	19	11	Debris
2006	242	140	242.85	140.31	1	12	Debris
2006	242	140	242.79	140.29	2	12	Debris
2006	242	140	242.93	140.38	3	12	Flake Fragment

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2006	242	140	242.8	140.97	4	12	Pebble
2006	242	140	242.35	140.43	5	12	Flake Fragment
2006	242	140	242.25	140.77	6	12	Debris
2006	242	140	242.35	140.43	7	12	Pebble
2006	242	140	242.22	140.62	8	12	Amorphous Debris
2006	242	140	242.89	140.23	1	13	Debris
2006	242	140	242.63	140.38	2	13	Amorphous Debris
2006	242	140	242.38	140.63	3	13	Debris
2006	242	140	242.47	140.79	4	13	Amorphous Debris
2006	242	140	242.42	140.1	5	13	Amorphous Debris
2006	242	140	242.7	140.88	7	13	Pebble
2006	242	140	242.4	140.44	6	13	Debris
2006	242	140	242.93	140.36	1	14	Amorphous Debris
2006	242	140	242.55	140.36	2	14	Pebble
2006	242	140	242.56	140.34	3	14	Amorphous Debris
2006	242	140	242.32	140.32	4	14	Debris
2006	242	140	242.14	140	5	14	Amorphous Debris
2006	242	140	242.86	140.29	1	15	Amorphous Debris
2006	242	140	242.16	140.9	2	15	Amorphous Debris
2006	242	140	242.7	140.17	1	16	Amorphous Debris
2006	242	140	242.8	140.94	3	16	Debris
2006	242	140	242.73	140.36	2	16	Amorphous Debris
2006	242	140	242.33	140.8	4	16	Amorphous Debris
2006	242	142	242.15	142.32	5	1	Amorphous Debris
2006	242	142	242.28	142.14	1	1	Debris
2006	242	142	242.47	142.7	7	1	Debris
2006	242	142	242.12	142.9	8	1	Amorphous Debris
2006	242	142	242.9	142.17	1	2	Flake Fragment
2006	242	142	242.77	142.29	3	2	NA
2006	242	142	242.29	142.55	5	2	Pebble
2006	242	142	242.28	142.8	8	2	Amorphous Debris
2006	242	142	242.75	142.09	2	2	Flak Fragment
2006	242	142	242.655	142.55	4	2	Amorphous Debris
2006	242	142	242.82	142.88	9	2	Debris
2006	242	142	242.43	142.95	4	3	Broken Flake
2006	242	142	242.69	142.195	1	3	Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2006	242	142	242.86	142.16	2	3	Amorphous Debris
2006	242	142	242.98	142.44	3	5	Debris
2006	242	142	242.34	142.635	4	6	Broken Flake
2006	242	142	242.63	142.65	5	6	Debris
2006	242	142	242.07	142.49	1	7	Debris
2006	242	142	242.43	142.73	1	8	Debris
2006	242	142	242.41	142.41	1	4	Flake
2006	242	142	242.5	142.87	1	6	Pebble
2006	242	142	242.93	142.925	6	8	Amorphous Debris
2006	242	142	242.4	142.025	2	9	Pebble
2006	242	142	242.54	142.95	4	9	Pebble
2006	242	142	242.37	142.435	6	9	Pebble
2006	242	140	242.48	141.77	6	9	Debris
2006	242	142	242.37	142.06	1	9	Amorphous Debris
2006	242	142	242.48	142.12	6	2	Flake
2006	242	142	242.38	142.825	3	3	Debris
2006	242	142	242.745	142.895	2	5	Amorphous Debris
2006	242	142	242.19	142.815	3	3	Amorphous Debris
2006	242	142	242.205	142.58	2	6	Broken Flake
2006	242	142	242.62	142.58	6	6	Amorphous Debris
2006	242	142	242.44	142.94	2	7	Flake Fragment
2006	242	142	242.26	142.68	2	1	Debris
2006	242	142	242.03	142.32	2	4	Flake Fragment
2006	242	142	242.72	142.77	7	6	Amorphous Debris
2006	242	142	242.99	142.24	2	8	Debris
2006	242	142	242.71	142.99	3	9	Flake Fragment
2006	242	142	242.45	142.35	5	9	Debris
2007	242	140	242.97	141.94	1	17	Debris
2007	242	140	242.86	140.93	1	17	Amorphous Debris
2007	242	140	242.69	140.96	2	17	Debris
2007	242	140	242.48	140.85	3	17	Amorphous Debris
2007	242	140	242.11	140.7	4	17	Amorphous Debris
2007	242	140	242.08	140.26	5	17	Amorphous Debris
2007	242	140	242.32	140.12	6	17	Amorphous Debris
2007	242	140	242.71	140.44	7	17	Amorphous Debris
2007	242	140	242.77	140.4	8	17	Broken Flake

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2007	242	140	242.87	140.3	9	17	Amorphous Debris
2007	242	140	242.91	140.03	10	17	Debris
2007	242	140	242.37	141.9	2	18	Pebble
2007	242	140	241.37	141.9	2	18	Amorphous Debris
2007	242	140	242.34	141.44	3	18	Amorphous Debris
2007	242	140	241.34	141.44	3	18	Pebble
2007	242	140	242.5	141.5	4	18	Flake
2007	242	140	242.84	140.29	2	18	Pebble
2007	242	140	242.84	140.08	3	18	Debris
2007	242	140	242.45	140.47	4	18	Debris
2007	242	140	242.2	140.54	5	18	Debris
2007	242	140	242.38	140.27	6	18	Pebble
2007	242	140	242.5	140.94	7	18	Debris
2007	242	140	242.44	140.75	9	18	Flake Fragment
2007	242	140	242.07	140.7	10	18	Amorphous Debris
2007	242	140	242.76	140.6	11	18	Amorphous Debris
2007	242	140	242.34	141.85	1	19	Pebble
2007	242	140	242.66	141.3	2	19	Pebble
2007	242	140	242.11	141.66	4	19	Amorphous Debris
2007	242	140	242.65	141.37	5	19	Pebble
2007	242	140	242.54	141.4	6	19	Amorphous Debris
2007	242	140	242.31	141.49	8	19	Pebble
2007	242	140	242.67	140.95	1	19	Debris
2007	242	140	242.64	140.78	2	19	Pebble
2007	242	140	242.99	140.76	3	19	Pebble
2007	242	140	242.47	140.72	4	19	Amorphous Debris
2007	242	140	242.44	140.48	5	19	Flake
2007	242	140	242.44	140.79	6	19	Amorphous Debris
2007	242	140	242.49	140.82	7	19	Amorphous Debris
2007	242	140	242.6	140.21	8	19	Amorphous Debris
2007	242	140	242.59	140.24	9	19	Debris
2007	242	140	242.48	140.19	10	19	Pebble
2007	242	140	242.05	140.62	12	19	Amorphous Debris
2007	242	140	242.1	140.02	13	19	Flake
2007	242	140	242.2	140.24	14	19	Amorphous Debris
2007	242	140	242.25	140.2	15	19	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2007	242	140	242.3	140.11	16	19	Amorphous Debris
2007	242	140	242.29	140.11	17	19	Debris
2007	242	140	242.29	140.04	18	19	Debris
2007	242	140	242.52	141.95	1	20	Debris
2007	242	140	242.67	141.97	2	20	Amorphous Debris
2007	242	140	242.84	141.42	3	20	Amorphous Debris
2007	242	140	242.82	141.78	4	20	Flake
2007	242	140	242.88	141.29	5	20	Pebble
2007	242	140	242.66	141.34	6	20	Pebble
2007	242	140	242.59	141.36	7	20	Chert Pebble
2007	242	140	242.94	141.12	8	20	Amorphous Debris
2007	242	140	242.44	141.64	9	20	Amorphous Debris
2007	242	140	242.05	141.92	12	20	Amorphous Debris
2007	242	140	242.25	141.82	13	20	Flake Fragment
2007	242	140	242.43	141.36	14	20	Pebble
2007	242	140	242.3	141.64	15	20	Debris
2007	242	140	242.79	140.85	1	20	Pebble
2007	242	140	242.66	140.74	2	20	Pebble
2007	242	140	242.59	140.72	3	20	Amorphous Debris
2007	242	140	242.38	140.49	4	20	Pebble
2007	242	140	242.45	140.95	5	20	Amorphous Debris
2007	242	140	242.25	140.88	6	20	Amorphous Debris
2007	242	140	242.27	140.8	7	20	Debris
2007	242	140	242.09	141.67	1	21	Debris
2007	242	140	242.99	141.95	2	21	Amorphous Debris
2007	242	140	242.99	141.87	2	21	Amorphous Debris
2007	242	140	242.81	141.8	3	21	Debris
2007	242	140	242.82	141.52	4	21	Pebble
2007	242	140	242.75	141.44	5	21	Amorphous Debris
2007	242	140	242.71	141.93	6	21	Debris
2007	242	140	242.71	141.22	7	21	Debris
2007	242	140	242.71	141.13	8	21	Amorphous Debris
2007	242	140	242.56	141.8	9	21	Amorphous Debris
2007	242	140	242.49	141.93	10	21	Amorphous Debris
2007	242	140	242.44	141.86	11	21	Amorphous Debris
2007	242	140	242.38	141.67	12	21	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2007	242	140	242.25	141.75	14	21	Debris
2007	242	140	242.24	141.32	15	21	Amorphous Debris
2007	242	140	242.16	141.72	16	21	Debris
2007	242	140	242.11	141.71	17	21	Flake
2007	242	140	242.11	141.17	18	21	Amorphous Debris
2007	242	140	242.06	141.98	19	21	Amorphous Debris
2007	242	140	242	141.8	20	21	Amorphous Debris
2007	242	140	242.61	140.96	3	21	Debris
2007	242	140	242.08	140.75	4	21	Pebble
2007	242	140	242.28	140.41	5	21	Debris
2007	242	140	242.3	140.04	6	21	Debris
2007	242	140	242.64	140.08	7	21	Amorphous Debris
2007	242	140	242.99	141.88	1	22	Flake Fragment
2007	242	140	242.26	141.26	3	22	Flake
2007	242	140	242.15	141.11	4	22	Pebble
2007	242	140	242.99	141.7	5	22	Pebble
2007	242	140	242.98	141.74	6	22	Pebble
2007	242	140	242.99	141.61	7	22	Debris
2007	242	140	242.93	141.36	8	22	Amorphous Debris
2007	242	140	242.9	141.65	9	22	Pebble
2007	242	140	242.87	141.93	10	22	Amorphous Debris
2007	242	140	242.89	141.93	11	22	Amorphous Debris
2007	242	140	242.7	140.52	12	22	Debris
2007	242	140	242.7	141.09	13	22	Amorphous Debris
2007	242	140	242.56	141.32	15	22	Amorphous Debris
2007	242	140	242.4	141.35	16	22	Amorphous Debris
2007	242	140	242.38	141.62	17	22	Debris
2007	242	140	242.28	141.7	18	22	Amorphous Debris
2007	242	140	242.26	141.44	19	22	Pebble
2007	242	140	242.28	141.18	20	22	Amorphous Debris
2007	242	140	242.18	141.79	21	22	Amorphous Debris
2007	242	140	242.18	141.73	22	22	Pebble
2007	242	140	242.13	141.79	23	22	Debris
2007	242	140	242.12	141.41	24	22	Broken Flake
2007	242	140	242.53	140.22	1	22	Amorphous Debris
2007	242	140	242.54	141.99	1	**23**	Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2007	242	140	242.88	141.6	2	**23**	Amorphous Debris
2007	242	140	242.92	141.35	3	**23**	Pebble
2007	242	140	242.875	141.29	4	**23**	Amorphous Debris
2007	242	140	242.945	141.22	5	**23**	Amorphous Debris
2007	242	140	242.785	141.28	6	**23**	Amorphous Debris
2007	242	140	242.71	141.79	7	**23**	Flake Fragment
2007	242	140	242.71	141.79	8	**23**	Debris
2007	242	140	242.58	141.26	9	**23**	Debris
2007	242	140	242.4	141.88	10	**23**	Amorphous Debris
2007	242	140	242.36	141.74	11	**23**	Debris
2007	242	140	242.26	141.71	12	**23**	Amorphous Debris
2007	242	140	242.28	141.63	13	**23**	Broken Flake
2007	242	140	242.13	141.91	14	**23**	Amorphous Debris
2007	242	140	242.1	141.79	15	**23**	Amorphous Debris
2007	242	140	242.08	141.99	16	**23**	Flake Fragment
2007	242	140	242	141.8	17	**23**	Flake Fragment
2007	242	140	2242.67	140.45	1	23	Amorphous Debris
2007	242	140	242.84	140.68	2	23	Amorphous Debris
2007	242	140	242.87	140.46	3	23	Pebble
2007	242	140	242.92	140.8	4	23	Amorphous Debris
2007	242	140	242.83	140.74	5	23	Amorphous Debris
2007	242	140	242.83	140.63	6	23	Amorphous Debris
2007	242	140	242.74	140.67	7	23	Amorphous Debris
2007	242	140	242.75	140.76	8	23	Pebble
2007	242	140	242.5	141.13	1	24	Amorphous Debris
2007	242	140	242.5	141.84	2	24	Flake Fragment
2007	242	140	242.8	141.17	3	24	Debris
2007	242	140	242.99	141.87	4	24	Amorphous Debris
2007	242	140	242.465	141.52	5	24	Flake
2007	242	140	242.73	141.99	6	24	Debris
2007	242	140	242.77	141.71	7	24	Pebble
2007	242	140	242.24	141.96	8	24	Pebble
2007	242	140	242.8	141.28	9	24	Amorphous Debris
2007	242	140	242.535	141.77	10	24	Amorphous Debris
2007	242	140	242.4	141.8	11	24	Amorphous Debris
2007	242	140	242.34	141.78	12	24	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2007	242	140	242.69	141.74	13	24	Debris
2007	242	140	242.32	141.93	14	24	Pebble
2007	242	140	242.94	141.8	15	24	Broken Flake
2007	242	140	242.28	141.95	16	24	Pebble
2007	242	140	242.93	141.81	17	24	Debris
2007	242	140	242.95	141.85	18	24	Debris
2007	242	140	242.23	141.71	19	24	Amorphous Debris
2007	242	140	242.14	141.91	20	24	Amorphous Debris
2007	242	140	242.16	141.13	21	24	Debris
2007	242	140	242.13	141.46	22	24	
2007	242	140	242.18	141.75	23	24	Pebble
2007	242	140	242.14	141.78	24	24	Pebble
2007	242	140	242.12	141.86	25	24	Pebble
2007	242	140	242.695	141.485	25	24	Pebble
2007	242	140	242.33	141.82	26	24	Chert Flake
2007	242	140	242.15	141.96	27	24	Amorphous Debris
2007	242	140	242.07	141.03	28	24	Pebble
2007	242	140	242.08	141.94	29	24	Flake Fragment
2007	242	140	242.25	141.93	12	25	Debris
2007	242	140	242.79	141.69	22	25	Pebble
2007	242	140	242.53	141.46	3	25	Amorphous Debris
2007	242	140	242.98	141.02	14	25	Amorphous Debris
2007	242	140	242.37	141.98	34	25	Amorphous Debris
2007	242	140	242.29	141.88	38	25	Amorphous Debris
2007	242	140	242.11	141.71	10	25	Amorphous Debris
2007	242	140	242.99	141.97	16	25	Debris
2007	242	140	242.98	141.54	18	25	Amorphous Debris
2007	242	140	242.84	141.85	20	25	Debris
2007	242	140	242.82	141.96	21	25	Flake Fragment
2007	242	140	242.71	141.92	24	25	Flake Fragment
2007	242	140	242.55	141.94	33	25	Amorphous Debris
2007	242	140	242.35	141.85	35	25	Amorphous Debris
2007	242	140	242.33	141.83	36	25	Debris
2007	242	140	242.26	141.61	40	25	Amorphous Debris
2007	242	140	242.07	141.71	9	25	Debris
2007	242	140	242.22	141.89	41	25	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2007	242	140	242.62	141.77	37	25	Pebble
2007	242	140	242.11	141	1	25	Debris
2007	242	140	242.39	141.21	2	25	Pebble
2007	242	140	242.58	141.51	4	25	Pebble
2007	242	140	242.34	141.68	7	25	Pebble
2007	242	140	242.4	141.79	11	25	Amorphous Debris
2007	242	140	242.99	141.86	15	25	Amorphous Debris
2007	242	140	242.95	141.22	17	25	Debris
2007	242	140	242.88	141.94	19	25	Pebble
2007	242	140	242.8	141.62	23	25	Amorphous Debris
2007	242	140	242.73	141.69	25	25	Pebble
2007	242	140	242.77	141.62	26	25	Amorphous Debris
2007	242	140	242.73	141.6	27	25	Pebble
2007	242	140	242.5	141.7	30	25	Pebble
2007	242	140	242.65	141.94	28	25	Debris
2007	242	140	242.67	141.88	29	25	Amorphous Debris
2007	242	140	242.59	141.98	42	25	Debris
2007	242	140	242.21	141.62	6	25	Flake Fragment
2007	242	140	242.99	141.68	13	25	Pebble
2007	242	140	242.27	141.6	5	25	Debris
2007	242	140	242.18	141.68	8	25	Chert Flake
2007	242	140	242.99	141.53	1	26	Debris
2007	242	140	242.93	141.48	2	26	Pebble
2007	242	140	242.98	141.96	3	26	Amorphous Debris
2007	242	140	242.94	141.81	4	26	Amorphous Debris
2007	242	140	242.76	141.82	6	26	Flake Fragment
2007	242	140	242.62	141.43	7	26	Amorphous Debris
2007	242	140	242.57	141.34	8	26	Amorphous Debris
2007	242	140	242.43	141.86	9	26	Debris
2007	242	140	242.37	141.37	10	26	Pebble
2007	242	142	243.12	142.25	1	8	Pebble
2007	242	142	243.12	142.2	2	8	Pebble
2007	242	142	243.085	142.45	1	9	Amorphous Debris
2007	242	142	243.12	142.58	2	9	Debris
2007	242	142	243.62	142.99	3	9	Amorphous Debris
2007	242	140	242.04	140.25	8	18	Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2007	242	140	242.31	140.42	11	19	Amorphous Debris
2007	242	140	242.29	141.42	7	19	Amorphous Debris
2007	242	140	242.46	141.92	11	20	Broken Flake
2007	242	140	242.99	140.59	2	21	Debris
2007	242	140	242.99	140.5	1	21	Debris
2007	242	140	242.39	141.6	13	21	Debris
2007	242	140	242.54	141.77	14	22	Flake Fragment
2007	242	140	242.71	141.22	32	25	Debris
2007	242	140	242.97	141.59	31	25	Pebble
2007	242	140	242.26	141.66	39	25	Flake Fragment
2007	242	140	242.27	141.44	11	26	Flake Fragment
2007	242	140	242.89	141.72	5	26	Flake Fragment
2007	244	138	244.77	139.84	1	2	Pebble
2007	244	138	244.5	139.05	2	2	Amorphous Debris
2007	244	138	244.62	139.53	3	2	Amorphous Debris
2007	244	138	244.97	139.32	6	2	Amorphous Debris
2007	244	138	244.52	139.54	4	2	Debris
2007	244	138	244.85	139.51	1	3	Pebble
2007	244	138	244.47	139.59	2	3	Debris
2007	244	138	244.97	139.4	3	3	Pebble
2007	244	138	244.845	139.235	5	3	Debris
2007	244	138	244.265	139.145	7	3	Amorphous Debris
2007	244	138	244.89	139.29	4	4	Amorphous Debris
2007	244	138	244.09	139.49	3	4	Amorphous Debris
2007	244	138	244.89	139.27	7	4	Amorphous Debris
2007	244	138	244.67	139.41	8	4	Pebble
2007	244	138	244.3	139.22	6	4	Amorphous Debris
2007	244	138	244.84	139.85	1	4	Amorphous Debris
2007	244	138	244.77	139.59	2	4	Amorphous Debris
2007	244	138	244.165	139.18	5	4	Flake Fragment
2007	244	138	244.67	139.37	2	5	Amorphous Debris
2007	244	138	244.76	139.31	3	5	Debris
2007	244	138	244.67	139.84	4	5	Amorphous Debris
2007	244	138	244.67	139.84	5	5	Amorphous Debris
2007	244	138	244.225	139.83	6	5	Amorphous Debris
2007	244	138	244.44	139.19	7	5	Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2007	244	138	244.92	139.22	1	5	Debris
2007	244	138	244.44	139.88	2	6	Flake Fragment
2007	244	138	244.23	139.49	3	6	Amorphous Debris
2007	244	138	244.76	139.85	4	6	Amorphous Debris
2007	244	138	244.4	139.12	5	6	Amorphous Debris
2007	244	138	234.34	139.025	7	6	Amorphous Debris
2007	244	138	244.205	139	8	6	Amorphous Debris
2007	244	138	244.53	139.53	9	6	Pebble
2007	244	138	244.99	139.28	10	6	Flake Fragment
2007	244	138	244.295	139.48	6	6	Flake
2007	244	138	244.6	139.7	1	6	Pebble
2007	244	138	244.71	139.31	1	7	Flake Fragment
2007	244	138	244.47	139.88	2	7	Amorphous Debris
2007	244	138	244.32	139.48	3	7	Flake Fragment
2007	244	138	244.58	139.43	4	7	Amorphous Debris
2007	244	138	244.3	139.355	1	8	Amorphous Debris
2007	244	138	244.765	139.66	2	8	Debris
2007	244	138	244.39	139.55	3	8	Amorphous Debris
2007	244	138	244.39	139.76	4	8	Amorphous Debris
2007	244	138	244.46	139.905	5	8	Flake Fragment
2007	244	138	244.64	139.22	1	9	Broken Flake
2007	244	138	244.48	139.26	2	9	Flake Fragment
2007	244	138	244.54	139.76	3	9	Debris
2007	244	138	244.3	139.66	4	9	Debris
2007	244	138	244.15	139.63	5	9	Amorphous Debris
2007	244	138	244.17	139.93	6	9	Debris
2007	244	138	244.15	139.95	7	9	Flake Fragment
2007	244	138	244.21	139.93	9	9	Broken Flake
2007	244	138	244.29	139.91	3	10	Amorphous Debris
2007	244	138	244.32	139.46	4	10	Amorphous Debris
2007	244	138	244.42	139.42	5	10	Amorphous Debris
2007	244	138	244.2	139.74	2	10	
2007	244	138	244	139	2	10	Amorphous Debris
2007	244	138	244.29	139.82	1	10	Broken Flake
2007	244	138	244.51	139.58	1	11	Amorphous Debris
2007	244	138	244.69	139.31	2	11	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2007	244	138	244.7	139.34	3	11	Amorphous Debris
2007	244	138	244.71	139.42	4	11	Amorphous Debris
2007	244	138	244.29	139.99	8		Debris
2007	242	140	242.7	140.85	9	23	Flake Fragment
2008	242	138	243.52	139.16	1	1	Broken Flake
2008	242	138	243.81	139.56	1	2	Amorphous Debris
2008	242	138	243.01	139.16	1	3	Pebble
2008	242	138	243.76	139.335	2	3	Amorphous Debris
2008	242	138	243.06	139.31	1	4	Debris
2008	242	138	243.29	139.395	2	4	Amorphous Debris
2008	242	138	243.36	139.5	3	4	Debris
2008	242	138	243.68	139.26	4	4	Amorphous Debris
2008	242	138	243.87	139.4	5	4	Amorphous Debris
2008	242	138	243.2	139.67	1	5	Debris
2008	242	138	242	139.565	2	5	Pebble
2008	242	138	243	139.625	2	5	Amorphous Debris
2008	242	138	243.95	139.68	4	5	Pebble
2008	242	138	243.85	139.355	5	5	Amorphous Debris
2008	242	138	243.885	139.16	7	5	Amorphous Debris
2008	242	138	243.825	139.12	8	5	Amorphous Debris
2008	242	138	243.94	139.25	6	5	Amorphous Debris
2008	242	138	242.215	139.89	1	6	Pebble
2008	242	138	242.085	139.68	2	6	Debris
2008	242	138	242.38	139.365	4	6	Amorphous Debris
2008	242	138	242.47	139.375	5	6	Amorphous Debris
2008	242	138	242.475	139.345	6	6	Amorphous Debris
2008	242	138	242.055	139.63	3	6	Amorphous Debris
2008	242	138	243.95	139.49	1	7	Broken Flake
2008	242	138	243.655	139.405	2	7	Amorphous Debris
2008	242	138	243.685	139.395	3	7	Pebble
2008	242	138	243.66	139.295	4	7	Debris
2008	242	138	243.025	139.665	5	7	Pebble
2008	242	138	243.225	139.085	6	7	Amorphous Debris
2008	242	138	242.85	139.17	1	8	Flake
2008	242	138	242	139.565	2	8	Flake Fragment
2008	242	138	243.105	139.595	3	9	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2008	242	138	243.895	139.902	1	9	Amorphous Debris
2008	242	138	243.865	139.37	2	9	Pebble
2008	242	138	243.215	139.29	4	9	Debris
2008	242	138	243.15	139.1	5	9	Amorphous Debris
2008	242	138	243.6	139.17	1	10	Debris
2008	242	138	243.6	139.17	1	10	Amorphous Debris
2008	242	138	243.855	139.075	2	10	Flake Fragment
2008	242	138	243.13	139.295	3	10	Amorphous Debris
2008	242	138	243.79	139.35	4	10	Pebble
2008	242	138	243.86	139.385	5	10	Debris
2008	242	138	243.315	139.615	6	10	Amorphous Debris
2008	242	138	243.345	139.67	7	10	Amorphous Debris
2008	242	138	243.6	139.17	8	10	Amorphous Debris
2008	242	138	243.95	139.88	1	11	Pebble
2008	242	138	243.16	139.74	2	11	Amorphous Debris
2008	242	138	243.76	139.46	3	11	Debris
2008	242	138	243.78	139.36	4	11	Amorphous Debris
2008	242	138	243.59	139.235	5	11	Debris
2008	242	138	243.725	139.86	1	12	Pebble
2008	242	138	243.7	139.82	2	12	Debris
2008	242	138	243.545	139.83	3	12	Pebble
2008	242	138	243.57	139.7	4	12	Debris
2008	242	138	243.45	139.63	5	12	Debris
2008	242	138	243.15	139.59	6	12	Pebble
2008	242	138	243.72	139.25	7	12	Pebble
2008	242	138	243.145	139.93	1	13	Pebble
2008	242	138	243.15	139.905	2	13	Amorphous Debris
2008	242	138	243.13	139.295	3	13	Pebble
2008	242	138	243.17	139.86	4	13	Pebble
2008	242	138	243.71	139.82	5	13	Pebble
2008	242	138	243.945	139.81	6	13	Pebble
2008	242	138	243.49	139.65	7	13	Pebble
2008	242	138	243.89	139.56	8	13	Pebble
2008	242	138	243.73	139.47	9	13	Pebble
2008	242	138	243.485	139.5	10	13	Amorphous Debris
2008	242	138	243.41	139.46	11	13	Flake

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2008	242	138	243.55	139.325	12	13	Pebble
2008	242	138	243.505	139.175	13	13	Debris
2008	242	138	243.2	139.97	17	13	Flake
2008	242	138	243.51	139.15	14	14	Amorphous Debris
2008	242	140	242.16	141.28	1	26	Amorphous Debris
2008	242	140	242.17	141.38	3	26	Debris
2008	242	140	242.18	141.47	4	26	Debris
2008	242	140	242.18	141.46	6	26	Amorphous Debris
2008	242	140	242.74	141.48	8	26	Amorphous Debris
2008	242	140	242.76	141.46	9	26	Pebble
2008	242	140	242.88	141.49	10	26	Amorphous Debris
2008	242	140	242.104	141.34	11	26	Pebble
2008	242	140	242.105	141.88	12	26	Amorphous Debris
2008	242	140	242.05	141.31	1	27	Debris
2008	242	140	242.04	141.74	2	27	Amorphous Debris
2008	242	140	242.115	141.78	3	27	Debris
2008	242	140	242.46	141.13	4	27	Debris
2008	242	140	242.53	141.12	5	27	Amorphous Debris
2008	242	140	242.58	141.77	6	27	Amorphous Debris
2008	242	140	242.88	141.69	7	27	Amorphous Debris
2008	242	140	242.95	141.51	8	27	Debris
2008	242	140	242.93	141.62	9	27	Amorphous Debris
2008	242	140	242.83	141.52	10	27	Flake
2008	242	140	242.85	141.47	11	27	Broken Flake
2008	242	140	242.91	141.47	12	27	Amorphous Debris
2008	242	140	242.83	141.42	13	27	Pebble
2008	242	140	242.82	141.5	14	27	Amorphous Debris
2008	242	140	242.9	141.6	15	27	Pebble
2008	242	140	242.65	141.89	2	28	Debris
2008	242	140	242.56	141.78	3	28	Amorphous Debris
2008	242	140	242.95	141.73	4	28	Debris
2008	242	140	242.87	141.72	5	28	Amorphous Debris
2008	242	140	242.65	141.61	7	28	Pebble
2008	242	140	242.67	141.67	8	28	Pebble
2008	242	140	242.8	141.53	9	28	Pebble
2008	242	140	242.84	141.38	11	28	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2008	242	140	242.7	141.37	12	28	Debris
2008	242	140	242.91	141.17	13	28	Broken Flake
2008	242	140	242.76	141.13	14	28	Amorphous Debris
2008	242	140	242.88	141.23	15	28	Pebble
2008	242	140	242.37	141.56	16	28	Debris
2008	242	140	242.31	141.24	17	28	Amorphous Debris
2008	242	140	242.65	141.82	19	28	Pebble
2008	242	140	242.96	141.64	6	28	Amorphous Debris
2008	242	140	242.76	141.45	10	28	Pebble
2008	242	140	242.76	141.34	2	29	Debris
2008	242	140	242.49	140.14	17	17	Pebble
2008	242	140	242.527	140.925	1	24	Amorphous Debris
2008	242	140	242.808	140.94	2	24	Amorphous Debris
2008	242	140	242.779	140.915	3	24	Pebble
2008	242	140	242.752	140.796	4	24	Pebble
2008	242	140	242.766	140.865	5	24	Pebble
2008	242	140	242.78	140.882	6	24	Amorphous Debris
2008	242	140	242.688	140.582	7	24	Amorphous Debris
2008	242	140	242.834	140.636	8	24	Amorphous Debris
2008	242	140	242.68	140.83	1	25	Amorphous Debris
2008	242	140	242.576	140.828	2	25	Amorphous Debris
2008	242	140	242.692	140.298	3	25	Amorphous Debris
2008	242	140	242.654	140.792	4	25	Pebble
2008	242	140	242.637	140.464	5	25	Amorphous Debris
2008	242	140	242.656	140.76	6	25	Amorphous Debris
2008	242	140	242.748	140.742	7	25	Amorphous Debris
2008	242	140	242.732	140.705	8	25	Amorphous Debris
2008	242	140	242.806	140.592	11	25	Pebble
2008	242	140	242.726	140.948	13	25	Pebble
2008	242	140	242.632	140.405	14	25	Pebble
2008	242	140	242.882	140.1	15	25	Pebble
2008	242	140	242.47	140.03	16	25	Amorphous Debris
2008	242	140	242.64	140.1	18	25	Amorphous Debris
2008	242	140	242.52	140.45	19	25	Debris
2008	242	140	242.66	140.57	20	25	Amorphous Debris
2008	242	140	242.654	140.585	10	25	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2008	242	140	242.743	140.454	12	25	Debris
2008	242	140	242.646	140.205	1	26	Debris
2008	242	140	242.35	140.416	2	26	Pebble
2008	242	140	242.754	140.416	3	26	Amorphous Debris
2008	242	140	242.542	140.529	4	26	Amorphous Debris
2008	242	140	242.593	140.762	5	26	Pebble
2008	242	140	242.662	140.862	6	26	Pebble
2008	242	140	243.99	140	2		Debris
2008	242	140	243.99	140	1		Amorphous Debris
2008	242	142	243.37	142.36	1	10	
2008	242	142	243.37	142.36	2	10	Amorphous Debris
2008	242	142	243.09	142.21	3	10	Debris
2008	242	142	243.395	142.25	4	10	Debris
2008	242	142	243.38	142.22	5	10	Amorphous Debris
2008	242	142	243.68	142.9	6	10	Pebble
2008	242	142	243.245	142.38	1	11	Debris
2008	242	142	243.74	142.26	2	11	Debris
2008	242	142	242.77	142.355	3	11	Pebble
2008	242	142	242.9	142.79	4	11	Pebble
2008	242	142	243.89	142.97	1	12	Debris
2008	242	142	243.28	142.7	1	13	Amorphous Debris
2008	242	142	243.59	142.01	2	13	Amorphous Debris
2008	242	142	243.12	142.325	3	13	Pebble
2008	242	142	243.21	142.2	4	13	Pebble
2008	242	142	243.37	142.275	5	13	Pebble
2008	242	142	243.71	142.29	6	13	Pebble
2008	242	142	243.69	142.02	7	13	Pebble
2008	242	142	243.5	142.165	8	13	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2008	242	142	243.05	142.04	1	14	Pebble
2008	242	142	243.9	142	2	14	Pebble
2008	242	142	243.62	142.03	3	14	Pebble
2008	242	142	243.605	142.01	4	14	Amorphous Debris
2008	242	142	243.11	142.24	5	14	Pebble
2008	242	142	243.93	142.44	1	15	Amorphous Debris
2008	242	142	243.91	142.36	2	15	Amorphous Debris
2008	242	142	243.86	142.28	3	15	Flake Fragment
2008	242	142	243.48	142.14	4	15	Pebble
2008	242	142	243.59	142.62	1	16	Pebble
2008	242	142	243.085	142.71	2	16	Amorphous Debris
2008	242	142	243.05	142.52	3	16	Debris
2008	242	142	243.07	142.445	4	16	Amorphous Debris
2008	242	142	243.07	142.42	5	16	Amorphous Debris
2008	242	142	243.345	142.55	6	16	Amorphous Debris
2008	242	142	243.6	142.135	7	16	Pebble
2008	242	142	243.43	142.79	1	17	Pebble
2008	242	142	243.47	142.79	2	17	Amorphous Debris
2008	242	142	243.27	142.265	3	17	Flake Fragment
2008	242	142	243.1	142.93	1	18	Amorphous Debris
2008	242	142	243.63	142.84	2	18	Flake Fragment
2008	242	142	243.635	142.77	3	18	Flake Fragment
2008	242	142	243.1	142.94	4	18	
2008	242	142	243.66	142.955	1	19	Flake
2008	242	142	243.63	142.87	2	19	Amorphous Debris
2008	242	142	243.53	142.94	3	19	Flake Fragment
2008	242	142	243.69	142.71	5	19	Pebble
2008	242	142	243.68	142.675	6	19	Debris
2008	242	142	243.44	142.725	7	19	Debris
2008	242	142	243.345	142.93	1	20	Flake Fragment
2008	242	142	243.26	142.35	2	20	Amorphous Debris
2008	242	142	243.05	142.03	3	20	Amorphous Debris
2008	242	142	243.61	142.635	1	21	Flake
2008	242	142	243.26	142.67	2	21	Amorphous Debris
2008	242	142	243.27	142.69	3	21	Flake Fragment
2008	242	142	243.03	142.07	4	21	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2008	242	142	243.02	142.79	1	22	Flake Fragment
2008	242	142	243.04	142.44	2	22	Broken Flake
2008	242	142	243.27	142.7	3	22	Amorphous Debris
2008	242	142	243.27	142.71	4	22	Pebble
2008	242	142	243.99	142.87	5	22	Pebble
2008	242	142	243.24	142.28	2	23	Amorphous Debris
2008	242	142	243.32	142.42	3	23	Flake Fragment
2008	242	142	243.29	142.49	4	23	Debris
2008	242	142	243.1	142.61	5	23	Amorphous Debris
2008	242	142	243.11	142.7	6	23	Amorphous Debris
2008	242	142	243.29	142.76	7	23	Debris
2008	242	142	243.34	142.7	8	23	Pebble
2008	242	142	243.48	142.69	9	23	Debris
2008	242	142	243.71	142.65	10	23	Pebble
2008	242	142	243.42	142.52	11	23	Flake
2008	242	142	243.68	142.73	4		Debris
2008	242	142	242.37	142.38	7	7	Broken Flake
2008	242	142	242.18	142.05	1	10	Debris
2008	242	142	242.61	142.31	2	10	Debris
2008	242	142	243.05	142.99	3	10	Amorphous Debris
2008	242	142	242.08	142.96	4	10	Amorphous Debris
2008	242	142	243.81	139.56	1	11	Pebble
2008	242	142	242.6	142.4	1	11	Amorphous Debris
2008	242	142	242.55	142.41	2	11	Debris
2008	242	142	242.53	142.57	3	11	Debris
2008	242	142	242.34	142.74	4	11	Amorphous Debris
2008	242	142	242.06	142.69	5	11	Debris
2008	242	142	242.29	142.94	6	11	Amorphous Debris
2008	242	142	242.17	142.99	7	11	Pebble
2008	242	142	242.65	142.91	8	11	Debris
2008	242	142	242.81	142.13	1	12	Flake
2008	242	142	242.94	142.26	2	12	Pebble
2008	242	142	242.94	142.32	3	12	Pebble
2008	242	142	242.72	142.35	4	12	Amorphous Debris
2008	242	142	242.62	142.35	5	12	Debris
2008	242	142	242.62	142.4	6	12	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2008	242	142	242.29	142.47	8	12	Debris
2008	242	142	242.19	142.5	9	12	Amorphous Debris
2008	242	142	242.16	142.56	10	12	Chert Pebble
2008	242	142	242.15	142.62	11	12	Quartz Pebble
2008	242	142	242.08	142.72	12	12	Amorphous Debris
2008	242	142	242.11	142.71	13	12	Flake
2008	242	142	242.73	142.73	14	12	Amorphous Debris
2008	242	142	242.18	142.55	16	12	Amorphous Debris
2008	242	142	242.19	142.49	17	12	Amorphous Debris
2008	242	142	242.11	142.72	18	12	Flake
2008	242	142	242.44	142.81	19	12	Amorphous Debris
2008	242	142	242.43	142.85	20	12	Debris
2008	242	142	242.25	142.87	21	12	Pebble
2008	242	142	242.662	142.99	22	12	Amorphous Debris
2008	242	142	242.38	142.99	23	12	Amorphous Debris
2008	242	142	242.22	142.96	24	12	Amorphous Debris
2008	242	142	242.27	142.1	25	12	Debris
2008	242	142	242.02	142.48	26	12	Flake
2008	242	142	242.22	142.97	27	12	Amorphous Debris
2008	242	142	242.25	142.54	30	13	Amorphous Debris
2008	242	142	242.25	142.54	32	13	Amorphous Debris
2008	242	142	242.89	142.67	37	13	Amorphous Debris
2008	242	142	242.25	142.51	71	13	Debris
2008	242	142	242.24	142.55	73	13	Pebble
2008	242	142	242.62	142.27	9	13	Amorphous Debris
2008	242	142	242.68	142.37	12	13	Amorphous Debris
2008	242	142	242.31	142.37	13	13	Amorphous Debris
2008	242	142	242.29	142.41	22	13	Pebble
2008	242	142	242.47	142.54	27	13	Amorphous Debris
2008	242	142	242.27	142.54	29	13	Pebble
2008	242	142	242.09	142.59	36	13	Amorphous Debris
2008	242	142	242.15	142.66	49	13	Pebble
2008	242	142	242.06	142.78	54	13	Amorphous Debris
2008	242	142	242.77	142.99	64	13	Pebble
2008	242	142	242.4	142.45	69	13	Amorphous Debris
2008	242	142	242.13	142.68	75	13	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2008	242	142	242.44	142.11	5	13	Debris
2008	242	142	242.75	142.11	3	13	Debris
2008	242	142	242.2	142.55	34	13	Flake
2008	242	142	242.07	142.79	55	13	Flake
2008	242	142	242.22	142.87	62	13	Broken Flake
2008	242	142	242.15	142.82	53	13	Pebble
2008	242	142	242.61	142.06	4	13	Debris
2008	242	142	242.09	142.35	16	13	Amorphous Debris
2008	242	142	242.07	142.57	35	13	Amorphous Debris
2008	242	142	242.56	142.75	41	13	Amorphous Debris
2008	242	142	242.18	142.67	46	13	Amorphous Debris
2008	242	142	242.45	142.37	68	13	Pebble
2008	242	142	242.14	142.64	74	13	Amorphous Debris
2008	242	142	242.87	142.76	77	13	Flake
2008	242	142	242.38	142.9	59	13	Amorphous Debris
2008	242	142	242.12	142.72	51	13	Debris
2008	242	142	242.77	142.27	8	13	Amorphous Debris
2008	242	142	242.89	142	2	13	Pebble
2008	242	142	242.92	142.2	6	13	Pebble
2008	242	142	242.3	142.5	26	13	Pebble
2008	242	142	242.56	142.8	1	13	Amorphous Debris
2008	242	142	242.46	142.35	11	13	Flake Fragment
2008	242	142	242.77	142.43	18	13	Pebble
2008	242	142	242.36	142.41	21	13	Pebble
2008	242	142	242.39	142.48	24	13	Pebble
2008	242	142	242.26	142.55	28	13	Pebble
2008	242	142	242.2	142.52	33	13	Amorphous Debris
2008	242	142	242.75	142.66	39	13	Pebble
2008	242	142	242.47	142.72	42	13	Pebble
2008	242	142	242.22	142.59	44	13	Pebble
2008	242	142	242.75	142.93	56	13	Amorphous Debris
2008	242	142	242.16	142.9	63	13	Pebble
2008	242	142	242.39	142.46	70	13	Pebble
2008	242	142	242.55	142.3	67	13	Pebble
2008	242	142	242.42	142.41	19	13	Pebble
2008	242	142	242.41	140.43	20	13	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2008	242	142	242.42	142.89	58	13	Debris
2008	242	142	243.27	142.89	60	13	Amorphous Debris
2008	242	142	242.25	142.55	31	13	Pebble
2008	242	142	242.05	142.77	76	13	Flake
2008	242	142	242.75	142.23	7	13	Flake Fragment
2008	242	142	242.13	142.35	15	13	Amorphous Debris
2008	242	142	242.06	142.33	17	13	Pebble
2008	242	142	242.64	142.61	40	13	Pebble
2008	242	142	242.56	142.81	52	13	Pebble
2008	242	142	242.24	142.53	72	13	Pebble
2008	242	142	242.37	142.69	43	13	Amorphous Debris
2008	242	142	242.21	142.36	14	13	Pebble
2008	242	142	242.58	142.99	66	13	Pebble
2008	242	142	242.16	142.72	50	13	Pebble
2008	242	142	242.31	142.46	25	13	Debris
2008	242	142	242.67	142.99	65	13	Amorphous Debris
2008	242	142	242.82	142.69	38	13	Amorphous Debris
2008	242	142	242.19	142.62	45	13	Pebble
2008	242	142	242.56	142.3	10	13	Amorphous Debris
2008	242	142	242.48	142.72	74	13	Amorphous Debris
2008	242	142	242.54	142.93	57	13	Pebble
2008	242	142	242.24	142.42	23	13	Debris
2008	242	142	242.19	142.64	47	13	Amorphous Debris
2008	242	142	242.24	142.93	61	13	Amorphous Debris
2008	242	142	242.43	142.38	78	13	Amorphous Debris
2008	242	142	242.77	142.015	1	14	Amorphous Debris
2008	242	142	242.32	142.01	2	14	Amorphous Debris
2008	242	142	242.73	142.14	3	14	Amorphous Debris
2008	242	142	242.58	142.095	4	14	Amorphous Debris
2008	242	142	242.33	142.14	5	14	Amorphous Debris
2008	242	142	242.82	142.29	6	14	Broken Flake
2008	242	142	242.65	142.31	7	14	Flake
2008	242	142	242.55	142.3	8	14	Amorphous Debris
2008	242	142	242.49	142.36	9	14	Flake Fragment
2008	242	142	242.17	142.59	10	14	Flake
2008	242	142	242.69	142.71	11	14	Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2008	242	142	242.28	142.68	12	14	Amorphous Debris
2008	242	142	242.17	142.67	13	14	Flake Fragment
2008	242	142	242.75	142.78	14	14	Amorphous Debris
2008	242	142	242.69	142.91	15	14	Broken Flake
2008	242	142	242.48	142.84	16	14	Amorphous Debris
2008	242	142	242.28	142.87	17	14	Amorphous Debris
2008	242	142	242.25	142.94	18	14	Amorphous Debris
2008	242	142	242.8	142	1	15	Flake Fragment
2008	242	142	242.79	142.02	2	15	Amorphous Debris
2008	242	142	242.3	142.11	3	15	Flake Fragment
2008	242	142	242.66	142.24	4	15	Amorphous Debris
2008	242	142	242.67	142.27	5	15	Pebble
2008	242	142	242.15	142.43	6	15	Amorphous Debris
2008	242	142	242.73		7	15	Pebble
2008	242	142	242.1	142.625	8	15	Debris
2008	242	142	242.82	142.89	9	15	Broken Flake
2008	242	142	242.58	142.91	10	15	Flake
2008	242	142	242.19	142.96	11	15	Flake
2008	242	142	242.73	142.84		15	Pebble
2008	242	142	242.02	142.01	1	16	Amorphous Debris
2008	242	142	242.48	142.17	2	16	Pebble
2008	242	142	242.21	142.13	3	16	Pebble
2008	242	142	242.74	142.29	4	16	Pebble
2008	242	142	242.36	142.33	5	16	Amorphous Debris
2008	242	142	242.34	142.3	6	16	Flake Fragment
2008	242	142	242.4	142.53	7	16	Debris
2008	242	142	242.12	142.55	8	16	Pebble
2008	242	142	242.08	142.53	9	16	Flake
2008	242	142	242.59	142.67	10	16	Debris
2008	242	142	242.59	142.65	11	16	Flake
2008	242	142	242.29	142.65	12	16	Debris
2008	242	142	242.79	142.99	13	16	Debris
2008	242	142	242.22	142.98	15	16	Flake Fragment
2008	242	142	242.95	142.79	16	16	Flake Fragment
2008	242	142	242.48	142.21	17	16	Debris
2008	242	142	242.38	142.02	1	17	Flake

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2008	242	142	242.76	142.46	2	17	Flake Fragment
2008	242	142	242.3	142.5	3	17	Flake
2008	242	142	242.23	142.49	4	17	Amorphous Debris
2008	242	142	242.56	142.62	5	17	Flake Fragment
2008	242	142	242.18	142.6	6	17	Amorphous Debris
2008	242	142	242.55	142.69	7	17	Amorphous Debris
2008	242	142	242.37	142.67	8	17	Pebble
2008	242	142	242.9	142.99	9	17	Amorphous Debris
2008	242	142	242.53	142.37	1	18	Flake Fragment
2008	242	142	242.72	142.49	2	18	Amorphous Debris
2008	242	142	242.03	142.42	4	18	Amorphous Debris
2008	242	142	242.8	142.67	5	18	Broken Flake
2008	242	142	242.65	142.72	6	18	Amorphous Debris
2008	242	142	242.62	142.93	7	18	Flake
2008	242	142	242.37	142.99	8	18	Amorphous Debris
2008	242	142	242.32	142.99	9	18	Amorphous Debris
2008	242	142	242.17	142.49	3	18	Amorphous Debris
2008	242	142	242.67	142.05	1	19	Amorphous Debris
2008	242	142	242.75	142.36	2	19	Amorphous Debris
2008	242	142	242.15	142.3	3	19	Flake Fragment
2008	242	142	242.52	142.63	4	19	Amorphous Debris
2008	242	142	242.9	142.72	6	19	Amorphous Debris
2008	242	142	242.66	142.88	7	19	Amorphous Debris
2008	242	142	242.66	142.99	8	19	Flake Fragment
2008	242	142	242.47	142.02	1	20	Amorphous Debris
2008	242	142	242.71	142.08	2	20	Pebble
2008	242	142	242.49	142.24	3	20	Amorphous Debris
2008	242	142	242.34	142.31	4	20	Amorphous Debris
2008	242	142	242.18	142.23	5	20	Amorphous Debris
2008	242	142	242.06	142.25	6	20	Amorphous Debris
2008	242	142	242.26	142.36	7	20	Amorphous Debris
2008	242	142	242.1	142.4	8	20	Amorphous Debris
2008	242	142	242.15	142.5	9	20	Flake
2008	242	142	242.22	142.55	10	20	Amorphous Debris
2008	242	142	242.9	142.8	11	20	Broken Flake
2008	242	142	242.64	142.8	12	20	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2008	242	142	242.96	142.93	13	20	Pebble
2008	242	142	242.41	142.32	7	21	Amorphous Debris
2008	242	142	242.89	142.65	15	21	Amorphous Debris
2008	242	142	242.55	142.06	1	21	Amorphous Debris
2008	242	142	242.55	142.06	1	21	Amorphous Debris
2008	242	142	242.51	142.13	3	21	Amorphous Debris
2008	242	142	242.56	142.17	5	21	Amorphous Debris
2008	242	142	242.41	141.32	7	21	Amorphous Debris
2008	242	142	242.15	142.45	12	21	Amorphous Debris
2008	242	142	242.22	142.78	16	21	Amorphous Debris
2008	242	142	242.04	142.79	17	21	Amorphous Debris
2008	242	142	242.04	142.79	17	21	Amorphous Debris
2008	242	142	242.15	142.09	4	21	Pebble
2008	242	142	242.53	142.09	2	21	Amorphous Debris
2008	242	142	242.33	142.34	8	21	Flake Fragment
2008	242	142	242.33	142.34	8	21	Amorphous Debris
2008	242	142	242.67	142.59	13	21	Debris
2008	242	142	242.67	142.59	13	21	Amorphous Debris
2008	242	142	242.81	142.43	11	21	Amorphous Debris
2008	242	142	242.53	142.09	2	21	Amorphous Debris
2008	242	142	242.14	142.25	14	21	Debris
2008	242	142	242.14	142.25	10	21	Amorphous Debris
2008	242	142	242.68	142.29	6	21	Amorphous Debris
2008	242	142	242.15	142.09	4	21	Pebble
2008	242	142	242.93	142.68	14	21	Debris
2008	242	142	242.89	142.65	15	21	Amorphous Debris
2008	242	142	242.27	142.34	9	21	Amorphous Debris
2008	242	142	242.22	142.28	16	21	Amorphous Debris
2008	242	142	242.81	142.93	11	21	Amorphous Debris
2008	242	142	242.68	142.29	6	21	Debris
2008	242	142	242.79	142.69	18	21	Pebble
2008	242	142	242.91	142.9	28	22	Debris
2008	242	142	242.71	142.52	35	22	Amorphous Debris
2008	242	142	242.25	142.12	9	22	Pebble
2008	242	142	242.64	142.725	25	22	Pebble
2008	242	142	242.34	142.97	31	22	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2008	242	142	242.22	142.09	32	22	Amorphous Debris
2008	242	142	242.38	142.31	17	22	Amorphous Debris
2008	242	142	242.14	142.23	18	22	Amorphous Debris
2008	242	142	242.72	142.55	22	22	Debris
2008	242	142	242.44	142.98	30	22	Debris
2008	242	142	242.16	142.055	12	22	Amorphous Debris
2008	242	142	242.74	142.43	20	22	Amorphous Debris
2008	242	142	242.22	142.59	33	22	Amorphous Debris
2008	242	142	242.24	142.11	34	22	Flake Fragment
2008	242	142	242.89	142.78	36	22	Amorphous Debris
2008	242	142	242.77	142.28	14	22	Amorphous Debris
2008	242	142	242.57	142.32	16	22	Flake Fragment
2008	242	142	242.71	142.095	5	22	Amorphous Debris
2008	242	142	242.78	142.205	4	22	Amorphous Debris
2008	242	142	242.88	142.22	2	22	Pebble
2008	242	142	242.54	142.99	29	22	Pebble
2008	242	142	242.31	142.08	8	22	Amorphous Debris
2008	242	142	242.07	142.01	13	22	Debris
2008	242	142	242.72	142.52	21	22	Amorphous Debris
2008	242	142	242.14	142.53	23	22	Amorphous Debris
2008	242	142	242.82	142.72	24	22	Amorphous Debris
2008	242	142	242.63	142.81	26	22	Broken Flake
2008	242	142	242.22	142.07	10	22	Amorphous Debris
2008	242	142	242.22	142.05	11	22	Amorphous Debris
2008	242	142	242.77	142.32	15	22	Amorphous Debris
2008	242	142	242.05	142.195	19	22	Amorphous Debris
2008	242	142	242.78	142.17	3	22	Pebble
2008	242	142	242.21	142.69	27	22	Pebble
2008	242	142	242.89	142.125	1	22	Pebble
2008	242	142	242.57	142.1	6	22	Flake Fragment
2008	242	142	242.3	142.03	7	22	Debris
2008	242	142	243.48	142.1	5		Pebble
2008	242	140	242.772	140.77	9	25	Flake Fragment
2008	242	140	242.27	141.26	2	26	Pebble
2008	242	140	242.23	141.42	5	26	Debris
2008	242	140	242.32	141.71	7	26	Flake Fragment

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2008	242	140	242.64	141.86	1	28	Flake Fragment
2008	242	140	242.725	141.26	1	29	Debris
2008	242	142	243.18	142.61	8	19	Flake Fragment
2008	244	138	244.45	139.425	2	12	Debris
2008	244	138	244.63	139.235	3	12	Amorphous Debris
2008	244	138	244.46	139.655	4	12	Pebble
2008	244	138	244.585	139.49	5	12	Pebble
2008	244	138	244.53	139.37	6	12	Pebble
2008	244	138	244.185	139.32	7	12	Pebble
2008	244	138	244.11	139.245	8	12	Amorphous Debris
2008	244	138	244.055	139.2	9	12	Pebble
2008	244	138	244.97	139.42	10	12	Amorphous Debris
2008	244	138	244.775	139.545	11	12	Pebble
2008	244	138	244.79	139.5	12	12	Pebble
2008	244	138	244.59	139.27	13	12	Pebble
2008	244	138	244.62	139.265	14	12	Pebble
2008	244	138	244.66	139.26	15	12	Pebble
2008	244	138	244.53	139.24	16	12	Amorphous Debris
2008	244	138	244.365	139.095	17	12	Pebble
2008	244	138	244.605	139.21	18	12	Pebble
2008	244	138	244.63	139.225	19	12	Pebble
2008	244	138	244.77	139.245	20	12	Amorphous Debris
2008	244	138	244.77	139.205	21	12	Amorphous Debris
2008	244	138	244.92	139.185	22	12	Debris
2008	244	138	244.29	139.035	23	12	Pebble
2008	244	138	244.64	139.22	24	12	Amorphous Debris
2008	244	138	244.36	139.1	26	12	Amorphous Debris
2008	244	138	244.44	139.7	2	13	Amorphous Debris
2008	244	138	244.56	139.585	3	13	Amorphous Debris
2008	244	138	244.695	139.44	4	13	Debris
2008	244	138	244.465	139.34	5	13	Amorphous Debris
2008	244	138	244.61	139.25	6	13	Pebble
2008	244	138	244.52	139.21	7	13	Amorphous Debris
2008	244	138	244.61	139.19	8	13	Debris
2008	244	138	244.67	139.2	9	13	Pebble
2008	244	138	244.295	139.12	10	13	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2008	244	138	244.4	139.09	12	13	Amorphous Debris
2008	244	138	244.62	139.2	13	13	Pebble
2008	244	138	244.26	139.12	11	13	Debris
2008	244	138	244.46	139.63	1	14	Debris
2008	244	138	244.73	139.635	2	14	Broken Flake
2008	244	138	244.86	139.55	3	14	Amorphous Debris
2008	244	138	244.73	139.44	4	14	Pebble
2008	244	138	244.4	139.16	5	14	Amorphous Debris
2008	244	138	244.375	139.15	6	14	Pebble
2008	244	138	244.35	139.14	7	14	Amorphous Debris
2008	244	138	244.31	139.12	8	14	Amorphous Debris
2008	244	138	244.38	139.11	9	14	Amorphous Debris
2008	244	138	244.34	139.06	10	14	Not Visible
2008	244	138	244.31	139.03	11	14	Pebble
2008	244	138	244.29	139.055	12	14	Pebble
2008	244	138	244.7	139.44	1	15	Amorphous Debris
2008	244	138	244.545	139.31	2	15	Amorphous Debris
2008	244	138	244.495	139.24	3	15	Amorphous Debris
2008	244	138	244.42	139.19	4	15	Debris
2008	244	138	244.125	139.31	5	15	Flake Fragment
2008	244	138	244.405	139.22	6	15	Amorphous Debris
2008	244	138	244.22	139.13	7	15	Debris
2008	244	138	244.5	139.19	8	15	Debris
2008	244	138	244.365	139.13	9	15	Debris
2008	244	138	244.535	139.66	10	15	Pebble
2008	244	138	244.54	139.695	11	15	Amorphous Debris
2008	244	138	244.665	139.78	12	15	Pebble
2008	244	138	244.785	139.805	14	15	Debris
2008	244	138	244.11	139.63	15	15	Debris
2008	244	138	244.83	139.33	16	15	Flake Fragment
2008	244	138	244.32	139.11	17	15	Amorphous Debris
2008	244	138	244.17	139.75	18	15	Pebble
2008	244	138	244.18	139.25	19	15	Amorphous Debris
2008	244	138	244.385	139.097	20	15	Amorphous Debris
2008	244	138	244.15	139.047	21	15	Pebble
2008	244	138	244.26	139.03	22	15	Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2008	244	138	244.405	139.08	23	15	Pebble
2008	244	138	244.6	139.38	13	15	Flake Fragment
2008	244	138	244.355	139.44	1	16	Pebble
2008	244	138	244.375	139.12	2	16	Amorphous Debris
2008	244	138	244.145	139.02	3	16	Flake Fragment
2008	244	138	244.83	139.365	4	16	Debris
2008	244	138	244.9	139.51	1	17	Amorphous Debris
2008	244	138	244.97	139.26	2	17	Amorphous Debris
2008	244	138	244.21	139.64	1	18	Amorphous Debris
2008	244	138	244.3	139.33	2	18	Amorphous Debris
2008	244	138	244.37	139.35	3	18	Pebble
2008	244	138	244.365	139.3	4	18	Pebble
2008	244	138	244.032	139.255	5	18	Amorphous Debris
2008	244	138	244.165	139.125	6	18	Amorphous Debris
2008	244	138	244.2	139.11	7	18	Pebble
2008	244	138	244.175	139.055	8	18	Pebble
2008	244	138	244.185	139.41	9	18	Debris
2008	244	138	244.4	139.325	1	20	Pebble
2008	244	138	244.3	139.3	2	20	Pebble
2008	244	138	244.045	139.455	3	20	Amorphous Debris
2008	244	138	244.61	139	4	20	Pebble
2008	244	138	244.35	139.145	5	20	Amorphous Debris
2008	244	138	244.2025	139.65	6	20	Broken Flake
2008	244	138	244.02	139.765	1	21	Amorphous Debris
2008	244	138	244.145	139.665	2	21	Amorphous Debris
2008	244	138	244.03	139.625	3	21	Amorphous Debris
2008	244	138	244.545	139.125	1	22	Amorphous Debris
2008	244	138	244.05	139.225	2	22	Amorphous Debris
2008	244	138	244.035	139.56	3	22	Amorphous Debris
2008	244	138	244.155	139.655	4	22	Debris
2008	244	138	244.455	139.845	1	24	Amorphous Debris
2008	244	138	244.585	139.815	1	25	Amorphous Debris
2008	244	138	244.625	139.725	2	25	Amorphous Debris
2008	244	138	244.1	139.635	5	25	Amorphous Debris
2008	244	138	244.58	139.63	3	25	Debris
2008	244	138	244.32	139.775	1	26	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2008	244	138	244.25	139.24	2	26	Pebble
2008	244	138	244.245	139.35	3	26	Amorphous Debris
2008	244	138	244.09	139.655	1	27	Amorphous Debris
2008	244	138	244.73	139.795	1	28	Amorphous Debris
2008	244	138	244.46	139.615	1	30	Amorphous Debris
2008	244	138	244.49	139.19	2	30	Amorphous Debris
2008	244	138	244.435	139.735	1	31	Amorphous Debris
2008	244	138	244.32	139.3	2	31	Amorphous Debris
2008	244	138	244.01	139.14	3	31	Flake
2008	244	138	244.01	139.16	4	31	Pebble
2009	242	138	242.03	139.77	1	1	Debris
2009	242	138	243.53	139.56	6	6	Amorphous Debris
2009	242	138	243.69	139.68	2	14	Amorphous Debris
2009	242	138	243.45	139.78	1	14	Amorphous Debris
2009	242	138	243.84	139.53	4	14	Amorphous Debris
2009	242	138	243.44	139.55	3	14	Pebble
2009	242	138	243.23	139.15	3	15	Amorphous Debris
2009	242	138	243.73	139.17	2	15	Debris
2009	242	138	243.85	1339.43	1	15	Pebble
2009	242	138	243.85	139.035	4	15	Pebble
2009	242	138	243.59	139.825	6	16	Amorphous Debris
2009	242	138	243.7	139.37	4	16	Amorphous Debris
2009	242	138	243.03	139.03	5	16	Amorphous Debris
2009	242	138	243.41	139.775	7	16	Pebble
2009	242	138	243.75	139.66	2	16	Amorphous Debris
2009	242	138	243.78	139.64	3	16	Amorphous Debris
2009	242	138	243.69	139.91	1	16	Debris
2009	242	138	243.72	139.36	1	22	Flake
2009	242	138	243.14	139.08	2	22	Debris
2009	242	138	243.08	139.56	22	23	Amorphous Debris
2009	242	138	243.36	139.59	4	23	Debris
2009	242	138	243.64	139.78	2	23	Debris
2009	242	138	243.25	139.87	1	23	Amorphous Debris
2009	242	138	243.01	139.16	5	23	Pebble
2009	242	138	243.11	139.01	6	23	Amorphous Debris
2009	242	138	243.64	139.79	2	24	Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2009	242	138	243.11	139.08	3	24	Flake
2009	242	138	243.91	139.81	1	24	Amorphous Debris
2009	242	138	243.42	139.87	4	25	Debris
2009	242	138	243.38	139.73	3	25	Amorphous Debris
2009	242	138	243.61	139.77	5	25	Amorphous Debris
2009	242	138	243.73	139.13	7	25	Amorphous Debris
2009	242	138	243.3	139.73	2	25	Amorphous Debris
2009	242	138	243.21	139.79	1	25	Amorphous Debris
2009	242	138	243.61	139.76	1	26	Amorphous Debris
2009	242	138	243.86	139.52	2	26	Amorphous Debris
2009	242	138	243.58	139.77	2	27	Flake
2009	242	138	243.6	139.58	3	27	Amorphous Debris
2009	242	138	243.1	139.6	2	28	Flake
2009	242	138	243.27	139.375	4	28	Amorphous Debris
2009	242	138	243.17	139.5	3	28	Debris
2009	242	138	243.21	139.27	5	28	Amorphous Debris
2009	242	138	243.6	139.76	1	28	Debris
2009	242	138	243.39	139.77	4	29	Amorphous Debris
2009	242	138	243.62	139.67	7	29	Amorphous Debris
2009	242	138	243.42	139.72	5	29	Amorphous Debris
2009	242	138	243.9	139.31	20	29	Amorphous Debris
2009	242	138	243.57	139.65	6	29	Amorphous Debris
2009	242	138	243.26	139.56	10	29	Pebble
2009	242	138	243.3	139.23	17	29	Pebble
2009	242	138	243.65	139.74	1	29	Pebble
2009	242	138	243.33	139.52	11	29	Amorphous Debris
2009	242	138	243.2	139.6	9	29	Amorphous Debris
2009	242	138	243.96	139.3	16	29	Amorphous Debris
2009	242	138	243.65	139.67	8	29	Amorphous Debris
2009	242	138	243.69	139.56	13	29	Amorphous Debris
2009	242	138	243.94	139.14	18	29	Amorphous Debris
2009	242	138	243.9	139.58	14	29	Flake
2009	242	138	243.21	139.91	2	29	Pebble
2009	242	138	243.66	139.53	12	29	Amorphous Debris
2009	242	138	243.93	139.38	15	29	Amorphous Debris
2009	242	138	243.96	139.17	19	29	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2009	242	138	243.11	139.58	21	30	Debris
2009	242	138	243.46	139.66	4	30	Amorphous Debris
2009	242	138	243.25	139.84	10	30	Amorphous Debris
2009	242	138	243.25	139.66	2	30	Amorphous Debris
2009	242	138	243.22	139.79	11	30	Amorphous Debris
2009	242	138	243.18	139.08	27	30	Amorphous Debris
2009	242	138	243.78	139.47	17	30	Amorphous Debris
2009	242	138	243.23	139.11	26	30	Amorphous Debris
2009	242	138	243.46	139.63	14	30	Amorphous Debris
2009	242	138	243.56	139.63	13	30	Amorphous Debris
2009	242	138	243.11	139.71	16	30	Flake Fragment
2009	242	138	243.75	139.16	23	30	Debris
2009	242	138	243.32	139.59	20	30	Amorphous Debris
2009	242	138	243.28	139.68	15	30	Amorphous Debris
2009	242	138	243.93	139.86	6	30	Pebble
2009	242	138	243.44	139.55	19	30	Amorphous Debris
2009	242	138	243.6	139.105	25	30	Amorphous Debris
2009	242	138	243.76	139.62	12	30	Amorphous Debris
2009	242	138	243.77	139.75	9	30	Amorphous Debris
2009	242	138	243.55	139.53	18	30	Amorphous Debris
2009	242	138	243.99	139.735	5	30	Debris
2009	242	138	243.39	139.73	3	30	Amorphous Debris
2009	242	138	243.92	139.8	7	30	Amorphous Debris
2009	242	138	243.21	139	28	30	Debris
2009	242	138	243.23	139.56	24	30	Amorphous Debris
2009	242	138	243.79	139.72	8	30	Amorphous Debris
2009	242	138	243.41	139.79	1	30	Pebble
2009	242	138	243.9	139.2	31	31	Amorphous Debris
2009	242	138	243.54	139.61	14	31	Amorphous Debris
2009	242	138	243.015	139.47	30	31	Amorphous Debris
2009	242	138	243.58	139.62	15	31	Pebble
2009	242	138	243.22	139.12	37	31	Amorphous Debris
2009	242	138	243.89	139.78	4	31	Amorphous Debris
2009	242	138	243.79	139.5	20	31	Amorphous Debris
2009	242	138	243.04	139.93	8	31	Amorphous Debris
2009	242	138	243.2	139.48	28	31	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2009	242	138	243.1	139.37	29	31	Amorphous Debris
2009	242	138	243.7	139.53	18	31	Amorphous Debris
2009	242	138	243.95	139.85	3	31	Debris
2009	242	138	243.3	139.34	26	31	Amorphous Debris
2009	242	138	243.52	139.33	25	31	Amorphous Debris
2009	242	138	243.34	139.72	9	31	Amorphous Debris
2009	242	138	243.25	139.55	12	31	Amorphous Debris
2009	242	138	243.15	139.82	7	31	Flake Fragment
2009	242	138	243.1	139.62	11	31	Amorphous Debris
2009	242	138	243.3	139.64	10	31	Amorphous Debris
2009	242	138	243.6	139.03	35	31	Flake Fragment
2009	242	138	243.14	139.9	6	31	Amorphous Debris
2009	242	138	243.85	139.22	39	31	Amorphous Debris
2009	242	138	243.32	139.01	36	31	Amorphous Debris
2009	242	138	243.86	139.84	5	31	Debris
2009	242	138	243.52	139.49	17	31	Amorphous Debris
2009	242	138	243.74	139.49	19	31	Debris
2009	242	138	243.6	139.61	23	31	Debris
2009	242	138	243.23	139.56	24	31	Amorphous Debris
2009	242	138	243.92	139.79	38	31	Debris
2009	242	138	243.68	139.36	21	31	Pebble
2009	242	138	243.6	139.38	22	31	Pebble
2009	242	138	243.25	139.43	27	31	Pebble
2009	242	138	243.69	139.05	34	31	Pebble
2009	242	138	243.61	139.01	40	31	Flake Fragment
2009	242	138	243.62	139.56	16	31	Debris
2009	242	138	243.5	139.62	13	31	Amorphous Debris
2009	242	138	243.57	139.03	41	31	Amorphous Debris
2009	242	138	243.92	139.04	33	31	Broken Flake
2009	242	138	243.86	139.18	32	32	Amorphous Debris
2009	242	138	243.63	139.14	24		
2009	242	138	243.21	139.82	3		
2009	242	142	243.08	139.56	22	30	Amorphous Debris
2009	242	142	243.77	142.7	1	24	Pebble
2009	242	142	243.18	142.06	2	24	Amorphous Debris
2009	242	142	243.22	142.33	3	25	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2009	242	142	243.44	142.31	4	25	Amorphous Debris
2009	242	142	243.58	142.08	2	25	Amorphous Debris
2009	242	142	243.85	142	1	25	Broken Flake
2009	242	142	243.57	142.56	5	25	Debris
2009	242	142	243.675	142.725	6	25	Broken Flake
2009	242	142	243.39	142.39	7	25	Amorphous Debris
2009	242	142	243.445	142.14	2	26	Amorphous Debris
2009	242	142	243.22	142.62	4	26	Amorphous Debris
2009	242	142	243.09	142.82	6	26	Debris
2009	242	142	243.28	142.22	3	26	Amorphous Debris
2009	242	142	243.37	142.82	5	26	Amorphous Debris
2009	242	142	243.36	142.15	1	26	Debris
2009	242	142	243.33	142.23	2	27	Pebble
2009	242	142	243.825	142.43	3	27	Debris
2009	242	142	243.61	142.15	1	27	Debris
2009	242	142	243.84	142.87	5	27	Amorphous Debris
2009	242	142	243.8	142.39	4	27	Flake Fragment
2009	242	142	243.51	142.23	6	27	Debris
2009	242	142	243.69	142.1	3	28	Amorphous Debris
2009	242	142	243.83	242.34	1	28	Debris
2009	242	142	243.38	142.34	7	28	Flake Fragment
2009	242	142	243.17	142.32	5	28	Debris
2009	242	142	243.3	142.37	6	28	Debris
2009	242	142	243.56	142.14	4	28	Debris
2009	242	142	243.875	142.1	2	28	Flake Fragment
2009	242	142	243.25	142.125	3	29	Pebble
2009	242	142	243.85	142.65	5	29	Amorphous Debris
2009	242	142	243.05	142.89	4	29	Amorphous Debris
2009	242	142	243.82	242.12	1	29	Debris
2009	242	142	243.04	142.27	2	29	Amorphous Debris
2009	242	142	243.45	142.92	11	30	Amorphous Debris
2009	242	142	243.42	142.07	10	30	Amorphous Debris
2009	242	142	243.43	142.68	12	30	Amorphous Debris
2009	242	142	243.76	142.76	14	30	Amorphous Debris
2009	242	142	243.27	142.655	7	30	Amorphous Debris
2009	242	142	243.19	142.69	8	30	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2009	242	142	243.87	142.95	13	30	Debris
2009	242	142	243.71	142.63	15	30	Debris
2009	242	142	243.09	142.16	18	30	Debris
2009	242	142	243.05	142.76	6	30	Debris
2009	242	142	243.64	142.47	17	30	Amorphous Debris
2009	242	142	243.34	142.8	9	30	Amorphous Debris
2009	242	142	243.62	142.52	16	30	Amorphous Debris
2009	242	142	243.01	142.145	1	30	Amorphous Debris
2009	242	142	243.32	142.29	3	30	Amorphous Debris
2009	242	142	243.53	142.37	5	30	Pebble
2009	242	142	243.49	142.37	4	30	Debris
2009	242	142	243.4	142.05	2	30	Pebble
2009	242	142	243.11	142.82	19	30	Amorphous Debris
2009	242	142	243.72	142.69	14	31	Amorphous Debris
2009	242	142	243.34	142.81	16	31	Pebble
2009	242	142	243.47	142.915	11	31	Debris
2009	242	142	243.46	142.98	12	31	Debris
2009	242	142	243.79	142.08	1	31	Debris
2009	242	142	243.5	142.87	10	31	Pebble
2009	242	142	243.54	142.75	15	31	Amorphous Debris
2009	242	142	243.71	142.44	13	31	Amorphous Debris
2009	242	142	243.83	142.67	16	31	Amorphous Debris
2009	242	142	243.13	142.66	7	31	Amorphous Debris
2009	242	142	243.27	142.85	8	31	Amorphous Debris
2009	242	142	243.05	142.09	2	31	Amorphous Debris
2009	242	142	243.12	142.32	5	31	Amorphous Debris
2009	242	142	243.295	142.12	4	31	Amorphous Debris
2009	242	142	243.08	142.395	6	31	Amorphous Debris
2009	242	142	243.22	142.1	3	31	Amorphous Debris
2009	242	142	243.38	142.89	9	31	Pebble
2009	242	142	243.06	142.75	25	32	Debris
2009	242	142	243.33	142.18	4	32	Pebble
2009	242	142	243.15	142.15	3	32	Amorphous Debris
2009	242	142	243.32	142.54	13	32	Amorphous Debris
2009	242	142	243.06	142.96	18	32	Debris
2009	242	142	243.49	142.56	15	32	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2009	242	142	243.03	142.48	16	32	Pebble
2009	242	142	243.71	142.69	21	32	Pebble
2009	242	142	243.09	142.035	1	32	Amorphous Debris
2009	242	142	243.21	142.5	12	32	Amorphous Debris
2009	242	142	243.64	142.945	22	32	Flake Fragment
2009	242	142	243.19	142.71	24	32	Debris
2009	242	142	243.51	142.1	2	32	Debris
2009	242	142	243.63	142.89	23	32	Pebble
2009	242	142	243.29	142.34	8	32	Amorphous Debris
2009	242	142	243.32	142.27	7	32	Pebble
2009	242	142	243.09	142.38	9	32	Amorphous Debris
2009	242	142	243.255	142.48	11	32	Amorphous Debris
2009	242	142	243.39	142.19	10	32	Pebble
2009	242	142	243.21	142.79	17	32	Amorphous Debris
2009	242	142	243.27	142.28	6	32	Amorphous Debris
2009	242	142	243.33	142.225	5	32	Amorphous Debris
2009	242	142	243.36	142.575	14	32	Amorphous Debris
2009	242	142	243.16	142.92	19	32	Amorphous Debris
2009	242	142	243.49	142.79	20	32	Pebble
2009	242	142	243.42	142.95	28	33	Amorphous Debris
2009	242	142	243.16	142.93	40	33	Amorphous Debris
2009	242	142	243.06	142.36	8	33	Pebble
2009	242	142	243.03	142.455	10	33	Debris
2009	242	142	243.12	142.88	26	33	Debris
2009	242	142	243.13	142.96	27	33	Amorphous Debris
2009	242	142	243.35	142.75	34	33	Amorphous Debris
2009	242	142	243.05	142.43	7	33	Amorphous Debris
2009	242	142	243.1	142.33	6	33	Amorphous Debris
2009	242	142	243.38	142.65	31	33	Amorphous Debris
2009	242	142	243.01	142.92	25	33	Amorphous Debris
2009	242	142	243.13	142.75	35	33	Amorphous Debris
2009	242	142	243.18	142.73	29	33	Amorphous Debris
2009	242	142	243.24	142.27	12	33	Pebble
2009	242	142	243.17	142.185	1	33	Amorphous Debris
2009	242	142	243.44	142.44	18	33	Pebble
2009	242	142	243.07	142.9	38	33	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2009	242	142	243.285	142.38	14	33	Amorphous Debris
2009	242	142	243.6	142.48	19	33	Debris
2009	242	142	243.17	142.64	22	33	Flake Fragment
2009	242	142	243.02	142.6	17	33	Pebble
2009	242	142	243.14	142.64	21	33	Pebble
2009	242	142	243.06	142.8	24	33	Pebble
2009	242	142	243.28	142.71	33	33	Amorphous Debris
2009	242	142	243.65	142.52	20	33	Amorphous Debris
2009	242	142	243.22	142.33	15	33	Amorphous Debris
2009	242	142	243.36	142.175	2	33	Amorphous Debris
2009	242	142	243.52	142.17	3	33	Flake Fragment
2009	242	142	243.035	142.32	5	33	Amorphous Debris
2009	242	142	243.22	142.71	30	33	Amorphous Debris
2009	242	142	243.27	142.68	32	33	Amorphous Debris
2009	242	142	243.02	142.74	36	33	Amorphous Debris
2009	242	142	243.21	142.39	13	33	Amorphous Debris
2009	242	142	243.22	142.28	11	33	Debris
2009	242	142	243.1	142,35	16	33	Amorphous Debris
2009	242	142	243.1	142.74	23	33	Pebble
2009	242	142	243.03	142.27	4	33	Amorphous Debris
2009	242	142	243.82	142.625	12	34	Pebble
2009	242	142	243.59	142.235	4	34	Amorphous Debris
2009	242	142	243.54	142.52	9	34	Pebble
2009	242	142	243.79	142.92	13	34	Pebble
2009	242	142	243.3	142.08	2	34	Pebble
2009	242	142	243.41	142.145	3	34	Amorphous Debris
2009	242	142	243.3	142.5	7	34	Amorphous Debris
2009	242	142	243.54	142.44	8	34	Pebble
2009	242	142	243.52	142.59	10	34	Chert Amorphous Debris
2009	242	142	243.462	142.71	11	34	Amorphous Debris
2009	242	142	243.21	142.1	1	34	Pebble
2009	242	142	243.05	142.57	5	34	Amorphous Debris
2009	242	142	243.01	142.49	6	34	Amorphous Debris
2009	242	142	243.64	142.31	12	35	Pebble
2009	242	142	243.29	142.165	2	35	Amorphous Debris
2009	242	142	243.155	142.22	6	35	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2009	242	142	243.67	142.32	13	35	Debris
2009	242	142	243.62	142.46	16	35	Amorphous Debris
2009	242	142	243.69	142.455	17	35	Amorphous Debris
2009	242	142	243.275	142.17	1	35	Debris
2009	242	142	243.55	142.36	10	35	Amorphous Debris
2009	242	142	243.73	142.3	14	35	Amorphous Debris
2009	242	142	243.825	142.34	15	35	Pebble
2009	242	142	243.34	142.12	3	35	Amorphous Debris
2009	242	142	243.75	142.06	7	35	Debris
2009	242	142	243.59	142.275	9	35	Amorphous Debris
2009	242	142	243.56	142.4	11	35	Amorphous Debris
2009	242	142	243.41	142.16	5	35	Pebble
2009	242	142	243.37	142.1	4	35	Pebble
2009	242	142	243.43	142.095	8	35	Debris
2009	242	142	243.02	142.92	37	37	Pebble
2009	242	142	243.11	142.88	39	39	Amorphous Debris
2009	242	142	242.54	142.42	10	23	Amorphous Debris
2009	242	142	242.92	142.52	7	23	Amorphous Debris
2009	242	142	242.12	142.24	5	23	Amorphous Debris
2009	242	142	242.64	142.41	6	23	Amorphous Debris
2009	242	142	242.105	142.17	4	23	Amorphous Debris
2009	242	142	242.33	142.86	12	23	Amorphous Debris
2009	242	142	242.07	142.74	14	23	Amorphous Debris
2009	242	142	242.1	142.075	3	23	Debris
2009	242	142	242.55	142.49	8	23	Debris
2009	242	142	242.39	142.52	9	23	Flake
2009	242	142	242.49	142.65	11	23	Amorphous Debris
2009	242	142	242.38	142.35	13	23	Amorphous Debris
2009	242	142	242.35	142.12	2	23	Amorphous Debris
2009	242	142	242.88	142.13	1	23	Amorphous Debris
2009	242	142	242.85	142.11	2	24	Amorphous Debris
2009	242	142	242.39	142.11	4	24	Debris
2009	242	142	242.32	142.04	5	24	Debris
2009	242	142	242.23	142.05	6	24	Broken Flake
2009	242	142	242.62	142.95	9	24	Pebble
2009	242	142	242.47	142.43	10	24	Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2009	242	142	242.34	142.62	15	24	Amorphous Debris
2009	242	142	242.74	142.86	18	24	Amorphous Debris
2009	242	142	242.86	142.15	3	24	Amorphous Debris
2009	242	142	242.56	142.29	8	24	Amorphous Debris
2009	242	142	242.26	142.5	11	24	Amorphous Debris
2009	242	142	242.11	142.54	16	24	Pebble
2009	242	142	242.87	142	1	24	Debris
2009	242	142	242.77	142.36	7	24	Debris
2009	242	142	242.9	142.57	12	24	Pebble
2009	242	142	242.58	142.31	14	24	Debris
2009	242	142	242.85	142.72	17	24	Amorphous Debris
2009	242	142	242.29	142.99	19	24	Amorphous Debris
2009	242	142	242.79	142.01	3	25	Broken Flake
2009	242	142	242.77	142.02	5	25	Pebble
2009	242	142	242.7	142.01	6	25	Amorphous Debris
2009	242	142	242.2	142.41	19	25	Amorphous Debris
2009	242	142	242.86	142.58	24	25	Amorphous Debris
2009	242	142	242.85	142.23	8	25	Amorphous Debris
2009	242	142	242.71	142.61	26	25	Amorphous Debris
2009	242	142	242.69	142.8	32	25	Amorphous Debris
2009	242	142	242.7	142.01	6	25	Amorphous Debris
2009	242	142	242.63	142.65		25	Amorphous Debris
2009	242	142	242.28	142.38	17	25	Debris
2009	242	142	242.58	142.19	10	25	Amorphous Debris
2009	242	142	242.23	142.26	13	25	Amorphous Debris
2009	242	142	242.85	142.75	30	25	Debris
2009	242	142	242.86	142.78	31	25	Broken Flake
2009	242	142	242.59	142.34	14	25	Debris
2009	242	142	242.4	142.75	34	25	Debris
2009	242	142	242.04	142.97	36	25	Debris
2009	242	142	242.88	142.55	23	25	Amorphous Debris
2009	242	142	242.65	142.59	27	25	Amorphous Debris
2009	242	142	242.63	142.59	25	25	Flake Fragment
2009	242	142	242.23	142.51	22	25	Pebble
2009	242	142	242.41	142.31	16	25	Amorphous Debris
2009	242	142	242.45	142.53	21	25	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2009	242	142	242.66	142.87		25	Amorphous Debris
2009	242	142	242.79	142.06	4	25	Amorphous Debris
2009	242	142	242.64	142.14	9	25	Amorphous Debris
2009	242	142	242.18	142.2	11	25	Debris
2009	242	142	242.54	142.07	7	25	Amorphous Debris
2009	242	142	242.09	142.7	33	25	Amorphous Debris
2009	242	142	242.78	142.01	2	25	Debris
2009	242	142	242.48	142.37	15	25	Flake Fragment
2009	242	142	242.87	142.05	1	25	Amorphous Debris
2009	242	142	242.54	142.51	20	25	Amorphous Debris
2009	242	142	242.35	142.14	12	25	Amorphous Debris
2009	242	142	242.77	142.43	18	25	Amorphous Debris
2009	242	142	242.59	142.6	29	25	Amorphous Debris
2009	242	142	242.49	142.23	3	26	Flake Fragment
2009	242	142	242.5	142.52	5	26	Pebble
2009	242	142	242.57	142.39	4	26	Flake Fragment
2009	242	142	242.69	142.51	7	26	Amorphous Debris
2009	242	142	242.62	142.72	11	26	Debris
2009	242	142	242.49	142.11	2	26	Debris
2009	242	142	242.3	142.67	6	26	Debris
2009	242	142	242.56	142.72	12	26	Debris
2009	242	142	242.7	142.8	14	26	Amorphous Debris
2009	242	142	242.83	142.91	17	26	Flake
2009	242	142	242.82	142.2	1	26	Debris
2009	242	142	242.84	142.71	9	26	Amorphous Debris
2009	242	142	242.67	142.76	10	26	Debris
2009	242	142	242.68	142.81	13	26	Amorphous Debris
2009	242	142	242.79	142.83	15	26	Pebble
2009	242	142	242.85	142.81	16	26	Flake Fragment
2009	242	142	242.72	142.62	8	26	Amorphous Debris
2009	242	142	242.53	142.65	2	27	Amorphous Debris
2009	242	142	242.77	142.07	4	27	Flake
2009	242	142	242.68	142.8	1	27	Broken Flake
2009	242	142	242.56	142.81	3	27	Amorphous Debris
2009	242	142	242.85	143.36	2	29	Debris
2009	242	142	242.86	142.8	4	29	Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2009	242	142	243.01	142.45	9		
2009			242.65	142.67			Flake Fragment
2009	246	138	246.54	138.86	1	10	Flake
2009	246	138	246.91	138.99	1	11	Pebble
2009	246	138	246.58	138.68	1	11	Debris
2009	246	138	246.4	138.7	2	11	Flake Fragment
2009	246	138	246.39	138.87	1	12	Amorphous Debris
2009	246	138	246.7	138.92	1	12	Flake Fragment
2009	246	138	246.37	138.82	2	12	Flake Fragment
2009	246	138	246.4	138.55	2	12	Flake
2009	246	138	246.42	138.5	3	12	Pebble
2009	246	138	246.39	138.34	3	12	Flake
2009	246	138	246.95	138.9	4	12	Pebble
2009	246	138	246.39	138.1	4	12	Amorphous Debris
2009	246	138	246.71	138.16	5	12	Pebble
2009	246	138	246.94	138.1	6	12	Debris
2009	246	138	246.82	138.36	7	12	Debris
2009	246	138	246.96	138.77	1	13	Amorphous Debris
2009	246	138	246.97	139.05	1	13	Flake Fragment
2009	246	138	246.34	138.55	1	13	Flake
2009	246	138	246.47	139.53	1	**14**	Pebble
2009	246	138	246.54	139.53	2	14	Pebble
2009	246	138	246.26	139.13	1	15	Debris
2009	246	138	246.7	138.28	1	15	Debris
2009	246	138	246.6	139.38	2	15	Pebble
2009	246	138	246.9	138.76	2	15	Amorphous Debris
2009	246	138	246.67	139.62	1	16	Pebble
2009	246	138	246.97	139.36	2	16	Pebble
2009	246	138	246.92	139.55	1	17	Pebble
2009	246	138	246.45	138.83	1	17	Flake
2009	246	138	246.83	139.36	2	17	Debris
2009	246	138	246.37	138.47	2	17	Flake
2009	246	138	246.83	139.36	1	18	Pebble
2009	246	138	246.79	139.1	2	18	Pebble
2009	246	138	246.13	139.88	1	19	Pebble
2009	246	138	247	139.86	1	20	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2009	246	138	246.16	138.52	1	20	Flake
2009	246	138	246.89	138.14	1	21	Flake Fragment
2009	246	140	247.55	141.66	1	23	Amorphous Debris
2009	246	140	247.65	141.5	2	23	Debris
2009	246	140	247.67	141.76	3	23	Amorphous Debris
2009	246	140	247.36	141.1	4	23	Flake Fragment
2009	246	140	247.9	141.65	5	23	**Amorphous Debris**
2009	246	140	247.95	141.63	6	23	Debris
2009	246	140	247.96	141.76	7	23	Amorphous Debris
2009	246	140	247.98	141.74	8	23	Pebble
2009	246	140	247.55	140.4	1	23	Amorphous Debris
2009	246	140	247.12	140.58	2	23	Debris
2009	246	140	247.12	140.76	3	23	Pebble
2009	246	140	247.52	140.99	4	23	Debris
2009	246	140	247.9	140.68	5	23	Pebble
2009	246	140	247.74	141.98	1	24	Amorphous Debris
2009	246	140	247.88	141.8	2	24	Amorphous Debris
2009	246	140	247.61	141.79	3	24	Amorphous Debris
2009	246	140	247.37	141.81	4	24	Amorphous Debris
2009	246	140	247.22	141.69	5	24	Debris
2009	246	140	247.17	141.08	6	24	Amorphous Debris
2009	246	140	246.68	141.24	1	24	Amorphous Debris
2009	246	140	246.8	141.05	2	24	Pebble
2009	246	140	246.63	141.16	3	24	Amorphous Debris
2009	246	140	246.42	141.31	4	24	Broken Flake
2009	246	140	246.24	141.64	5	24	Amorphous Debris
2009	246	140	246.33	141.61	6	24	Amorphous Debris
2009	246	140	246.36	141.61	7	24	Amorphous Debris
2009	246	140	247.27	141.77	1	25	Debris
2009	246	140	246.7	140.77	1	25	Amorphous Debris
2009	246	140	245.43	140.97	2	25	Debris
2009	246	140	246.3	142.6	3	25	Amorphous Debris
2009	246	140	246.42	140.64	1	26	Amorphous Debris
2009	246	140	246.56	141.34	1	F107	Pebble
2009	246	140	246.79	141.46	2	F107	Amorphous Debris
2009	246	140	246.65	141.645	3	F107	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2009	246	140	246.58	141.68	4	F107	Pebble
2009	246	140	246.38	141.52	5	F107	Pebble
2009	246	140	246.27	141.64	6	F107	Pebble
2009	246	140	246.3	141.56	7	F107	Pebble
2009	246	140	246.53	141.745	8	F107	Pebble
2009	246	140	246.92	141.505	9	F107	Pebble
2009	246	140	246.455	141.4	10	F107	Pebble
2009	246	140	246.625	141.48	11	F107	Pebble
2009	246	140	246.33	141.31	1	F94	Amorphous Debris
2009	246	140	246.31	141.41	2	F94	Flake
2009	246	140	246.27	141.24	3	F94	Amorphous Debris
2009	246	140	246.92	141.06	4	F94	Amorphous Debris
2009	246	140	246.66	141.43	5	F94	Amorphous Debris
2009	246	140	246.2	141.3	6	F94	Pebble
2009	246	140	246.2	141.45	7	F94	Amorphous Debris
2009	246	140	244.406	141.31	8	F94	Debris
2009	246	140	246.56	141.1	9	F94	Debris
2009	246	140	246.45	141.45	10	F94	Amorphous Debris
2009	246	140	246.2	141.57	11	F94	Amorphous Debris
2009	246	140	246.48	141.18	12	F94	Pebble
2009	246	140	246.405	141.14	13	F94	Amorphous Debris
2009	246	140	246.48	141.3	14	F94	Amorphous Debris
2009	246	140	246.295	141.29	15	F94	Amorphous Debris
2009	246	140	246.445	141.245	16	F94	Flake Fragment
2009	246	140	246.4	141.3	17	F94	Amorphous Debris
2009	246	140	246.33	141.33	18	F94	Pebble
2009	246	140	246.58	141.235	19	F94	Broken Flake
2009	246	140	246.65	141.305	20	F94	Pebble
2009	246	140	246.68	141.27	21	F94	Pebble
2009	246	140	246.Xx	140.Xx			Debris
2009	246	142	246.2	142.97	1	27	Flake
2009	246	142	246.55	142.91	2	27	Flake
2009	248	140	248.16	141.35	1	3	Pebble
2009	248	140	248.56	140.8	1	20	Debris
2009	248	140	248.73	140.88	1	21	Amorphous Debris
2009	248	140	248.3	140.82	2	21	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2009	248	140	248.55	140.26	3	21	Pebble
2009	248	140	248.35	140.24	4	21	Flake
2009	248	140	248.27	140.78	5	21	Pebble
2009	248	140	248.34	140.64	6	21	Pebble
2009	248	140	248.93	140.8	7	21	Amorphous Debris
2009	248	140	248.17	140.34	8	21	Pebble
2009	248	140	248.18	141.13	1	22	Amorphous Debris
2009	248	140	248.45	141.01	2	22	Amorphous Debris
2009	248	140	248.27	141.7	2	22	Debris
2009	248	140	248.62	141.02	3	22	Debris
2009	248	140	248.87	141.01	4	22	Debris
2009	248	140	248.38	141.75	5	22	Pebble
2009	248	140	248.71	141.59	5	22	Pebble
2009	248	140	248.44	141.59	6	22	Flake
2009	248	140	248.88	141.6	6	22	Amorphous Debris
2009	248	140	248.44	141.77	7	22	Pebble
2009	248	140	248.12	141.68	8	22	Pebble
2009	248	140	248.1	141.74	9	22	Amorphous Debris
2009	248	140	248.17	141.99	10	22	Debris
2009	248	140	248.57	141.6	12	22	Pebble
2009	248	140	248.07	140.78	1	22	Flake
2009	248	140	248.55	140.09	1	22	Amorphous Debris
2009	248	140	248.82	140.06	2	22	Pebble
2009	248	140	248.89	140.22	3	22	Debris
2009	248	140	248.01	141.86	1	23	Amorphous Debris
2009	248	140	248.05	140.47	1	23	Amorphous Debris
2009	248	140	248.49	140.84	2	23	Pebble
2009	248	140	248.81	140.84	3	23	Debris
2009	248	140	248.6	141.38	1	24	Pebble
2009	248	140	248.98	141.41	2	24	Debris
2009	248	140	248.57	140.92	1	24	Amorphous Debris
2009	248	140	248.3	140.24	2	24	Debris
2009	248	140	248.77	140.89	3	24	Pebble
2009	248	140	248.58	140.63	4	24	Pebble
2009	248	140	248.91	140.28	5	24	Pebble
2009	248	140	248.12	140.57	6	24	Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2009	248	140	248.39	140.41	7	24	Debris
2009	248	140	248.06	141.67	3	F105	Debris
2009	248	140	248.58	141.6	11	F105	Debris
2009	246	140	247.32	141.875	1	1	Debris
2009	246	140	247.1	141.42	2	3	Amorphous Debris
2009	246	140	247.54	141.71	1	3	Debris
2009	246	140	247.02	141.48	3	3	Pebble
2009	246	140	246.18	141.18	1	3	Flake Fragment
2009	246	140	246.18	141.18	1	3	Debris
2009	246	140	246.35	141.19	2	3	Debris
2009	246	140	247.06	141.12	1	4	Pebble
2009	246	140	247	141.47	1	4	Pebble
2009	246	140	246.465	141.43	6	4	Amorphous Debris
2009	246	140	246.15	141.43	3	4	Flake
2009	246	140	246.978	141.27	9	4	Amorphous Debris
2009	246	140	246.505	141.855	1	4	Amorphous Debris
2009	246	140	246.235	141.05	5	4	Amorphous Debris
2009	246	140	246.13	141.42	4	4	Amorphous Debris
2009	246	140	246.05	141.55	2	4	Amorphous Debris
2009	246	140	246.935	141.35	8	4	Flake
2009	246	140	246.4	141.31	7	4	Pebble
2009	246	140	246.19	141.38	1	5	Amorphous Debris
2009	246	140	246.07	141.26	2	5	Debris
2009	246	140	246.92	141.8	9	5	Amorphous Debris
2009	246	140	246.532	141.12	4	5	Pebble
2009	246	140	246.37	141.39	5	5	Amorphous Debris
2009	246	140	246.06	141.8	7	5	Amorphous Debris
2009	246	140	246.995	141.86	10	5	Amorphous Debris
2009	246	140	246.4	141.63	8	5	Amorphous Debris
2009	246	140	246.15	141.665	6	5	Amorphous Debris
2009	246	140	246.515	141.03	1	5	Pebble
2009	246	140	246.673	141.12	3	5	Pebble
2009	246	140	246.655	141.0325	2	5	Debris
2009	246	140	246.28	141.86	3	6	Flake Fragment
2009	246	140	246.11	141.83	2	6	Amorphous Debris
2009	246	140	246.85	141.27	5	6	Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2009	246	140	246.82	141.15	6	6	Flake Fragment
2009	246	140	246.77	141.43	4	6	Flake Fragment
2009	246	140	247.92	141.26	2	7	Amorphous Debris
2009	246	140	247.88	141.73	3	7	Amorphous Debris
2009	246	140	247.73	141.73	1	7	Amorphous Debris
2009	246	140	247.07	141.205	4	7	Pebble
2009	246	140	246.835	141.44	9	7	Amorphous Debris
2009	246	140	246.05	141.16	1	7	Debris
2009	246	140	246.27	141.8	11	7	Amorphous Debris
2009	246	140	246.37	141.19	4	7	Amorphous Debris
2009	246	140	246.63	141.13	6	7	Amorphous Debris
2009	246	140	246.8	141.43	10	7	Debris
2009	246	140	246.67	141.4	8	7	Debris
2009	246	140	246.5	141.33	5	7	Amorphous Debris
2009	246	140	246.7	141.235	7	7	Amorphous Debris
2009	246	140	246.14	141.22	2	7	Amorphous Debris
2009	246	140	246.2	141.74	12	7	Amorphous Debris
2009	246	140	246.34	141.06	3	7	Amorphous Debris
2009	246	140	246.87	141.05	6	8	Debris
2009	246	140	246.74	141.58	10	8	Debris
2009	246	140	246.91	141.35	9	8	Amorphous Debris
2009	246	140	246.26	141.02	1	8	Amorphous Debris
2009	246	140	246.88	141.06	5	8	Debris
2009	246	140	246.59	141.91	11	8	Amorphous Debris
2009	246	140	246.13	141.87	7	8	Amorphous Debris
2009	246	140	246.13	141.28	3	8	Pebble
2009	246	140	246.21	141.17	2	8	Amorphous Debris
2009	246	140	246.83	141.37	8	8	Flake
2009	246	140	246.59	141.27	9	9	Amorphous Debris
2009	246	140	246.05	141.91	1	9	Amorphous Debris
2009	246	140	246.88	141.38	10	9	Debris
2009	246	140	246.15	141.71	4	9	Amorphous Debris
2009	246	140	246.15	141.39	4	9	Amorphous Debris
2009	246	140	246.4	141.91	2	9	Amorphous Debris
2009	246	140	246.31	141.6	5	9	Amorphous Debris
2009	246	140	246.35	141.4	7	9	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2009	246	140	246.72	141.75	6	9	Amorphous Debris
2009	246	140	246.15	141.76	3	9	Amorphous Debris
2009	246	140	246.63	141.1	11	9	Amorphous Debris
2009	246	140	246.07	141.45	8	9	Pebble
2009	246	140	246.34	141.01	1	10	Debris
2009	246	140	246.56	141.14	2	10	Amorphous Debris
2009	246	140	246.48	141.2	3	10	Flake
2009	246	140	246.64	141.385	5	10	Debris
2009	246	140	246.52	141.48	6	10	Amorphous Debris
2009	246	140	246.46	141.36	4	10	Amorphous Debris
2009	246	140	246.11	141.69	8	10	Debris
2009	246	140	246.68	141.58	7	11	Pebble
2009	246	142	246.74	142	1	1	Flake
2009	246	142	246.37	142.1	1	1	Debris
2009	246	142	246.717	142.76	6	2	Flake Fragment
2009	246	142	246.21	142.59	3	2	Amorphous Debris
2009	246	142	246.27	142.9	4	2	Debris
2009	246	142	246.045	142.19	1	2	Pebble
2009	246	142	246.58	142.45	5	2	Pebble
2009	246	142	246.19	142.4	2	2	Amorphous Debris
2009	246	142	246.83	142.2	7	2	Broken Flake
2009	246	142	246.59	142.215	5	3	Pebble
2009	246	142	246.288	142.93	9	3	Amorphous Debris
2009	246	142	246.305	142.9	8	3	Broken Flake
2009	246	142	246.26	142.92	10	3	Debris
2009	246	142	246.457	142.18	1	3	Debris
2009	246	142	246.79	142.46	3	3	Amorphous Debris
2009	246	142	246.1	142.63	7	3	Amorphous Debris
2009	246	142	246.142	142.6	6	3	Amorphous Debris
2009	246	142	246.8	142.392	4	3	Amorphous Debris
2009	246	142	246.427	142.573	3	3	Amorphous Debris
2009	248	140	248.32	140.76	1	2	Debris
2009	248	140	248.39	140.1	2	2	Amorphous Debris
2009	248	140	248.2	140.26	1	3	Amorphous Debris
2009	248	140	248.65	140.89	4	3	Pebble
2009	248	140	248.94	140.13	3	3	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2009	248	140	248.28	140.14	2	3	Amorphous Debris
2009	248	140	248.48	140.82	2	4	Debris
2009	248	140	248.46	140.82	1	4	Amorphous Debris
2009	248	140	246.45	141.08	1	5	Flake Fragment
2009	248	140	248.24	140.4	1	5	Flake
2009	248	140	248.1	140.12	2	5	Pebble
2009	248	140	248.03	141.08	1	6	Amorphous Debris
2009	248	140	248.68	141.88	2	6	Pebble
2009	248	140	248.565	140.36	1	6	Debris
2009	248	140	248.74	140.235	2	6	Pebble
2009	248	140	248.835	141.8	2	7	Amorphous Debris
2009	248	140	248.83	141.18	1	7	Amorphous Debris
2009	248	140	248.67	140.335	1	7	Debris
2009	248	140	248.92	141.11	2	8	Amorphous Debris
2009	248	140	248.233	141.255	1	8	Amorphous Debris
2009	248	140	248.945	141.13	3	8	Amorphous Debris
2009	248	140	248.67	141.555	4	8	Amorphous Debris
2009	248	140	248.615	141.615	5	8	Amorphous Debris
2009	248	140	248.42	140.75	1	8	Flake Fragment
2009	248	140	248.46	141.44	2	9	Pebble
2009	248	140	248.215	141.11	1	9	Debris
2009	248	140	248.67	141.67	4	9	Debris
2009	248	140	248.75	141.57	3	9	Pebble
2009	248	140	248.18	140.05	1	9	Debris
2009	248	140	248.41	140.08	7	9	Debris
2009	248	140	248.49	140.3	4	9	Pebble
2009	248	140	248.26	140.36	6	9	Debris
2009	248	140	248.175	140.235	3	9	Debris
2009	248	140	248.41	140.19	2	9	Debris
2009	248	140	248.665	141.13	4	10	Flake Fragment
2009	248	140	248.55	141.645	5	10	Flake
2009	248	140	248.86	141.22	3	10	Amorphous Debris
2009	248	140	248.95	141.21	2	10	Debris
2009	248	140	248.435	141.29	1	10	Pebble
2009	248	140	248.3	140.11	2	10	Flake
2009	248	140	248.15	140.245	4	10	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2009	248	140	248.54	140.19	3	10	Debris
2009	248	140	248.23	140.3	5	10	Amorphous Debris
2009	248	140	248.26	140.05	6	10	Debris
2009	248	140	24826	140.33	1	10	Debris
2009	248	140	248.5	141.115	1	11	Amorphous Debris
2009	248	140	248.89	141.3	3	11	Pebble
2009	248	140	248.69	141.23	2	11	Amorphous Debris
2009	248	140	248.46	141.545	4	11	Pebble
2009	248	140	248.19	141.735	3	12	Flake
2009	248	140	248.27	141.1	2	12	Amorphous Debris
2009	248	140	248.26	141.16	1	12	Debris
2009	244	138	244.9	138.7			Debris
2010	246	140	246.52	140.55	6	1	Flake Fragment
2010	246	140	246.36	140.635	4	1	Amorphous Debris
2010	246	140	247.01	140.955	1	1	Amorphous Debris
2010	246	140	246.5	140.44	3	1	Pebble
2010	246	140	247.945	140.81	2	1	Pebble
2010	246	140	246.94	140.63	2	1	Pebble
2010	246	140	247.745	140.55	3	1	Pebble
2010	246	140	246.91	140.98	5	1	Pebble
2010	246	140	246.66	140.925	1	1	Pebble
2010	246	140	247.45	140.78	1	2	Amorphous Debris
2010	246	140	246.66	140.8	1	2	Pebble
2010	246	140	247.18	140.87	2	2	Flake Fragment
2010	246	140	246.6	140.61	3	3	Debris
2010	246	140	246.21	140.915	1	3	Amorphous Debris
2010	246	140	247.69	140.77	1	3	Pebble
2010	246	140	246.46	140.92	2	3	Pebble
2010	246	140	246.42	140.62	9	4	Debris
2010	246	140	246.76	140.18	14	4	Flake Fragment
2010	246	140	246.17	140.95	3	4	Debris
2010	246	140	247.635	140.97	2	4	Amorphous Debris
2010	246	140	247.07	140.95	5	4	Amorphous Debris
2010	246	140	247.659	140.54	7	4	Amorphous Debris
2010	246	140	247.905	140.965	1	4	Amorphous Debris
2010	246	140	247.13	140.72	6	4	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2010	246	140	247.05	140.97	3	4	Pebble
2010	246	140	247.08	140.88	4	4	Pebble
2010	246	140	247.11	140.12	9	4	Pebble
2010	246	140	247.87	140.57	8	4	Pebble
2010	246	140	246.5	140.94	5	4	Pebble
2010	246	140	246.16	140.73	7	4	Pebble
2010	246	140	246.93	140.56	12	4	Pebble
2010	246	140	246.63	140.28	13	4	Pebble
2010	246	140	246.15	140.99	1	4	Amorphous Debris
2010	246	140	246.22	140.99	2	4	Amorphous Debris
2010	246	140	246.47	140.99	4	4	Flake Fragment
2010	246	140	246.83	140.88	6	4	Flake Fragment
2010	246	140	246.29	140.72	8	4	Amorphous Debris
2010	246	140	246.13	140.51	10	4	Amorphous Debris
2010	246	140	246.56	140.5	11	4	Amorphous Debris
2010	246	140	246.6	140.13	15	4	Amorphous Debris
2010	246	140	247.41	140.75	2	5	Flake Fragment
2010	246	140	247.56	140.785	1	5	Flake Fragment
2010	246	140	247.18	140.75	13	5	Debris
2010	246	140	247.42	140.93	7	5	Debris
2010	246	140	247.485	140.61	14	5	Debris
2010	246	140	247.08	140.73	12	5	Amorphous Debris
2010	246	140	247.12	140.48	15	5	Debris
2010	246	140	247.395	140.59	17	5	Debris
2010	246	140	247.13	140.64	16	5	Amorphous Debris
2010	246	140	247.55	140.95	6	5	Flake
2010	246	140	247.65	140.78	10	5	Flake Fragment
2010	246	140	247.335	140.86	8	5	Amorphous Debris
2010	246	140	247.19	140.1	18	5	Debris
2010	246	140	247.98	140.5	11	5	Amorphous Debris
2010	246	140	247.52	140.8	19	5	Flake Fragment
2010	246	140	247.81	140.97	5	5	Amorphous Debris
2010	246	140	247.385	140.85	9	5	Amorphous Debris
2010	246	140	247.315	140.81	3	5	Pebble
2010	246	140	247.045	140.94	4	5	Pebble
2010	246	140	247.04	141.42	4	8	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2010	246	140	247.56	141.935	3	8	Pebble
2010	246	140	247.755	141.6	2	8	Pebble
2010	246	140	247.542	141.065	1	8	Amorphous Debris
2010	246	140	247.48	141.15	6	9	Debris
2010	246	140	247.52	141.32	5	9	Flake Fragment
2010	246	140	247.71	141.14	4	9	Flake Fragment
2010	246	140	247.71	141.3	3	9	Flake Fragment
2010	246	140	247.98	141.88	2	9	Amorphous Debris
2010	246	140	247.26	141.15	8	9	Flake Fragment
2010	246	140	247.08	141.37	9	9	Pebble
2010	246	140	247.3	141.46	7	9	Pebble
2010	246	140	247.64	141.47	1	9	Pebble
2010	246	140	247.66	141.68	17	10	Flake
2010	246	140	247.8	141.74	18	10	Debris
2010	246	140	247.8	141.31	5	10	Amorphous Debris
2010	246	140	247.54	141.3	8	10	Pebble
2010	246	140	247.36	141.62	15	10	Debris
2010	246	140	247.65	141.09	4	10	Amorphous Debris
2010	246	140	247.57	141.33	7	10	Pebble
2010	246	140	247.12	141.31	12	10	Amorphous Debris
2010	246	140	247.99	141.88	25	10	Pebble
2010	246	140	247.99	141.09	1	10	Amorphous Debris
2010	246	140	247.89	141.08	2	10	Flake Fragment
2010	246	140	247.84	141.05	3	10	Pebble
2010	246	140	247.65	141.35	6	10	Pebble
2010	246	140	247.32	141.22	10	10	Amorphous Debris
2010	246	140	247.25	141.47	14	10	Amorphous Debris
2010	246	140	247.42	141.59	16	10	Amorphous Debris
2010	246	140	247.88	141.68	19	10	Pebble
2010	246	140	247.79	141.91	20	10	Flake
2010	246	140	247.43	141.76	21	10	Debris
2010	246	140	247.25	141.76	22	10	Pebble
2010	246	140	248	141.6	26	10	Amorphous Debris
2010	246	140	247.43	141.3	9	10	Amorphous Debris
2010	246	140	247.08	141.1	11	10	Amorphous Debris
2010	246	140	247.14	141.36	13	10	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2010	246	140	247.2	141.78	23	10	Amorphous Debris
2010	246	140	247.07	141.65	24	10	Amorphous Debris
2010	246	142	246.225	142.13	2	4	Broken Flake
2010	246	142	246.045	142.32	4	4	Amorphous Debris
2010	246	142	246.92	142.85	6	4	Pebble
2010	246	142	246.87	142.1	3	4	Flake Fragment
2010	246	142	246.65	142.78	5	4	Amorphous Debris
2010	246	142	246.52	142.36	1	4	Amorphous Debris
2010	246	142	246.67	142.92	7	4	Debris
2010	246	142	246.61	142.77	7	5	Debris
2010	246	142	246.28	142.04	1	5	Flake Fragment
2010	246	142	246.59	142.14	3	5	Amorphous Debris
2010	246	142	246.07	142.38	2	5	Amorphous Debris
2010	246	142	246.71	142.31	5	5	Pebble
2010	246	142	246.49	142.72	8	5	Pebble
2010	246	142	246.2	142.89	9	5	Pebble
2010	246	142	246.1	142.84	10	5	Pebble
2010	246	142	246.89	142.27	6	5	Pebble
2010	246	142	246.64	142.22	4	5	Pebble
2010	246	142	246.28	142.825	9	6	Debris
2010	246	142	246.94	142.165	1	6	Amorphous Debris
2010	246	142	246.17	142.11	4	6	Amorphous Debris
2010	246	142	246.775	142.81	10	6	Amorphous Debris
2010	246	142	246.27	142.4	5	6	Debris
2010	246	142	246.53	142.17	3	6	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2010	246	142	246.84	142.44	7	6	Pebble
2010	246	142	246.57	142.24	2	6	Amorphous Debris
2010	246	142	246.61	142.42	6	6	Amorphous Debris
2010	246	142	246.57	142.51	8	6	Amorphous Debris
2010	246	142	246.19	142.54	8	7	Debris
2010	246	142	246.68	142.325	2	7	Flake Fragment
2010	246	142	246.45	142.22	4	7	Pebble
2010	246	142	246.75	142.725	9	7	Pebble
2010	246	142	246.17	142.87	15	7	Amorphous Debris
2010	246	142	246.735	142.8925	12	7	Amorphous Debris
2010	246	142	246.375	142.23	16	7	Amorphous Debris
2010	246	142	246.74	142.645	5	7	Amorphous Debris
2010	246	142	246.625	142.265	3	7	Amorphous Debris
2010	246	142	246.71	142.62	6	7	Amorphous Debris
2010	246	142	246.775	142.135	1	7	Pebble
2010	246	142	246.32	142.82	11	7	Amorphous Debris
2010	246	142	246.5	142.95	14	7	Pebble
2010	246	142	246.58	142.93	13	7	Pebble
2010	246	142	246.295	142.605	7	7	Pebble
2010	246	142	246.15	142.7	10	7	Pebble
2010	246	142	246.41	142.675	9	8	Amorphous Debris
2010	246	142	246.07	142.29	3	8	Pebble
2010	246	142	246.79	142.43	5	8	Pebble
2010	246	142	246.71	142.715	8	8	Pebble
2010	246	142	246.245	142.35	4	8	Amorphous Debris
2010	246	142	246.225	142.63	10	8	Amorphous Debris
2010	246	142	246.735	142.725	7	8	Amorphous Debris
2010	246	142	246.635	142.2	1	8	Pebble
2010	246	142	246.49	142.18	2	8	Pebble
2010	246	142	246.71	142.51	6	8	Pebble
2010	248	140	248.09	141.05	9	12	Flake Fragment
2010	248	140	248.015	141.58	12	12	Amorphous Debris
2010	248	140	248.09	141.33	14	13	Debris
2010	248	140	248.27	141.04	10	13	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2010	248	140	248.04	141.84	2	13	Amorphous Debris
2010	248	140	248.02	141.31	13	13	Amorphous Debris
2010	248	140	248.63	141.155	8	13	Amorphous Debris
2010	248	140	248.76	141.64	4	13	Flake
2010	248	140	248.76	141.11	7	13	Pebble
2010	248	140	248.15	141.505	6	13	Pebble
2010	248	140	248.14	141.6	5	13	Flake Fragment
2010	248	140	248.015	141.23	11	13	Pebble
2010	248	140	248.13	141.73	3	13	Pebble
2010	248	140	248.24	141.64	9	14	Flake Fragment
2010	248	140	248.45	141.69	6	14	Debris
2010	248	140	248.84	141.85	7	14	Debris
2010	248	140	248.115	141.65	5	14	Pebble
2010	248	140	248.065	141.05	2	14	Amorphous Debris
2010	248	140	248.015	141.44	1	14	Pebble
2010	248	140	248.35	141.11	3	14	Amorphous Debris
2010	248	140	248.24	141.72	8	14	Pebble
2010	248	140	248.82	141.04	4	14	Pebble
2010	248	140	248.075	141.9	1	15	Amorphous Debris
2010	248	140	248.54	141.8	10	15	Flake Fragment
2010	248	140	248.125	141.92	2	15	Amorphous Debris
2010	248	140	248.71	141.94	9	15	Pebble
2010	248	140	248.43	141.58	7	15	Pebble
2010	248	140	248.46	141.16	4	15	Pebble
2010	248	140	248.53	141.66	8	15	Pebble
2010	248	140	248.375	141.55	6	15	Amorphous Debris
2010	248	140	248.14	141.91	1	15	Flake Fragment
2010	248	140	248.24	141.61	3	15	Pebble
2010	248	140	248.59	141.18	5	15	Pebble
2010	263	145	263.865	146.63	1	1	Amorphous Debris
2010	263	145	263.96	146.49	2	3	Amorphous Debris
2010	263	145	264.03	146.87	3	3	Amorphous Debris
2010	263	145	263.76	146.93	1	3	Amorphous Debris
2010	263	145	263.51	146.6	4	3	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2010	263	145	263.62	145.12	1	7	Amorphous Debris
2010	263	145	263.12	145.1	3	8	Amorphous Debris
2010	263	145	263.24	145.38	2	8	Amorphous Debris
2010	263	145	263.93	145.41	1	8	Amorphous Debris
2010	263	145	264.81	146.6	1	9	Amorphous Debris
2010	263	145	263.99	146.21	1	10	Amorphous Debris
2010	263	145	263.21	146.24	1	11	Broken Flake
2011	246	140	246.265	140.105	9	**11**	Broken Flake
2011	246	140	246.625	140.095	5	**11**	Debris
2011	246	140	246.26	140.09	8	**11**	Amorphous Debris
2011	246	140	246.43	140.745	14	**11**	Debris
2011	246	140	246.18	140.01	10	**11**	Amorphous Debris
2011	246	140	246.38	140.08	7	**11**	Pebble
2011	246	140	246.705	140.63	4	**11**	Pebble
2011	246	140	246.79	140.62	3	**11**	Pebble
2011	246	140	246.9	140.08	2	**11**	Amorphous Debris
2011	246	140	246.415	140.575	13	**11**	Pebble
2011	246	140	246.525	1440.1	6	**11**	Pebble
2011	246	140	246.13	140.28	12	**11**	Pebble
2011	246	140	246.96	140.43	1	**11**	Pebble
2011	246	140	246.1	140.275	11	**11**	Pebble
2011	246	140	246.39	140.88	15	**11**	Pebble
2011	246	140	246.37	140.47	11	12	Amorphous Debris
2011	246	140	246.625	140.653	2	12	Amorphous Debris
2011	246	140	246.59	140.095	5	12	Amorphous Debris
2011	246	140	246.61	140.352	4	12	Debris
2011	246	140	246.13	140.676	7	12	Amorphous Debris
2011	246	140	246.047	140.315	10	12	Pebble
2011	246	140	246.54	140.45	3	12	Amorphous Debris
2011	246	140	246.92	140.83	1	12	Pebble
2011	246	140	246.136	140.562	8	12	Pebble
2011	246	140	246.036	140.518	9	12	Amorphous Debris
2011	246	140	246.355	140.88	6	12	Amorphous Debris
2011	246	140	246.7	140.35	1	13	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2011	246	140	246.385	140.28	5	13	Pebble
2011	246	140	246.62	140.745	2	13	Amorphous Debris
2011	246	140	246.36	140.345	3	13	Pebble
2011	246	140	246.385	140.27	6	13	Pebble
2011	246	140	246.315	140.485	4	13	Pebble
2011	246	140	246.085	140.665	7	13	Pebble
2011	246	140	247.1	140.88	4	6	Amorphous Debris
2011	246	140	247.42	140.76	2	6	Amorphous Debris
2011	246	140	247.32	140.6	5	6	Amorphous Debris
2011	246	140	247.43	140.86	3	6	Pebble
2011	246	140	247.22	140.19	1	6	Amorphous Debris
2011	246	140	247.07	140.51	4	7	Pebble
2011	246	140	247.44	140.72	6	7	Flake
2011	246	140	247.35	140.39	2	7	Pebble
2011	246	140	247.05	140.52	5	7	Debris
2011	246	140	247.04	140.47	3	7	Debris
2011	246	140	247.18	140.24	1	7	Amorphous Debris
2011	246	140	247.19	140.83	3	8	Pebble
2011	246	140	247.3	140.89	4	8	Debris
2011	246	140	247.87	140.68	2	8	Pebble
2011	246	140	247.06	140.59	1	8	Amorphous Debris
2011	246	140	246.38	140.34	6	9	Amorphous Debris
2011	246	140	246.16	140.89	3	9	Amorphous Debris
2011	246	140	246.57	140.975	2	9	Pebble
2011	246	140	246.33	141.01	1	9	Pebble
2011	246	140	246.05	140.8	4	9	Amorphous Debris
2011	246	140	246.45	140.59	5	9	Pebble
2011	246	140	246.64	140.27	6	5	Amorphous Debris
2011	246	140	246.64	140.28	7	5	Debris
2011	246	140	246.61	140.92	2	5	
2011	246	140	246.02	140.88	4	5	Pebble
2011	246	140	246.45	140.37	5	5	Amorphous Debris
2011	246	140	246.54	140.71	3	5	Debris
2011	246	140	246.77	140.88	1	5	PEBBLE

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2011	246	140	246.59	140.98	1	6	Flake Fragment
2011	246	140	246.28	140.49	7	6	Debris
2011	246	140	246.09	140.33	9	6	Pebble
2011	246	140	246.06	140.36	8	6	Debris
2011	246	140	246.53	140.95	2	6	Amorphous Debris
2011	246	140	246.24	140.49	6	6	Pebble
2011	246	140	246.85	140.65	4	6	Pebble
2011	246	140	246.23	140.54	5	6	Pebble
2011	246	140	246.7	140.87	3	6	Flake
2011	246	140	246.69	140.61	8	7	Flake
2011	246	140	246.68	140.07	23	7	Amorphous Debris
2011	246	140	246.11	140.33	14	7	Debris
2011	246	140	246.31	140.41	13	7	Pebble
2011	246	140	246.265	140.72	6	7	Debris
2011	246	140	246.49	140.52	11	7	Pebble
2011	246	140	246.62	140.83	3	7	Amorphous Debris
2011	246	140	246.79	140.65	22	7	Pebble
2011	246	140	246.705	140.09	19	7	Pebble
2011	246	140	246.975	140.93	2	7	Amorphous Debris
2011	246	140	246.2	140.69	7	7	Pebble
2011	246	140	246.575	140.11	17	7	Pebble
2011	246	140	246.33	140.47	12	7	Pebble
2011	246	140	246.88	140.655	10	7	Pebble
2011	246	140	246.28	140.18	15	7	Pebble
2011	246	140	246.82	140.375	16	7	Debris
2011	246	140	246.69	140.93	21	7	Pebble
2011	246	140	246.82	140.65	9	7	Pebble
2011	246	140	246.03	140.72	20	7	Pebble
2011	246	140	246.43	140.02	18	7	Pebble
2011	246	140	246.71	140.93	1	7	Amorphous Debris
2011	246	140	246.57	140	1	7	Pebble
2011	246	140	246.98	140.75	4	7	Pebble
2011	246	140	247.04	141...	5	7	Pebble
2011	246	140	246.45	140.72	12	8	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2011	246	140	246.3	140.14	23	8	Flake Fragment
2011	246	140	246.54	140.96	3	8	Pebble
2011	246	140	246.825	140.17	25	8	Amorphous Debris
2011	246	140	246.915	140.54	18	8	Flake
2011	246	140	246.84	140.8	13	8	Amorphous Debris
2011	246	140	246.62	140.815	7	8	Debris
2011	246	140	246.99	140.76	14	8	Pebble
2011	246	140	246.25	140.595	17	8	Amorphous Debris
2011	246	140	246.16	140.72	11	8	Pebble
2011	246	140	247.01	140.36	24	8	Amorphous Debris
2011	246	140	246.525	140.325	20	8	Pebble
2011	246	140	246.52	140.84	5	8	Debris
2011	246	140	247	140.65	16	8	Pebble
2011	246	140	246.69	140.98	6	8	Pebble
2011	246	140	246.58	140.76	8	8	Amorphous Debris
2011	246	140	246.12	140.36	19	8	Amorphous Debris
2011	246	140	246.7	140.29	21	8	Amorphous Debris
2011	246	140	246.215	140.9	2	8	Pebble
2011	246	140	246.96	141.05	15	8	Pebble
2011	246	140	247.04	141.07	1	8	Amorphous Debris
2011	246	140	246.07	140.08	22	8	Pebble
2011	246	140	246.68	140.76	9	8	Debris
2011	246	140	246.63	140.75	10	8	Pebble
2011	246	140	246.51	140.9	4	8	Pebble
2011	246	140	246.74	140.58	6	9	Broken Flake
2011	246	140	246.32	140.855	1	9	Amorphous Debris
2011	246	140	246.31	140.62	5	9	Amorphous Debris
2011	246	140	246.735	140.4	7	9	Pebble
2011	246	140	246.38	140.19	12	9	Pebble
2011	246	140	246.94	140.11	13	9	Amorphous Debris
2011	246	140	246.09	140.09	15	9	Amorphous Debris
2011	246	140	246.45	140.78	2	9	PEBBLE
2011	246	140	246.23	140.64	4	9	Pebble
2011	246	140	246.09	140.1	11	9	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2011	246	140	246.88	140.46	8	9	Pebble
2011	246	140	246.915	140.465	9	9	Debris
2011	246	140	246.9	140.08	16	9	Pebble
2011	246	140	246.95	140.28	10	9	Pebble
2011	246	140	246.01	140.9	14	9	Amorphous Debris
2011	246	140	247	140.65	3	9	Amorphous Debris
2011	246	140	246.87	140.34	17	10	Pebble
2011	246	140	246.34	140.37	14	10	Amorphous Debris
2011	246	140	246.97	140.42	18	10	Flake
2011	246	140	246.18	140.03	23	10	Amorphous Debris
2011	246	140	246.54	140.19	26	10	Flake
2011	246	140	246.935	140.82	9	10	Amorphous Debris
2011	246	140	246.85	140.37	16	10	Pebble
2011	246	140	246.71	140.95	3	10	Pebble
2011	246	140	246.625	140.42	15	10	Pebble
2011	246	140	246.495	140.62	11	10	Amorphous Debris
2011	246	140	246.15	140.15	21	10	Pebble
2011	246	140	246.87	140.82	8	10	Pebble
2011	246	140	246.69	140.84	6	10	Pebble
2011	246	140	246.45	140.57	10	10	Pebble
2011	246	140	246.46	140.105	24	10	Pebble
2011	246	140	246.53	140.455	13	10	Pebble
2011	246	140	246.77	140.06	27	10	Pebble
2011	246	140	246.15	140.08	22	10	Pebble
2011	246	140	246.69	140.98	2	10	Amorphous Debris
2011	246	140	246.26	140.86	1	10	Pebble
2011	246	140	246.46	140.19	25	10	Pebble
2011	246	140	246.015	140.23	19	10	Flake
2011	246	140	246.65	140.54	12	10	Amorphous Debris
2011	246	140	246.93	141.03	4	10	Amorphous Debris
2011	246	140	246.27	140.22	20	10	Pebble
2011	246	140	246.77	140.8	7	10	Pebble
2011	246	140	246.58	140.795	3	11	Pebble
2011	246	140	246.28	140.38	10	11	Flake

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2011	246	140	246.32	140.47	8	11	Amorphous Debris
2011	246	140	246.48	140.38	12	11	Debris
2011	246	140	246.89	140.98	1	11	Pebble
2011	246	140	246.93	140.315	15	11	Pebble
2011	246	140	246.24	140.31	11	11	Amorphous Debris
2011	246	140	246.05	140.54	6	11	Pebble
2011	246	140	246.87	140.41	13	11	Pebble
2011	246	140	246.04	140.77	2	11	PEBBLE
2011	246	140	246.185	140.47	7	11	Pebble
2011	246	140	246.74	140.04	17	11	Amorphous Debris
2011	246	140	246.47	140.6	5	11	Pebble
2011	246	140	246.69	140.05	16	11	Pebble
2011	246	140	246.92	140.85	4	11	Pebble
2011	246	140	246.71	140.59	9	11	Amorphous Debris
2011	246	140	246.93	140.4	14	11	Amorphous Debris
2011	246	140	246.26	140.18	18	11	Amorphous Debris
2011	246	140	246.25	140.4	10	12	Pebble
2011	246	140	246.715	140.58	8	12	Debris
2011	246	140	246.43	140.3	15	12	Amorphous Debris
2011	246	140	246.42	140.1	17	12	Amorphous Debris
2011	246	140	246.53	140.35	11	12	Debris
2011	246	140	246.61	140.99	1	12	Pebble
2011	246	140	246.725	140.27	13	12	Pebble
2011	246	140	246.69	140.35	12	12	Pebble
2011	246	140	246.85	140.56	9	12	Pebble
2011	246	140	246.28	140.31	14	12	Pebble
2011	246	140	246.86	140.65	5	12	Pebble
2011	246	140	246.22	140.7	2	12	PEBBLE
2011	246	140	246.92	140.78	6	12	Pebble
2011	246	140	246.9	140.33	16	12	Amorphous Debris
2011	246	140	246.985	140.75	7	12	Pebble
2011	246	140	246.59	140.77	4	12	Pebble
2011	246	140	246.475	140.73	3	13	Amorphous Debris
2011	246	140	246.67	140.76	5		

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2011	246	142	246.846	142.595	16	9	Debris
2011	246	142	246.155	142.4	2	9	Debris
2011	246	142	246.43	142.77	11	9	Debris
2011	246	142	246.055	142.615	4	9	Flake
2011	246	142	246.07	142.11	1	9	Debris
2011	246	142	246.22	142.57	6	9	Flake Fragment
2011	246	142	246.825	142.85	17	9	Amorphous Debris
2011	246	142	246.725	142.51	15	9	Debris
2011	246	142	246.535	142.482	13	9	Amorphous Debris
2011	246	142	246.623	142.93	14	9	Debris
2011	246	142	246.347	142.51	9	9	Debris
2011	246	142	246.425	142.53	12	9	Amorphous Debris
2011	246	142	246.245	142.41	3	9	Flake
2011	246	142	246.175	142.75	8	9	Amorphous Debris
2011	246	142	246.195	142.69	7	9	Amorphous Debris
2011	246	142	246.09	142.59	5	9	Debris
2011	246	142	246.38	142.655	10	9	Amorphous Debris
2011	246	142	246.87	142.4	15	10	Amorphous Debris
2011	246	142	246.32	142.54	11	10	Amorphous Debris
2011	246	142	246.71	142.59	18	10	Amorphous Debris
2011	246	142	246.09	142.78	25	10	Amorphous Debris
2011	246	142	246.64	142.02	1	10	Amorphous Debris
2011	246	142	246.01	142.85	29	10	Amorphous Debris
2011	246	142	246.36	142.66	16	10	Amorphous Debris
2011	246	142	246.72	142.38	13	10	Amorphous Debris
2011	246	142	246.72	142.38	13	10	Amorphous Debris
2011	246	142	246.58	142.73	23	10	Amorphous Debris
2011	246	142	246.31	142.53	12	10	Amorphous Debris
2011	246	142	246.63	142.67	19	10	Amorphous Debris
2011	246	142	246.72	142.11	3	10	Amorphous Debris
2011	246	142	246.5	142.45	9	10	Amorphous Debris
2011	246	142	246.06	142.24	6	10	Amorphous Debris
2011	246	142	246.03	142.35	8	10	Amorphous Debris
2011	246	142	246.55	142.75	22	10	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2011	246	142	246.4	142.69	17	10	Amorphous Debris
2011	246	142	246.8	142.35	14	10	Amorphous Debris
2011	246	142	246.6	142.09	2	10	Amorphous Debris
2011	246	142	246.6	142.09	2	10	Amorphous Debris
2011	246	142	246.03	142.3	7	10	Amorphous Debris
2011	246	142	246.86	142.08	4	10	Amorphous Debris
2011	246	142	246.86	142.08	4	10	Amorphous Debris
2011	246	142	246.69	142.84	27	10	Amorphous Debris
2011	246	142	246.64	142.88	26	10	Amorphous Debris
2011	246	142	246.46	142.5	10	10	Amorphous Debris
2011	246	142	246.75	142.67	20	10	Amorphous Debris
2011	246	142	246.53	142.71	21	10	Amorphous Debris
2011	246	142	246.48	142.29	5	10	Amorphous Debris
2011	246	142	246.58	142.78	24	10	Amorphous Debris
2011	246	142	246.2	142.91	28	10	Amorphous Debris
2011	246	142	246.14	142.58	10	11	Pebble
2011	246	142	246.63	142.72	20	11	Pebble
2011	246	142	246.34	142.47	7	11	Pebble
2011	246	142	246.82	142.52	9	11	Amorphous Debris
2011	246	142	246.19	142.67	11	11	Pebble
2011	246	142	246.63	142.72	21	11	Pebble
2011	246	142	246.33	142.77	22	11	Pebble
2011	246	142	246.48	142.73	17	11	Pebble
2011	246	142	246.02	142.96	24	11	Pebble
2011	246	142	246.45	142.35	5	11	Pebble
2011	246	142	246.51	142.73	18	11	Pebble
2011	246	142	246.85	142.17	4	11	Pebble
2011	246	142	246.26	142.68	12	11	Pebble
2011	246	142	246.73	142.16	3	11	Pebble
2011	246	142	246.44	142.69	16	11	Amorphous Debris
2011	246	142	246.2	142.45	6	11	Pebble
2011	246	142	246.55	142.12	2	11	Pebble
2011	246	142	246.42	142.61	15	11	Pebble
2011	246	142	246.34	142.97	25	11	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2011	246	142	246.36	142.67	14	11	Pebble
2011	246	142	246.35	142.81	23	11	Pebble
2011	246	142	246.44	142.97	26	11	Pebble
2011	246	142	246.27	142.62	13	11	Pebble
2011	246	142	246.57	142.74	19	11	Pebble
2011	246	142	246.72	142.42	8	11	Pebble
2011	246	142	246.61	142.01	1	11	Pebble
2011	246	142	246.38	142.92	29	12	Pebble
2011	246	142	246.2	142.39	8	12	Pebble
2011	246	142	246.43	142.34	6	12	Pebble
2011	246	142	246.72	142.77	24	12	Pebble
2011	246	142	246.69	142.65	19	12	Pebble
2011	246	142	246.2	142.96	30	12	Pebble
2011	246	142	246.02	142.75	23	12	Pebble
2011	246	142	246.78	142.68	20	12	Pebble
2011	246	142	246.75	142.98	31	12	Pebble
2011	246	142	246.86	142.03	2	12	Pebble
2011	246	142	246.61	142.12	5	12	Pebble
2011	246	142	246.58	142.63	18	12	Pebble
2011	246	142	246.44	142.44	12	12	Pebble
2011	246	142	246.6	142.74	21	12	Pebble
2011	246	142	246.16	142.44	13	12	Pebble
2011	246	142	246.18	142.47	14	12	Pebble
2011	246	142	246.65	142.43	10	12	Pebble
2011	246	142	246.16	142.04	1	12	Pebble
2011	246	142	246.49	142.4	9	12	Pebble
2011	246	142	246.58	142.8	25	12	Pebble
2011	246	142	246.12	142.4	11	12	Pebble
2011	246	142	246.35	142.9	28	12	Pebble
2011	246	142	246.68	142.81	27	12	Pebble
2011	246	142	246.87	142.33	7	12	Pebble
2011	246	142	246.74	142.73	22	12	Pebble
2011	246	142	246.13	142.18	3	12	Pebble
2011	246	142	246.57	142.19	4	12	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2011	246	142	246.77	142.59	17	12	Pebble
2011	246	142	246.71	142.59	16	12	Pebble
2011	246	142	246.91	142.57	15	12	Pebble
2011	246	142	246.61	142.83	26	12	Pebble
2011	246	142	246.415	142.925	21	13	Pebble
2011	246	142	246.63	142.67	19	13	Pebble
2011	246	142	246.495	142.58	16	13	Pebble
2011	246	142	246.31	142.265	6	13	Pebble
2011	246	142	246.86	142.91	23	13	Pebble
2011	246	142	246.72	142.75	18	13	Pebble
2011	246	142	246.74	142.58	14	13	Pebble
2011	246	142	246.77	142.625	15	13	Pebble
2011	246	142	246.66	142.12	2	13	Pebble
2011	246	142	246.69	142.38	11	13	Pebble
2011	246	142	246.38	142.1	3	13	Pebble
2011	246	142	246.175	142.97	22	13	Pebble
2011	246	142	246.74	142.51	13	13	Pebble
2011	246	142	246.63	142.45	10	13	Pebble
2011	246	142	246.38	142.38	9	13	Pebble
2011	246	142	246.76	142.42	12	13	Pebble
2011	246	142	246.822	142.705	17	13	Pebble
2011	246	142	246.11	142.095	5	13	Pebble
2011	246	142	246.695	142.785	19	13	Pebble
2011	246	142	246.77	142.875	20	13	Pebble
2011	246	142	246.22	142.325	8	13	Pebble
2011	246	142	246.395	142.18	4	13	Pebble
2011	246	142	246.79	142.02	1	13	Pebble
2011	246	142	246.17	142.295	7	14	Pebble
2011	248	140	248.29	140.88	6	16	Debris
2011	248	140	248.14	140.83	7	16	Pebble
2011	248	140	248.495	140.76	4	16	Flake
2011	248	140	248.79	140.66	3	16	Amorphous Debris
2011	248	140	248.74	140.39	2	16	Amorphous Debris
2011	248	140	248.75	140.35	1	16	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2011	248	140	248.37	140.82	5	16	Pebble
2011	248	140	248.625	140.01	6	17	Pebble
2011	248	140	248.21	140.11	3	17	Pebble
2011	248	140	248.15	140.09	2	17	Pebble
2011	248	140	248.165	140.17	1	17	Pebble
2011	248	140	248.52	140.32	7	17	Pebble
2011	248	140	248.355	140.205	4	17	Pebble
2011	248	140	248.44	140.14	5	17	Pebble
2012	246	138	246.92	139.57	3	3	Pebble
2012	246	138	246.44	139.46	1	3	Amorphous Debris
2012	246	138	246.89	139.09	2	3	Debris
2012	246	138	246.2	138.05	1	3	Amorphous Debris
2012	246	138	246.2	138.05	1	3	
2012	246	138	246.23	139.92	4	4	Pebble
2012	246	138	246.32	139.24	2	4	Pebble
2012	246	138	246.33	139.55	11	4	Amorphous Debris
2012	246	138	246.12	139.07	1	4	Amorphous Debris
2012	246	138	246.12	139.84	6	4	Amorphous Debris
2012	246	138	246.38	139.52	8	4	Amorphous Debris
2012	246	138	246.04	139.88	7	4	Pebble
2012	246	138	246.18	139.94	5	4	Pebble
2012	246	138	246.31	139.81	3	4	Debris
2012	246	138	246.32	139.45	9	4	Amorphous Debris
2012	246	138	246.29	139.5	10	4	Boulder
2012	246	138	246.61	139.81	4	5	Amorphous Debris
2012	246	138	246.22	139.71	3	5	Pebble
2012	246	138	246.2	139.63	2	5	Pebble
2012	246	138	246.13	139.23	1	5	Amorphous Debris
2012	246	138	246.23	138.13	1	5	Debris
2012	246	138	246.25	138.05	2	5	Amorphous Debris
2012	246	138	246.68	138.78	5	5	Pebble
2012	246	138	246.5	138.19	3	5	Amorphous Debris
2012	246	138	246.63	138.6	4	5	Debris
2012	246	138	246.03	138.77	6	5	

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2012	246	138	246.6	139.23	5	6	Amorphous Debris
2012	246	138	246.35	138.36	4	6	Pebble
2012	246	138	246.23	138.65	2	6	Amorphous Debris
2012	246	138	246.04	138.37	1	6	Amorphous Debris
2012	246	138	246.48	139.63	8	6	Pebble
2012	246	138	246.3	139.59	7	6	Pebble
2012	246	138	246.68	139.49	6	6	Pebble
2012	246	138	246.18	138.97	3	6	Amorphous Debris
2012	246	138	246.17	138.54	5	6	Pebble
2012	246	138	246.21	138.45	3	6	Amorphous Debris
2012	246	138	246.35	138.45	4	6	Amorphous Debris
2012	246	138	246.68	138.13	2	6	Debris
2012	246	138	246.05	138.38	1	6	Pebble
2012	246	138	246.48	139.175	3	7	Flake
2012	246	138	246.71	139.44	6	7	Amorphous Debris
2012	246	138	246.99	139.9	2	7	Amorphous Debris
2012	246	138	246.925	139.68	8	7	Debris
2012	246	138	246.11	139.99	1	7	Debris
2012	246	138	246.88	139.885	9	7	Pebble
2012	246	138	246.55	139.99	14	7	Pebble
2012	246	138	246.99	139.21	5	7	Pebble
2012	246	138	246.94	139.7	10	7	Amorphous Debris
2012	246	138	246.85	139.79	13	7	Debris
2012	246	138	246.95	139.87	12	7	Pebble
2012	246	138	246.685	139.5	7	7	Debris
2012	246	138	246.96	139.85	11	7	Pebble
2012	246	138	246	139	4	7	Pebble
2012	246	138	246.11	138.09	11	7	Pebble
2012	246	138	246.15	138.7	2	7	Amorphous Debris
2012	246	138	246.18	138.1	10	7	Amorphous Debris
2012	246	138	246.21	138.115	1	7	Pebble
2012	246	138	246.66	138.82	6	7	Pebble
2012	246	138	246.82	138.45	8	7	Amorphous Debris
2012	246	138	246.67	138.75	7	7	Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2012	246	138	246.72	138.09	9	7	Amorphous Debris
2012	246	138	246.51	138.87	5	7	Pebble
2012	246	138	246.09	138.9	3	7	
2012	246	138	246.22	138.89	4	7	
2012	246	138	246.17	139.13	5	8	Pebble
2012	246	138	246	139.04	6	8	Pebble
2012	246	138	246.86	139.98	12	8	Pebble
2012	246	138	246.64	139.1	2	8	Pebble
2012	246	138	246.98	139.41	7	8	Pebble
2012	246	138	246.98	139.64	10	8	Amorphous Debris
2012	246	138	246.98	139.7	11	8	Amorphous Debris
2012	246	138	246.78	139.71	9	8	Pebble
2012	246	138	246.19	139.05	4	8	Debris
2012	246	138	246.3	139.18	3	8	Pebble
2012	246	138	246.55	139.68	8	8	Debris
2012	246	138	246.99	139.08	1	8	Pebble
2012	246	138	246.46	138.87	10	8	Pebble
2012	246	138	246.03	138.38	5	8	Amorphous Debris
2012	246	138	246.34	138.21	1	8	Debris
2012	246	138	246.16	138.7	7	8	Debris
2012	246	138	246.04	138.4	6	8	Amorphous Debris
2012	246	138	246.11	138.84	8	8	Pebble
2012	246	138	246.41	138.58	11	8	Pebble
2012	246	138	246.29	138.27	2	8	Pebble
2012	246	138	246.17	188.43	4	8	Pebble
2012	246	138	246.28	138.85	9	8	Pebble
2012	246	138	246.97	138.92	12	8	Debris
2012	246	138	246.25	138.3	3	8	Amorphous Debris
2012	246	138	246.04	139.42	5	9	Pebble
2012	246	138	246.42	139.33	6	9	Amorphous Debris
2012	246	138	246.28	139.74	8	9	Amorphous Debris
2012	246	138	246.08	139.07	1	9	Pebble
2012	246	138	246.912	139.11	4	9	Pebble
2012	246	138	246..15	139.76	7	9	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2012	246	138	246.79	139.97	13	9	Pebble
2012	246	138	246.79	139.2	14	9	Cobble
2012	246	138	246.39	139.56	15	9	Cobble
2012	246	138	246.58	139.94	12	9	Pebble
	246	138	246.39	138.15	16	9	Amorphous Debris
2012	246	138	246.981	139.65	9	9	Amorphous Debris
246.11	246	138	139.97	96.9	10	9	Pebble
246.36	246	138	139.91	96.87	11	9	Flake
2012	246	138	246.42	139.2	2	9	Pebble
2012	246	138	246.66	139.055	3	9	Flake
2012	246	138	246.99	138.78	14	9	Amorphous Debris
2012	246	138	246.41	138.56	8	9	Pebble
2012	246	138	246.09	138.21	1	9	Amorphous Debris
2012	246	138	246.13	138.61	5	9	Amorphous Debris
2012	246	138	246.88	138.65	13	9	Pebble
2012	246	138	246.73	138.75	11	9	Amorphous Debris
2012	246	138	246.24	138.33	2	9	Pebble
2012	246	138	246.86	138.69	12	9	Flake Fragment
2012	246	138	246.4	138.62	7	9	Pebble
2012	246	138	246.84	138.87	10	9	Pebble
2012	246	138	246.18	138.57	4	9	Pebble
2012	246	138	246.41	138.7	20	9	Debris
2012	246	138	246.2	138.5	3	9	Amorphous Debris
2012	246	138	246.8	138.64	6	9	Amorphous Debris
2012	246	138	246.37	138.15	19	9	Debris
2012	246	138	246.83	138.28	18	9	Pebble
2012	246	138	246.52	138.32	17	9	Amorphous Debris
2012	246	138	246.64	138.94	9	9	Flake
2012	246	138	246.58	138.47	16	9	Amorphous Debris
2012	246	138	246.5	138.55	15	9	Pebble
2012	246	138	246.97	139.44	10	10	Pebble
2012	246	138	246.46	139.37	5	10	Pebble
2012	246	138	246.16	139.99	17	10	Pebble
2012	246	138	246.95	139.92	19	10	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2012	246	138	246.83	139.37	9	10	Pebble
2012	246	138	246.04	139.85	16	10	Debris
2012	246	138	246.76	139.55	15	10	Pebble
2012	246	138	246.99	139.79	20	10	Amorphous Debris
2012	246	138	246.43	139.07	2	10	Debris
2012	246	138	246.44	139.5	12	10	Amorphous Debris
2012	246	138	246.59	139.37	6	10	Pebble
2012	246	138	246.66	139.36	8	10	Pebble
2012	246	138	246.62	139.4	7	10	Pebble
2012	246	138	246.16	139.57	11	10	Pebble
2012	246	138	246.61	139.08	3	10	Amorphous Debris
2012	246	138	246.7	139.47	13	10	Amorphous Debris
2012	246	138	246.7	139.55	14	10	Pebble
2012	246	138	246.47	139.8	18	10	Amorphous Debris
2012	246	138	246.12	139.25	1	10	Debris
2012	246	138	246.48	139.34	4	10	Flake
2012	246	138	246.52	138.35	8	10	Pebble
2012	246	138	246.55	138.27	7	10	Pebble
2012	246	138	246.07	138.22	4	10	Amorphous Debris
2012	246	138	246.8	138.29	12	10	Debris
2012	246	138	246.66	138.44	9	10	Debris
2012	246	138	246.29	138.62	3	10	Pebble
2012	246	138	246.27	138.11	5	10	Pebble
2012	246	138	246.09	138.51	2	10	Pebble
2012	246	138	246.42	138.79	1	10	Pebble
2012	246	138	246.26	138.17	6	10	Debris
2012	246	138	246.34	138.48	13	10	Amorphous Debris
2012	246	138	246.78	138.13	11	10	Debris
2012	246	138	246.47	138.38	10	10	Flake
2012	246	138	246.86	139.86	15	11	Pebble
2012	246	138	246.77	139.9	14	11	Pebble
2012	246	138	246.78	139.25	20	11	Pebble
2012	246	138	246.37	139.98	18	11	Debris
2012	246	138	246.15	139.68	7	11	Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2012	246	138	246.92	139.88	16	11	Amorphous Debris
2012	246	138	246.59	139.46	3	11	Amorphous Debris
2012	246	138	246.03	139.36	1	11	Amorphous Debris
2012	246	138	246.57	139.37	2	11	Pebble
2012	246	138	246.23	138.69	8	11	Amorphous Debris
2012	246	138	246.07	139.88	11	11	Debris
2012	246	138	246.52	139.83	13	11	Amorphous Debris
2012	246	138	246.97	139.67	9	11	Amorphous Debris
2012	246	138	246.4	139.57	4	11	Amorphous Debris
2012	246	138	246.05	139.92	12	11	Amorphous Debris
2012	246	138	246.77	139.51	6	11	Debris
2012	246	138	246.52	139.59	5	11	Debris
2012	246	138	246.8	139.26	21	11	Debris
2012	246	138	246.99	139.77	10	11	Amorphous Debris
2012	246	138	246.98	139.86	17	11	Pebble
2012	246	138			19	11	
2012	246	138	246.45	138.76	13	11	Pebble
2012	246	138	246.18	138.71	5	11	Amorphous Debris
2012	246	138	246.31	138.72	8	11	Amorphous Debris
2012	246	138	246.82	138.79	21	11	Amorphous Debris
2012	246	138	246.3	138.98	4	11	Amorphous Debris
2012	246	138	246.29	138.91	24	11	Pebble
2012	246	138	246.5	138.52	25	11	Pebble
2012	246	138	246.03	138.27	1	11	Pebble
2012	246	138	246.7	138.7	18	11	Amorphous Debris
2012	246	138	246.17	138.44	19	11	Amorphous Debris
2012	246	138	246.39	138.49	9	11	Amorphous Debris
2012	246	138	246.4	138.65	10	11	Pebble
2012	246	138	246.49	138.85	14	11	Amorphous Debris
2012	246	138	246.12	138.4	6	11	Pebble
2012	246	138	246.25	138.86	3	11	Amorphous Debris
2012	246	138	246.78	138.87	22	11	Amorphous Debris
2012	246	138	246.48	138.13	17	11	Amorphous Debris
2012	246	138	246.52	138.48	16	11	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2012	246	138	246.22	138.37	7	11	Amorphous Debris
2012	246	138	246.41	138.68	11	11	Amorphous Debris
2012	246	138	246.84	138.88	23	11	Pebble
2012	246	138	246.45	138.71	12	11	Pebble
2012	246	138	246.78	138.77	20	11	Pebble
2012	246	138	246.45	138.8	15	11	Amorphous Debris
2012	246	138	246.01	138.38	2	11	Amorphous Debris
2012	246	138			9	12	Pebble
2012	246	138	246.3	139.58	20	12	Pebble
2012	246	138	246.26	139.48	17	12	Amorphous Debris
2012	246	138	246.295	139.34	6	12	Pebble
2012	246	138	246.24	139.25	5	12	Amorphous Debris
2012	246	138	246.09	139.55	19	12	Amorphous Debris
2012	246	138			15	12	Pebble
2012	246	138	246.62	138.2	10	12	Pebble
2012	246	138	246.28	139.12	4	12	Debris
2012	246	138	246.445	139.68	23	12	Pebble
2012	246	138	246.555	139.31	14	12	Pebble
2012	246	138	246.95	139.29	12	12	Pebble
2012	246	138	246.7	139.79	30	12	Flake
2012	246	138	246.205	139.15	3	12	Amorphous Debris
2012	246	138	256.56	139.15	16	12	Flake
2012	246	138	246.64	139.95	31	12	Pebble
2012	246	138	246.41	139.21	7	12	Pebble
2012	246	138	246.2	139.78	27	12	Amorphous Debris
2012	246	138	246.98	139.25	11	12	Pebble
2012	246	138	246.28	139.75	28	12	Pebble
2012	246	138	246.23	139.64	21	12	Pebble
2012	246	138	246.49	139.17	8	12	Amorphous Debris
2012	246	138	246.045	139.39	13	12	Pebble
2012	246	138	246.25	139.1	32	12	Cobble
2012	246	138	241.92	139.6	22	12	Flake
2012	246	138	246.565	139.79	29	12	Pebble
2012	246	138	246.23	139.78	33	12	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2012	246	138	246.18	139.76	26	12	Pebble
2012	246	138	246.71	139.56	18	12	Pebble
2012	246	138	246.07	139.71	1	12	Debris
2012	246	138	246	139.76	24	12	Amorphous Debris
2012	246	138	246.06	139.76	25	12	Amorphous Debris
2012	246	138	246.07	139.79	2	12	Debris
2012	246	138	246.44	139.23	34	12	
2012	246	138	246.17	139.45	12	13	Amorphous Debris
2012	246	138	246.52	139.23	4	13	Pebble
2012	246	138	246.2	139.75	17	13	Pebble
2012	246	138	246.17	139.94	18	13	Amorphous Debris
2012	246	138	246.79	139.06	9	13	Amorphous Debris
2012	246	138	246.28	139.62	16	13	Pebble
2012	246	138	246.27	139.09	1	13	Amorphous Debris
2012	246	138	246.36	139.41	13	13	Amorphous Debris
2012	246	138	246.57	139.06	7	13	Pebble
2012	246	138	246.65	139.04	14	13	Broken Flake
2012	246	138	246.68	139.17	10	13	Pebble
2012	246	138	246.56	139.04	5	13	Amorphous Debris
2012	246	138	246.55	139.1	8	13	Pebble
2012	246	138	246.22	139.16	2	13	Amorphous Debris
2012	246	138	246.94	139.37	15	13	Pebble
2012	246	138	246.93	139.25	11	13	Pebble
2012	246	138	2446.66	139.43	21	13	Pebble
2012	246	138	246.41	139.22	3	13	Amorphous Debris
2012	246	138	246.58	139.02	6	13	Amorphous Debris
2012	246	138	246.99	139.94	20	13	Amorphous Debris
2012	246	138	246.09	139.91	19	13	Amorphous Debris
2012	246	140	246.55	141.04	5	11	Amorphous Debris
2012	246	140	246.96	141.9	11	11	Amorphous Debris
2012	246	140	246.7	141.45	7	11	Amorphous Debris
2012	246	140	246.33	141.35	4	11	Pebble
2012	246	140	246.13	141.58	1	11	Pebble
2012	246	140	246.28	141.63	3	11	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2012	246	140	246.6	141.54	6	11	Broken Flake
2012	246	140	246.84	141.65	9	11	Pebble
2012	246	140	246.2	141.48	2	11	Pebble
2012	246	140	246.79	141.15	8	11	Pebble
2012	246	140	246.95	141.63	10	11	Pebble
2012	246	140	246.64	141.25	13	12	Pebble
2012	246	140	246.32	141.19	3	12	Broken Flake
2012	246	140	246.81	141.6	9	12	Amorphous Debris
2012	246	140	246.1	141.49	1	12	Debris
2012	246	140	246.95	141.54	12	12	Pebble
2012	246	140	246.95	141.81	10	12	Amorphous Debris
2012	246	140	246.13	141.3	2	12	Amorphous Debris
2012	246	140	246.53	141.11	4	12	Pebble
2012	246	140	246.81	141.02	14	12	Amorphous Debris
2012	246	140	246.8	141.8	8	12	Pebble
2012	246	140	246.58	141.83	6	12	Pebble
2012	246	140	246.71	141.95	7	12	Debris
2012	246	140	246.52	141.45	5	12	Amorphous Debris
2012	246	140	246.93	141.84	11	12	Pebble
2012	246	140	246.87	141.67	13	13	Pebble
2012	246	140	246.36	141.41	4	13	Amorphous Debris
2012	246	140	246.61	141.955	7	13	Pebble
2012	246	140	246.36	141.98	5	13	Amorphous Debris
2012	246	140	246.84	141.62	15	13	Flake Fragment
2012	246	140	246.8	141.85	16	13	Pebble
2012	246	140	246.79	141.07	19	13	Pebble
2012	246	140	246.85	141.8	12	13	Amorphous Debris
2012	246	140	246.83	141.13	18	13	Broken Flake
2012	246	140	246.53	141.17	9	13	Pebble
2012	246	140	246.44	141.88	6	13	Pebble
2012	246	140	246.96	141.9	20	13	Amorphous Debris
2012	246	140	246.56	141.17	10	13	Pebble
2012	246	140	246.18	141.14	1	13	Pebble
2012	246	140	246.55	141.51	8	13	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2012	246	140	246.84	141.66	14	13	Pebble
2012	246	140	246.03	141.65	2	13	Pebble
2012	246	140	246.67	141.72	11	13	Pebble
2012	246	140	246.92	141.36	17	13	Amorphous Debris
2012	246	140	246.18	141.72	3	13	Pebble
2012	246	140	246.035	140.1	2	13	Pebble
2012	246	140	246.03	140.17	3	13	Pebble
2012	246	140	246.65	140.35	6	13	Pebble
2012	246	140	246.06	140.58	10	13	Pebble
2012	246	140	246.18	140.69	11	13	Pebble
2012	246	140	246.58	140.55	12	13	Pebble
2012	246	140	246.87	140.64	18	13	Pebble
2012	246	140	246.66	140.73	20	13	Pebble
2012	246	140	246.66	140.96	22	13	Amorphous Debris
2012	246	140	246.72	140.56	16	13	Debris
2012	246	140	246.61	140.8	19	13	Broken Flake
2012	246	140	246.76	141.74	23	13	Pebble
2012	246	140	246.03	140.05	1	13	Debris
2012	246	140	246.54	140.295	4	13	Complete Flake
2012	246	140	246.7	140.485	9	13	Complete Flake
2012	246	140	246.92	140.81	24	13	Amorphous Debris
2012	246	140	246.46	140.64	13	13	Debris
2012	246	140	246.94	140.51	17	13	Debris
2012	246	140	246.36	140.55	7	13	Amorphous Debris
2012	246	140	246.61	140.99	21	13	Pebble
2012	246	140	246.59	140.43	8	13	Pebble
2012	246	140	246.44	140.71	14	13	Pebble
2012	246	140	246.65	140.29	5	13	Pebble
2012	246	140	246.58	140.55	15	13	Pebble
2012	246	140	246.98	140.72	25	13	Pebble
2012	246	140	246	140.06	26	13	Debris
2012	246	140	247.06	141.21	3	14	Debris
2012	246	140	247.29	141.93	4	14	Pebble
2012	246	140	247.27	141.21	5	14	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2012	246	140	247.86	141.85	8	14	Pebble
2012	246	140	247.02	141.92	1	14	Pebble
2012	246	140	247.04	141.36	2	14	Debris
2012	246	140	247.81	141.66	7	14	Pebble
2012	246	140	247.5	141.14	6	14	Complete Flake
2012	246	140	246.52	141.42	2	14	Pebble
2012	246	140	246.59	141.8	3	14	Amorphous Debris
2012	246	140	246.7	141.71	4	14	Amorphous Debris
2012	246	140	246.75	141.92	6	14	Pebble
2012	246	140	246.86	141.81	8	14	Pebble
2012	246	140	246.1	141.36	11	14	Broken Flake
2012	246	140	246.13	141.54	16	14	Broken Flake
2012	246	140	246.4	141.18	25	14	Amorphous Debris
2012	246	140	246.02	141.46	37	14	Pebble
2012	246	140	246.66	141.8	5	14	Amorphous Debris
2012	246	140	246.39	141.15	26	14	Flake
2012	246	140	246.8	141.49	35	14	Pebble
2012	246	140	246.14	141.59	14	14	Amorphous Debris
2012	246	140	246.04	141.52	19	14	Debris
2012	246	140	246.18	141.34	23	14	Amorphous Debris
2012	246	140	246.16	141.19	24	14	Broken Flake
2012	246	140	246.54	141.21	27	14	Broken Flake
2012	246	140	246.6	141.53	29	14	Amorphous Debris
2012	246	140	246.2	141.52	34	14	Amorphous Debris
2012	246	140	246.15	141.34	22	14	Debris
2012	246	140	246.84	141.51	9	14	Debris
2012	246	140	246.21	141.52	17	14	Pebble
2012	246	140	246.64	141.19	28	14	Pebble
2012	246	140	246.18	141.32	32	14	Debris
2012	246	140	246.07	141.74	12	14	Amorphous Debris
2012	246	140	246.08	141.64	13	14	Amorphous Debris
2012	246	140	246.12	141.31	31	14	Amorphous Debris
2012	246	140	246.31	141.995	1	14	Flake
2012	246	140	246.77	141.85	7	14	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2012	246	140	246.04	141.54	33	14	Pebble
2012	246	140	246.76	141.44	10	14	Pebble
2012	246	140	246.02	141.59	15	14	Amorphous Debris
2012	246	140	246.24	141.49	18	14	Amorphous Debris
2012	246	140	246.03	141.48	20	14	Debris
2012	246	140	246.12	141.3	36	14	Pebble
2012	246	140	246.06	141.28	30	14	Broken Flake
2012	246	140	246.02	141.38	21	14	Pebble
2012	246	140	246.16	140.76	22	14	Amorphous Debris
2012	246	140	246.67	140.35	12	14	Amorphous Debris
2012	246	140	246.33	140.07	3	14	Pebble
2012	246	140	246.35	140.45	11	14	Amorphous Debris
2012	246	140	246.05	140.95	26	14	Pebble
2012	246	140	246.29	140.65	19	14	Pebble
2012	246	140	246.18	140.99	30	14	Pebble
2012	246	140	246.61	140.42	13	14	Amorphous Debris
2012	246	140	246.82	140.22	6	14	Debris
2012	246	140	246.64	140.64	20	14	Amorphous Debris
2012	246	140	246.44	140.61	18	14	Amorphous Debris
2012	246	140	246.04	140.38	7	14	Debris
2012	246	140	246.74	140.57	14	14	Flake
2012	246	140	246.99	140.72	24	14	Pebble
2012	246	140	246.04	140.55	15	14	Amorphous Debris
2012	246	140	246.04	140.02	1	14	Pebble
2012	246	140	246.23	140.99	28	14	Pebble
2012	246	140	246.35	140.91	25	14	Amorphous Debris
2012	246	140	246.39	140.03	2	14	Amorphous Debris
2012	246	140	246.32	140.29	5	14	Amorphous Debris
2012	246	140	246.89	140.38	8	14	Amorphous Debris
2012	246	140	246.25	140.63	17	14	Pebble
2012	246	140	246.34	140.52	16	14	Broken Flake
2012	246	140	246.86	140.65	21	14	Amorphous Debris
2012	246	140	246.54	140.295	4	14	Flake
2012	246	140	246.34	140.72	29	14	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2012	246	140	246.15	140.95	27	14	Pebble
2012	246	140	246.48	140.36	9	14	Pebble
2012	246	140	246.11	140.41	10	14	Flake
2012	246	140	246.33	140.71	23	14	Pebble
2012	246	140	247.43	141.58	5	15	Amorphous Debris
2012	246	140	247.73	141.46	6	15	Amorphous Debris
2012	246	140	247.26	141.97	4	15	Pebble
2012	246	140	247.84	141.89	7	15	Complete Flake
2012	246	140	247.94	141.16	8	15	Pebble
2012	246	140	247.26	141.3	3	15	Amorphous Debris
2012	246	140	247.03	141.54	1	15	Debris
2012	246	140	247.06	141.45	2	15	Amorphous Debris
2012	246	140	246.65	141.93	5	15	Amorphous Debris
2012	246	140	246.12	141.66	2	15	Amorphous Debris
2012	246	140	246.14	141.71	1	15	Pebble
2012	246	140	246.84	141.74	4	15	Debris
2012	246	140	246.64	141.81	3	15	Amorphous Debris
2012	246	140	247.23	140.48	2	16	Pebble
2012	246	140	247.16	140.9	3	16	Debris
2012	246	140	247.77	140.44	1	16	Debris
2012	246	140	247.11	140.94	4	16	Flake
2012	246	140	247.32	140.98	5	16	Pebble
2012	246	140	246.51	141.76	18	16	Amorphous Debris
2012	246	140	246.1	141.86	16	16	Pebble
2012	246	140	246.34	141.26	5	16	Pebble
2012	246	140	246.3	141.37	7	16	Amorphous Debris
2012	246	140	246.16	141.15	2	16	Amorphous Debris
2012	246	140	246.12	141.04	1	16	Amorphous Debris
2012	246	140	246.58	141.68	17	16	Broken Flake
2012	246	140	246.76	141.22	12	16	Pebble
2012	246	140	246.61	141.14	8	16	Debris
2012	246	140	246.95	141.27	13	16	Amorphous Debris
2012	246	140	246.3	141.12	3	16	Pebble
2012	246	140	246.97	141.56	15	16	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2012	246	140	246.92	141.31	14	16	Pebble
2012	246	140	246.36	141.25	6	16	Debris
2012	246	140	246.65	141.12	10	16	Amorphous Debris
2012	246	140	246.56	141.82	19	16	Pebble
2012	246	140	246.42	141.15	4	16	Debris
2012	246	140	246.76	141.07	11	16	Debris
2012	246	140	246.61	141.02	9	16	Pebble
2012	246	140	246.55	140.49	15	16	Flake
2012	246	140	246.43	140.59	13	16	Debris
2012	246	140	246.38	140.54	10	16	Amorphous Debris
2012	246	140	246.61	140.96	23	16	Amorphous Debris
2012	246	140	246.39	140.88	19	16	Amorphous Debris
2012	246	140	246.33	140.55	9	16	Flake
2012	246	140	246.29	140.09	1	16	Amorphous Debris
2012	246	140	246.62	140.67	29	16	Pebble
2012	246	140	246.61	140.66	17	16	Amorphous Debris
2012	246	140	246.31	140.67	1	16	Pebble
2012	246	140	246.82	140.65	27	16	Amorphous Debris
2012	246	140	246.04	140.55	7	16	Debris
2012	246	140	246.55	140.71	16	16	Amorphous Debris
2012	246	140	246.59	140.88	25	16	Pebble
2012	246	140	246.61	140.86	24	16	Debris
2012	246	140	246.5	140.24	2	16	Amorphous Debris
2012	246	140	246.15	140.15	6	16	Pebble
2012	246	140	246.36	140.62	12	16	Pebble
2012	246	140	246.03	140.46	4	16	Pebble
2012	246	140	246.45	140.41	3	16	Amorphous Debris
2012	246	140	246.76	140.69	26	16	Broken Flake
2012	246	140	246.63	140.73	18	16	Amorphous Debris
2012	246	140	246.14	140.66	14	16	Pebble
2012	246	140	246.58	140.96	22	16	Amorphous Debris
2012	246	140	246.5	140.99	21	16	Debris
2012	246	140	246.4	140.94	20	16	Amorphous Debris
2012	246	140	246.78	140.62	28	16	Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2012	246	140	246.04	140.63	8	16	Amorphous Debris
2012	246	140	246.13	140.51	5	16	Pebble
2012	246	142	246.51	142.05	2	14	Pebble
2012	246	142	246.3	142.3	9	14	Pebble
2012	246	142	246.4	142.7	26	14	Pebble
2012	246	142	246.89	142.29	15	14	Amorphous Debris
2012	246	142	246.59	142.28	11	14	Amorphous Debris
2012	246	142	246.46	142.2	7	14	Pebble
2012	246	142	246.31	142.72	25	14	Pebble
2012	246	142	246.91	142.22	14	14	Pebble
2012	246	142	246.44	142.3	10	14	Amorphous Debris
2012	246	142	246.36	142.41	18	14	Pebble
2012	246	142	246.63	142.9	27	14	Flake
2012	246	142	246.48	142.43	20	14	Amorphous Debris
2012	246	142	246.48	142.09	3	14	Pebble
2012	246	142	246.27	142.41	17	14	Pebble
2012	246	142			28	14	Amorphous Debris
2012	246	142	246.7	142.07	4	14	Pebble
2012	246	142	246.3	142.15	6	14	Pebble
2012	246	142	246.3	142.23	8	14	Pebble
2012	246	142	246.92	142.45	22	14	Pebble
2012	246	142	246.31	142.64	24	14	Amorphous Debris
2012	246	142	246.89	142.29	16	14	Pebble
2012	246	142	246.87	142.21	13	14	Amorphous Debris
2012	246	142	246.91	142	5	14	Pebble
2012	246	142	246.64	142.94	29	14	Amorphous Debris
2012	246	142	246.49	142	1	14	Pebble
2012	246	142	246.54	142.44	21	14	Amorphous Debris
2012	246	142	246.43	142.42	19	14	Amorphous Debris
2012	246	142	246.63	142.27	12	14	Pebble
2012	246	142	246.22	142.63	23	14	
2012	246	142	246.08	142.06	1	15	Pebble
2012	246	142	246.52	142.16	15	15	Debris
2012	246	142	246.93	142.27	19	15	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2012	246	142	246.58	142.22	16	15	Amorphous Debris
2012	246	142	246.58	142.22	17	15	Complete Flake
2012	246	142	246.63	142.78	6	15	Amorphous Debris
2012	246	142	246.28	142.28	3	15	Pebble
2012	246	142	246.59	142.04	14	15	Pebble
2012	246	142	246.41	142.07	12	15	Pebble
2012	246	142	246.66	142.36	13	15	Pebble
2012	246	142	246.14	142.93	2	15	Pebble
2012	246	142	246.82	142.89	7	15	Pebble
2012	246	142	246.74	142.7	9	15	Pebble
2012	246	142	246.42	142.8	4	15	Amorphous Debris
2012	246	142	246.89	142.34	11	15	Amorphous Debris
2012	246	142	246.76	142.15	21	15	Pebble
2012	246	142	246.81	142.16	20	15	Pebble
2012	246	142	246.63	142.26	18	15	Pebble
2012	246	142	246.73	142.11	23	15	Amorphous Debris
2012	246	142	246.92	142.87	8	15	Debris
2012	246	142	246.68	142.6	10	15	Pebble
2012	246	142	246.58	142.88	5	15	Pebble
2012	246	142	246.81	142.14	22	15	Amorphous Debris
2012	246	142	246.89	142.77	4	16	Amorphous Debris
2012	246	142	246.89	142.37	6	16	Pebble
2012	246	142	246.27	142.09	7	16	Pebble
2012	246	142	246.92	142.19	9	16	Amorphous Debris
2012	246	142	246.49	142.89	2	16	Amorphous Debris
2012	246	142	246.81	142.15	8	16	Flake Fragment
2012	246	142	246.37	142.97	1	16	Amorphous Debris
2012	246	142	246.8	142.58	5	16	Pebble
2012	246	142	246.57	142.84	3	16	Amorphous Debris
2012	246	142	246.31	142.81	1	17	Amorphous Debris
2012	246	142	246.72	142.02	5	17	Complete Flake
2012	246	142	246.73	142.66	9	17	Pebble
2012	246	142	246.76	142.49	12	17	Debris
2012	246	142	246.92	142.67	13	17	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2012	246	142	246.8	142.55	14	17	Debris
2012	246	142	246.65	142.51	16	17	Pebble
2012	246	142	246.83	142.55	17	17	Amorphous Debris
2012	246	142	246.57	142.12	4	17	Debris
2012	246	142	246.62	142.51	11	17	Amorphous Debris
2012	246	142	246.63	142.18	6	17	Amorphous Debris
2012	246	142	246.58	142.52	10	17	Amorphous Debris
2012	246	142	246.03	142.02	3	17	Amorphous Debris
2012	246	142	246.88	142.98	15	17	Debris
2012	246	142	246.13	142.32	2	17	Amorphous Debris
2012	246	142	246.84	142.26	7	17	Amorphous Debris
2012	246	142	246.55	142.64	8	17	Amorphous Debris
2012	248	140	248.2	141.5	1	18	Pebble
2012	248	140	248.51	141.98	8	18	Pebble
2012	248	140	248.6	141.44	9	18	Pebble
2012	248	140	248.83	141.08	14	18	Pebble
2012	248	140	248.5	141.86	7	18	Broken Flake
2012	248	140	248.52	141.65	6	18	Pebble
2012	248	140	248.81	141.47	13	18	Amorphous Debris
2012	248	140	248.43	141.49	4	18	Amorphous Debris
2012	248	140	248.63	141.42	10	18	Amorphous Debris
2012	248	140	248.36	141.75	15	18	Debris
2012	248	140	248.63	141.34	11	18	Debris
2012	248	140	248.48	141.59	5	18	Pebble
2012	248	140	248.74	141.26	12	18	Amorphous Debris
2012	248	140	248.28	141.46	2	18	Pebble
2012	248	140	248.35	141.74	3	18	Pebble
2012	248	140	248.25	141.57	4	19	Amorphous Debris
2012	248	140	248.74	141.7	15	19	Debris
2012	248	140	248.6	141.07	11	19	Amorphous Debris
2012	248	140	248.4	141.75	8	19	Pebble
2012	248	140	248.64	141.23	12	19	Amorphous Debris
2012	248	140	248.53	141.82	10	19	Pebble
2012	248	140	248.77	141.94	14	19	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2012	248	140	248.41	141.66	7	19	Amorphous Debris
2012	248	140	248.05	141.42	3	19	Pebble
2012	248	140	248.31	141.48	5	19	Amorphous Debris
2012	248	140	248.53	141.19	9	19	Pebble
2012	248	140	248.92	141.2	1	19	Debris
2012	248	140	248.09	141.17	2	19	Flake
2012	248	140	248.38	141.17	6	19	Amorphous Debris
2012	248	140	248.7	141.36	13	19	Amorphous Debris
2012	248	140	248.31	141.77	2	20	Amorphous Debris
2012	248	140	248.77	141.52	12	20	Flake Fragment
2012	248	140	248.89	141.12	16	20	Pebble
2012	248	140	248.9	141.07	17	20	Pebble
2012	248	140	248.09	141.53	1	20	Broken Flake
2012	248	140	248.37	141.18	5	20	Pebble
2012	248	140	248.57	141.4	9	20	Amorphous Debris
2012	248	140	248.73	141.31	10	20	Debris
2012	248	140	248.79	141.38	11	20	Pebble
2012	248	140	248.96	141.13	20	20	Pebble
2012	248	140	248.92	141.04	21	20	Debris
2012	248	140	248.9	141.83	14	20	Amorphous Debris
2012	248	140	248.9	141.17	15	20	Amorphous Debris
2012	248	140	248.55	141.12	6	20	Pebble
2012	248	140	248.17	141.96	19	20	Pebble
2012	248	140	248.6	141.15	7	20	Amorphous Debris
2012	248	140	248.3	141.99	3	20	Pebble
2012	248	140	248.88	141.82	13	20	Pebble
2012	248	140	248.41	141.92	4	20	Pebble
2012	248	140	248.67	141.15	8	20	Pebble
2012	248	140	248.89	141.05	18	20	Pebble
2012	248	140	248.44	141.16	8	21	Debris
2012	248	140	248.31	141.74	4	21	Debris
2012	248	140	248.55	141.45	17	21	Debris
2012	248	140	248.14	141.97	2	21	Amorphous Debris
2012	248	140	248.95	141.09	15	21	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2012	248	140	248.53	141.79	7	21	Pebble
2012	248	140	248.55	141.28	10	21	Amorphous Debris
2012	248	140	248.22	141.99	3	21	Flake
2012	248	140	248.68	141.03	12	21	Flake
2012	248	140	248.49	141.82	6	21	Pebble
2012	248	140	248.58	141.28	9	21	Pebble
2012	248	140	248.75	141	13	21	Pebble
2012	248	140	248.7	141.66	16	21	Debris
2012	248	140	248.89	141.1	14	21	Amorphous Debris
2012	248	140	248.65	141.1	18	21	Amorphous Debris
2012	248	140	248.05	141.83	1	21	Pebble
2012	248	140	248.58	141.07	11	21	Pebble
2012	248	140	248.4	141.85	5	21	Flake Fragment
2012	248	140	248.14	141.29	7	21F117	Amorphous Debris
2012	248	140	248.27	141.39	3	21F117	Pebble
2012	248	140	248.22	141.34	8	21F117	Pebble
2012	248	140	248.26	141.44	2	21F117	Pebble
2012	248	140	248.2	141.33	4	21F117	Pebble
2012	248	140	248.27	141.86	6	21F117	Pebble
2012	248	140			1	21F117	
2012	248	140	248.2	141.26	5	21F117	Pebble
2012	248	140	248.22	140.4	1	11	Pebble
2012	248	140	248.1	140.4	2	11	Broken Flake
2012	248	140	248.27	140.38	11	12	Amorphous Debris
2012	248	140	248.24	140.93	2	12	Amorphous Debris
2012	248	140	248.34	140.79	3	12	Amorphous Debris
2012	248	140	248.1	140.42	9	12	Pebble
2012	248	140	248.34	140.74	4	12	Broken Flake
2012	248	140	248.16	140.16	12	12	Pebble
2012	248	140	248.51	140.76	6	12	Amorphous Debris
2012	248	140	248.49	140.1	15	12	Pebble
2012	248	140	248.37	140.19	14	12	Amorphous Debris
2012	248	140	248.06	140.42	8	12	Pebble
2012	248	140	248.04	140.89	1	12	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2012	248	140	248.15	140.11	13	12	Pebble
2012	248	140	248.48	140.77	5	12	Debris
2012	248	140	248.12	140.4	10	12	Pebble
2012	248	140	248.57	140.71	7	12	Debris
2012	248	140	248.19	140.93	1	13	Pebble
2012	248	140	248.91	140.79	2	13	Pebble
2012	248	140	248.47	140.55	4	13	Flake
2012	248	140	248.13	140.25	6	13	Amorphous Debris
2012	248	140	248.23	140.1	7	13	Pebble
2012	248	140	248.57	140.1	9	13	Debris
2012	248	140	248.12	140.48	3	13	Pebble
2012	248	140	248.94	140.31	10	13	Amorphous Debris
2012	248	140	248.59	140.16	8	13	Pebble
2012	248	140	248.52	140.5	5	13	Pebble
2012	248	140	248.61	140.88	2	14	Pebble
2012	248	140	248.15	140.73	3	14	Pebble
2012	248	140	248.24	140.68	4	14	Debris
2012	248	140	248.63	140.71	5	14	Amorphous Debris
2012	248	140	248.93	140.58	6	14	Complete Flake
2012	248	140	248.94	140.55	7	14	Debris
2012	248	140	248.78	140.51	8	14	Pebble
2012	248	140	248.22	140.23	11	14	Pebble
2012	248	140	248.42	140.29	12	14	Debris
2012	248	140	248.17	140.22	14	14	Debris
2012	248	140	248.15	140.28	10	14	Pebble
2012	248	140	248.45	140.2	13	14	Complete Flake
2012	248	140	248.07	140.91	1	14	Pebble
2012	248	140	248.89	140.4	9	14	Complete Flake
2012	248	140	248.83	140.86	4	15	Debris
2012	248	140	248.93	140.9	6	15	Amorphous Debris
2012	248	140	248.3	140.7	8	15	Amorphous Debris
2012	248	140	248.4	140.59	9	15	Pebble
2012	248	140	248.1	140.41	12	15	Pebble
2012	248	140	248.28	140.14	16	15	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2012	248	140	248.75	140.3	13	15	Debris
2012	248	140	248.04	140.2	14	15	Complete Flake
2012	248	140	248.37	140.94	2	15	Amorphous Debris
2012	248	140	248.02	140.76	7	15	Debris
2012	248	140	248.37	140.99	1	15	Debris
2012	248	140	248.83	140.85	5	15	Pebble
2012	248	140	248.58	140.8	3	15	Pebble
2012	248	140	248.28	140.22	15	15	Pebble
2012	248	140	248.2	140.46	11	15	Broken Flake
2012	248	140	248.06	140.5	10	15	Pebble
2012	248	140	248.87	140.54	7	16	Pebble
2012	248	140	248.2	140.55	10	16	Pebble
2012	248	140	248.13	140.44	14	16	Pebble
2012	248	140	248.05	140.07	21	16	Pebble
2012	248	140	248.33	140.55	9	16	Pebble
2012	248	140	248.12	140.03	22	16	Pebble
2012	248	140	248.91	140.39	16	16	Pebble
2012	248	140	248.82	140.62	6	16	Flake
2012	248	140	248.12	140.2	20	16	Pebble
2012	248	140	248.67	140.85	4	16	Flake
2012	248	140	248	140.53	12	16	Amorphous Debris
2012	248	140	248.12	140.81	3	16	Pebble
2012	248	140	248.63	140.7	5	16	Debris
2012	248	140	248.48	140.57	8	16	Amorphous Debris
2012	248	140	248.12	140.95	2	16	Amorphous Debris
2012	248	140	248.03	140.59	11	16	Amorphous Debris
2012	248	140	248.19	140.19	19	16	Debris
2012	248	140	248.43	140.25	17	16	Debris
2012	248	140	248.34	140.22	18	16	Debris
2012	248	140	248.13	140.51	13	16	Pebble
2012	248	140	248.35	140	23	16	Debris
2012	248	140	248.18	140.32	15	16	Debris
2012	248	140	248.34	140.71	1	16	Debris
2012	248	140	248.47	140.75	13	17	Pebble

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2012	248	140	248.11	140.58	8	17	Amorphous Debris
2012	248	140	248.41	140.06	36	17	Pebble
2012	248	140	248.77	140.67	17	17	Pebble
2012	248	140	248.31	140.12	37	17	Pebble
2012	248	140	248.49	140.3	29	17	Amorphous Debris
2012	248	140	248.72	140.45	31	17	Amorphous Debris
2012	248	140	248.8	140.52	32	17	Amorphous Debris
2012	248	140	248.83	140.39	33	17	Amorphous Debris
2012	248	140	248.88	140.47	34	17	Amorphous Debris
2012	248	140	248.87	140.2	35	17	Debris
2012	248	140	248.51	140.71	12	17	Pebble
2012	248	140	248.76	140.81	2	17	Pebble
2012	248	140	248.01	140.49	21	17	Flake
2012	248	140	248.25	140.62	7	17	Pebble
2012	248	140	248.88	140.61	19	17	Pebble
2012	248	140	248.47	140.32	28	17	Pebble
2012	248	140	248.91	140.63	20	17	Pebble
2012	248	140	248.56	140.57	16	17	Pebble
2012	248	140	248.8	140.44	23	17	Pebble
2012	248	140	248.6	140.44	22	17	Pebble
2012	248	140	248.81	140.64	18	17	Pebble
2012	248	140	248.11	140.4	24	17	Amorphous Debris
2012	248	140	248.43	140.67	10	17	Debris
2012	248	140	248.39	140.6	9	17	Amorphous Debris
2012	248	140	248.62	140.3	30	17	Pebble
2012	248	140	248.22	140.29	26	17	Debris
2012	248	140	248.68	140.92	1	17	Amorphous Debris
2012	248	140	248.53	140.78	14	17	Amorphous Debris
2012	248	140	248.45	140.71	11	17	Amorphous Debris
2012	248	140	248.21	140.68	5	17	Amorphous Debris
2012	248	140	248.33	140.3	27	17	Amorphous Debris
2012	248	140	248.24	140.69	4	17	Amorphous Debris
2012	248	140	248.22	140.47	25	17	Pebble
2012	248	140	248.18	140.79	3	17	Amorphous Debris

Table A29-1continued

Year	N	E	N	E	Art	Level	Classification
2012	248	140	248.12	139.99	38	17	Debris
2012	248	140	248.24	140.65	6	17	Flake
2012	248	140	248.42	140.66	15	17	Pebble



Figure A29-1
Complete Clovis flakes (at top) and broken flakes (bottom row) from Screen N242 E138 98.20-98.10m

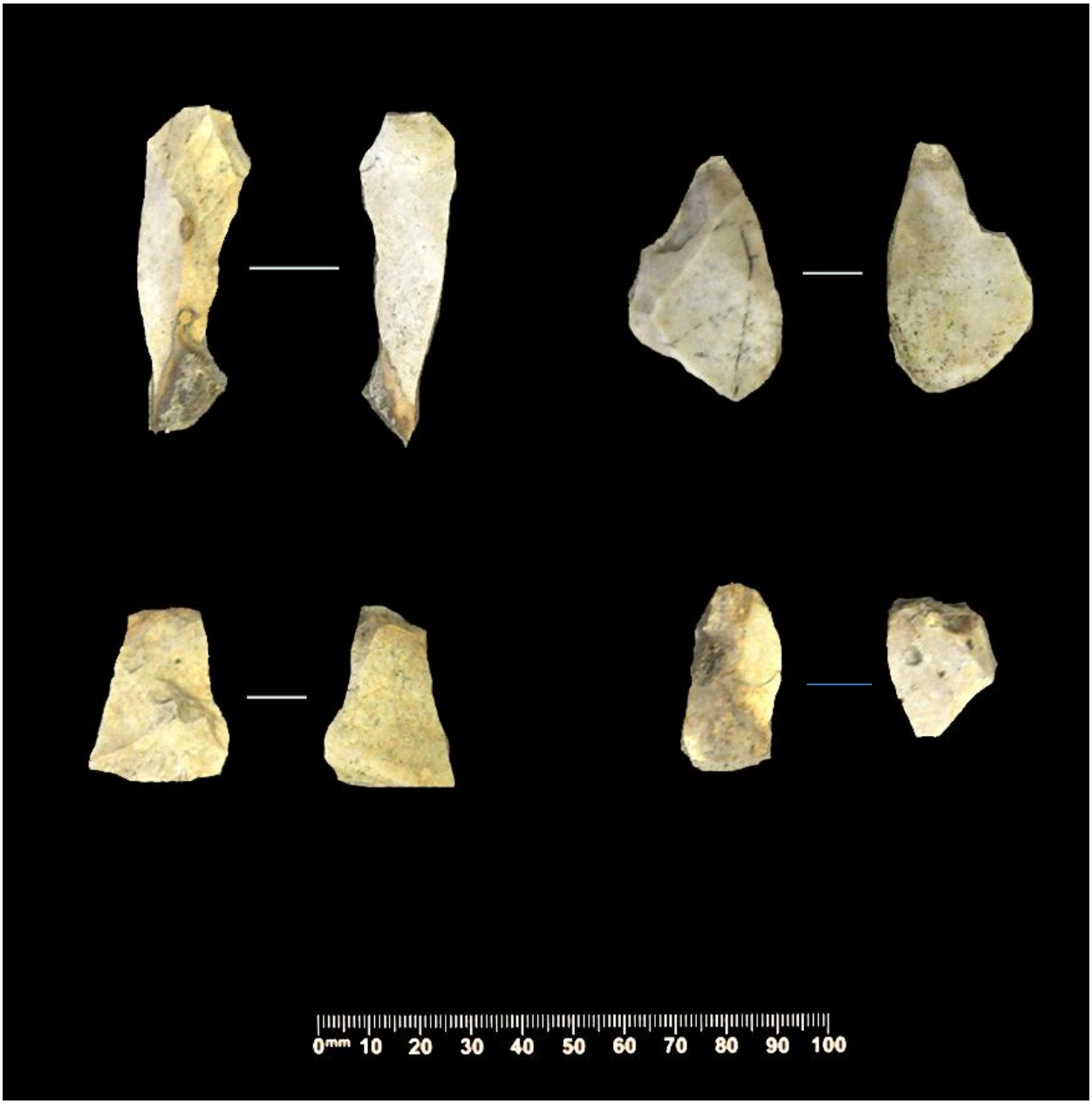


Figure A29-2
Complete Clovis flakes from Screen N242 E138 98.20-98.10m

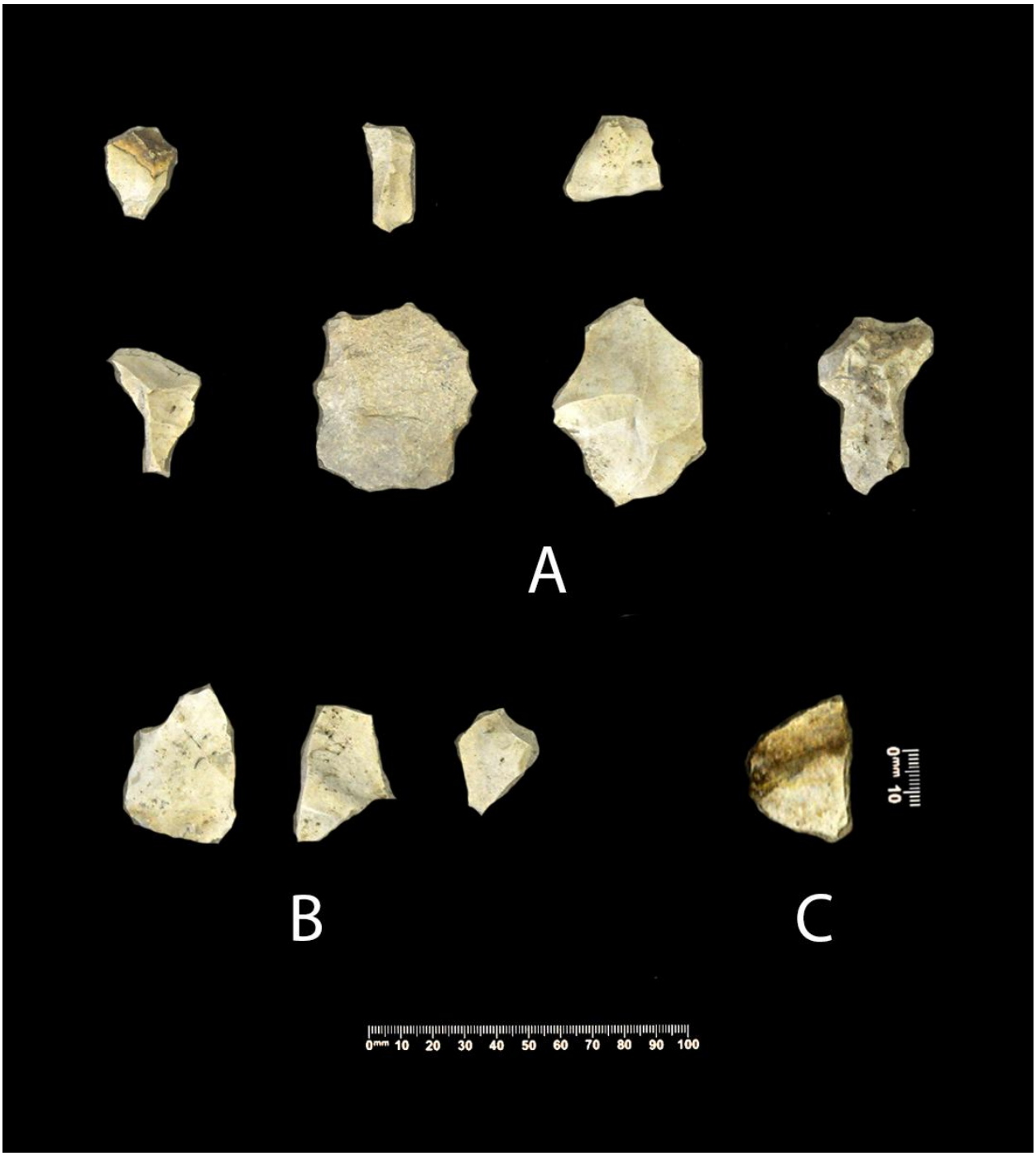


Figure A29-3
A; Clovis Broken flakes and flake fragments, B; Clovis debris, C; Clovis bend break formed from a snapped flakes possibly the result of trampling. All artifacts from unit N242 E130

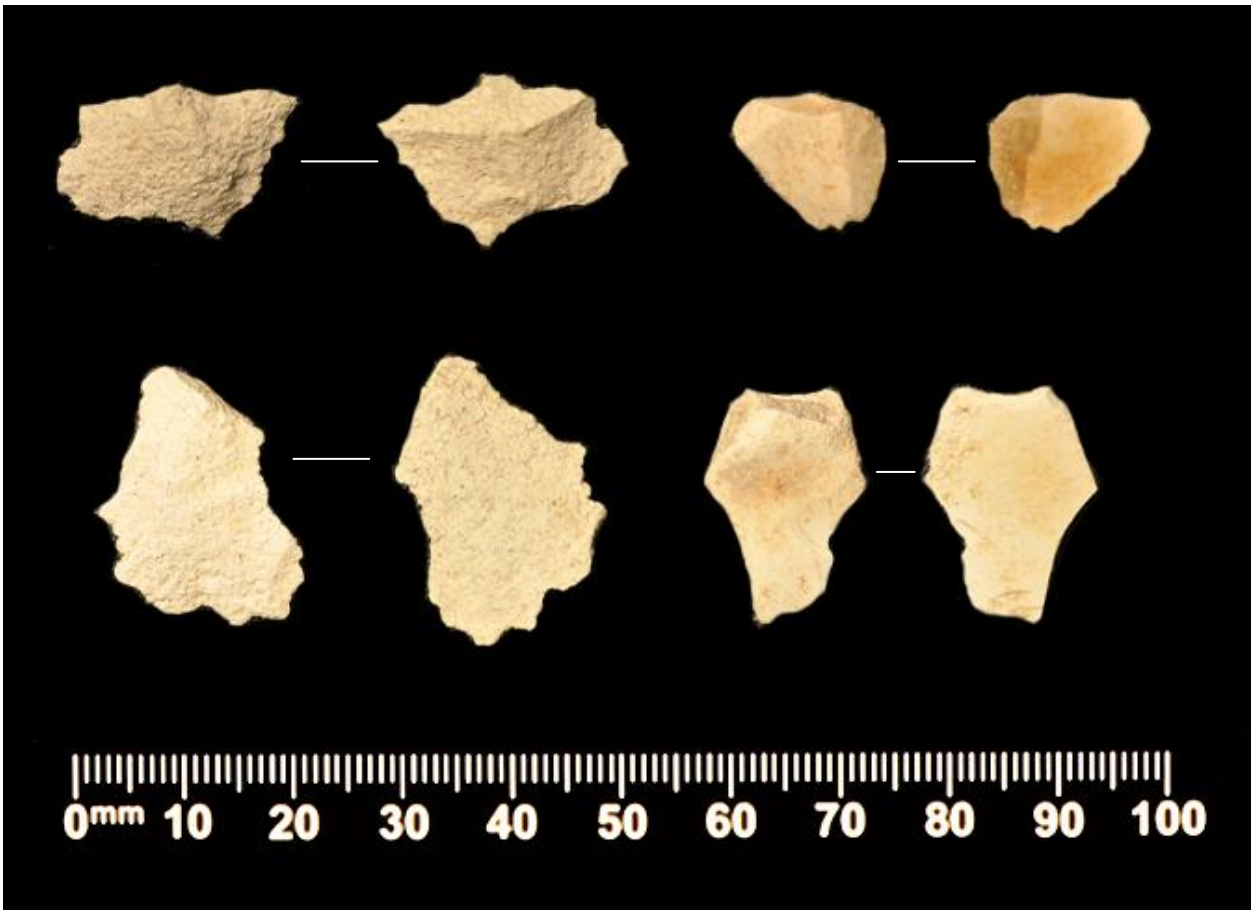


Figure A29-4
Complete flakes from the Pleistocene Sands. Artifacts from unit N244 E130 97.00-97.10m. Complete flakes have a striking platform, intact margins, an intact termination and a bulb of force.



Figure A29-5

Examples of weathered broken chert flakes and flake fragments from the Pleistocene Sands at the Topper Site (38AL23) Items from unit N242 E130 97.00m.



Figure A29-6
Flake fragments (top two rows) and broken flakes (Bottom row) from the Pleistocene Sands at The Topper Site (38AL23). Artifacts from unit N244 E130 97.0-97.10m.

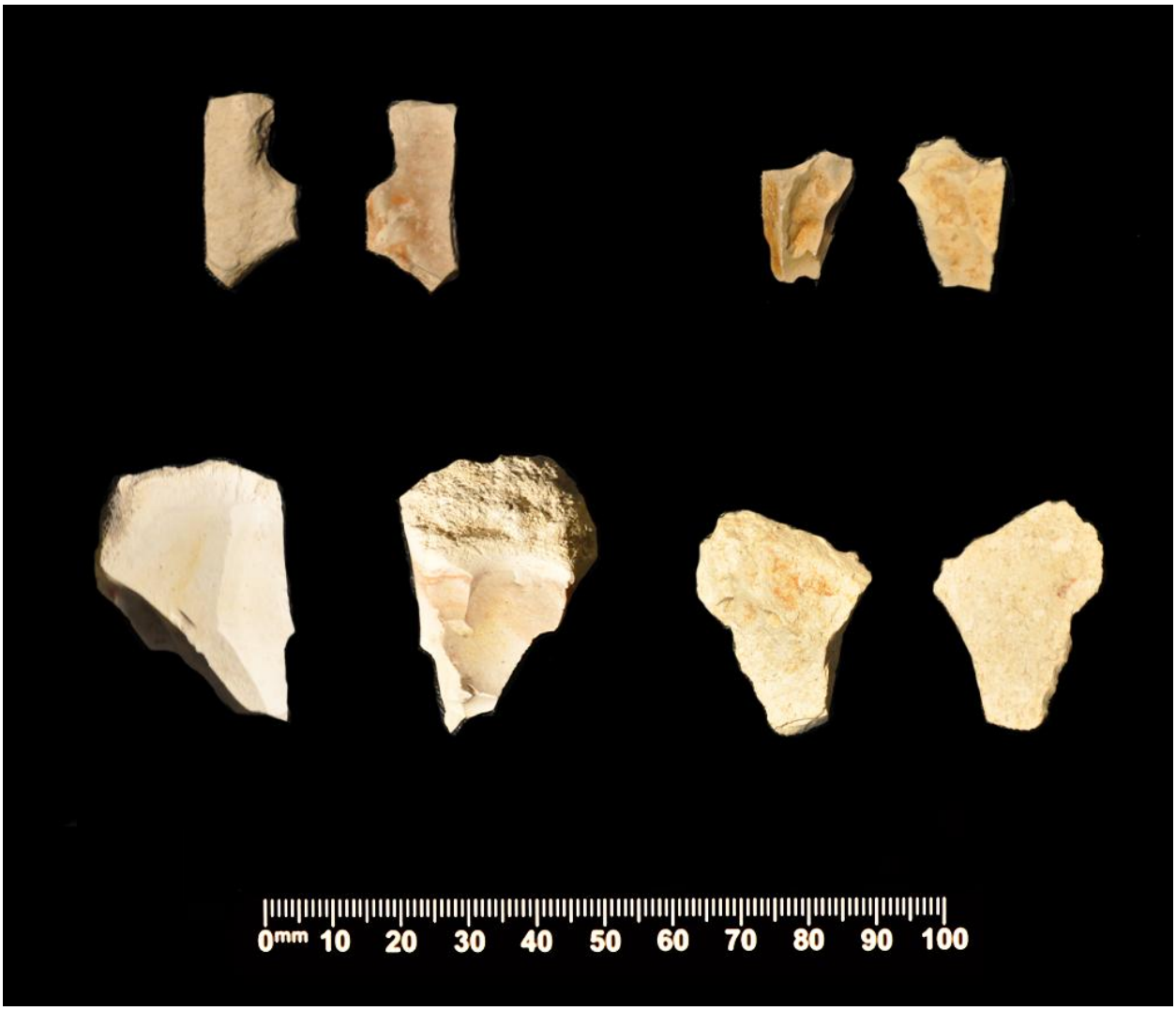


Figure A29-7
Debris from the Pleistocene Sands at the Topper Site (38AL23). Artifacts from unit N244 E130 97.00-97.10m.

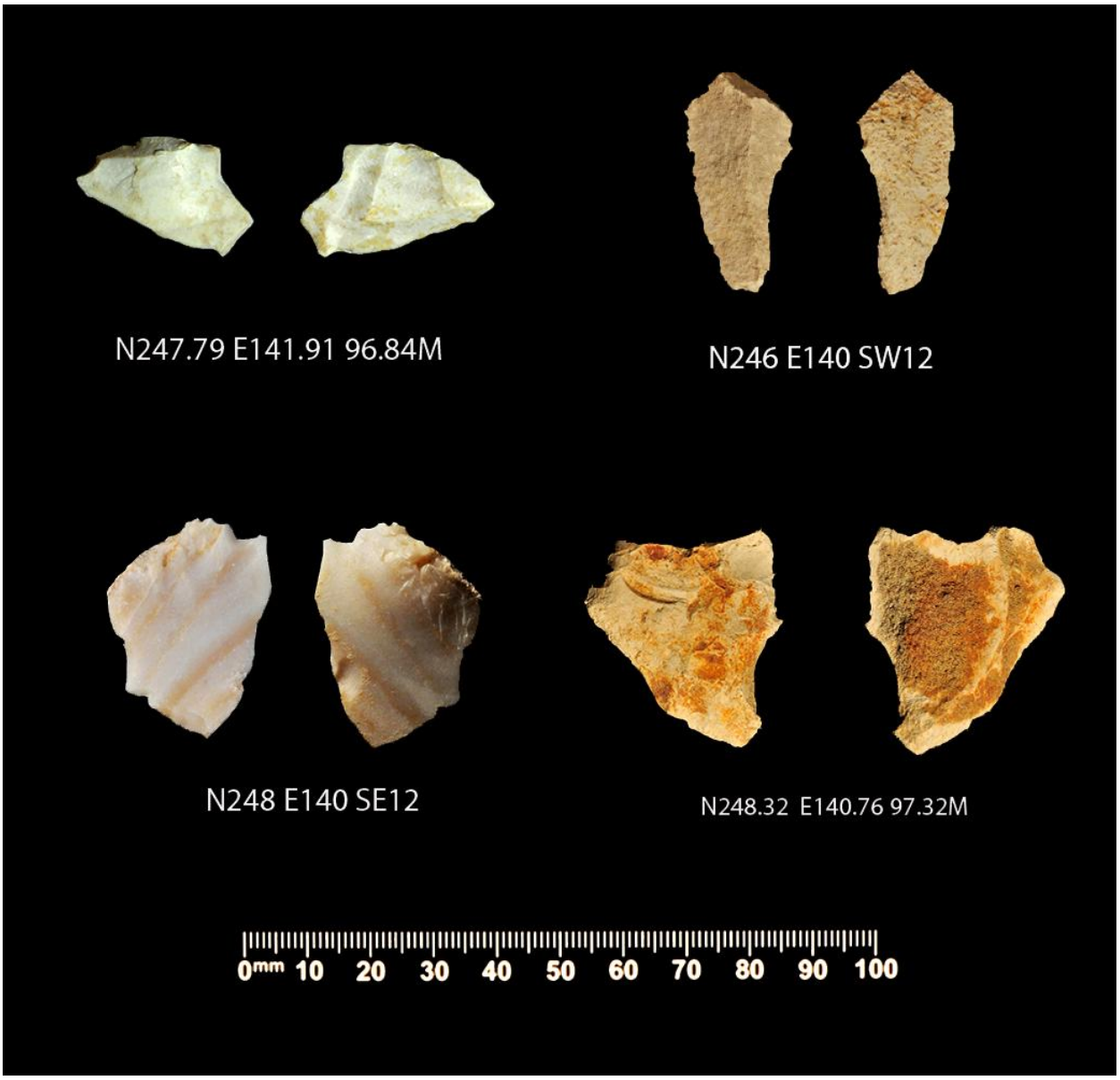


Figure A29-8
Complete Flakes from the Pleistocene Terrace at the Topper Site (38AL23).



Figure A29-9
Broken flakes and Flake fragments from the Pleistocene Terrace at the Topper Site (38AL23). Broken flake at top right does not have a well-defined bulb of force but does exhibit compression rings on exterior surface removal scars.

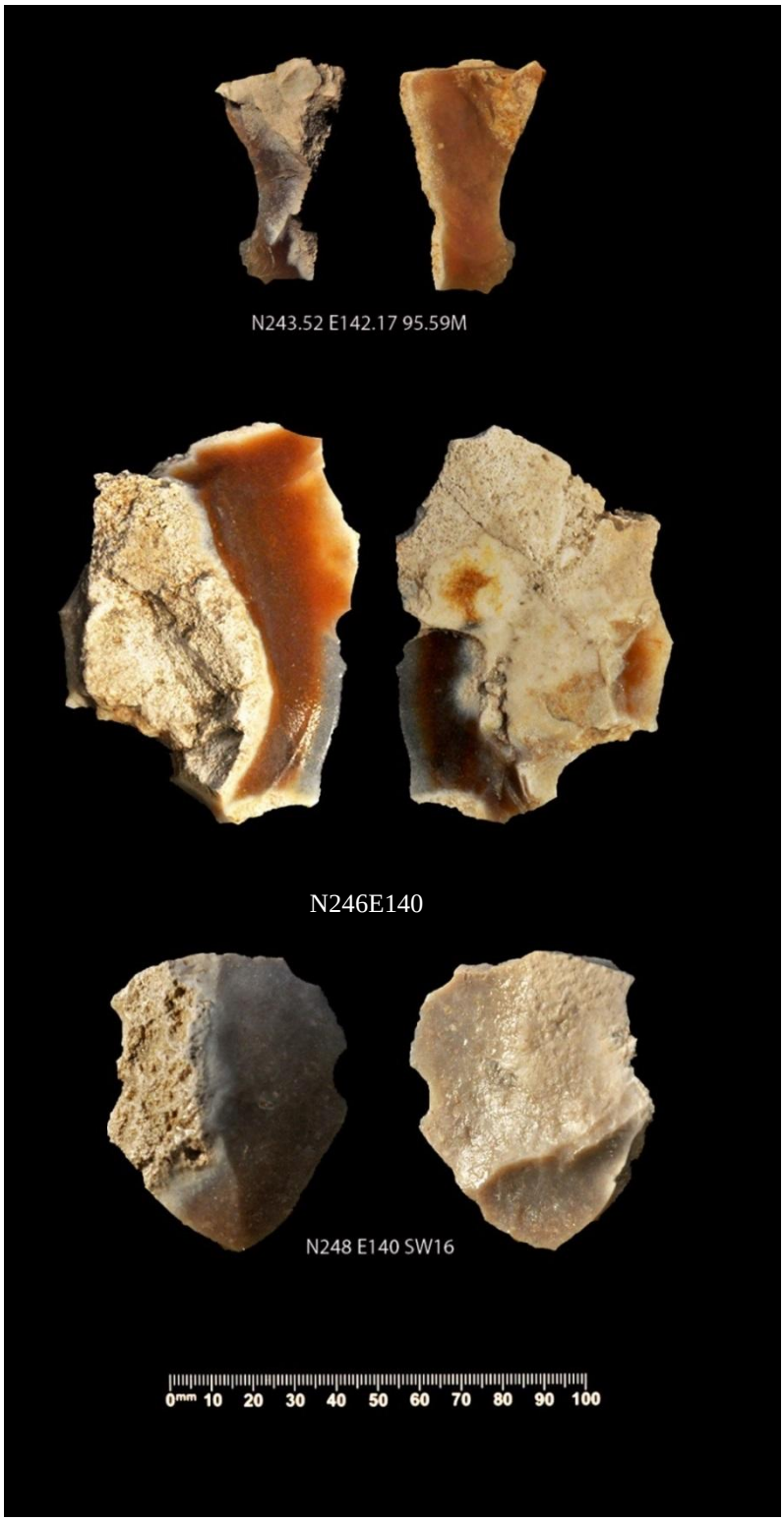


Figure A29-10
Debris from the Pleistocene Terrace.



Figure A29-11
Amorphous debris from the Pleistocene Terrace

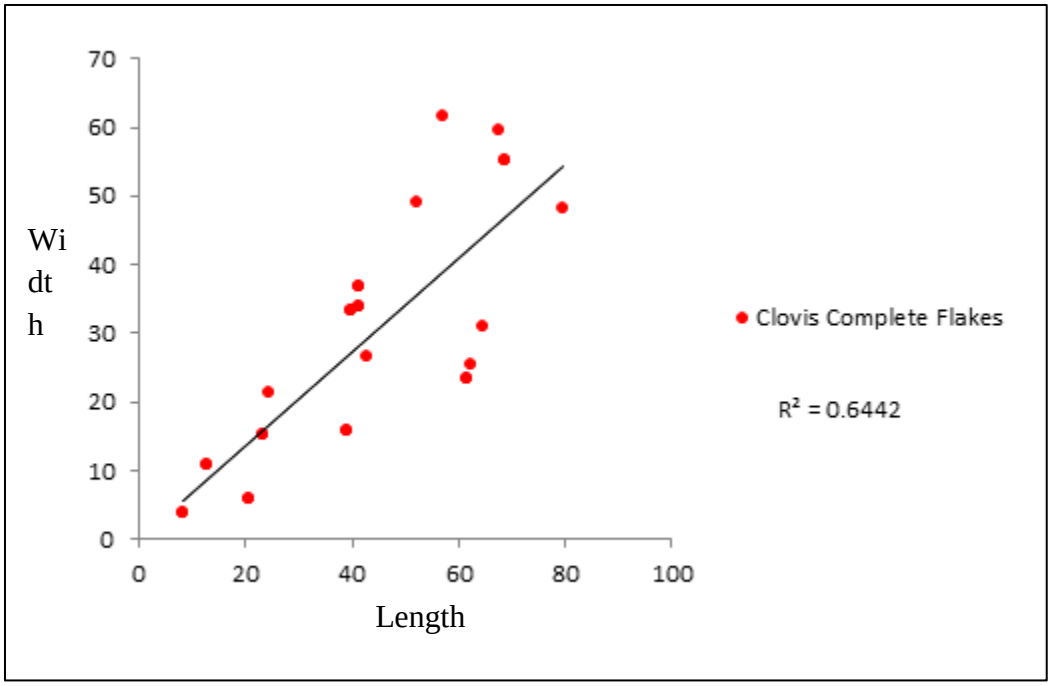


Figure A29-12
Length regressed against width for mapped complete Clovis flakes from 16 2m x2m units.

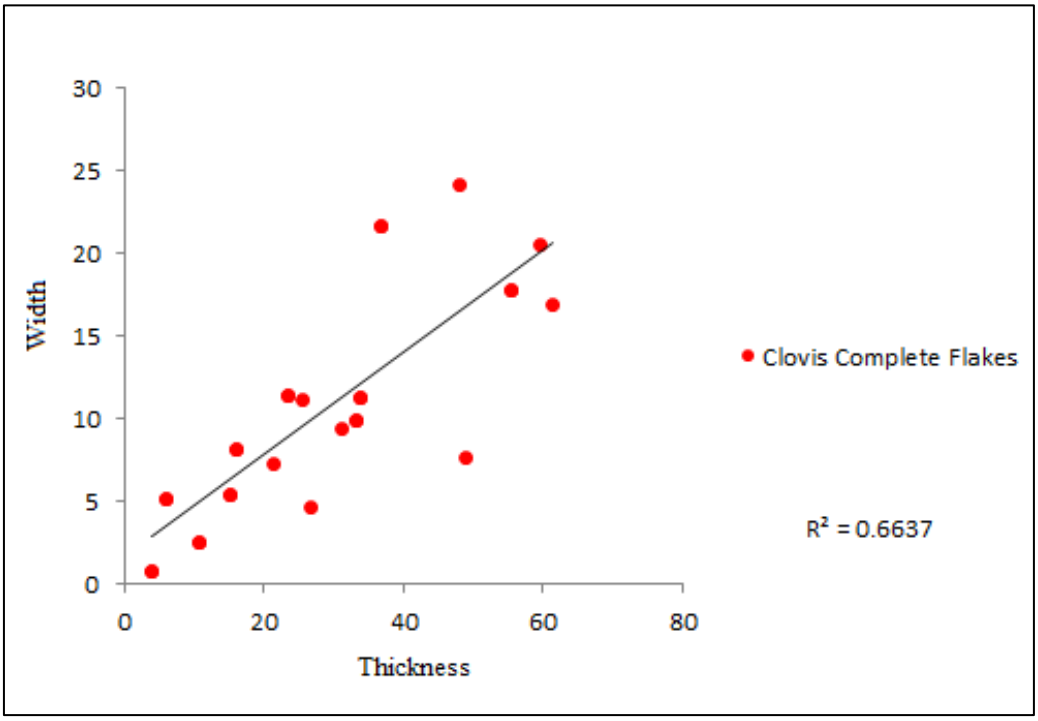


Figure A29-13
Width regressed against thickness for mapped complete Clovis flakes from 16 2m x2m units

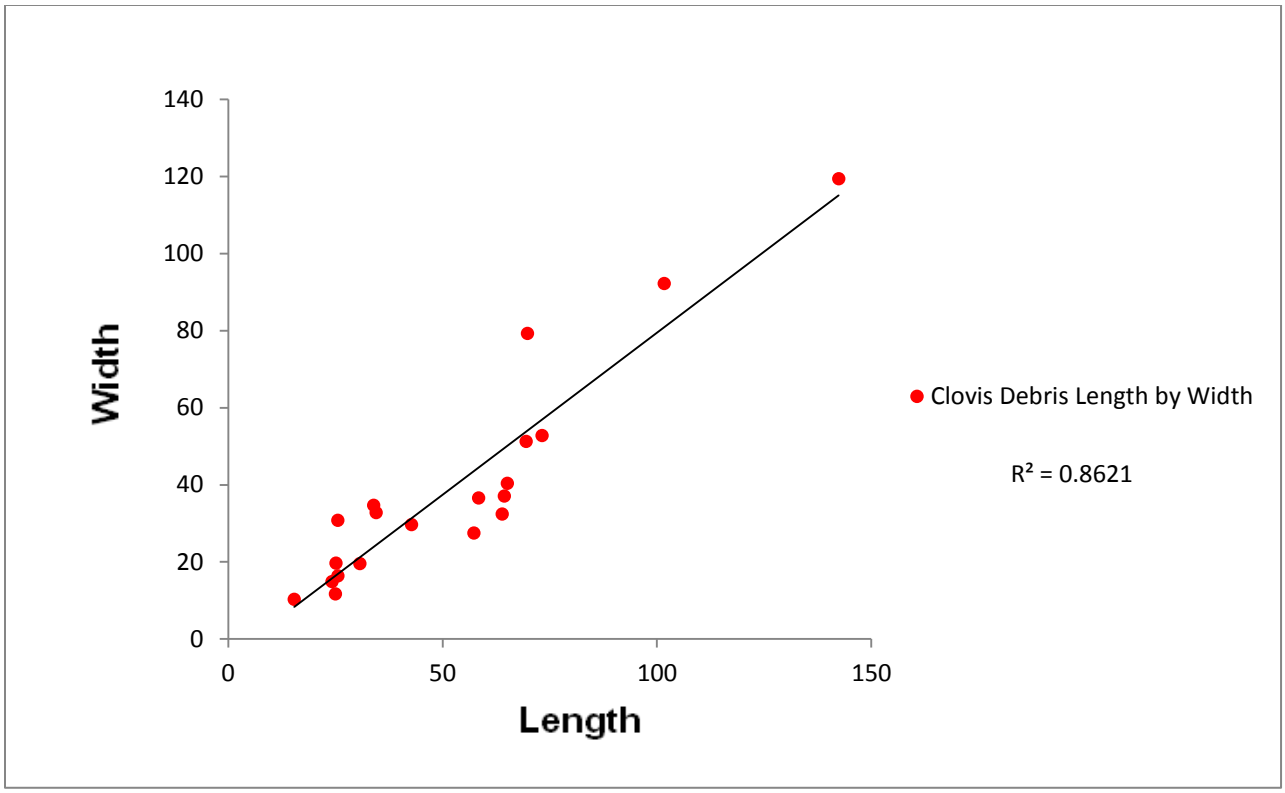


Figure A29-14
Debris Length regressed against width for Clovis Debris interpretation free category.

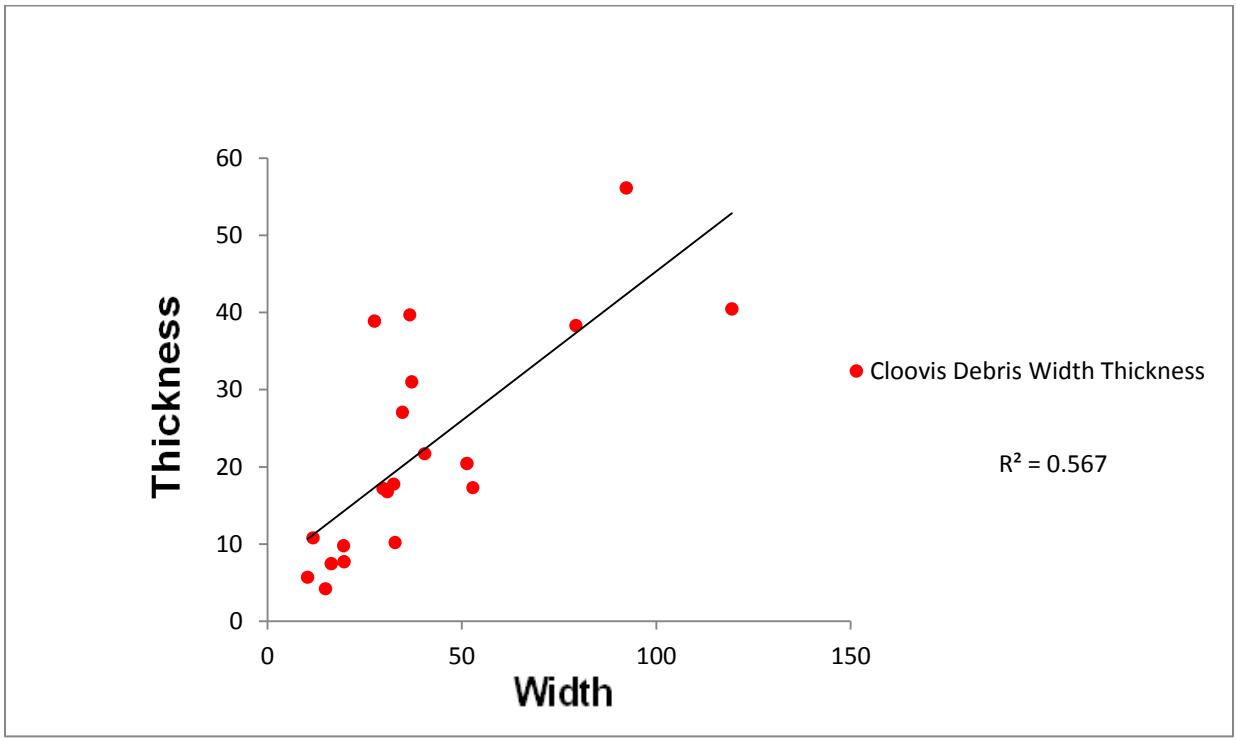


Figure 6-15
Debris Width regressed against Thickness for Clovis Debris interpretation free category.

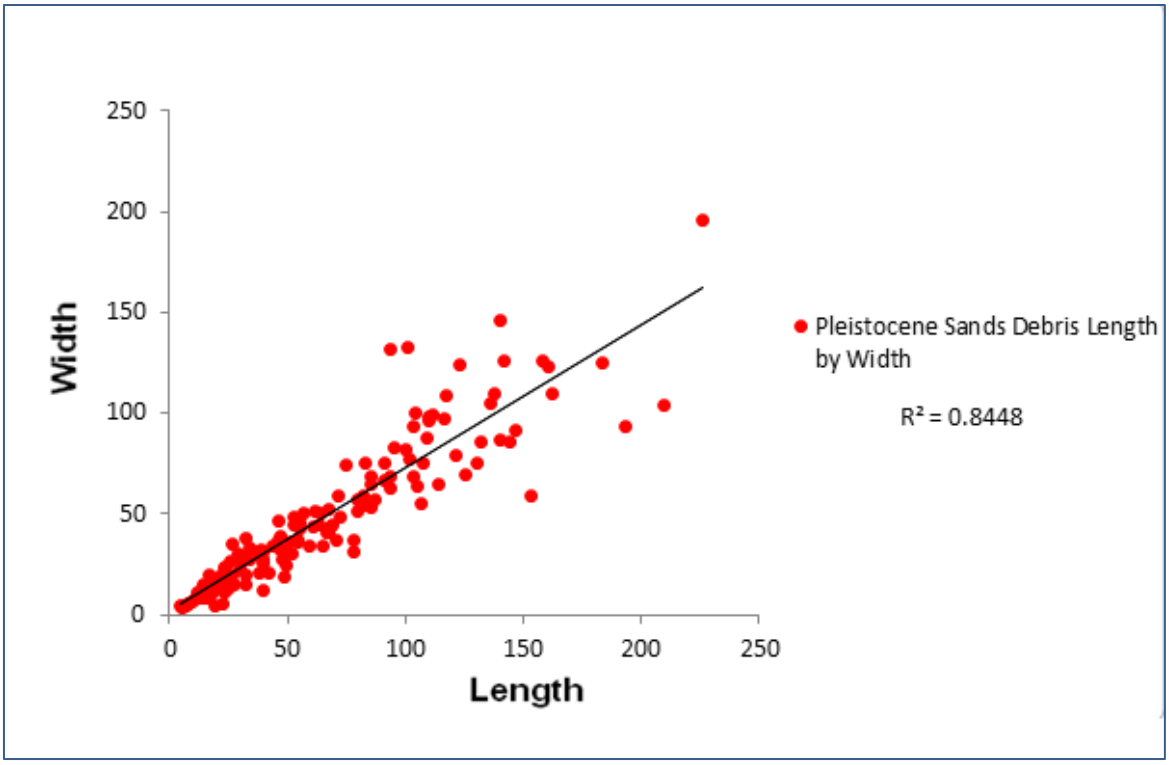


Figure A29-16

Debris Length regressed against Width for Pleistocene Sands Debris interpretation free category

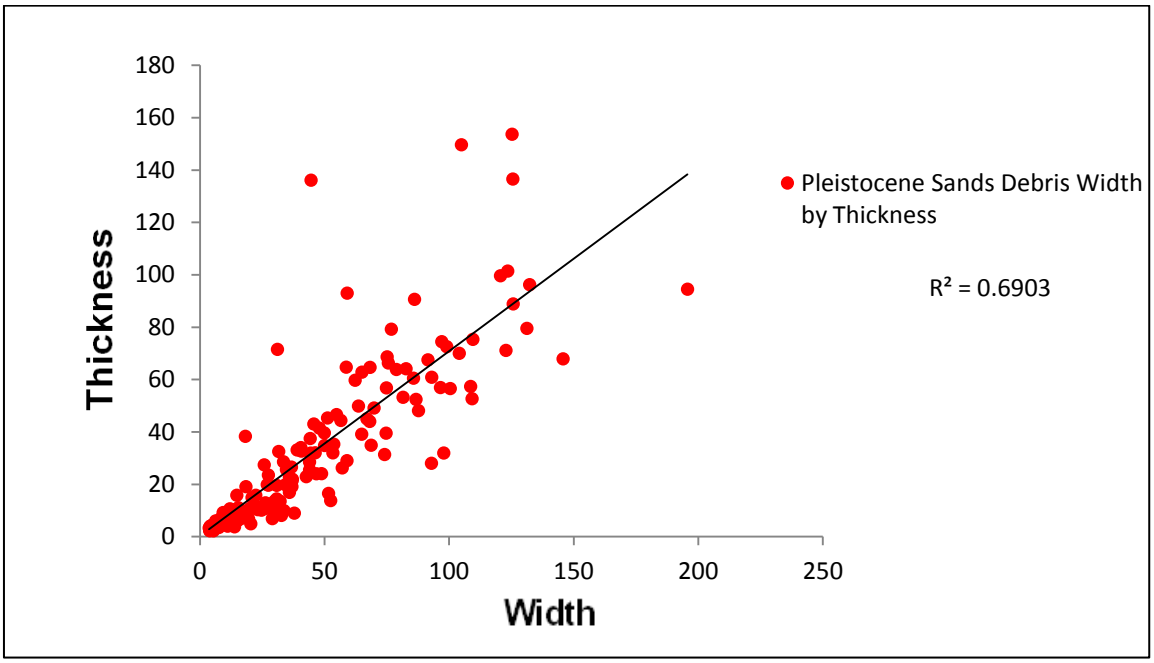


Figure A29-17

Debris Width regressed against Thickness for Pleistocene Sands Debris interpretation free category.

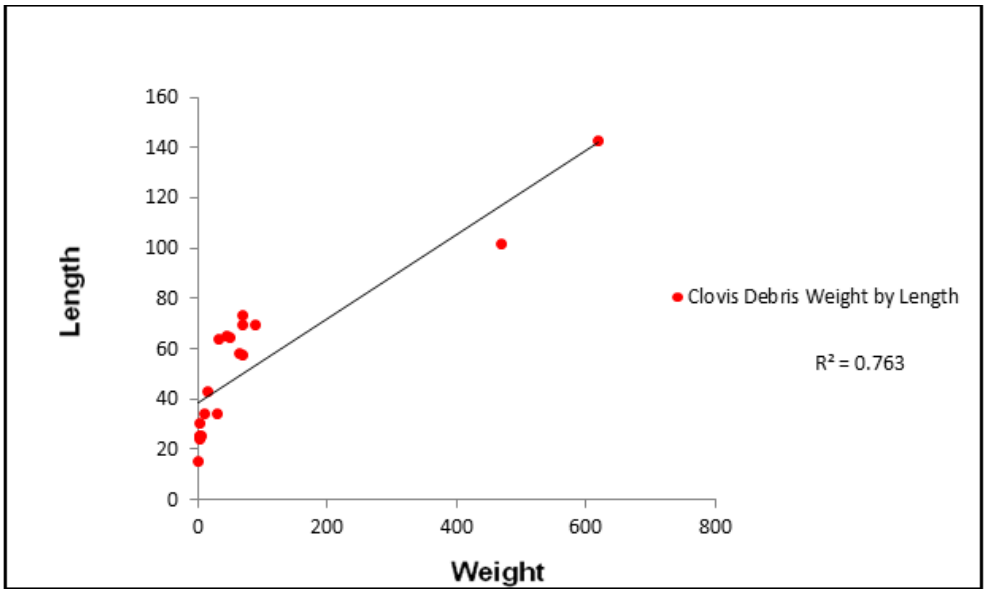


Figure A29-18
Debris Length regressed against Weight for Clovis Debris interpretation free category.

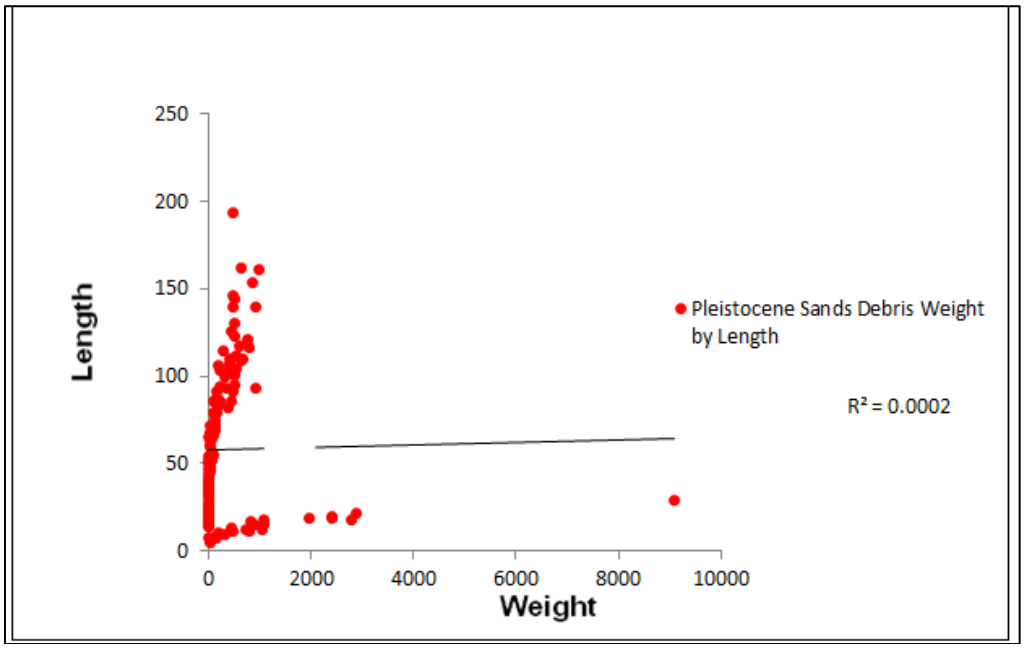


Figure A29-19
Debris Length regressed against Weight for Pleistocene Sands Debris interpretation free category.

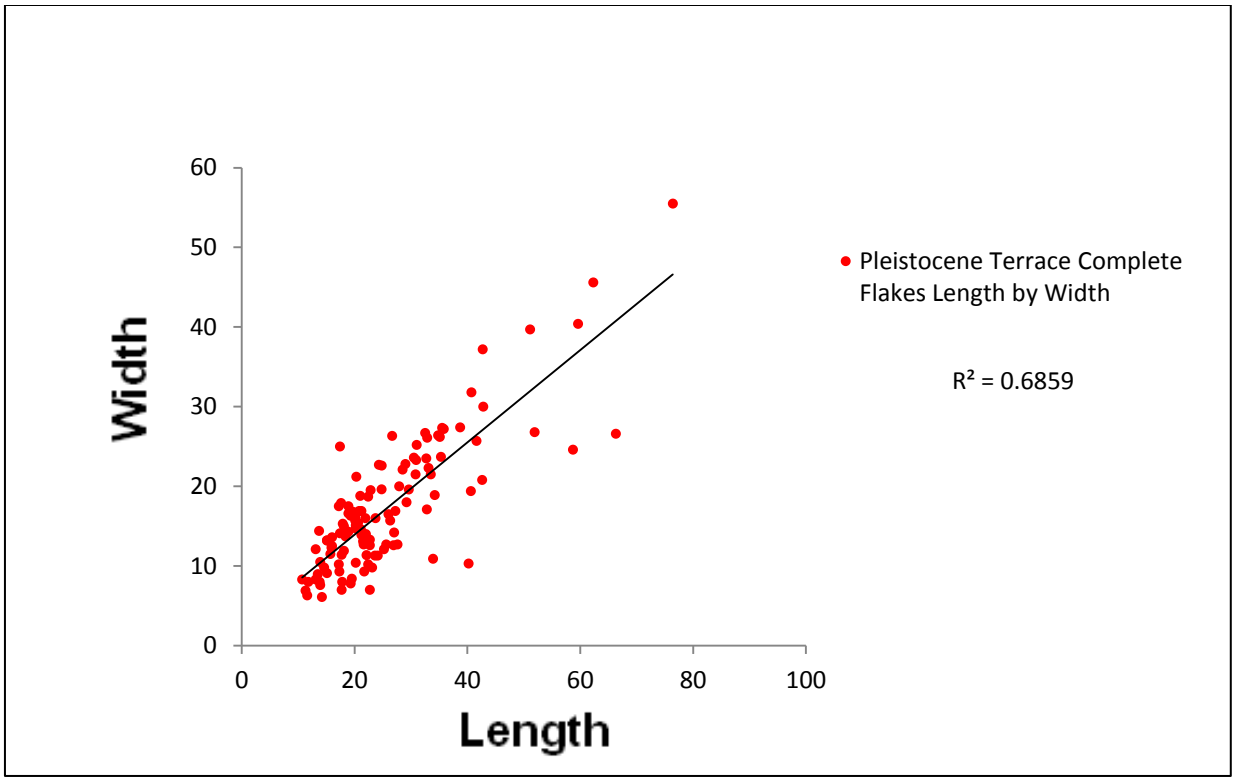


Figure A29-20
Length to Width ratios for complete mapped Pleistocene Terrace flakes from 12 1x1m units.

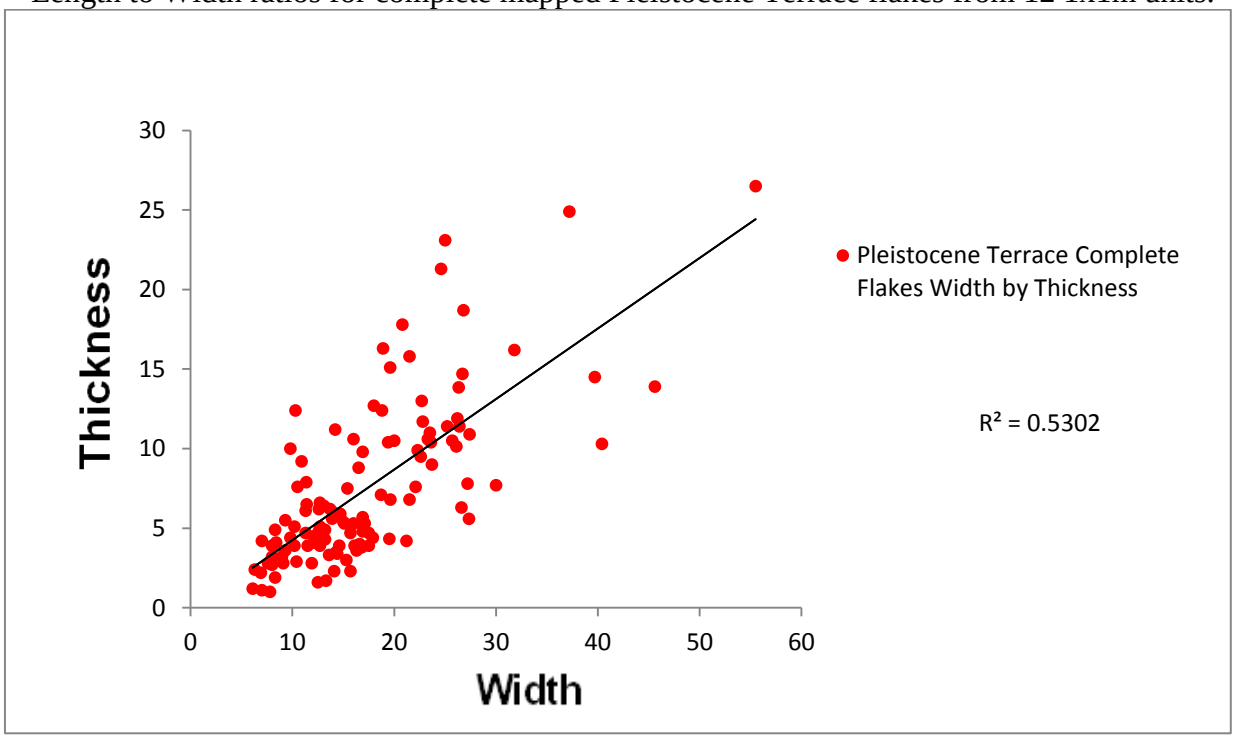


Figure 29-21
Width to Thickness ratios for complete mapped Pleistocene Terrace flakes from 12 1x1m units.

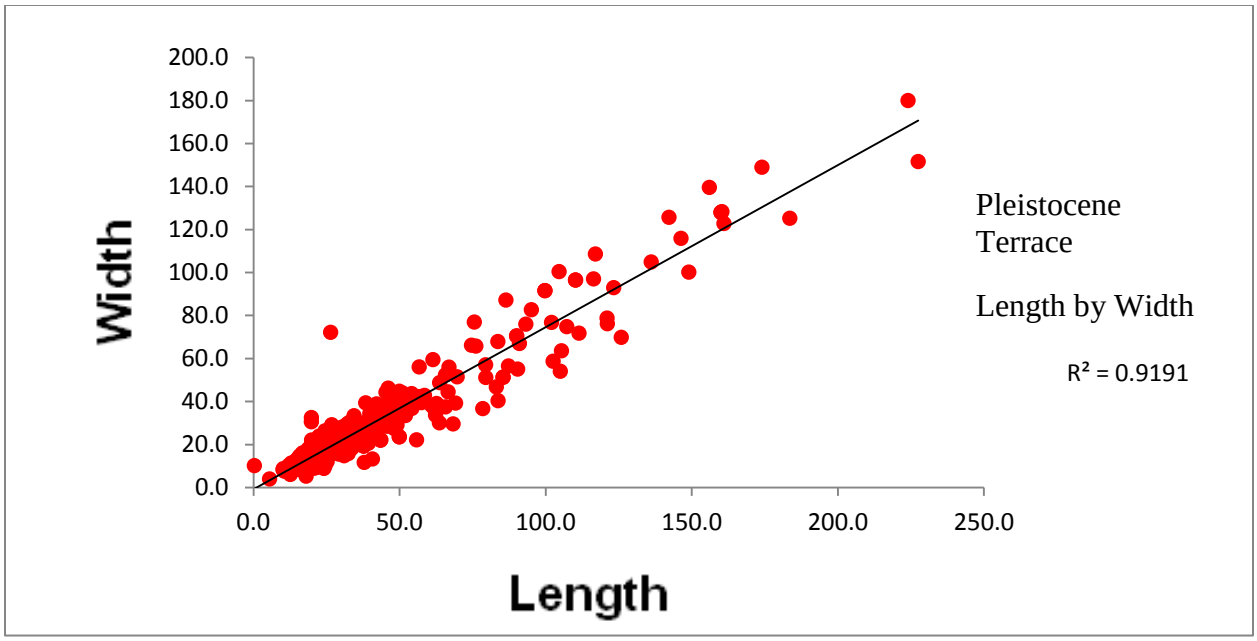


Figure A29-22
Length to Width ratios for complete mapped Pleistocene Terrace Debris from 12 1x1m units.

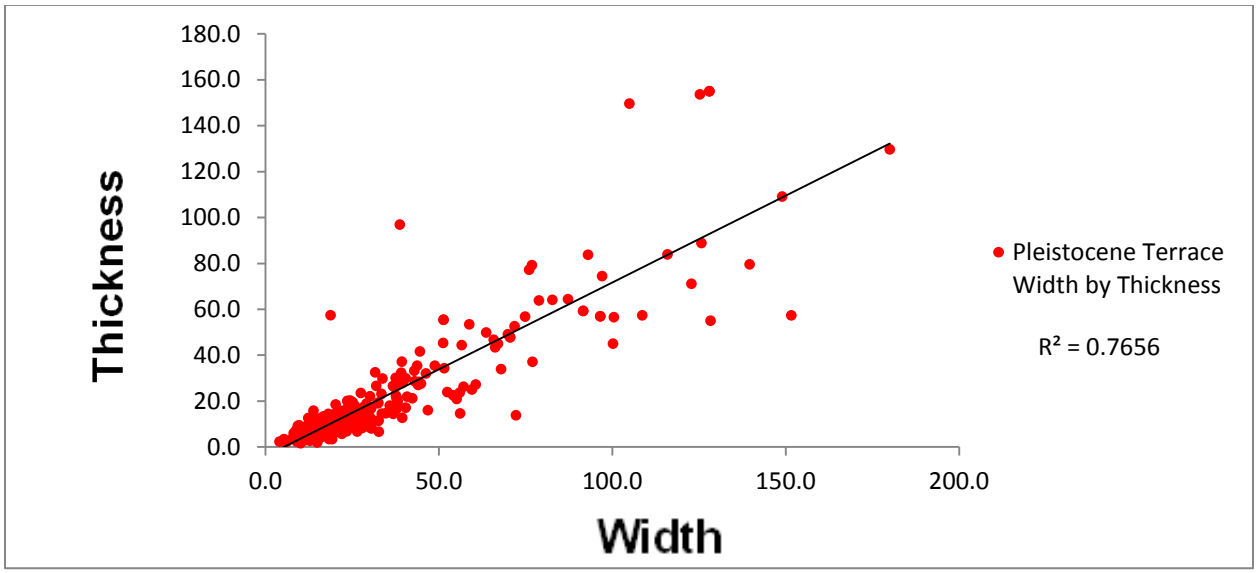


Figure A29-23
Width to Thickness ratios for complete mapped Pleistocene Terrace Debris from 12 1x1m units.

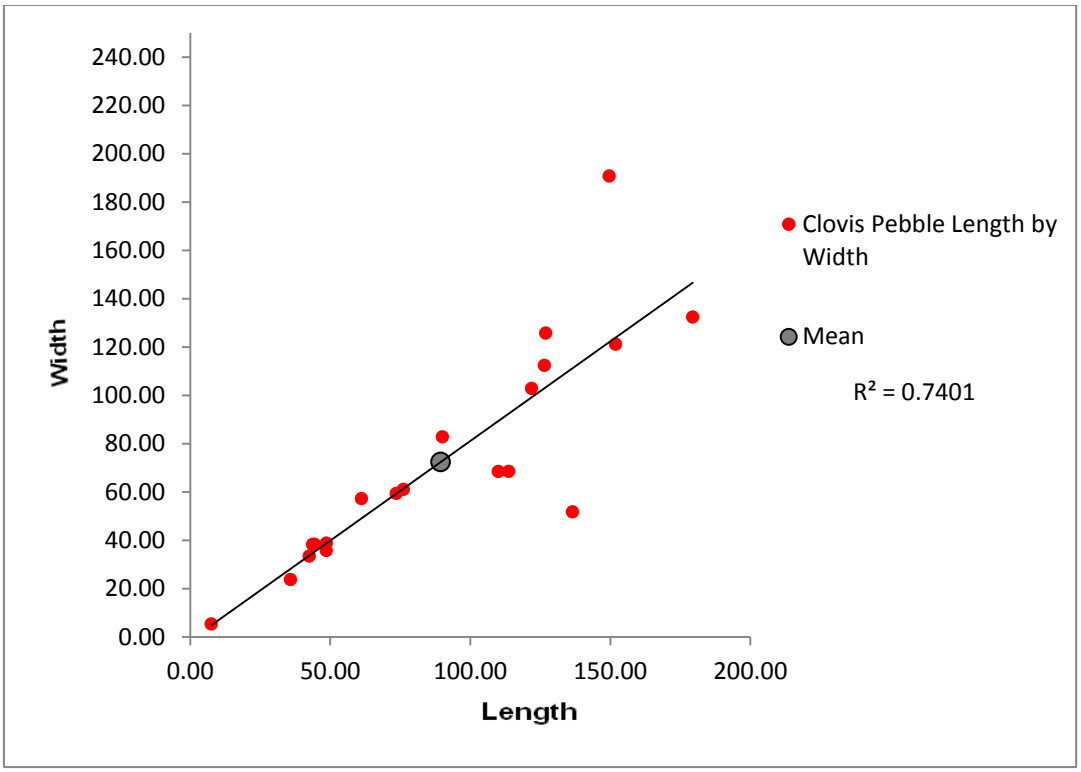


Figure A29-24
Length to Width ratios for complete mapped Clovis Pebbles from 162x2m units.

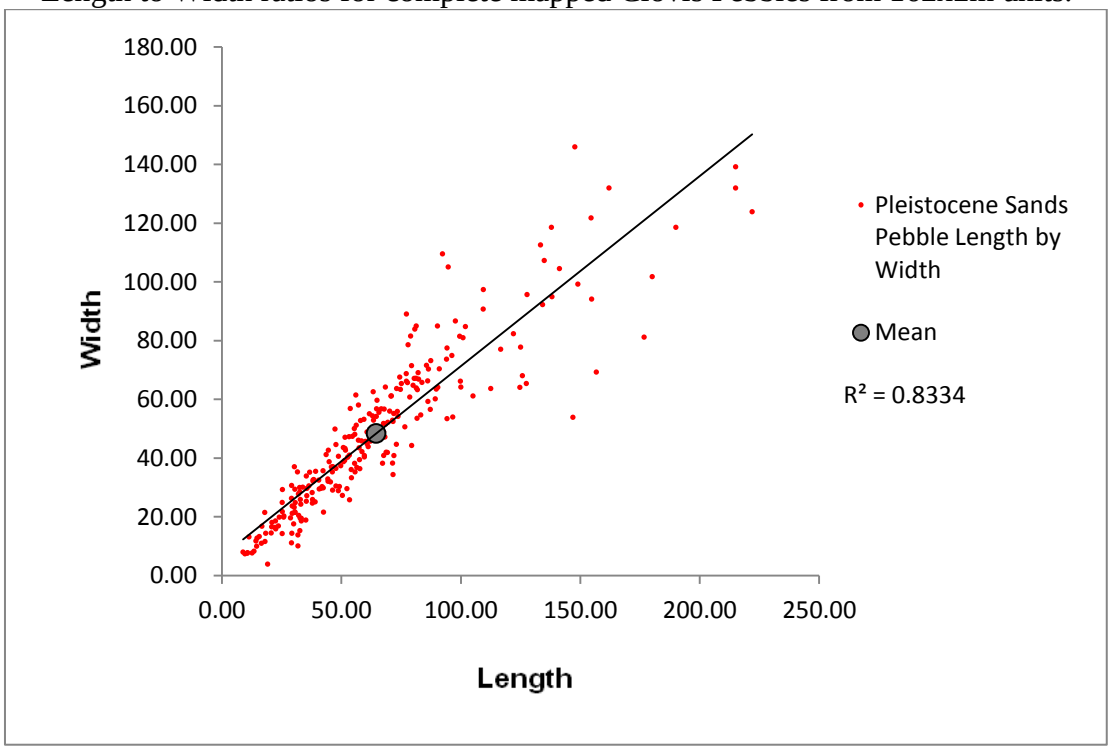


Figure A29-25
Length to Width ratios for complete mapped Pleistocene Sands Pebbles from 162x2m units.

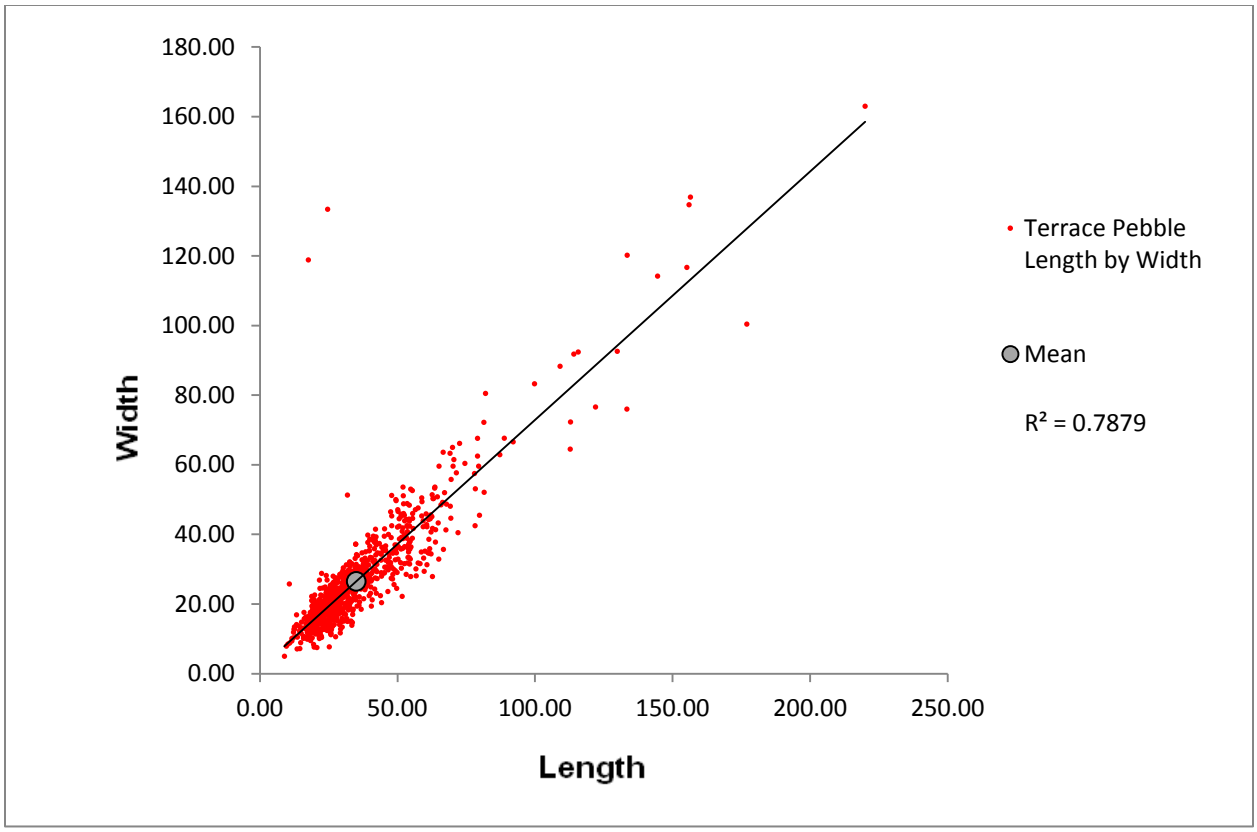


Figure A29-26
Length to Width ratios for complete mapped Pleistocene Terrace Pebbles from 12 1x1m units
Pleistocene Terrace Pebbles are smaller than examples from the overlying deposits.

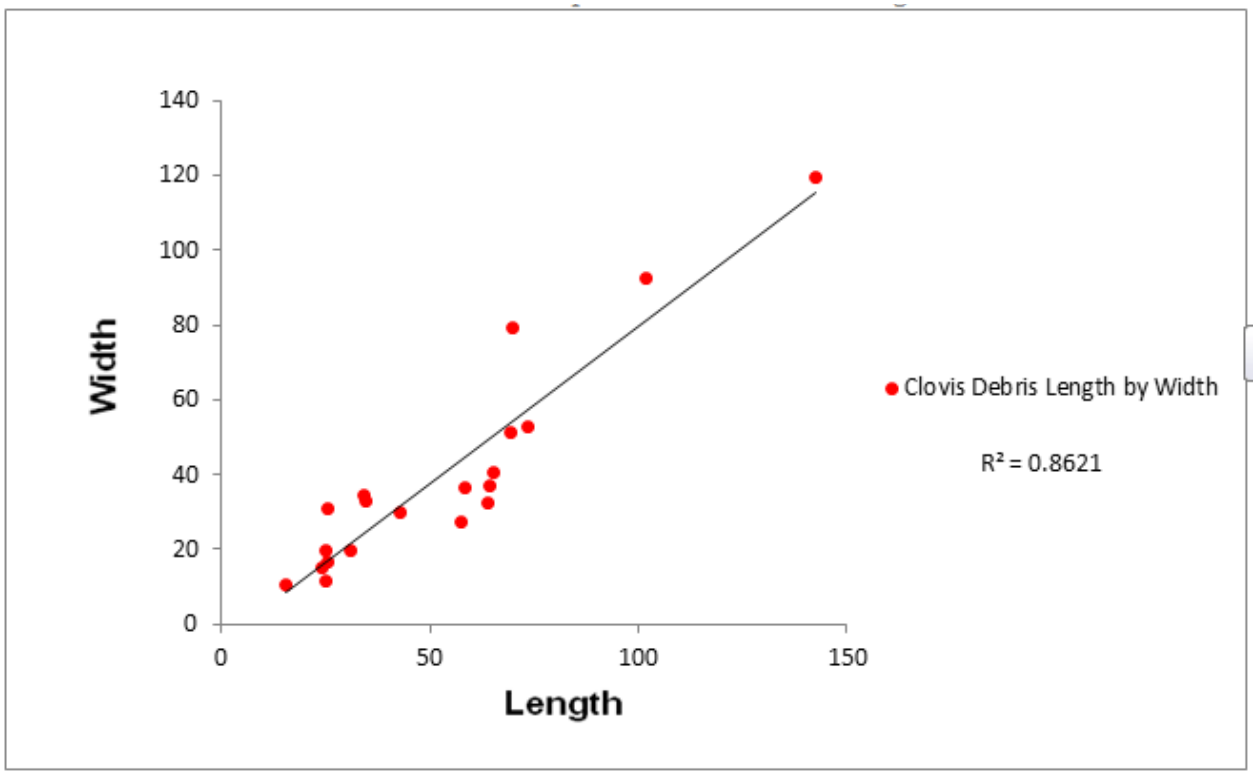


Figure A29-27
Debris Length regressed against width for Clovis Debris interpretation free category.

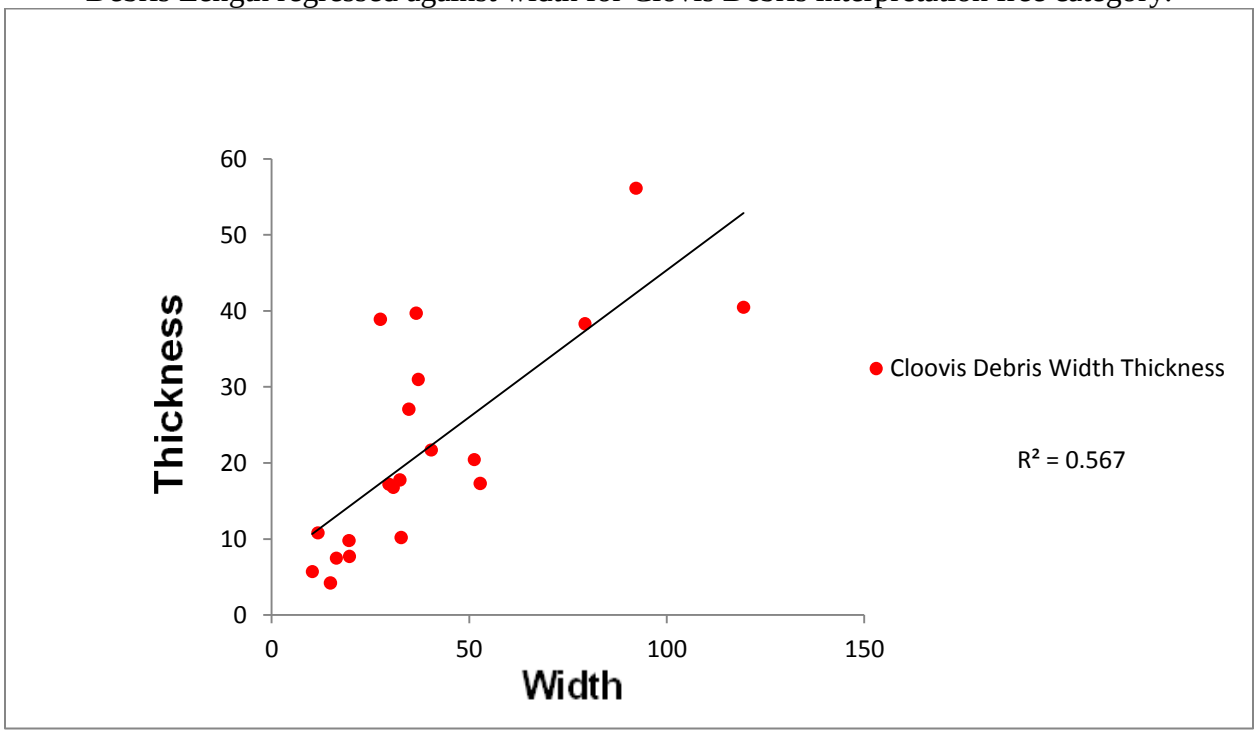


Figure A29-28
Debris Width regressed against Thickness for Clovis Debris interpretation free category.

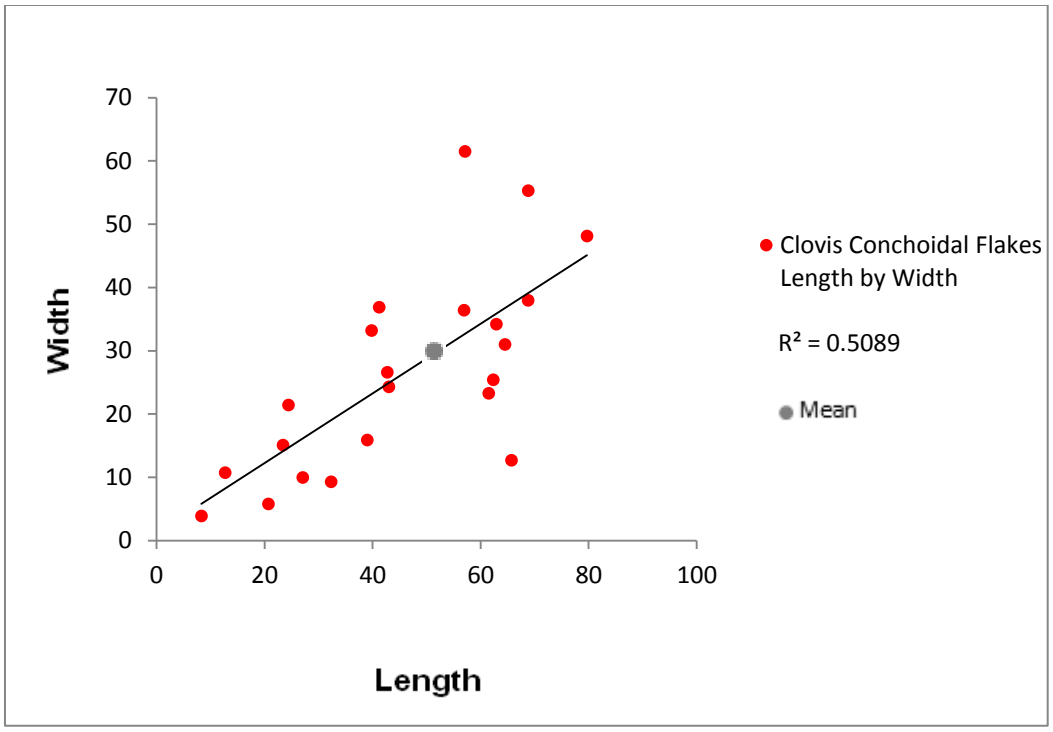


Figure A29-29
Length to Width ratios for complete mapped Clovis conchoidal flakes from 16 2x2m units.

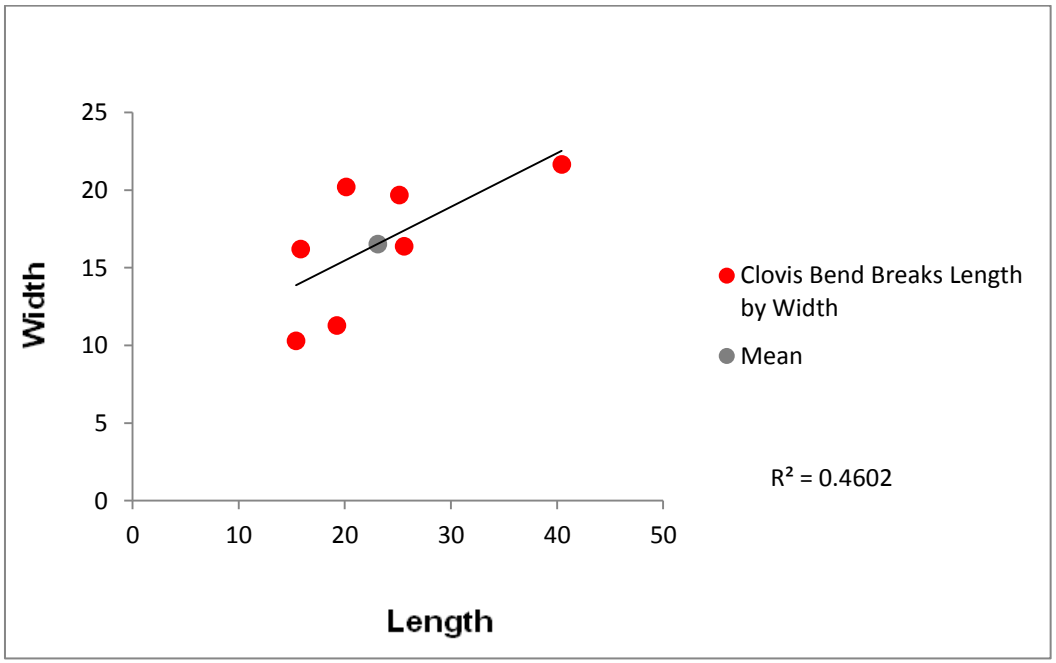


Figure A29-30
Length to Width ratios for complete mapped Clovis Bend Breaks from 16 2x2m units.

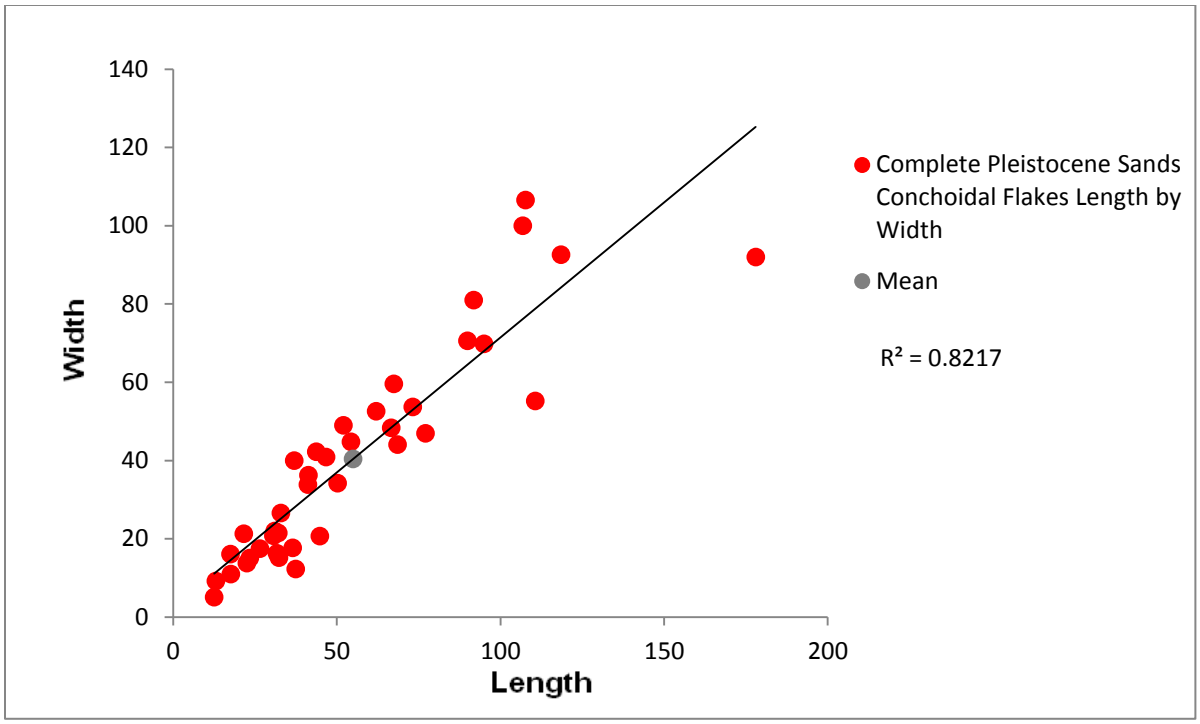


Figure A29-31
Length to Width ratios for complete mapped Pleistocene Sands conchoidal flakes from 16 2x2m units.

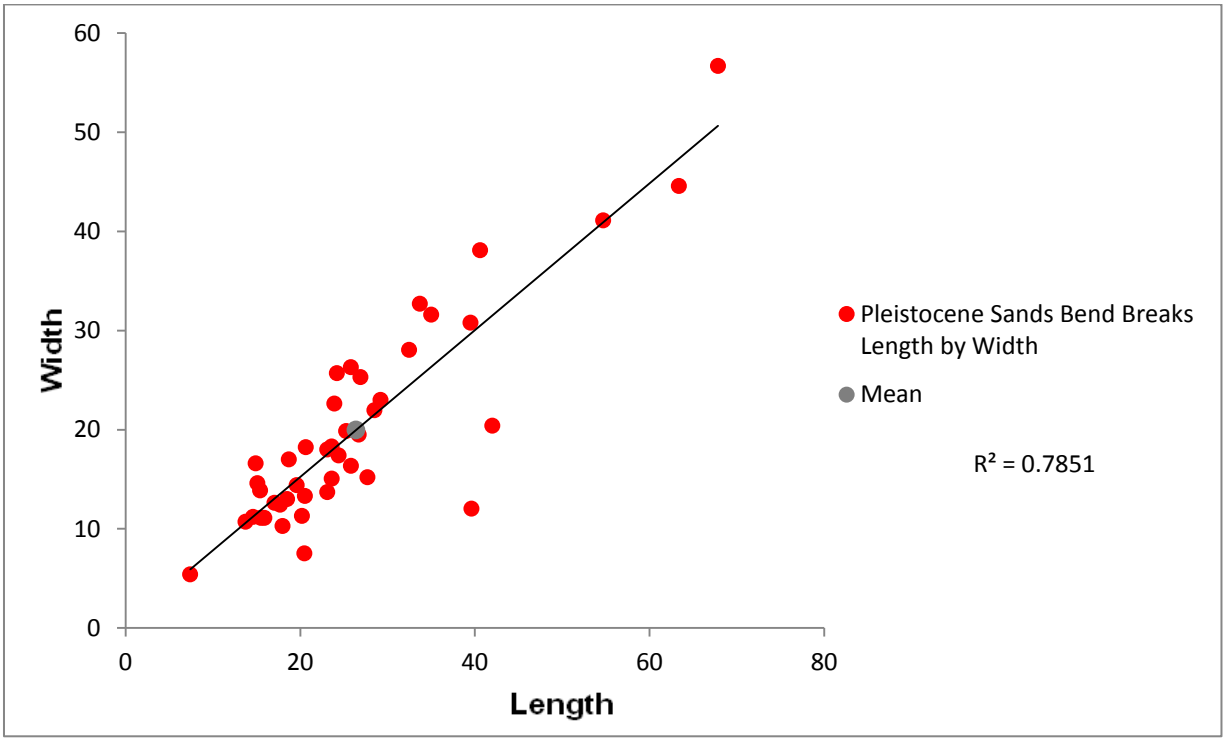


Figure A29-32
Length to Width ratios for complete mapped Pleistocene Sands Bend Breaks from 16 2x2m.

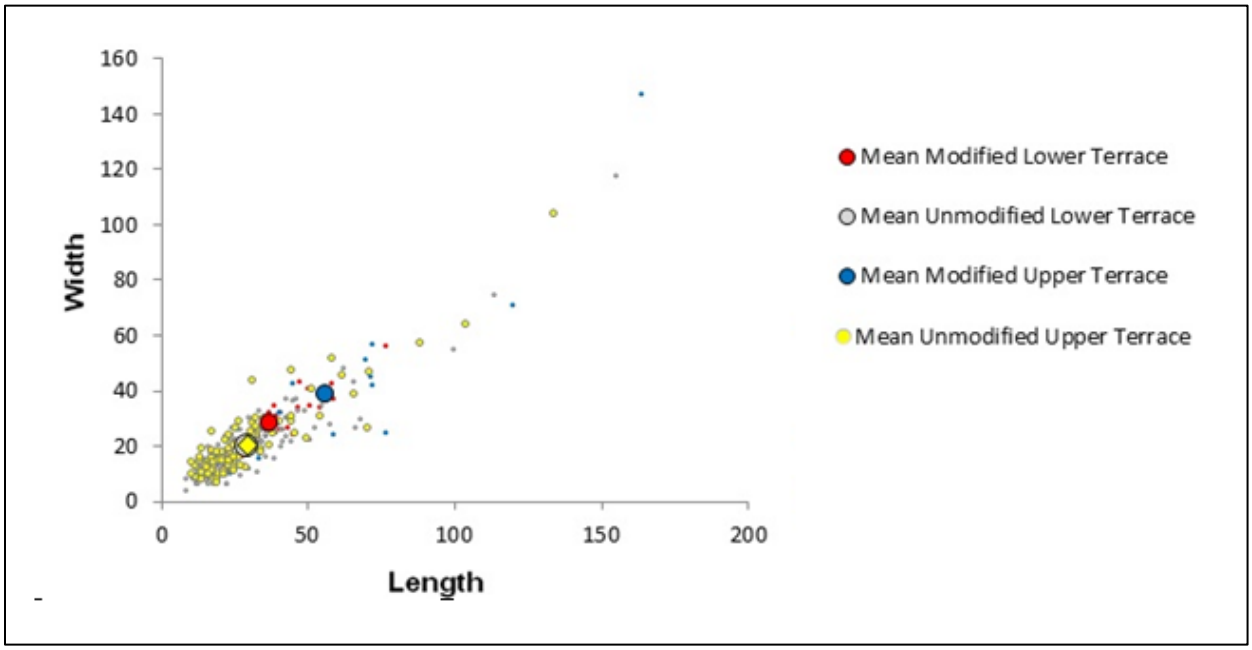


Figure A29-33
Length to Width ratios (mm) for piece plotted modified and unmodified conchoidal flakes from the Upper and Lower Pleistocene Terrace at the Topper Site (38AL23).

APPENDIX 30

METRIC ATTRIBUTES OF MAPPED ARTIFACTS FROM THE TOPPER SITE (38AL23)

Table A30-1
Metric Attributes of Mapped Artifacts from the Topper Site (38AL23)

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
1999	242	130	242.94	130.85	1	9	21.2	52.2	27.9	16.4	Flake Fragment
1999	242	130	243.01	130.95	1	11	1.5	23.1	14.9	3.9	Flake Fragment
1999	242	130	242.31	130.76	1	12	1.1	17.6	11.7	5.9	Amorphous Debris
1999	242	130	243.75	131.93	1	14	1122	16.6	10.5	9.1	
1999	242	130	243.61	131.68	1	17	11.7	41.7	24.3	19.1	Pebble
1999	242	130	243.78	131.56	1	x	6.3	31.8	17.6	7.4	Amorphous Debris
1999	242	130	243.4	131.2	2	10	77.7	67.4	59.6	20.5	Flake
1999	242	130	242.8	131.46	2	12	0.1	12.5	5.1	2.7	Flake
1999	242	130	243.84	131.49	3	12	1	19.1	14.3	5.6	Flake Fragment
1999	242	130	243.725	130.86	6	17	51.5	54.3	48.4	31.2	Pebble
1999	242	130	243.61	130.485	18	17	26.6	49.7	24.5	29.9	Pebble
1999	242	130	243.565	130.535	19	17	6.2	14.2	23.2	14.5	Debris
1999	242	130	243.885	130.49	24	17	17.8	27.3	21.72	23.7	Pebble
1999	242	130	243.775	130.695	25	17		33.7	20.5	16.6	Amorphous Debris
1999	242	130	243.83	130.69	26	17	17.3	48.6	27.1	13.1	Amorphous Debris
1999	242	130	243.86	131.275	30	17	18.8	29.4	22.7	18.5	Pebble
1999	242	130	243.89	130.82	30	17	15.4	30.2	21.7	18.2	Amorphous Debris
1999	242	130	243.88	131.285	31	17	25.5	40.3	22.3	21.4	Amorphous Debris
1999	242	130	243.88	130.865	31	17	25.7	40.2	20.8	22.5	Amorphous Debris
1999	242	130	243.88	130.865	35	17	20.4	34.4	26.5	17.4	Pebble
1999	242	130	243.81	131.045	36	17	90.7	50.1	47.1	37.9	Pebble
1999	242	130	243.86	131.035	39	17	31.8	40	32.7	20.2	Amorphous Debris
1999	242	130	243.85	131.155	40	17	4	34.2	17	11.1	Broken Flake
1999	242	130	243.54	131.23	41	17	32.9	48.5	30.1	22.4	Pebble
1999	242	130	243.76	131.8	x	16	61.2	39.2	37.7	28.3	Pebble
1999	242	130	243.85	130.95	x	16	41.6	54.7	48.8	22.1	Amorphous Debris
1999	242	130	243.625	130.685	x	17	13	24.3	23.7	24.4	Amorphous Debris
1999	242	130	243.825	131.02	x	17	x	27.39	27.51	13.61	Pebble
1999	242	130	243.88	130.52	x	17	x	30.86	19.91	22.22	Pebble
1999	242	130	243.8	131.05	x	17	x	37.23	30.62	18.91	Pebble
1999	242	130	243.84	131.065	x	17	x	43.83	22.91	27.31	Amorphous Debris
1999	242	130	243.715	130.745	x	17	x	48.74	25.6	31.86	Pebble
1999	242	130	243.925	130.63	x	17	x	53.15	28.52	31.83	Pebble
1999	242	130	243.86	130.72	x	17	x	53.44	42.52	21.79	Pebble
1999	242	130	243.74	130.47	x	17	x	60.6	46.91	23.82	Amorphous Debris

Table A30 – 1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
1999	242	130	243.745	130.29	x	17	x	x	x	x	Pebble
1999	242	130	243.85	131.11	x	17	x	x	x	x	Pebble
1999	242	130	243.67	130.34	x	17	x	x	x	x	Pebble
1999	242	130	243.72	130.51	x	17	x	x	x	x	Pebble
1999	242	130	243.9	130.765	x	17	x	x	x	x	Pebble
1999	242	130	243.7	130.385	x	17	x	x	x	x	Pebble
1999	242	130	243.655	130.485	x	17	x	x	x	x	Pebble
1999	242	130	243.92	130.97	x	17	x	x	x	x	Pebble
1999	242	130	243.695	130.275	x	17	x	x	x	x	Pebble
1999	242	130	243.95	130.68	x	17	x	x	x	x	Pebble
1999	242	130	243.88	130.99	x	17	x	x	x	x	Pebble
1999	242	130	243.85	130.89	x	17	x	x	x	x	Pebble
1999	242	130	243.84	130.47	x	17	x	x	x	x	Pebble
1999	242	130	243.65	130.03	x	17	x	x	x	x	Pebble
1999	242	130	243.62	130.915	x	17	x	x	x	x	Amorphous Debris
1999	242	130	243.755	130.745	x	17	x	x	x	x	Amorphous Debris
1999	242	130	243.86	130.96	x	17	x	x	x	x	Amorphous Debris
1999	242	130	243.88	130.52	x	17	x	x	x	x	Pebble
1999	242	130	242.52	130.97	x	17	x	35.5	33.9	17.7	Pebble
1999	242	132	243.588	133.52	1	3	91.7	76.9	41.6	26.8	Flake Fragment
1999	242	132	242.075	133.43	1	3	97.1	93.2	43.1	23.7	Flake Fragment
1999	242	132	x	x	1	14	35.3	39.9	33.7	22.1	Amorphous Debris
1999	242	132	243.78	133.97	1	15	940.8	136	80.9	88.5	Amorphous Debris
1999	242	132	243.62	134	1	15	64.4	41.3	38.5	31.3	Amorphous Debris
1999	242	132	243.69	133.95	1	17	97.1	49.5	49.7	57.2	Pebble
1999	242	132	243.78	133.93	1	x	x	x	x	x	x
1999	242	132	243.76	133.93	1	x	x	x	x	x	x
1999	242	132	243.72	133.89	1	x	x	x	x	x	x
1999	242	132	243.76	133.89	1	x	x	x	x	x	x
1999	242	132	243.68	133.85	1	x	x	x	x	x	x
1999	242	132	243.8	133.91	1	x	x	x	x	x	x
1999	242	132	243.7	133.83	1	x	x	x	x	x	x
1999	242	132	243.64	133.9	1	x	x	x	x	x	x
1999	242	132	243.72	133.84	1	x	x	x	x	x	x

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
1999	242	132	242.25	132.45	2	3	11.4	49.8	25.8	6.8	Flake Fragment
1999	242	132	243.145	131.545	2	3	124.6	99.8	54.3	23.6	Flake Fragment
1999	242	132	243.21	132.29	2	16	204.6	85.27	79.26	40.79	Amorphous Debris
1999	242	132	243.3	132.15	2	x	x	x	x	x	x
1999	242	132	243.09	132.2	2	x	x	x	x	x	x
1999	242	132	243.2	132.19	2	x	x	x	x	x	x
1999	242	132	243.06	133.6	2	x	x	x	x	x	x
1999	242	132	243.2	132.15	2	x	x	x	x	x	x
1999	242	132	243.33	133.18	3	3	4.5	44	15.8	6.7	Flake Fragment
1999	242	132	243.23	132.24	3	3	75.3	85.4	54.1	14.5	Flake Fragment
1999	242	132	243.71	133.15	3	15	74.2	49	29.2	32.2	Amorphous Debris
1999	242	132	243.21	132.23	3	16	34.6	48.3	28.5	32.3	Pebble
1999	242	132	243.73	132.73	3	x	x	x	x	x	x
1999	242	132	243.75	133.15	3	x	x	x	x	x	x
1999	242	132	243.29	132.13	4	3	87.6	88.1	47	26.4	Flake Fragment
1999	242	132	243.43	132.08	4	15	12.8	25.4	30	12.4	Amorphous Debris
1999	242	132	243.57	133.47	4	x	x	x	x	x	x
1999	242	132	243.9	133.27	4	x	x	x	x	x	x
1999	242	132	242.88	133.45	4	x	x	x	x	x	x
1999	242	132	243.18	133.71	5	3	128	102.3	52	24.5	Flake Fragment
1999	242	132	243.07	133.7	5	15	26.7	45.1	42.3	22.7	Flake Fragment
1999	242	132	243	133.66	5	16	99.5	69.2	44.5	34	Amorphous Debris
1999	242	132	242.98	133.67	5	x	x	x	x	x	x
1999	242	132	242.43	133.32	5	x	x	x	x	x	x
1999	242	132	242.27	132.26	6	3	53.2	76.2	45.1	15.2	Flake Fragment
1999	242	132	242.33	132.73	6	15	166.8	90.05	70.52	47.79	Debris
1999	242	132	242.45	133.08	6	15	40.1	54.2	33.3	25.5	Pebble
1999	242	132	242.52	130.47	6	x	x	x	x	x	x
1999	242	132	243.22	131.27	7	3	66.3	78.7	46.1	19.1	Flake Fragment
1999	242	132	243.4	132.6	7	15	210.2	72.57	66.15	41.33	Pebble
1999	242	132	243.4	133.87	7	15	13.8	27.3	31.5	11.9	Amorphous Debris
1999	242	132	243.49	132.35	7	x	x	x	x	x	x
1999	242	132	243.78	133.97	8	3	33.1	37.8	33.1	21.8	Amorphous Debris
1999	242	132	242.3	133.25	8	15	355.9	104.32	63.49	47.7	Flake Fragment
1999	242	132	243.27	132.3	8	15	27.1	46.3	31.2	14.4	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
1999	242	132	243.76	133.93	8	16	187.6	75.64	66.45	38.84	Debris
1999	242	132	243.78	133.13	8	x	x	x	x	x	x
1999	242	132	242.58	134	9	3	9	35.8	23.8	18.9	Pebble
1999	242	132	243.26	132.8	9	15	146.2	61.5	54.2	50.7	Debris
1999	242	132	243.72	133.89	9	16	476.3	102.32	68.84	63.57	Amorphous Debris
1999	242	132	243.25	132.75	9	x	x	x	x	x	x
1999	242	132	243.44	132.28	10	3	37.7	42.5	33.5	26	Pebble
1999	242	132	243.68	133.85	10	15	117.9	71.66	44.95	70.94	Flake Fragment
1999	242	132	243.25	132.75	10	16	46.1	75.2	39.9	19.7	Debris
1999	242	132	243.69	133.95	10	x	x	x	x	x	x
1999	242	132	243.76	133.89	11	3	35.5	68.8	29.6	14.6	Flake Fragment
1999	242	132	243.78	133.93	11	16	651.9	148.98	100.19	45	Debris
1999	242	132	243.72	133.84	11	x	x	x	x	x	x
1999	242	132	243.64	133.9	12	3	72.6	67.2	46.7	26.5	Flake Fragment
1999	242	132	243.7	133.83	12	16	155.7	103.5	54.3	38.1	Amorphous Debris
1999	242	132	243.8	133.91	12	x	x	x	x	x	x
1999	242	132	243.62	134	13	x	x	x	x	x	x
1999	242	132	242.86	133.88	14	16	40.2	49.7	22.8	39.4	Flake Fragment
1998	244	130	244.17	131.64	1	19	138.6	72.1	78.3	26.9	Amorphous Debris
1998	244	130	245.33	131.13	1	21	x	x	x	x	Debris
1998	244	130	245.92	131.36	1	21 F	64.3	51.2	48.4	26.4	Amorphous Debris
1998	244	130	245.14	131.93	1	x	30.1	48	31.6	20.2	Debris
1998	244	130	244	131.04	2	19	232.2	85.4	79.4	44.4	Amorphous Debris
1998	244	130	244.055	131.2	2	21 F	26.5	40.2	32.2	27.2	Flake Fragment
1998	244	130	244.1	130.75	2	x	7	34.4	28.7	9	Debris
1998	244	130	244.09	130.88	3	21 F	52	45.5	43.5	27	Amorphous Debris
1998	244	130	244.12	131.12	4	21 F	6.5	19.9	22.6	19.5	Pebble
1998	244	130	244.05	131.12	5	21 F	23.2	42.5	29.3	22.6	Pebble
1998	244	130	244.02	131.12	6	21 F	46.1	76.7	51.4	24	Amorphous Debris
1998	244	130	244.08	131.16	7	21 F	49.1	51.8	46.4	33.4	Amorphous Debris
1998	244	130	244.025	131.28	8	21 F	14.1	30.4	24.8	13	Amorphous Debris
1998	244	130	244	130.81	9	21 F	53.4	47.7	39.1	24.4	Pebble
1998	244	130	244.04	130.85	10	21 F	13.2	34.3	28.1	17.6	Pebble
1998	244	130	244	130.94	11	21 F	65.3	68.1	44.4	33.7	Amorphous Debris
1998	244	130	244	131.09	12	21 F	83.6	71.6	46.6	30.6	Flake Fragment

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
1998	244	130	244	131.15	13	21 F	121.1	70	65	50.4	Pebble
1998	244	130	244.065	130.92	14	21 F	87.6	58.7	38.8	27.4	Amorphous Debris
1998	244	130	244.03	130.965	15	21 F	121.8	71.4	57.7	44.1	Pebble
1998	244	130	244.09	130.94	16	21 F	56.4	38.8	43.3	28.7	Amorphous Debris
1998	244	130	244.08	131.12	17	21 F	28.8	51.4	34.5	18.8	Amorphous Debris
1998	244	130	244.035	131.31	18	21 F	8.5	33.1	24.7	13.4	Debris
1998	244	130	244.02	130.89	19	21 F	112.8	52	53.6	35.7	Pebble
1998	244	130	244	131.19	20	21 F	4.4	22.4	28.8	16.5	Pebble
1998	244	130	244.035	131.07	21	21 F	2.1	23.1	15.8	12.3	Pebble
1998	244	130	245.36	130.92	22	21 F	94.7	49.4	50	42.8	Pebble
1998	244	130	245.22	131.37		21	5.1	25.72	25.75	7.39	Broken Flake
2000	242	130	243.56	131.01	2	x	10.5	32.09	29.6	13.3	Debris
2000	242	130	243.33	131.63	2	x	21.3	44.6	30.2	24.8	Flake Fragment
2000	242	128	242.02	129.59	6	x	x	27.74	26.49	7.92	Flake Fragment
2000	244	146	245.84	147.22	8	180	x	30.98	29.05	6.88	Debris
2000	242	130	242.15	131.05	5	185	672.7	128.6	106.95	68.72	Debris
2000	242	130	243.23	131.85	1	185	785.3	130.02	109.38	76.27	Debris
2000	242	130	242.27	130.7	4	190	x	160	127.98	155	Debris
2000	242	130	243.82	130.53	1	190	1.8	23.1	10.9	8.4	Flake Fragment
2000	242	130	242.45	130.73	3	190	x	156	124.46	91.11	Debris
2000	242	130	242.43	130.01	25	x	x	x	x	x	x
2000	242	130	242.86	131.9	1	x	x	x	x	x	x
2000	242	132	242.44	132.27	2	x	x	x	x	x	x
2000	242	132	242.75	132.89	3	x	x	x	x	x	x
2000	242	132	242.9	132.4	1	x	x	x	x	x	x
2000	242	132	242.6	132.06	1	x	x	x	x	x	x
2000	242	132	242.7	133.85	6	x	x	x	x	x	x
2000	242	136	242.54	136.04	1	x	x	x	x	x	x
2000	242	136	242.94	136.02	3	x	x	x	x	x	x
2000	242	136	243.24	136.42	1	x	x	x	x	x	x
2000	242	136	243.59	136	9	x	x	x	x	x	x
2000	244	132	244.52	133.5	5		x	126	153.49	91.79	Pebble
2000	242	130	243.56	131.01	2	x	x	x	x	x	x
2000	242	130	243.33	131.63	2	x	x	x	x	x	x
2000	242	128	242.02	129.59	6	x	x	x	x	x	x

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2000	244	146	245.84	147.22	8	180	x	x	x	x	x
2001	240	130	241.36	131.46	1	23	x	x	x	x	Flake
2001	240	130	241.2	131.6	4	25	598	11.8	8.1	6.0	
2001	240	130	240.86	130.9	3	x	x	x	x	x	x
2001	240	130	241.06	130.63	2	x	x	x	x	x	x
2001	240	130	241.24	130.35	1	x	x	x	x	x	x
2001	240	130	241.05	131.8	1	x	x	x	x	x	x
2001	240	130	241.31	131.9	1	x	x	x	x	x	x
2001	240	130	240.74	131.92	2	x	x	x	x	x	x
2001	240	130	240.84	131.54	1	x	x	x	x	x	x
2001	240	130	240.47	131.41	2	x	x	x	x	x	x
2001	240	130	240.51	131.44	3	x	x	x	x	x	x
2001	240	130	240.76	130.03	1	x	x	x	x	x	x
2001	240	130	240.36	131.59	1	x	x	x	x	x	x
2001	240	130	240.56	131.32	2	x	x	x	x	x	x
2001	240	130	240.57	130.19	1	x	x	x	x	x	x
2001	240	130	241.49	131.695	1	x	x	x	x	x	x
2001	240	130	240.45	130.56	18		19.6	62.6	32.1	10.3	Broken Flake
2001	240	132	240.3	132.76	19	2	71.8	69.22	49.02	21.76	Broken Flake
2001	240	132	240.7	132.87	1	16	13	26.4	34.7	25.6	Debris
2001	240	132	240.46	132.805	9	16	17.1	51.8	30	13.6	Debris
2001	240	132	240.58	132.91	4	16	19.5	36.97	39.99	1.43	Flake Fragment
2001	240	132	240.6	132.87	3	16	25	39.5	25.8	27.4	Debris
2001	240	132	240.49	132.91	6	16	29.2	32.5	26.5	30.9	Amorphous Debris
2001	240	132	240.435	132.84	8	16	30.9	54.3	44.8	16	Flake
2001	240	132	240.48	132.715	12	x	0.2	12.33	6.05	2.72	Amorphous Debris
2001	240	132	240.55	132.82	19	x	0.3	18.21	8.09	3.32	Amorphous Debris
2001	240	132	240.475	132.72	11	x	1.3	23.82	14.55	5.07	Amorphous Debris
2001	240	132	240.58	132.795	17	x	3.5	20.97	24.24	9.08	Amorphous Debris
2001	240	132	240.51	132.78	16	x	5.6	25.51	22.74	11.54	Amorphous Debris
2001	240	132	240.605	132.8	18	x	6.6	28.4	25.83	11.49	Amorphous Debris
2001	240	132	240.49	132.71	14	x	10.3	39.86	21.74	18.36	Amorphous Debris
2001	240	132	240.51	132.935	20	x	10.7	37.67	19.16	14.97	Amorphous Debris
2001	240	132	240.46	132.69	15	x	25.4	44.11	49.23	17.58	Amorphous Debris
2001	240	132	240.52	132.9	45	x	29.6	54.94	30.47	9.5	Flake

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2001	240	132	240.54	132.8	46	x	54.3	67.1	40.67	32.66	Debris
2001	240	132	240.65	132.87	2	x	116.7	74	62.4	38.5	Flake Fragment
2001	240	132	240.46	132.82	41	x	129.2	74.79	74.1	31.35	Debris
2001	240	132	240.51	132.96	5	x	170.1	78.1	74.2	30.5	Flake Fragment
2001	240	132	240.52	132.87	44	x	222.2	93.75	68.25	64.63	Debris
2001	240	132	240.45	132.68	42	x	412	105.4	63.61	49.86	Debris
2001	240	132	240.91	132.91	49	x	420.8	110.06	97.83	31.92	Debris
2001	240	132	240.88	132.14	48	x	449.9	125.86	69.87	49.11	Debris
2001	240	132	240.47	132.59	10	x	505.9	95.1	82.7	64.1	Debris
2001	240	132	240.89	132.86	50	x	612.8	117.01	108.62	57.34	Debris
2001	240	132	240.5	132.83	43	x	668.9	110.21	96.52	56.92	Debris
2001	240	132	240.83	132.98	47	x	x	142.19	125.69	88.85	Debris
2001	240	132	241.12	132.58	1	18	56.1	60.42	59.25	22.97	Amorphous Debris
2001	240	132	241.3	132.6	1	18	60.7	63.11	56.83	26.33	Debris
2001	240	132	241.27	132.62	8	18	90.2	70.81	25.92	28.59	Flake Fragment
2001	240	132	241.3	132.54	5	18	273	10.1	8.3	5.2	Debris
2001	240	132	241.17	132.47	2	18	361.7	86.38	87.21	64.4	Debris
2001	240	132	241.20	132.56	7	18	1018	12.3	12.7	9.1	Amorphous Debris
2001	240	132	241.29	132.47	4	18	1257	15.5	11.9	9.1	Debris
2001	240	132	241.2	132.53	3	18	2300	16.0	14.5	12.0	Debris
2001	240	132	241.13	132.60	6	18	x	x	x	x	x
2001	240	132	241.36	131.42				24.53	24.93	6.54	x
2001	240	132	240.67	132.43	2	18	x	x	x	x	Amorphous Debris
2001	240	132	240.87	132.45	3	18	x	x	x	x	Flake
2001	240	132	240.85	132.6	4	18	x	x	x	x	Amorphous Debris
2002	240	134	240.36	135.45	11	5X10		56.96	23.1	10.5	Flake
2002	242	136	243.84	137.09	4	18	12.4	41.25	35.59	9.66	Flake Fragment
2002	242	136	243.2	136.88	2	18	66.7	56.44	36.84	18.08	Pebble
2002	242	136	242.42	137.85	3	18	70.6	70.05	41.26	22.7	Amorphous Debris
2002	242	136	242.33	137.52	5	18	90.7	59.5	50.8	37.5	Flake Fragment
2002	242	136	242.96	136.9	1	18	92.9	80.51	40.73	3.78	Flake Fragment
2002	242	138	243.9	138.02	12	2	x	x	x	x	Debris
2002	242	138	242.96	138.57	1	4	10.7	37.97	29.81	14.23	Flake Fragment
2002	242	138	243.26	138.57	2	4	21.5	42.36	39.31	22.71	Flake Fragment
2002	242	138	243.97	138.64	1	11	1.8	21.8	21.73	6.49	Flake Fragment

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2002	242	138	242.34	139.78	3	12	57.6	76.5	45.21	25.36	Amorphous Debris
2002	242	138	242.95	139.34	2	12	174.2	85.2	60.8	32.93	Amorphous Debris
2002	242	138	243.64	139.21	1	13	379.7	140.56	77.33	40.85	Flake Fragment
2002	242	138	243.22	139.965	PP7	14	1.9	27.7	15.2	6.2	Debris
2002	242	138	243.26	139.97	PP6	14	11.7	24.8	22.5	13.1	Amorphous Debris
2002	242	138	243.75	139.89	PP11	14	12.5	37.2	35.1	14	Amorphous Debris
2002	242	138	243.85	139.9	PP12	14	14	35.5	27.2	21.2	Pebble
2002	242	138	243.49	139.965	PP8	14	23.2	40.5	32.5	23.1	Pebble
2002	242	138	243.5	139.9	PP9	14	29.7	57.6	33.8	19.5	Amorphous Debris
2002	242	138	243.4	139.855	PP10	14	30.9	36.7	35.2	31.5	Pebble
2002	242	138	243.29	139.15	PP4	14	33.8	62.9	33.7	17	Amorphous Debris
2002	242	138	242.77	139.2	1	14	34.9	76.55	51.79	20.79	Broken Flake
2002	242	138	242.64	139.33	2	14	37.7	53.95	51.7	29.76	Amorphous Debris
2002	242	138	243.72	139.82	4	14	37.9	54.1	35.9	22.7	Debris
2002	242	138	243.87	139.7	5	14	92	67.4	54.5	44.7	Amorphous Debris
2002	242	138	242.61	139.3	PP1	14	117.4	73.4	55.9	36.9	Pebble
2002	242	138	243.3	139.215	PP5	14	133.4	81.8	63.3	35	Pebble
2002	242	138	242.75	139.86	PP3	14	151.9	81.1	59.3	45.5	Amorphous Debris
2002	242	138	243.85	139.98	3	14	249.8	85.6	68.7	34.9	Debris
2002	242	138	242.75	139.74	PP2	14	512.4	128.3	142.5	55.3	Amorphous Debris
2002	242	138	242.05	139.5	3	15	11.1	51.67	30.17	12.82	Amorphous Debris
2002	242	138	243.16	139	1	15	13	46.85	25.43	14.4	Flake Fragment
2002	242	138	243.48	138.34	4	15	13.7	37.75	28.27	14.48	Pebble
2002	242	138	243.03	138.62	5	15	16.7	42.74	28.2	15.12	Flake Fragment
2002	242	138	242.3	139.97	4	15	23	32.1	24.17	21.83	Amorphous Debris
2002	242	138	243.32	138.98	6	15	53.3	45.2	38.19	26.45	Amorphous Debris
2002	242	138	243.43	138.16	PP1	15	x	158.6	127.6	60.3	Amorphous Debris
2002	242	138	243.2	139.64	1	16	30.5	46.7	40.9	23.6	Flake
2002	242	138	243.14	138.64	1	17	6.8	35.16	23.43	9.9	Flake Fragment
2002	242	138	242.14	139.39	4	17	13.1	41.31	36.26	15	Flake
2002	242	138	242.85	139.95	2	17	28.2	77.08	46.96	11.83	Flake
2002	242	138	242.7	138.43	8	17	29.2	48.16	27.46	23.5	Debris
2002	242	138	242.9	139.51	3	17	48.9	46.1	46,24	32.02	Debris
2002	242	138	242.09	139.3	2	17	53.6	54.59	47.42	28.8	Pebble
2002	242	138	242.8	138.3	6	17	71	73.19	53.7	18	Flake

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2002	242	138	242.87	138.93	7	17	78.9	73.92	49.6	38.53	Amorphous Debris
2002	242	138	242.23	138.63	5	17	177.8	87.27	56.55	44.36	Debris
2002	242	138	242.27	139.94	1	17	222	79.35	71.49	45.43	Pebble
2002	242	138	242.96	139.14	3	17	x	215	131.99	73.69	Pebble
2002	242	138	243.74	139.09	1	18	2.2	26.32	19.31	4.97	Broken Flake
2002	242	138	243.08	138.18	4	18	25.1	47.83	29.05	21.27	Amorphous Debris
2002	242	138	243.03	138.87	2	18	33.8	57.33	48.35	20.22	Flake Fragment
2002	242	138	242.5	139.09	1	18	70.1	52.7	47.92	41.43	Debris
2002	242	138	242.96	139.11	2	18	354.9	83.7	65.78	45.71	Pebble
2002	242	138	243.45	138.98	5	18	582.7	134.19	92.28	45.9	Pebble
2002	242	138	243.09	139.2	3	18	x	221.93	123.9	83.1	Pebble
2002	242	138	243.14	139.87	PP7	19	67	44.52	42.69	27.04	Pebble
2002	242	138	243.09	139.64	PP6	19	67.1	51.36	39.21	27.4	Pebble
2002	242	138	243.3	139.97	PP9	19	71.6	71.73	39.22	23.66	Amorphous Debris
2002	242	138	242.74	139.5	PP4	19	75.4	59.43	53.21	27.34	Pebble
2002	242	138	243.75	139.99	PP8	19	95.2	79.44	57.09	26.24	Debris
2002	242	138	242.95	138.92	PP2	19	98.1	66.67	56.79	32.97	Pebble
2002	242	138	242	138.78	PP1	19	421.9	107.22	74.83	56.79	Debris
2002	242	138	242.1	139.34	PP3	19	537.2	104.58	100.44	56.53	Debris
2002	242	138	242.54	139.09	2	19	819.1	116.37	97.04	74.43	Debris
2002	242	138	242.46	139.08	PP5	19	979.8	148.97	99.25	96.54	Pebble
2002	242	138	242.32	138.8	1	19	x	183.54	125.25	153.64	Debris
2002	242	138	243.93	138.32	7	F87		51.35	49.22	22.49	Flake Fragment
2002	242	138	242.45	139.1	2	x	6.8	35	29.62	9.55	Flake Fragment
2002	242	138	242.26	139.59	1	x	202	10.5	7.3	4.8	Amorphous Debris
2002	242	138	242.32	138.97	1	x	x	x	x	x	x
2002	242	140	242	141.75	4	4	10.3	33.2	37.67	10.69	Flake Fragment
2002	242	140	242.63	141.88	2	4	15.6	23.06	51.05	12.5	Flake Fragment
2002	242	140	243.39	139.02	1	4	20.4	62.33	25.42	11.19	Flake
2002	242	140	242.75	141.97	5	4	25.5	54.3	29.84	20.84	Flake Fragment
2002	242	140	243.1	140.31	3	4	93.7	79.69	48.13	24.2	Flake
2002	242	140	243.55	140.58	2	6	30.9	53.23	34.51	16.81	Flake Fragment
2002	242	140	243.88	140.37	1	6	100.4	70.24	45.75	35.66	Flake Fragment
2002	242	140	243.63	140.23	1	11	20.1	47	27.3	16.7	Flake Fragment
2002	242	140	243.77	140.79	1	12	1.4	19.79	15.07	7.76	Flake Fragment

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2002	242	140	243.5	140.57	3	15	9.4	26.9	25.3	10.5	Flake Fragment
2002	242	140	243.53	141.04	6	15	x	x	x	x	Pebble
2002	242	140	243.6	141.02	5	15	x	x	x	x	Pebble
2002	242	140	243.23	141.4	12	15	x	x	x	x	Pebble
2002	242	140	243.18	141.323	10	15	x	x	x	x	Pebble
2002	242	140	243.63	141.14	8	15	x	x	x	x	Pebble
2002	242	140	243.65	141.42	PP3	16	0.7	20.48	7.52	4.06	Amorphous Debris
2002	242	140	242.84	141.7	2	16	7.5	30.7	26.3	10.8	Debris
2002	242	140	244	140.12	3	16	11.4	36	30.8	14.4	Debris
2002	242	140	242.84	141.76	1	16	42.1	x	x	x	Debris
2002	242	140	243.55	141.57	PP5	16	50.5	67.84	56.69	17.41	Amorphous Debris
2002	242	140	243.6	141.4	PP2	16	68.4	44.86	38.77	25.08	Pebble
2002	242	140	243.5	141.57	PP6	16	69	61.69	36.79	27.63	Amorphous Debris
2002	242	140	243.12	141.28	PP1	16	170.4	74.35	63.19	45.51	Amorphous Debris
2002	242	140	243.74	141.44	PP4	16	174.8	94.2	53.44	43.02	Pebble
2002	242	140	243.45	141.69	PP&	16	500.1	127.4	65.41	56.31	Pebble
2002	242	140	243.12	140.09	4	16	x	x	x	x	Debris
2002	242	140	242.64	142	4	17	11.4	37.36	35.78	13.59	Broken Flake
2002	242	140	242.84	141.82	3	17	21.5	35.02	34.11	22.11	Amorphous Debris
2002	242	140	242.58	141.64	1	17	30.7	53.77	50.44	15.52	Flake Fragment
2002	242	140	242.56	141.85	5	17	37.5	46.12	37.09	21.92	Debris
2002	242	140	242.8	141.65	2	17	104.3	56.03	61.49	33.93	Pebble
2002	242	140	242.6	141.89	6	17	944	93.52	131.2	79.51	Debris
2002	242	140	243.06	140.05	7	17	510.01	103.62	93	60.85	Debris
2002	242	140	243.54	141.95	PP2	17	226.7	90.97	70.4	32.34	Pebble
2002	242	140	243.85	141.9	PP3	17	531.6	99.98	106.84	66.88	Amorphous Debris
2002	242	140	243.12	141.12	PP4	17	x	153.61	125.77	66.77	Amorphous Debris
2002	242	140	242.67	141.86	PP1	17	x	x	x	x	Pebble
2002	242	140	243.17	141.87	1	19	x	36.82	36.62	10.03	x
2002	242	140	x	141.6	3	C2	13.6	59.21	25.25	8.57	Broken Flake
2002	242	140	242.92	140.66	6	C2	18	62.2	25	9.2	Broken Flake
2002	242	140	244.75	140.04	5	C2	36.4	54.9	37.4	14.4	Broken Flake
2002	242	140	243.53	140.09	1		191	7.6	5.9	5.8	Broken Flake
2002	242	140	243.21	141.08	7		484.85	11.5	7.8	6.0	Debris
2002	242	140	243.29	141.12	9	x	x	x	x	x	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2002	242	140	243.56	141.02	2	x	x	x	x	x	Amorphous Debris
2002	242	140	243.39	141.64	11	x	x	x	x	x	Debris
2002	242	140	242.12	140.79	1	x	x	x	x	x	x
2002	242	140	242.7	141.37	1	x	x	x	x	x	x
2002	242	140	242.72	141.14	2	x	x	x	x	x	x
2002	242	140	243.98	141	3	x	x	x	x	x	x
2002	242	140	243.86	141.03	4	x	x	x	x	x	x
2002	242	140	242.65	140.14	4	x	x	x	x	x	x
2002	242	140	242.94	142	5	x	x	x	x	x	x
2002	242	142	243.71	142.21	1	7	63.3	57.1	61.5	16.96	Flake
2002	242	142	243.65	143.06	2	11	17	52	49	7.7	Flake
2002	242	142	243	143.39	1	11	32.1	66.36	40.56	18.16	Flake Fragment
2002	242	142	243.12	143.45	1	12	20.9	76.3	25.2	19	Broken Flake
2002	242	142	243.27	145.09	2	14	19.1	41.51	29.84	17.92	Flake Fragment
2002	242	142	243.28	142.98	3	15	11.4	39.1	29.38	13.93	Flake Fragment
2002	242	142	242.81	143.9	10	15	16.7	34.13	27	19.87	Debris
2002	242	142	243.68	143.74	9	15	18.2	50.23	34.22	14.23	Flake
2002	242	142	243.33	142.72	4	15	26.5	49.16	30.33	23.57	Pebble
2002	242	142	243.7	142.91	2	15	34.3	46.28	44.81	24.41	Broken Flake
2002	242	142	243.05	143.75	12	15	36.7	59.43	33.53	28.57	Debris
2002	242	142	243	142.09	6	15	45	60.54	45.64	20.98	Pebble
2002	242	142	243.34	143.59	11	15	51.4	59.6	40.88	40.89	Pebble
2002	242	142	243.975	142.4	1	15	66.7	64.67	47.2	30.43	Pebble
2002	242	142	242.95	142.38	7	15	96.8	63.5	50.24	29.54	Amorphous Debris
2002	242	142	243.61	142.72	6	16	3.9	23	21.8	7.2	Flake Fragment
2002	242	142	243.39	144	1	16	4.2	25.5	26.5	7.8	Broken Flake
2002	242	142	243.57	142.72	7	16	5.6	29.81	17.3	10.9	Broken Flake
2002	242	142	243.1	143.77	2	16	52.2	46.7	39	33.1	Debris
2002	242	142	243.21	143.23	5	16	74.5	63.02	54.39	20.2	Pebble
2002	242	142	242	142	1	16	126.2	89.9	70.6	33.2	Flake
2002	242	142	243.4	142.54	3	16	158.7	83.9	53.7	35.3	Debris
2002	242	142	243.36	142.31	5	16	199.9	80.3	45.2	33.7	Amorphous Debris
2002	242	142	243.1	142.46	4	16	401.9	82.1	58.7	64.7	Debris
2002	242	142	243.58	145.62	1	x	4900	29.0	20.0	13.0	Amorphous Debris
2002	244	136	244.25	137.525	2	5	8.4	32.65	31.84	7.87	Broken Flake

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2002	244	136	245.48	136.03	1	5	31.8	54.28	32.64	26.99	Flake Fragment
2002	244	136	244.14	137.09	1	12	4.4	40.48	18.71	7.16	Flake Fragment
2002	244	136	245.74	136.94	1	15	6.7	26.3	25.9	13.3	Flake Fragment
2002	244	136	244.85	137.05	3	15	33	56.62	36.62	19.74	Flake Fragment
2002	244	136	245.05	137.63	2	15	638.9	117.3	101.4	65.3	Flake Fragment
2002	244	136	244.14	136.69	1	20	2.2	17.6	17.2	5.6	Amorphous Debris
2002	244	136	244.5	137.78	16	F87	3.3	18.8	16.4	8.9	Flake Fragment
2002	244	136	243.95	137.46	9	F87	3.5	17	19.2	9.5	Debris
2002	244	136	244.38	137.58	14	F87	6.6	27.2	25.7	14.5	Flake Fragment
2002	244	136	243.9	137.25	6	F87	14.9	46.8	31.7	13.3	Debris
2002	244	136	244.55	137.46	12	F87	65.3	69.7	50.5	21.7	Flake Fragment
2002	244	136	244.36	137.84	18	F87	102.3	62	52.6	30.9	Flake
2002	244	136	243.85	137.1	4	f87	119.2	71.4	52.9	47.1	Pebble
2002	244	136	244.46	137.5	13	F87	144.6	76.4	49.9	36.3	Flake Fragment
2002	244	136	244.37	137.93	21	F87	208.1	99.8	66.2	36.3	Pebble
2002	244	136	243.92	137.18	5	f87	261	110.3	81.7	48.4	Flake Fragment
2002	244	136	243.47	137.95	2	F87	276.4	87.7	54.6	55.9	Amorphous Debris
2002	244	136	243.42	137.77	3	F87	407.4	99.5	81.5	62.2	Pebble
2002	244	136	244.59	137.91	19	F87	633.3	109.3	87.7	48.1	Debris
2002	244	136	244.17	137.4	11	F87	841.2	178	92	68.2	Flake
2002	244	136	244.06	137.88	17	F87	x	178.3	117.4	65.4	Flake
2002	244	136	244.35	137.76	15		27.4	43.2	26.6	16.2	Amorphous Debris
2002	244	138	244.93	139.12	2	2	197.5	65.2	83.8	45.7	distal
2002	244	138	245.38	138.18	2	3	75.8	73.45	50.97	25.91	Flake Fragment
2002	244	138	244	138	1	3	604.6	111.6	91.48	42.93	Flake Fragment
2002	244	138	245.67	138.91	1	4	1.2	27.79	141.2	2.51	Flake Fragment
2002	244	138	245.24	138.61	2	4	3.6	26.97	27.12	6.55	Flake Fragment
2002	244	138	244.03	139.61	4	4	109.8	89.61	57.05	24.7	Broken Flake
2002	244	138	244.59	139.46	3	4	x	153.54	117.04	113.56	x
2002	244	138	245.8	138.43	1	5	20.5	72.21	29.1	96.5	Flake Fragment
2002	244	138	245.94	138.44	2	5	31.2	50.45	45.34	12.63	Flake Fragment
2002	244	138	245.78	138.2	1	8	26.8	55.8	37.76	13.4	Flake Fragment
2002	244	138	246	138.42	1	9	2.1	37.43	12.29	5.17	Flake
2002	244	138	244.47	138.51	1	10	1064	12.1	11.3	9.1	Debris
2002	244	138	245.43	138.23	1	12	4.4	40	18.5	7.2	Broken Flake

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2002	244	138	245.61	138.12	2	12	6.1	32.9	26.6	9.2	Flake
2002	244	138	243.63	138.19	1	13	12.3	69.8	30.3	7.7	Flake Fragment
2002	244	138	244.13	139.71	3	13	33.5	63.36	44.58	136.1	Debris
2002	244	138	244.82	139.91	7	13	144.8	76.55	50.65	33.82	Pebble
2002	244	138	244	139.8	12	14	20	37.9	43	15.7	Flake Fragment
2002	244	138	244.67	139.555	PP2	14	22	72.92	25.71	33.09	Amorphous Debris
2002	244	138	245.42	138.78	PP5	14	30.1	33.6	29.6	19.5	Amorphous Debris
2002	244	138	245.56	139.62	6	14	37.8	41.3	31.6	21.5	Amorphous Debris
2002	244	138	245.11	139.82	10	14	37.9	58.6	35.8	28.7	Amorphous Debris
2002	244	138	244.76	139.93	2	14	42.1	64.8	43.1	19.2	Flake Fragment
2002	244	138	245.2	139.52	8	14	50.3	68.2	47.2	30.3	Pebble
2002	244	138	244.955	139.86	PP4	14	55.1	72.14	48.8	24.04	Debris
2002	244	138	245.57	139.56	5	14	55.8	40.1	32.4	27.2	Amorphous Debris
2002	244	138	245.03	139.84	11	14	61.9	71.9	55.2	31.1	Pebble
2002	244	138	245.94	139.18	3	14	69.3	47.3	49.9	34.9	Pebble
2002	244	138	245.99	139.49	PP1	14	83.7	52.71	51.15	38	Amorphous Debris
2002	244	138	245.94	139.61	4	14	124.8	71.8	59	29	Debris
2002	244	138	245.21	139.89	9	14	214	82.3	66.9	58.8	Pebble
2002	244	138	244.91	139.35	PP3	14	239.6	103.77	68.13	43.99	Debris
2002	244	138	245.58	139.93	7	14	284.7	112.5	63.7	63.2	Pebble
2002	244	138	245.7	139.68	1	14	492.2	193.5	92.9	28	Debris
2002	244	138	245.37	138.73	13	14	777	17.6	11.0	5.0	Flake
2002	244	138	244.47	139.13	6	15	8.2	32.47	28.05	11.11	Debris
2002	244	138	244.31	139.22	5	15	31.8	54.69	41.11	14.66	Amorphous Debris
2002	244	138	244.12	139.63	4	15	45.2	48.4	18.45	19.08	Debris
2002	244	138	244.37	139.59	2	15	3100	20.1	16.2	10.6	Amorphous Debris
2002	244	138	245.7	139.93	2	15	x	x	x	x	Amorphous Debris
2002	244	138	244.73	139.68	1	15	x	x	x	x	Amorphous Debris
2002	244	138	245.54	138.69	2	16	3.6	38	19.3	7.2	Flake Fragment
2002	244	138	245.01	139.95	3	16	48	51.6	45.2	28.3	Flake Fragment
2002	244	138	244.54	139.05	1	16	174.7	79.5	51.2	45.3	Debris
2002	244	138	244.19	138.21	25	16	9100	29.5	22.4	15.8	Debris
2002	244	138	244.35	138.47	1	17	1.1	24.26	15.51	5.64	Flake Fragment
2002	244	138	245.5	138.85	2	17	120.6	80.86	63.73	30.63	Flake Fragment
2002	244	138	245.7	138.72	3	17	181.7	89.08	58.37	42.18	Flake Fragment

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2002	244	138	245.52	138.74	4	17	373.6	109.18	87.37	54,36	Flake Fragment
2002	244	138	x	x	1	19	285.9	92.97	69.71	45.41	Pebble
2002	244	138	244.24	139.1	1	20	32	58.91	37.6	16.43	Amorphous Debris
2002	244	138	244	138	3	20	37.5	66.62	38.68	14.27	Flake Fragment
2002	244	138	244	138	2	20	618.5	142.41	119.44	40.48	Debris
2002	244	138	244	138	1	20	x	154.44	103.45	91.02	Pebble
2002	244	138	244.83	138.76	7	D2	8.6	43	24.3	8.7	Flake
2002	244	138	244.64	138.32	30	F87	3.6	29.2	23	5	Flake Fragment
2002	244	138	243.95	137.43	8	F87	4.6	23.7	23.2	10.3	Debris
2002	244	138	244.14	138.63	44	F87	7.4	17.6	22.4	12.9	Amorphous Debris
2002	244	138	244.19	137.9	51	F87	7.4	25	24.2	14.3	Amorphous Debris
2002	244	138	244.35	138.51	62	F87	9.1	27.7	18.3	16.3	Amorphous Debris
2002	244	138	244.23	138.38	57	F87	9.7	25.9	20.3	13.7	Pebble
2002	244	138	244.36	138.58	41	F87	11	29.1	26.3	14.8	Pebble
2002	244	138	244.27	138.63	64	F87	11.1	40.8	26.4	11.7	Amorphous Debris
2002	244	138	244.3	138.11	54	F87	14.1	38.4	32.7	18.1	Pebble
2002	244	138	244.26	138.34	32	F87	15.9	29.4	23.7	17.2	Pebble
2002	244	138	244.13	138.57	65	F87	17.9	32.5	30	20.4	Pebble
2002	244	138	244.4	138.53	40	F87	18.1	32.8	23.3	17.2	Amorphous Debris
2002	244	138	244.2	138.53	38	F87	19.1	46.3	29.1	17.9	Pebble
2002	244	138	244.23	138.46	36	F87	21.9	42.3	35.7	19.2	Pebble
2002	244	138	244.34	138.42	58	F87	22.1	32.5	20.3		Amorphous Debris
2002	244	138	244.46	138.38	56	F87	24	32.6	24.4	24.4	Amorphous Debris
2002	244	138	x	x	9	F87	24.4	42	33.13	19.3	x
2002	244	138	244.26	138.41	59	F87	25.1	50.4	27.3	23	Pebble
2002	244	138	244.19	138.62	42	F87	28.8	39.2	35.5	25.2	Pebble
2002	244	138	244.27	138.51	66	F87	31.6	47.7	30.5	25.3	Pebble
2002	244	138	244.16	138.1	24	F87	32	59.4	38.4	17.5	Amorphous Debris
2002	244	138	243.94	137.45	49	F87	33.8	57.3	44.6	16.3	Amorphous Debris
2002	244	138	x	x	6	F87	35.4	43.56	31.75	17.3	Pebble
2002	244	138	244.25	138.51	67	F87	35.7	52.3	29.6	25.3	Pebble
2002	244	138	x	x	8	F87	35.8	60.48	36.36	24.46	Pebble
2002	244	138	244.53	138.49	63	F87	40.8	67.7	40.9	23.9	Pebble
2002	244	138	243.5	139.46	3	F87	42.9	40.73	39.67	34.83	Amorphous Debris
2002	244	138	x	x	3	F87	43	40.43	33.28	44.24	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2002	244	138	244.73	138.01	20	F87	43.5	46.4	37.1	17.1	Pebble
2002	244	138	x	x	10	F87	46.2	71.67	54.85	18.21	Pebble
2002	244	138	244.55	138.23	55	F87	47.4	57.3	41.8	30.9	Amorphous Debris
2002	244	138	244.11	138.62	43	F87	49.2	54.7	46.7	24	Debris
2002	244	138	244.34	138.47	61	F87	56	49.7	37.4	38.9	Pebble
2002	244	138	x	x	4	F87	59.6	65.81	39.82	30.07	Pebble
2002	244	138	244.15	137.35	50	F87	64.7	53.2	47.3	25.8	Pebble
2002	244	138	x	x	11	F87	72.6	47.26	38.18	33.08	Pebble
2002	244	138	244.36	138.09	53	F87	82.7	64.7	56.8	22.2	Pebble
2002	244	138	244.15	138.53	37	F87	88	66.9	37.8	42.3	Amorphous Debris
2002	244	138	244.22	138.26	33	F87	91.7	64.1	50	34.8	Debris
2002	244	138	x	x	2	F87	95.8	72.14	57.2	23.38	Pebble
2002	244	138	244.15	138.45	60	F87	126.6	68.7	42	29.8	Pebble
2002	244	138	245.92	138.35	46	F87	127.7	69.04	44.24	37.46	Debris
2002	244	138	x	x	5	F87	218.4	101.09	82.99	51.95	Pebble
2002	244	138	244.31	138.53	39	F87	233.8	87.4	73.2	62.7	Pebble
2002	244	138	243.82	137.7	48	F87	271.5	x	x	x	Amorphous Debris
2002	244	138	244.34	138.13	27	F87	287	10.2	7.1	4.1	Amorphous Debris
2002	244	138	244.14	138.04	23	F87	354.9	106.8	100	57.7	Flake
2002	244	138	244.28	138	22	F87	508.4	146.9	53.9	56.2	Pebble
2002	244	138	243.5	138.6	1	F87	527	130.6	75.11	68.64	Debris
2002	244	138	244.53	138.25	29	F87	636.8	127.7	95.7	45.7	Pebble
2002	244	138	243.88	138.86	47	F87	1961	18.7	12.8	7.4	Debris
2002	244	138	244.64	137.5	13	F87	x	203	138.37	41.78	Amorphous Debris
2002	244	138	243.5	138.6	1	F87	x	226	195.66	94.47	Debris
2002	244	138	244.3	138.21	28	F87	x	105.1	107.3	99	Flake Fragment
2002	244	138	243.47	137.95	2	F87	x	x	x	x	x
2002	244	138	244.28	138.1	26	X	117	55.3	45.7	43	Debris
2002	244	138	243.32	138.32	31	X	205.8	86.1	66.3	44.8	Pebble
2002	244	138	244.3	138.39	35	X	222.7	74.4	67.6	54.5	Pebble
2002	244	138	244.15	138.73	45	X	463	12.6	7.7	5.4	Pebble
2002	244	138	244.27	137.96	52	X	1616	16.5	11.7	10.0	X
2002	244	138	245.69	138.14	X	X	x	70.23	30.34	10.43	x
2002	244	138	243.95	137.46	9	X	X	x	x	x	Pebble
2002	244	140	244.6	140.16	6	4	2.6	24.41	21.43	7.24	Flake

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2002	244	140	244.54	140.24	5	4	4	42.71	26.6	4.59	Flake
2002	244	140	245.63	140.27	1	4	8	39.82	28.27	11.79	Flake Fragment
2002	244	140	245.81	141.12	2	4	28.9	51.9	45.9	17.9	Flake Fragment
2002	244	140	244.78	141.78	9	4	34.4	75	44.9	10.5	Flake Fragment
2002	244	140	245.11	140.3	4	4	89.9	69.8	79.3	38.3	Debris
2002	244	140	244.24	140.22	3	5	43.4	41.5	53.6	15.7	Flake Fragment
2002	244	140	244.11	140.48	1	5	50.1	64.4	37.1	31	Debris
2002	244	140	245.67	140.7	2	5	146.7	70	51.2	27.2	Pebble
2002	244	140	245.18	141.73	5	5	384	121.9	102.9	45.8	Pebble
2002	244	140	245.82	140.73	4	5	x	149.6	190.8	93.6	Pebble
2002	244	140	245.38	141.38	1	13	73.4	54.9	36.5	24.8	Amorphous Debris
2002	244	140	245.22	141.47	2	14	59.5	69.25	41.92	32.1	Pebble
2002	244	140	245.54	140.7	1	14	x	x	x	x	Amorphous Debris
2002	244	140	245.93	141.38	1	15	416.1	107.64	106.56	67.19	Flake
2002	244	140	244.08	140.8	4	16	6.6	24.2	25.7	8.3	Broken Flake
2002	244	140	244.72	140.9	5	16	11.5	33.7	32.7	8.1	Debris
2002	244	140	244.43	140.44	2	16	43.8	51.9	55.6	22.9	Amorphous Debris
2002	244	140	244.1	141.81	15	16	55.6	71.6	34.4	25.2	Pebble
2002	244	140	244.6	140.35	4	16	63.2	68	45.5	32.6	Amorphous Debris
2002	244	140	245.2	141.2	13	16	79.4	70.2	56	29.1	Pebble
2002	244	140	244.27	140.76	2	16	83.6	83.6	41.8	36.3	Amorphous Debris
2002	244	140	245.51	141.58	8	16	83.8	63.3	62.6	39.4	Pebble
2002	244	140	245.93	141.15	10	16	86.3	66.8	40.3	42.5	Amorphous Debris
2002	244	140	245.93	141.08	x	16	86.3	70.73	61.12	43.17	Pebble
2002	244	140	244.52	140.6	5	16	95.5	77.65	65.72	27.6	Pebble
2002	244	140	245.73	141.88	12	16	158.2	87.2	56.6	36.7	Pebble
2002	244	140	244.4	140.96	14	16	170.4	78.6	60.8	42.3	Pebble
2002	244	140	245.21	141.15	6	16	241.4	94	73.7	53.6	Pebble
2002	244	140	244.3	140.46	1	16	270.7	125	77.8	30.4	Pebble
2002	244	140	245.66	141.84	11	16	444	90.2	85	49.7	Pebble
2002	244	140	244.32	140.6	5	16	468.2	137.9	118.6	66.3	Pebble
2002	244	140	245.13	141.16	7	16	474.2	139.5	92.6	78.7	Amorphous Debris
2002	244	140	244.68	141.18	12	17	4.7	23.1	22.3	11.4	Debris
2002	244	140	244.93	141.24	10	17	11	58.6	26.2	8.3	Flake Fragment
2002	244	140	244.75	141.2	11	17	28.9	59.4	38.4	18.3	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2002	244	140	244.25	140.62	10	17	65.8	73.73	61.14	20.98	Amorphous Debris
2002	244	140	244.8	141.11	11	17	76.2	74.83	59.92	21.24	Amorphous Debris
2002	244	140	244.27	141.07	6	17	99.2	92.46	54.48	33.24	Amorphous Debris
2002	244	140	244.16	140.63	9	17	184.6	78.96	81.57	49.49	Pebble
2002	244	140	245.66	140.87	1	17	191.8	101.12	57.73	35.36	Flake Fragment
2002	244	140	244.69	141.06	7	17	207.9	86.43	70.34	37.62	Pebble
2002	244	140	244.19	141.29	4	17	225	102.26	69.5	28.33	Amorphous Debris
2002	244	140	244.09	141.5	1	17	439.6	125.76	68.07	58.47	Pebble
2002	244	140	244.29	140.85	8	17	508.1	160	116.19	39.28	Amorphous Debris
2002	244	140	245.45	140.85	2	17	683	143.0	95.0	55.0	Flake
2002	244	140	244.45	141.33	2	17	x	136.11	104.92	149.62	Debris
2002	244	140	244.7	141.23	3	17	x	141.26	104.54	91.14	Pebble
2002	244	140	244.9	141.2	5	17	x	215.02	139.21	67.64	Pebble
2002	244	140	244.51	141.54	1	18	766.4	121	78.83	63.82	Debris
2002	244	140	245.5	141.27	4	x	3.9	27.61	20.52	9.51	Flake Fragment
2002	244	140	244.19	140.56	9	x	111	7.3	4.1	4.0	Debris
2002	244	140	244.91	140.8	7	x	166	7.6	4.9	4.4	Debris
2002	244	140	244.1	140.82	8	x	316	9.4	6.3	6.0	Debris
2002	244	140	244.17	140.86	5	x	462	12.8	8.3	6.8	Debris
2002	244	140	244.87	141.08	6	x	510	10.0	8.7	6.8	Amorphous Debris
2002	244	140	245.58	141.08	3	x	826	16.9	8.3	6.8	Debris
2002	244	140	245.45	140.45	3	x	1099	18.0	11.5	6.8	Debris
2002	244	140	244.7	140.7	1	x	2800	17.7	14.1	7.4	Debris
2002	244	142	244.7	143.05	1	3	8.2	65.7	12.7	9.4	Flake
2002	244	142	245.27	142.57	3	3	x	171	132.78	88.55	Amorphous Debris
2002	244	142	244.66	142.25	5	4	5.8	58.9	18.1	5.6	Flake Fragment
2002	244	142	244.9	142.18	1	4	7.5	30.1	24.4	9	Amorphous Debris
2002	244	142	244.74	143.8	1	4	35.9	60.4	41.2	13.3	Flake Fragment
2002	244	142	244.35	143.52	4	4	45.1	65.1	40.4	21.7	Debris
2002	244	142	245.65	142.53	3	4	68.8	73.2	52.8	17.3	Debris
2002	244	142	244.35	143.77	1	5	22.6	64.5	31	9.4	Flake
2002	244	142	245.16	143.3	1	10	193.4	76.12	61.1	45.89	Pebble
2002	244	142	244.46	143.85	2	11	20.1	44.09	31.29	18.8	Flake Fragment
2002	244	142	245.58	143.39	3	12	13.6	41.5	21.3	17.4	Flake Fragment
2002	244	142	245.48	143.29	5	12	33	53.4	25.8	28.8	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2002	244	142	245.6	143.45	4	12	39.4	50.8	41.7	23.9	Amorphous Debris
2002	244	142	245.4	143.8	1	12	78.5	51.7	42.7	52.6	Pebble
2002	244	142	245.65	143.88	2	13	15.7	29.3	19.5	16.9	Amorphous Debris
2002	244	142	245.2	143.4	1	13	78.7	53.7	56.9	34.2	Pebble
2002	244	142	245.68	143.92	3	13	147	86.2	59.3	41.3	Pebble
2002	244	142	245.6	142.95	4	14	123.8	81.65	53.56	35	Pebble
2002	244	142	245.43	142.08	2	14	389.7	109.35	90.75	59.83	Pebble
2002	244	142	245.47	142.33	1	14	x	x	x	x	Flake Fragment
2002	244	142	244.46	143.5	5	15	53.3	46.9	42.8	31.9	Amorphous Debris
2002	244	142	245.96	143.43	4	15	76.6	71.4	38.3	31.2	Pebble
2002	244	142	244.62	143.78	1	15	91	7.5	5.4	3.0	Pebble
2002	244	142	245.55	142.94	2	15	163.1	104.9	40.6	33.2	Amorphous Debris
2002	244	142	244.58	142.51	6	15	185.6	74.7	63.4	50.9	Pebble
2002	244	142	245.89	143.14	3	15	215.9	83.2	54.7	47.3	Pebble
2002	244	142	244.83	142.25	7	15	500	124.7	64.1	73.5	Pebble
2002	244	142	245.06	142.05	8	15	x	124.2	113.5	70.7	Amorphous Debris
2002	244	142	244.45	143.09	5	16	0.5	15.9	11.1	4.0	Debris
2002	244	142	244.43	143.09	4	16	1.06	24.4	17.4	6.5	Flake Fragment
2002	244	142	244.24	143.07	1	16	11.3	37.8	20.9	14.9	Debris
2002	244	142	244.43	143.35	2	16	21.7	39.7	3.9	18.4	Flake Fragment
2002	244	142	244.16	143.28	1	16	204.8	83.3	74.7	39.5	Debris
2002	244	142	244.35	143.15	3	16	1307	185.0	119.0	100.0	
2002	244	142	244.87	142.1	2	B2	39.9	57.11	37.7	22.8	Broken Flake
2002	244	142	244.87	142.1	2	B2	40	56.92	36.41	22.86	Flake
2002	244	142	244.65	142.86	45	F 88	1	14.5	14.8	8.4	Debris
2002	244	142	244.91	142.39	63	F87	9.2	34.4	25.5	11.9	Flake Fragment
2002	244	142	244.86	142.66	65	F87	9.8	30	17.6	17.8	Pebble
2002	244	142	245.1	142.39	27	F87	515.9	134.25	94.05	65.25	Amorphous Debris
2002	244	142	244.68	142.17	30	F87	714.7	16.03	121.9	56.51	Amorphous Debris
2002	244	142	245.3	142.81	25	F87	x	158.44	125.56	136.53	Debris
2002	244	142	245	143.9	12	F87	x	179.44	132.44	79.71	Pebble
2002	244	142	244.6	143.33	7	F87	x	241.7	107.44	89.24	Amorphous Debris
2002	244	142	244.81	142.42	23	F87	x	x	x	x	Amorphous Debris
2002	244	142	244.84	142.62	64	F88	0.9	20.6	11.9	5.3	Amorphous Debris
2002	244	142	244.38	142.98	37	F88	1.3	18.8	15.2	5.1	Flake Fragment

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2002	244	142	244.9	142.48	59	F88	1.5	18.4	15.8	6.7	Debris
2002	244	142	244.69	142.49	62	F88	1.7	14.9	16.6	6.4	Flake Fragment
2002	244	142	244.92	142.49	58	F88	2	23.8	11.3	7.8	Amorphous Debris
2002	244	142	244.96	142.7	53	F88	2.2	18.9	15.1	8.2	Flake Fragment
2002	244	142	244.44	142.99	38	F88	2.6	27.4	14.1	9.9	Flake Fragment
2002	244	142	244.72	142.76	47	F88	3.2	31.7	16.3	10	Flake Fragment
2002	244	142	244.58	142.93	42	F88	4.1	34.3	13.4	10.9	Flake Fragment
2002	244	142	244.59	142.85	43	F88	4.1	24.7	22.2	8.4	Flake Fragment
2002	244	142	244.68	142.77	46	F88	7.3	30.8	15.7	11	Amorphous Debris
2002	244	142	244.62	142.88	44	F88	7.9	31.9	18.7	11.5	Flake Fragment
2002	244	142	244.84	142.49	67	F88	8.1	x	x	x	Pebble
2002	244	142	244.78	142.72	50	F88	10.9	25.2	24.9	13.5	Pebble
2002	244	142	244.49	142.87	40	F88	11.2	33	19.8	12.8	Amorphous Debris
2002	244	142	244.78	142.45	68	F88	13.7	35.1	18.9	26.5	Pebble
2002	244	142	244.88	142.62	66	F88	16.4	32.8	25.9	18.7	Pebble
2002	244	142	244.55	142.91	41	F88	16.8	36	34.6	15.4	Flake Fragment
2002	244	142	244.79	142.68	51	F88	17.6	41.4	29.7	20.7	Pebble
2002	244	142	244.81	142.62	56	F88	18.8	34.6	27.1	11.8	Amorphous Debris
2002	244	142	244.91	142.52	57	F88	24.1	43.8	34.3	19.8	Debris
2002	244	142	244.87	142.62	55	F88	25.8	43.8	24	15.7	Amorphous Debris
2002	244	142	244.86	142.49	60	F88	31.6	32	27.8	24.6	Pebble
2002	244	142	244.47	142.98	39	F88	48.6	46	40.5	18.4	Amorphous Debris
2002	244	142	244.87	142.69	52	F88	93.9	59.4	55.2	37.2	Amorphous Debris
2002	244	142	244.93	142.65	54	F88	201.5	106.4	54.8	46.6	Debris
2002	244	142	244.79	143.8	8	x	0.9	17.1	11.8	7.1	Debris
2002	244	142	244.78	142.77	48	x	2.8	23.6	18.3	6.9	Amorphous Debris
2002	244	142	244.72	142.27	29	x	2.8	16.8	18.1	6.5	Flake Fragment
2002	244	142	244.82	142.74	49	x	9.3	39.2	27.9	10.1	Flake Fragment
2002	244	142	243.88	142.96	16	x	24.9	44.4	32.1	19.3	Pebble
2002	244	142	244.83	142.78	35	x	33.4	44	27.2	22.8	Amorphous Debris
2002	244	142	243.82	142.95	14	x	39.5	57.4	43.5	21.1	Pebble
2002	244	142	244.46	142.45	21	x	41.3	59.6	40.4	25.6	Pebble
2002	244	142	244.35	143.15	3	x	42.9	54.1	36.1	29.4	Pebble
2002	244	142	244	142.8	15	x	50	60.3	47.4	16.9	Flake Fragment
2002	244	142	244.02	142.98	17	x	50.5	45.4	31.9	25.1	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2002	244	142	244.52	143.08	6	x	60.7	38.4	32.4	35.4	Pebble
2002	244	142	244.8	142.47	61	x	62.6	71	36.9	21.2	Debris
2002	244	142	244.56	142.77	33	x	67.1	67.9	56.7	28	Pebble
2002	244	142	244.5	142.82	34	x	74.4	61.2	43.9	33.4	Pebble
2002	244	142	244.27	142.63	19	x	77	57.2	49.9	39.6	Debris
2002	244	142	244.38	142.9	32	x	89.4	64.9	59.7	38.3	Pebble
2002	244	142	244.28	142.49	20	x	126.1	75.1	65.4	40.6	Pebble
2002	244	142	245.28	142.77	26	x	188	89.7	63.5	42.9	Pebble
2002	244	142	244.51	142.59	31	x	248.9	91.8	81	60.2	Flake
2002	244	142	245.32	143.88	11	x	318	95..1	72.1	43.2	Amorphous Debris
2002	244	142	244.02	142.9	13	x	415.9	105.9	90.8	46.9	Flake Fragment
2002	244	142	244.62	142.4	22	x	427.8	176.7	81.2	61.4	Pebble
2002	244	142	244.6	143.33	7	x	457.2	85.5	65	62.8	Debris
2002	244	142	245.08	143.74	9	x	688.7	128.67	119.94	63.04	Broken Flake
2002	244	142	244.96	143.2	10	x	701.3	143.1	65.9	66.5	Flake Fragment
2002	244	142	244.45	142.72	18	x	752.7	90.9	108.9	87.9	Flake Fragment
2002	244	142	245.35	143.23	12	x	779	137.9	107.9	65.6	Flake Fragment
2002	244	142	245.18	142.89	4	x	1053	14.2	11.8	9.5	Pebble
2002	244	142	244.83	142.36	28	x	x	147.7	146	63.6	Pebble
2002	244	142	245.1	143.85	4	x	x	x	x	x	Debris
2002	244	242	245.01	143.8	7	B2	22	41.95	38.77	14.41	Flake Fragment
2002	246	136	246	137.6		E7	14.5	60.14	25.04	8.44	Flake
2002	246	138	246.3	139.6	1	3	14.6	47.12	28.18	13.14	Flake Fragment
2002	246	138	246.8	138.78	2	4	17.8	40.72	37.89	11.04	Flake Fragment
2002	246	138	246.18	138.9	1	4	252.8	90.29	80.36	39.88	Flake Fragment
2002	246	138	246.9	139.75	5	4	295.1	113.73	68.57	43.34	Pebble
2002	246	138	246.6	139.2	3	4	420.2	136.5	51.81	63.9	Pebble
2002	246	138	246.85	139.65	4	4	x	151.9	121.21	80.45	Pebble
2002	246	138	246.8	139.65	9	D12	11.7	41.81	26.33	10.12	Broken Flake
2002	246	140	246.14	142	1	3	348.7	94.31	105.99	73.24	Flake Fragment
2002	246	142	246.85	143.9	6	2	133.1	89	57.6	33.4	Flake Fragment
2002	246	142	246.55	142.27	1	3	11.8	41.31	25.82	9.45	Flake Fragment
2002	246	142	246.97	143.26	4	3	19.4	44.82	36.02	15.33	Flake Fragment
2002	246	142	246.91	142.3	3	3	72.8	87.25	40.66	30.28	Flake Fragment
2002	246	142	246.93	142.94	2	3	76.7	64.71	69.35	21.45	Flake Fragment

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2002	246	142	246.7	142.35	3	4	55.2	62.9	47.9	17.7	Flake Fragment
2002	246	142	246.9	142.78	4	4	73.6	68.5	48.6	25.7	Flake Fragment
2002	246	142	246.7	142.25	2	4	414.9	108	79.1	65.7	Flake Fragment
2002		140		141.8	2	C2	13.4	45.65	30.21	9.52	Broken Flake
2002	X	140	x	141.9	4	C2	15.7	34.79	37.35	9.8	Broken Flake
2002	X	140	X	141.85	2	C4	19.9	52.5	35.2	11.56	Broken Flake
2003	242	140	242.97	141.97	5	18	752	12.0	10.2	7.8	Debris
2003	242	140	243.3	140.73	10	19	316	10.6	7.6	5.3	Pebble
2003	242	140	242.6	141.73	12	19	376	10.7	7.8	7.7	Pebble
2003	242	140	243.76	141.95	6	19	459	8.8	8	5	Pebble
2003	242	140	243.42	141.32	5	19	x	x	x	x	Pebble
2003	242	140	242.3	141.16	13	19	x	x	x	x	Pebble
2003	242	140	243.37	140.44	8	19	x	x	x	x	Amorphous Debris
2003	242	140	243.49	140.8	9	19	x	x	x	x	Debris
2003	242	140	242.63	140.29	3	19	x	x	x	x	Amorphous Debris
2003	242	140	243.08	141.59	1	19	x	x	x	x	Debris
2003	242	140	243.08	141.59	1	19	x	x	x	x	Debris
2003	242	140	242.86	140.18	10	20	79.5	59.44	41.02	28.34	Chert Pebble
2003	242	140	243.65	140.79	6	20	1610	18.0	11.6	9.2	Pebble
2003	242	140	242.65	140.35	3	20	3200	20.6	14.5	9.7	Pebble
2003	242	140	242.6	140.13	1	20	91.7	69.35	35.52	21.64	Amorphous Debris
2003	242	140	242.3	140.67	4	20	585	12.8	9.2	8.9	Amorphous Debris
2003	242	140	242.88	140.38	9	20	169	91.0	67.0	45.0	Debris
2003	242	140	242.58	140.22	2	20	383.4	121.54	75.8	40.83	Amorphous Debris
2003	242	140	242.07	140.6	7	20	2400	18.4	12.4	9.6	Debris
2003	242	140	242.8	140.07	5	20	431.5	130.73	95.96	57.03	Amorphous Debris
2003	242	140	242.84	140.3	8	20	95.7	82.24	58.19	29.43	Flake Fragment
2003	242	140	243	140.23	11	20	3400	210.0	209.0	134.0	Amorphous Debris
2003	242	140	243.28	141.03	11	F90	39.1	55.39	50.07	23.55	Pebble
2003	242	140	243.1	141.03	10	F90	145.8	77.13	68.77	42.13	Pebble
2003	242	140	243.04	141.06	6	F90	247.9	96.23	74.95	57.33	Pebble
2003	242	140	243.13	141.03	13	F90	257.9	90.35	64.11	43.2	Pebble
2003	242	140	242.95	140.93	1	F90	50.5	55.21	33.63	22.64	Amorphous Debris
2003	242	140	243.19	141	4	F90	407.3	134.84	60.46	40.11	Amorphous Debris
2003	242	140	243.06	140.97	7	F90	224.9	98.53	57.93	46.91	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2003	242	140	242.98	141.01	5	F90	676.3	112.77	106.89	48.82	Amorphous Debris
2003	242	140	242.98	141.05	12	F90	4.3	28.5	21..96	67.8	Flake Fragment
2003	242	140	243.23	140.9	3	F90	918.5	152.74	77.28	61.29	Flake Fragment
2003	242	140	243.12	141.15	9	F90	x	217	148.36	51.05	Flake Fragment
2003	242	140	242.97	141.12	8	F90	903.7	132.18	103.64	63.46	Flake Fragment
2003	242	140	243.35	141.21	2	F90	x	151.88	71.24	72.57	Flake Fragment
2003	242	140	242.49	140.12	11	X	0.2	17.9	6.1	2.5	Broken Flake
2003	242	140	243.82	141.38	4	X	33.1	39.9	47	26.2	Flake Fragment
2003	242	140	243.27	140.43	7	X		78.46	36.72	26.55	Debris
2003	242	142	242.71	142.03	3	17	32.8	68.2	53	16.2	Broken Flake
2003	242	142	242.75	143.66	5	17	194.5	94.96	69.82	33.33	Flake
2003	242	142	242.9	143	5	18	x	x	x	x	Pebble
2003	242	142	243	143.25	3	18	17	38.7	18.9	14.7	Amorphous Debris
2003	242	142	243.17	143.98	4	18	26.7	32.9	27.7	19	Amorphous Debris
2003	242	142	242.8	142.72	2	18	59.4	48.8	35.9	21.1	Amorphous Debris
2003	242	142	243.28	143.51	15	19	55	73	44.7	25	Pebble
2003	242	142	243.54	143.89	7	19	57.1	57.7	36.4	33.2	Pebble
2003	242	142	242.6	143.96	19	19	61.6	58.6	42.2	28.2	Pebble
2003	242	142	243.64	143.07	16	19	63.3	55.6	48.1	33.6	Pebble
2003	242	142	243.16	143.45	21	19	64.9	67.6	51.8	44	Pebble
2003	242	142	242.6	143.35	3	19	89	61.7	55.1	48.5	Pebble
2003	242	142	242.42	143.29	4	19	92.9	68.5	51.6	45.6	Pebble
2003	242	142	242.54	143.9	10	19	94	65.7	55.6	37.8	Pebble
2003	242	142	243.6	143.86	8	19	150.3	77.2	66.2	50.5	Pebble
2003	242	142	243.2	143.92	22	19	412	9.6	7.4	7.1	Pebble
2003	242	142	242.3	142.27	26	19	1656	18.3	14.4	11.9	Pebble
2003	242	142	243.65	143.85	23	19	1930	16.5	11.0	10.2	Pebble
2003	242	142	242.46	142.25	27	19	4100	23.6	16.9	11.1	Pebble
2003	242	142	243.48	143.89	5	19	17.3	32.2	28.4	24.6	Amorphous Debris
2003	242	142	243.25	142.91	28	19	779	11.8	11.6	6.4	Amorphous Debris
2003	242	142	242.73	143.03	1	19	0.2	7.4	5.4	2.2	Debris
2003	242	142	243.74	143	24	19	390	12.8	10.3	3.8	Amorphous Debris
2003	242	142	243.66	143.99	18	19	23.2	42.7	42.7	19	Broken Flake
2003	242	142	243.07	143.04	14	19	39.1	53.9	27.3	27.7	Amorphous Debris
2003	242	142	243.79	143.84	6	19	9	35	31.6	20.1	Broken Flake

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2003	242	142	243.67	143.79	9	19	179.6	83.7	55.7	49.1	Amorphous Debris
2003	242	142	242.4	143.57	2	19	59	5.5	4.0	2.3	Debris
2003	242	142	242.89	143.57	12	19	217	10.6	7.6	3.5	Debris
2003	242	142	242.6	143.78	11	19	795	11.6	9.3	9.2	Debris
2003	242	142	242.47	142.82	25	19	2400	19.4	14.4	10.4	Debris
2003	242	142	242.9	143.07	13	19	901	15.5	8.5	6.3	Debris
2003	242	142	242.85	142.53	1	x	12	44.43	31.84	11.55	Flake Fragment
2003	244	138	245.76	138.25	1	11	0.9	23.9	10.9	0.3	Broken Flake
2003	244	140	245.76	140.65	2	18	89.4	73.68	54.2	27.23	Pebble
2003	244	140	245.43	140.43	1	18	570	15.2	9.1	4.3	Flake Fragment
2003	244	140	245.8	140.44	1	20	124.9	63.43	52.92	49.26	Pebble
2003	244	140	244.13	140.1	2	20	1.5	23.1	18	6.3	Amorphous Debris
2003	244	140	244.63	140.34	3	20	2.7	23.1	13.7	8.5	Debris
2003	244	142	245.21	143.12	7	17	3.5	23.6	23.5	5.1	Flake Fragment
2003	244	142	244.17	142.53	3	17	1.6	27.7	10.6	6.6	Flake Fragment
2003	244	142	245.71	143.63	6	17	x	x	x	x	Flake
2003	244	142	244.87	142.73	2	17	19.4	67.56	27.22	12.78	Flake Fragment
2003	244	142	245.75	142.7	1	18	66.9	47.7	44.62	33.16	Pebble
2003	244	142	245.62	142.78	2	18	70.6	58.42	45.86	27.6	Pebble
2003	244	142	244.89	142.29	4	18	108.1	64.14	46.36	38.07	Pebble
2003	244	142	245.8	143.19	6	18	401.3	77.21	89.07	63.33	Pebble
2003	244	142	244.16	142.69	5	18	459	122	82.36	55.45	Pebble
2003	244	142	245.54	143.94	13	18	50	4.9	4.1	3.6	Debris
2003	244	142	245.26	143.94	11	18	32.5	43.12	33.15	19.06	Amorphous Debris
2003	244	142	245.06	143.97	9	18	10.4	31.28	19.22	13.15	Amorphous Debris
2003	244	142	245.18	142.83	3	18	0.8	17.7	12.43	5.35	Amorphous Debris
2003	244	142	245.48	143.74	14	18	1076	15.3	13.0	8.1	Debris
2003	244	142	245.35	143.37	7	18	12.4	39.5	30.79	19.58	Debris
2003	244	142	245.06	143.71	8	18	49.9	68.54	44.08	21.99	Flake
2003	244	142	245.35	143.91	12	18	260	11.0	7.2	4.0	Broken Flake
2003	244	142	245.16	143.89	10	18	50	5.4	3.7	3.3	Debris
2003	244	142	245.35	142.82	10	19	84.2	60.75	44.84	35.7	Pebble
2003	244	142	244.21	143.68	20	19	112.6	71.6	52.48	40.99	Pebble
2003	244	142	245.78	142.55	8	19	118.8	57.13	58.08	45.01	Pebble
2003	244	142	245.8	142.54	9	19	121.4	67.21	38.25	43.56	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2003	244	142	245.4	143.75	21	19	138.9	81.33	63.9	30.03	Pebble
2003	244	142	244.24	143.43	19	19	262.8	80.71	83.93	47.35	Pebble
2003	244	142	244.8	143.63	12	19	501	15.1	6.8	4.8	Amorphous Debris
2003	244	142	245.9	142.6	7	19	1112	14.5	10.0	8.7	Pebble
2003	244	142	245.32	143.3	22	19	221	89.29	73.27	35.07	Amorphous Debris
2003	244	142	244.2	143.3	15	19	196.9	59.6	60.7	47.5	Amorphous Debris
2003	244	142	245.07	143.73	3	19	46.8	66.6	48.37	28.35	Flake
2003	244	142	245.42	142.85	5	19		41.51	24.96	10.84	Flake Fragment
2003	244	142	244.2	143.42	18	19	140.8	110.62	55.23	27.66	Flake
2003	244	142	244.28	143.5	24	19	2900	21.4	14.5	9.0	Debris
2003	244	142	245.03	143.14	1	19		54.48	48.06	15.31	Broken Flake
2003	244	142	244.92	142.66	23	19	97.9	85.53	53.34	31.99	Debris
2003	244	142	244	142.58	17	X	219.1	85.15	62.23	60.37	Amorphous Debris
2003	244	142	245.13	143.14	2	X	2.7	39.5	23	4.9	Flake Fragment
2003	244	142	245.13	142.9	6	X	40	41.1	36.7	23	Amorphous Debris
2003	244	142	244.03	143.41	14	X	523.3	96.12	102.76	64.35	Broken Flake
2003	244	142	244.77	143.15	11	X	992.2	161	122.8	71.1	Debris
2003	244	142	245.48	142.83	4	X	10.5	50.4	24	9.8	Broken Flake
2003	244	142	244.5	143.87	13	X	x	210	104.06	69.99	Debris
2004	242	140	242.28	140.78	1	1					Amorphous Debris
2004	242	140	242.54	142.64	1	2	53.8	58.2	31.6	23.8	Pebble
2004	242	140	243.34	141.27	1	2					Debris
2004	242	140	243.39	141.73	2	3	4.5	30.3	21.9	9.7	Pebble
2004	242	140	242.52	141.5	2	3	25.9	49.1	37	20	Pebble
2004	242	140	242.55	140.82	5	3	0.3	15.5	11.7	2.6	Amorphous Debris
2004	242	140	242.16	140.36	6	3	0.3	13.1	6.3	5.7	Amorphous Debris
2004	242	140	242.37	140.56	4	3	1.4	16.9	19.5	8	Amorphous Debris
2004	242	140	242.3	140.66	2	3	4.7	34.1	32.9	11.8	Amorphous Debris
2004	242	140	242.26	140.83	1	3	47.5	52.5	45.5	35.8	Pebble
2004	242	140	242.3	140.78	3	3	62.6	46.7	40	36.7	Pebble
2004	242	140	243.39	141.74	1	3	7000				Amorphous Debris
2004	242	140	243.595	141.425	1	4	1	17.3	14.1	3.6	Flake Fragment
2004	242	140	242.54	141.28	2	4	2.1	21.2	14.4	5.5	Debris
2004	242	140	242.92	141.9	1	4	189.2	69.1	63.3	56.7	Pebble
2004	242	140	242.11	140.42	1	4	4.8	20.1	20.4	12.9	Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2004	242	140	242.24	140.74	3	4	138.1	81.5	52.1	2.2	Pebble
2004	242	140	242.18	140.41	2	4	432.6	93.2	76	77.2	Debris
2004	242	140	243.56	141.61	1	5	0.5	12.9	11.4	2.9	Debris
2004	242	140	242.04	140.34	2	5	35	50.3	36.5	26.5	Pebble
2004	242	140	242.63	140.56	1	5	90.6	52.2	49.4	23.3	Amorphous Debris
2004	242	140	242.7	141.57	2	5	2.3	22.11	13.51	9.91	Amorphous Debris
2004	242	140	242.69	141.65	1	5	1.2	25	13.5	4.6	Debris
2004	242	140	242.4	142.18	7	6	1.2	16.6	14.8	5.3	Amorphous Debris
2004	242	140	242.35	141.25	5	6	4.8	40.7	13.3	9.7	Debris
2004	242	140	242.74	141.02	6	6	5.2	18.5	14.4	14.1	Pebble
2004	242	140	242.65	141.67	2	6	5.3	26.5	15.99	17.4	Pebble
2004	242	140	242.56	141.15	9	6	6.6	26.8	19.6	15.5	Pebble
2004	242	140	242.11	141.78	8	6	21.3	53.8	33.4	19.6	Pebble
2004	242	140	242.69	141.12	4	6	29.7	40.6	27	21.7	Pebble
2004	242	140	242.76	141.15	10	6	38.3	35	34.1	24.9	Amorphous Debris
2004	242	140	242.12	141.88	1	6	62.5	79.1	67.6	26.2	Pebble
2004	242	140	242.78	141.18	3	6	92.4	60.8	36.9	31	Amorphous Debris
2004	242	140	242.19	140.06	1	6	46.3	72.3	42.2	27	Flake Fragment
2004	242	140	242.54	141.16	9	7	2.3	20.4	19.1	9.7	Pebble
2004	242	140	242.92	141.71	4	7	3.8	26.9	13.4	8.8	Amorphous Debris
2004	242	140	242.78	141.64	1	7	6	27.9	21.1	10.5	Pebble
2004	242	140	242.36	141.22	7	7	7.1	38	21.2	10.3	Amorphous Debris
2004	242	140	242.51	141.33	6	7	9	35.4	29.3	15.9	Pebble
2004	242	140	242.93	141.72	5	7	9.2	40.2	26.4	13.2	Debris
2004	242	140	242.87	141.57	2	7	9.3	38.4	24.2	15.4	Flake Fragment
2004	242	140	242.22	141.75	10	7	13.6	39.7	34.6	12.5	Amorphous Debris
2004	242	140	242.93	141.65	3	7	44.7	47.88	51.2	27	Pebble
2004	242	140	242.41	140.5	11	7	x	134	103.4	5.4	Flake Fragment
2004	242	140	242.31	141.12	8	7	x	155.2	116.7	118	Pebble
2004	242	140	242.73	140.82	1	7	1	13	11.6	6.1	Amorphous Debris
2004	242	140	242.07	140.82	3	7	29.8	46.7	32	15.1	Pebble
2004	242	140	242.33	140.73	2	7	31.2	40.1	35.3	25.1	Amorphous Debris
2004	242	140	243.06	141.165	2	8	0.5	22.8	11.2	3.3	Flake Fragment
2004	242	140	243.185	141.22	1	8	0.6	22.7	7	4.2	Flake

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2004	242	140	242.15	140.09	1	8	6.1	23	16.6	14.1	Pebble
2004	242	140	242.12	140.21	1	9	1.2	12	13.9	4.4	Amorphous Debris
2004	242	140	242.14	140.25	2	9	1.8	20	11.7	6.7	Pebble
2004	242	140	242.6	140.35	4	9	1.9	18.4	13.7	6	Amorphous Debris
2004	242	140	242.3	140.31	3	9	x	163.9	147	87.3	Flake Fragment
2004	242	140	242.31	140.21	3	10	1.9	24.1	18.7	6.4	Flake Fragment
2004	242	140	242.32	140.35	4	10	2.8	27.2	26.3	5.2	Amorphous Debris
2004	242	140	242.33	140.2	1	10	17.3	26.5	30.5	16.7	Debris
2004	242	140	242.27	140.3	2	10	54.4	41.9	37.7	26.8	Pebble
2004	242	140	242.61	140.17	1	11	2.3	37.9	11.7	7.9	Debris
2004	242	140	242.37	140.21	2	11	26.5	46.6	32.1	18.7	Pebble
2004	242	140	242.55	140.17	4	11	164.8	69.5	55.8	48.6	Pebble
2004	242	140	242.36	140.18	3	11	165.7	82	80.5	33.3	Pebble
2004	242	140	243.84	141.89		X	2.8	23.8	26.6	4.9	Flake Fragment
2004	242	140	243.29	141.69	1	X	1.5	24.1	11.3	4.7	Flake
2004	242	140	242.6	141.8	1	x	x	x	x	x	
2004	242	142	242.24	142.69	1	1	x	x	x	x	Debris
2004	242	142	242.66	142.01	2	3	0.4	11.4	7.3	3.8	Debris
2004	242	142	242.39	142.08	3	3	0.6	11.1	13.3	5	Flake Fragment
2004	242	142	242.15	142.24	4	3	4.8	19.8	30.6	8.1	Debris
2004	242	142	242.71	142.06	1	3	24.2	53.6	31.8	35.1	Pebble
2004	242	142	242.75	142.75	5	4	x	x	x	x	Broken Flake
2004	242	142	242.41	142.64	2	4	x	x	x	x	Amorphous Debris
2004	242	142	242.17	142.54	3	4	x	x	x	x	Amorphous Debris
2004	242	142	242.67	142.11	1	4	x	x	x	x	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2004	242	142	242.51	142.08	4	4	x	x	x	x	Pebble
2004	242	142	242.84	142.13	1	5	x	x	x	x	Flake Fragment
2004	242	142	242.92	143	6	6	x	x	x	x	Debris
2004	242	142	242.18	142.46	4	6	x	x	x	x	Amorphous Debris
2004	242	142	242.14	142.62	3	6	x	x	x	x	Amorphous Debris
2004	242	142	242.67	142.77	2	6	x	x	x	x	Amorphous Debris
2004	242	142	242.92	142.88	5	6	x	x	x	x	Pebble
2004	242	142	242.52	142.81	1	6	x	x	x	x	Pebble
2004	242	142	242.59	142.64	6	7	x	x	x	x	Broken Flake
2004	242	142	242.39	142.8	3	7	x	x	x	x	Debris
2004	242	142	242.38	142.84	2	7	x	x	x	x	Debris
2004	242	142	242.64	142.77	5	7	x	x	x	x	Flake Fragment
2004	242	142	242.78	142.79	9	7	x	x	x	x	Amorphous Debris
2004	242	142	242.17	142.01	11	7	x	x	x	x	Amorphous Debris
2004	242	142	242.91	142.86	10	7	x	x	x	x	Amorphous Debris
2004	242	142	242.64	142.8	12	7	x	x	x	x	Amorphous Debris
2004	242	142	242.79	142.94	8	7	x	x	x	x	Pebble
2004	242	142	242.49	142.93	4	7	x	x	x	x	Pebble
2004	242	142	242.7	142.92	7	7	x	x	x	x	Pebble
2004	242	142	242.42	142.55	1		x	x	x	x	
2004	244	142	244.13	142.25			11.5	50.4	22.8	8.2	Flake Fragment
2005	242	140	243.08	141.84	1	1	11	34.8	29.6	20.1	Pebble
2005	242	140	243.08	141.87	2	1	3.5	22.6	17.2	8.7	Amorphous Debris
2005	242	140	243.27	141.92	3	1	56	51.7	29.8	27.2	Amorphous Debris
2005	242	140	243.23	141.92	4	1	6.8	34.7	23	12.6	Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2005	242	140	243.1	141.96	1	2	86.7	67.8	48.7	33.8	Pebble
2005	242	140	243.34	141.84	2	2	5.2	30.5	27.9	12.4	Debris
2005	242	140	243.18	140.18	2	2					Amorphous Debris
2005	242	140	243.31	141.745	3	2	16.5	43.6	30.8	15.9	Amorphous Debris
2005	242	140	243.965	141.89	4	2	0.6	17.4	14.1	2.3	Flake
2005	242	140	243.38	141.65	5	2	1.2	16.9	10.5	8	Pebble
2005	242	140	243.03	141.27	6	2	16.4	37.1	32.7	19.7	Pebble
2005	242	140	243.18	141.42	7	2	9.2	36.2	26.2	13.6	Pebble
2005	242	140	243.39	141.73	8	2	5.7	22.8	19.6	14	Pebble
2005	242	140	243.35	141.69	9	2	9.3	66.3	26.6	6.3	Flake
2005	242	140	243.1	141.61	10	2	0.3	17.7	7.5	1.3	Amorphous Debris
2005	242	140	243.22	141.49	11	2	27.1	37.8	32.6	26.2	Pebble
2005	242	140	243.47	141.74	12	2	4	25.6	20.9	16	Pebble
2005	242	140	243.29	141.74	14	2	3.9	21.5	16.3	12.9	Pebble
2005	242	140	243.09	141.57	16	2	0.7	18	14.8	2.8	Debris
2005	242	140	243.34	140.77	17	2	20.2	47.6	34.7	12.9	Debris
2005	242	140	243.1	142	18	2	33.4	44.2	41.6	21	Amorphous Debris
2005	242	140	243.13	141.74	1	3	28.7	47.6	30.6	28.1	Pebble
2005	242	140	243.43	140.21	1	3	80.1	56.5	47.1	40.9	Pebble
2005	242	140	243.41	141.75	2	3	92.6	62.1	45.6	42.7	Pebble
2005	242	140	243.75	140.1	2	3	1.6	14.1	13.9	7.8	Amorphous Debris
2005	242	140	243.12	141.77	3	3	93.2	66.7	35.7	26.1	Pebble
2005	242	140	243.42	141.75	4	3	9.3	33.6	27.1	14.2	Flake Fragment
2005	242	140	243.18	141.75	5	3	2	27.5	22	5.4	Debris
2005	242	140	243.49	141.95	6	3	7.5	25.4	23.9	13.9	Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2005	242	140	243.66	140.28	6	3					Pebble
2005	242	140	243.5	141.54	7	3	2.1	20.55	16.7	7.7	Amorphous Debris
2005	242	140	243.22	140.28	8	3	27.6	59.5	37.8	18.8	Amorphous Debris
2005	242	140	243.23	141.4	9	3	74.1	66.6	44.5	41.6	Debris
2005	242	140	243.89	140.12	9	3					Pebble
2005	242	140	243.22	141.1	10	3	2.5	17.6	11.3	7.8	Amorphous Debris
2005	242	140	243	141.91	11	3	9.1	35	21.1	14.5	Amorphous Debris
2005	242	140	243.16	141.17	12	3	1.9	16.7	11.6	6.8	Amorphous Debris
2005	242	140	243.78	140.07	12	3					Pebble
2005	242	140	243.91	140	13	3					Amorphous Debris
2005	242	140	243.5	141.7	1	4	3.5	26.2	13.4	10.8	Debris
2005	242	140	243.77	140.365	1	4	6.1	43.8	15.9	11.6	Amorphous Debris
2005	242	140	243.25	141.8	2	4	1.6	18.4	17.7	4.5	Debris
2005	242	140	243.79	140.33	2	4	10.3	26.6	28	22.3	Pebble
2005	242	140	243.05	141.94	3	4	47.6	51.9	36	33.6	Pebble
2005	242	140	243.82	140.335	3	4	0.4	13	9.3	4.8	Amorphous Debris
2005	242	140	243.17	141.35	4	4	1.6	17.5	15.3	4.6	Amorphous Debris
2005	242	140	243.74	140.37	4	4	4.6	19.1	15.9	12.6	Pebble
2005	242	140	243.15	141.92	5	4	5.8	25	21.3	14.5	Amorphous Debris
2005	242	140	243.78	140.36	5	4	0.3	10.9	10.6	4.5	Amorphous Debris
2005	242	140	243.57	141.8	6	4	10	30.8	27.8	15.1	Debris
2005	242	140	243.48	141.57	7	4	51.4	54.4	38.2	31.4	Pebble
2005	242	140	243.79	140.2	7	4	16.6	29.6	27.7	20	Pebble
2005	242	140	243.05	141.7	8	4	5.5	26.8	21.9	9.9	Amorphous Debris
2005	242	140	243.77	140.33	8	4	4.1	23.6	15.2	14.1	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2005	242	140	243.42	141.82	9	4	9.5	26.2	17.7	15.8	Amorphous Debris
2005	242	140	243.47	141.84	10	4	2.2	21.3	19.5	8.3	Debris
2005	242	140	243.88	140.2	10	4	4.5	26.8	21.4	10	Pebble
2005	242	140	243.37	141.64	11	4	0.3	12.4	8.3	5.2	Amorphous Debris
2005	242	140	243.67	140.05	11	4	51.7	58.8	45.3	33.3	Pebble
2005	242	140	243.3	141.19	12	4	2.2	16.7	13	10.9	Amorphous Debris
2005	242	140	243.34	141.2	13	4	0.7	14.4	15.7	3.7	Broken Flake
2005	242	140	243.25	141.35	14	4	16.4	29	25.6	21.4	Amorphous Debris
2005	242	140	243.93	140.05	14	4	1.2	19.9	10.6	7.7	Amorphous Debris
2005	242	140	243.35	141.09	15	4	1.7	32.2	10.7	7	Flake Fragment
2005	242	140	243.38	141.72	1	5	97.1	64.3	36.7	29	Amorphous Debris
2005	242	140	243.05	141.92	2	5	20.1	31.6	23.3	20.5	Amorphous Debris
2005	242	140	243.17	141.29	3	5	1.4	18.9	16.6	4	Flake
2005	242	140	243.66	140.18	3	5					Amorphous Debris
2005	242	140	243.07	141.4	4	5	0.6	21.3	11	2.7	Flake Fragment
2005	242	140	243.52	140.275	4	5					Amorphous Debris
2005	242	140	243.3	141.94	5	5	0.9	15.6	8.4	5.4	Debris
2005	242	140	243.89	140.21	5	5					Amorphous Debris
2005	242	140	243.77	140.145	6	5					Amorphous Debris
2005	242	140	243.8	140.16	7	5					Pebble
2005	242	140	243.84	140.23	8	5					Pebble
2005	242	140	243.85	140.125	9	5					Amorphous Debris
2005	242	140	243.94	140.14	10	5					Amorphous Debris
2005	242	140	242.82	140.05	11	5	1.6	23.1	15.9	4.8	Flake Fragment
2005	242	140	243.38	141.55	1	6	241	150.0	52.0	44.0	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2005	242	140	243.55	140.19	1	6	8.8	63.3	29.4	9	Debris
2005	242	140	243.82	140.35	1	6					Amorphous Debris
2005	242	140	243.5	141.86	2	6	2.2	15.7	19.5	7.4	Flake Fragment
2005	242	140	243.37	140.2	2	6	13.6	37.5	26.7	19.8	Pebble
2005	242	140	243.01	141.1	3	6	790.4	123.27	92.98	83.74	Debris
2005	242	140	243.41	140.22	4	6	18.5	13.6	10.5	2	Pebble
2005	242	140	243.79	140.02	5	6	6.2	32.3	12.8	13.9	Amorphous Debris
2005	242	140	243.55	141.72	6	6	64	79.6	40.5	26.4	Amorphous Debris
2005	242	140	243.6	140.255	7	6	3.7	25.2	17.9	11.8	Amorphous Debris
2005	242	140	243.53	140.24	8	6	1.4	28.5	17.7	5.7	Amorphous Debris
2005	242	140	243.53	140.23	9	6	28	60.6	38	19.1	Amorphous Debris
2005	242	140	243.52	140.2	10	6	27.2	22	15.6	6.2	Pebble
2005	242	140	243.71	140.08	11	6	5.9	29.1	22.7	12.7	Debris
2005	242	140	243.77	140.175	12	6	6.4	27.2	17.4	16.2	Amorphous Debris
2005	242	140	243.75	140.14	13	6	4.6	23.2	18.1	11.8	Pebble
2005	242	140	243.74	140.09	14	6	2.9	26.6	17.3	6.2	Amorphous Debris
2005	242	140	243.92	140.15	15	6	1.9	26.1	16.5	6.2	Amorphous Debris
2005	242	140	243.825	140.02	16	6	8.3	27.5	19.6	12.5	Amorphous Debris
2005	242	140	243.725	140	17	6	0.6	15.2	9.4	5.2	Amorphous Debris
2005	242	140	243.755	140.21	18	6	2	20.9	19.7	8.3	Amorphous Debris
2005	242	140	243.515	140.15	19	6	42.9	58.8	50.5	22.4	Pebble
2005	242	140	243.415	140.21	20	6	6.9	21.7	21.2	13.5	Amorphous Debris
2005	242	140	243.325	140.29	21	6	2.8	19.1	18.4	6.9	Pebble
2005	242	140	243.3	140.37	22	6	28.4	45.1	28.9	21.6	Pebble
2005	242	140	243.53	140.11	23	6	17.9	54	37.1	12.4	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2005	242	140	243.5	140.1	24	6	9.4	45.1	26.9	15.1	Amorphous Debris
2005	242	140	243.29	140.34	25	6	11.2	30.3	26.8	19.6	Pebble
2005	242	140	243.38	140.12	26	6	12.7	51.6	26.5	14.1	Amorphous Debris
2005	242	140	243.38	140.15	27	6	3.4	33.8	14.1	13.1	Amorphous Debris
2005	242	140	243.54	140.13	28	6	5.5	27.5	20.6	14.8	Pebble
2005	242	140	243.54	140.13	29	6	1.8	24.9	12.6	12.6	Amorphous Debris
2005	242	140	243.52	140.06	30	6	8.9	33.2	21.4	7.5	Amorphous Debris
2005	242	140	243.51	140.08	31	6	2.4	23.2	21.4	7.5	Amorphous Debris
2005	242	140	243.54	140.07	32	6	10.4	41.2	24.9	14.4	Amorphous Debris
2005	242	140	243.345	140.15	33	6	5.7	21.1	16	11.4	Pebble
2005	242	140	243.54	140.04	34	6	6.2	33.7	29.1	9.7	Pebble
2005	242	140	243.52	140.08	35	6	13.9	41	32.3	16.6	Pebble
2005	242	140	243.56	140.04	36	6	6.1	34.8	26.4	11.4	Flake
2005	242	140	243.52	140.08	37	6	9.1	36.9	25.2	18.9	Pebble
2005	242	140	243.06	140.69	38	6	84.7	67.7	56.3	43.4	Amorphous Debris
2005	242	140	243	140.64	39	6	6.9	28.8	19.5	17.3	Pebble
2005	242	140	243.15	140.88	40	6	12.6	30.1	29.5	14.6	Pebble
2005	242	140	243.735	140.41	1	7	17.1	37.8	30.3	24.9	Pebble
2005	242	140	243.16	140.255	2	7	5.6	24.8	22.6	9.5	Flake
2005	242	140	243.11	140.485	3	7	10.6	26.7	22.2	20.2	Pebble
2005	242	140	243.2	140.605	4	7	1	17.1	13.7	4.5	Amorphous Debris
2005	242	140	243.22	140.69	5	7	6.6	22.1	18.1	15.2	Pebble
2005	242	140	243.195	140.67	6	7	21.8	38.6	27.6	26.1	Pebble
2005	242	140	243.17	140.71	7	7	1.7	17.1	15.4	10.1	Pebble
2005	242	140	243.095	140.58	8	7	22.9	40.1	26.8	14.7	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2005	242	140	243.08	140.71	9	7	1.8	25.8	11.6	7.3	Pebble
2005	242	140	243.22	140.875	10	7	3.4	22	16.5	15.3	Pebble
2005	242	140	243.08	140.55	11	7	36.1	63.8	37.8	14.4	Pebble
2005	242	140	243.08	140.83	12	7	13.8	38	31.9	21.2	Pebble
2005	242	140	243.18	140.89	13	7	14.7	32.6	32.1	21	Pebble
2005	242	140	243.15	140.88	14	7	9.4	25.9	21.6	19.5	Amorphous Debris
2005	242	140	243.07	140.26	15	7	7.1	20.8	16.2	14.5	quartz Pebble
2005	242	140	243.58	140.23	16	7	285	149.5	81	22.2	Amorphous Debris
2005	242	140	243.56	140.18	17	7	14.4	47.5	42.2	9.6	Amorphous Debris
2005	242	140	243.585	140.15	18	7	3	29.8	21.8	6	Pebble
2005	242	140	243.585	140.12	19	7	8.6	41.8	30.1	10.7	Pebble
2005	242	140	243.69	140.22	20	7	2.2	28.6	16.2	7.8	Amorphous Debris
2005	242	140	243.65	140.15	21	7	12.1	46	33.7	9.1	Amorphous Debris
2005	242	140	243.18	140.425	22	7	11	42.4	18	13.6	Amorphous Debris
2005	242	140	243.4	140.64	1	10	4	35.5	16.1	8	Flake Fragment
2005	242	140	243.34	140.24	2	10					Amorphous Debris
2005	242	140	243.3	140.9	3	10	121.1	76.2	60.6	27.2	Debris
2005	242	140	243.07	140.88	4	10	37.6	40.4	26.3	21	Amorphous Debris
2005	242	140	243.3	140.66	5	10	6.6	33.6	22.9	11.3	Flake Fragment
2005	242	140	243.7	140.56	1	11	10.5	33.5	32.7	12.4	Flake Fragment
2005	242	140	243.52	140.14	2	11	0.4	17.8	8	3.9	Flake
2005	242	140	243.68	140.09	3	11	2.2	26.5	16.6	6.2	Debris
2005	242	140	243.56	140.36	2	12	19.2	45.5	32.5	11.4	Debris
2005	242	140	243.58	140.18	3	12	23.3	45	34.8	16.7	Debris
2005	242	140	243.88	140.37	4	12	5.2	16.6	16.5	14.5	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2005	242	140	243.59	140.27	5	12	5.8	17.7	23.3	17.1	Amorphous Debris
2005	242	140	243.61	140.19	6	12	19.2	39.7	22.1	12	Amorphous Debris
2005	242	140	243.38	140.91	2	13	6.5	22	12.5	14.3	Amorphous Debris
2005	242	140	243	140.55	2	13	26.3	33.8	29.3	21.1	Amorphous Debris
2005	242	140	243	140.55	2	13	11.8	28.1	13.4	16.3	Amorphous Debris
2005	242	144	243.09	144.54	1	10					Debris
2005	244	140	244.31	140.02	1	4					Pebble
2005	244	140	244.64	140.07	2	4					Debris
2005	244	140	244.7	140.15	3	4	3.3	22.8	12.9	8.4	Amorphous Debris
2005	244	140	244.44	140.3	1	5					Flake
2005	244	140	244.21	140.05	2	5					Amorphous Debris
2005	244	140	244.28	140.03	3	5	10	40.3	19.6	15.3	Flake Fragment
2005	244	140	244.87	140.87	1	6					Flake Fragment
2005	244	140	244.875	140.635	2	6	5.4	28.3	20	12.8	Flake Fragment
2005	244	140	244.375	140.145	3	6	0.5	13.3	13.4	8.9	Debris
2005	244	140	244.46	140.04	4	6	22.1	44.2	34	19.4	Flake Fragment
2005	244	140	244.51	140.08	5	6					Debris
2005	244	140	244.46	140.37	1	7					Flake Fragment
2005	244	140	244.48	140.08	2	7					Amorphous Debris
2005	244	140	244.9	140.17	1	10					Amorphous Debris
2005	244	140	244.65	140.05	1	10	0.3	10.2	8.3	1.5	Debris
2005	244	140	244.43	140.53	1	12	1.9	21.3	17.6	0.6	Flake Fragment
2005	244	140	244.23	140.14	2	12	0.4	15	6.9	3.3	Amorphous Debris
2005	244	140	244.9	140.44	1	14	11	36.4	26.8	12.3	Flake Fragment
2005	244	140	244.9	140.3	2	14	43.2	62.4	49.9	22.4	Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2005	244	140	244.84	140.16	3	14					Debris
2005	244	140	244.42	140.49	1	15					Debris
2005	244	140	244.35	140.41	2	15					NA
2005	244	140	244.11	140.1	1	16					Amorphous Debris
2005	244	140	244.5	140.17	2	16					Debris
2005	244	140	244.28	140.24	3	16	7.9	34.3	20	11.3	Debris
2005	244	140	244.21	140.1	1	17	23.3	39.7	31.7	21.4	Debris
2005	244	144	244.3	144.8				91.5	72.5	29.55	Flake Fragment
2005	246	140	247.62	141.48	1	1	44.2	44.5	32.3	25.5	Amorphous Debris
2005	246	140	247.6	140.26	2	1	20.6	66.5	31.5	11.2	Broken Flake
2005	246	140	247.96	141	1	9	123.9	86.37	50.7	23.5	Amorphous Debris
2005	246	140	247.89	140.93	3	9	17.3	49.82	22.19	19.71	Flake Fragment
2005	246	140	247.38	141.19	4	9	63.3	58.4	36.6	39.7	Debris
2005	246	140	247.77	140.82	5	9	41.1	52.13	37.21	27.94	Flake Fragment
2005	246	140	247.92	140.32	6	9	75.5	78.83	39.66	23.21	Amorphous Debris
2005	246	140	247.3	140.32	1	10	69.5	54.7	48.6	19.6	Flake Fragment
2005	246	140	247.49	141.69	2	10	0.4	25.9	1.9	4	Flake Fragment
2005	246	140	247.96	140.43	3	10	1.4	32	13.8	4	Broken Flake
2005	246	140	247.95	140.25	1	12	0.5	27.06	9.98	2.95	Flake
2005	246	140	247.1	141.85	1	13	36	41.4	29.5	23.4	Amorphous Debris
2005	246	140	246.85	141.56	1	14	1.6	22.1	20.9	3	Broken Flake
2005	246	140	246.84	141.67	2	14	40.4	62.9	34.2	19.5	Flake
2005	246	140	246.69	141.73	3	14	6.3	32.4	32	6.1	Broken Flake
2005	246	140	246.5	141.76	4	14	3.3	25	28.9	3.8	Broken Flake
2005	246	140	246.46	141.25	5	14	68.7	68.8	55.3	17.8	Flake

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2005	246	140	247.71	140.88	1	15	18	27.3	26.8	20	Pebble
2005	246	140	246.28	141.4	2	15	36	62.6	34.4	23.5	Broken Flake
2005	246	140	246.3	141.3	3	15	9.9	34.5	32.8	10.2	Debris
2005	246	140	246.8	141.42	4	15	9.9	39.8	33.2	9.9	Flake
2005	246	140	246.37	141.46	5	15	2.2	23.4	15.1	5.4	Flake
2005	246	140	246.28	141.46	6	15	3.5	39	15.9	8.1	Flake
2005	246	140	247.65	141.97	1	17	2.4	25.58	16.39	7.47	Debris
2005	246	140	246.62	141.53	2	17	10.2	61.49	23.28	11.37	Flake
2005	246	140	246.7	141.3	3	17	17.6	59.75	25.23	14.47	Flake Fragment
2005	246	140	246.76	141.93	4	17	2.1	18.7	17	5.9	Flake Fragment
2005	246	140	246.5	141.41	5	17	19.7	65.07	33.74	9.91	Debris
2005	246	140	246.46	141.26	6	17	70.5	68.02	43.97	28.49	Debris
2005	246	140	246.25	141.4	7	17	2	24.54	13.95	9.9	Flake Fragment
2005	246	140	246.16	141.96	8	17	3.5	23.77	13.02	7.54	Amorphous Debris
2005	246	140	246.33	141.4	9	17	10.8	40.9	35.33	11.62	Broken Flake
2005	246	140	246.93	141.35	10	17	7	31.96	37.88	8.96	Debris
2005	246	140	246.76	141.43	11	17	10	41.15	33.86	11.3	Flake
2005	246	140	246.64	141.25	12	17	6	30.28	29.95	10.53	Flake Fragment
2005	246	140	246.8	140.9	13	17	x	126.47	112.43	103.81	Pebble
2005	246	140	246.25	141.74	14	17	23.7	39.85	27.49	19.64	Debris
2005	246	140	246.68	141.92	1	18	27.1	38.7	38.6	21.9	Flake Fragment
2005	246	140	246.36	141.54	2	18	5.4	38.9	28.7	6.2	Broken Flake
2005	246	140	246.15	141.58	3	18	251.4	105.07	61.17	55.97	Pebble
2005	246	140	246.2	140.96	4	18	945.8	139.77	145.72	67.88	Debris
2005	246	140	247.1	140.18	5	18	4.8	28.57	27.64	4.43	Flake Fragment

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2005	246	140	247.06	141.68	6	18	6.2	25.56	30.8	16.78	Debris
2005	246	140	246.13	141.6	1	19	10.5	23.4	24	14.4	Amorphous Debris
2005	246	140	247.2	140.65	2	19	2.9	36.5	17.7	4.5	Flake
2005	246	140	247.3	141.25	3	19	449.9	138.12	94.97	44.26	Pebble
2005	246	140	247.48	141.63	4	19	3.5	26.7	19.5	6.8	Debris
2005	246	140	246.8	141.96	1	20	76.6	60	45.7	33	Pebble
2005	246	140	246.35	140.48	2	20	7.7	29.8	25.4	10.3	Amorphous Debris
2005	246	140	246.26	140.92	3	20	127.2	69.4	52.2	35.7	Pebble
2005	246	140	246.24	140.03	4	20	8.8	37	29.1	15.4	Flake Fragment
2005	246	140	246.12	140.8	5	20	35.7	31.6	35.3	33.1	Pebble
2005	246	140	247.27	140.93	6	20	0.4	14.6	11.2	4.8	Amorphous Debris
2005	246	140	247.07	140.87	7	20	1	14.1	13	5	Debris
2005	246	140	247.03	140.25	8	20	7.9	34.5	21	10.2	Amorphous Debris
2005	246	140	247.81	140.09	9	20	644.4	162.4	109.2	52.66	Debris
2005	246	140	247.23	141.23	10	20	29.1	40.7	29.5	22.7	Pebble
2005	246	140	247.31	141.44	11	20	81.6	50.3	37.5	27.2	Amorphous Debris
2005	246	140	247.08	141.28	12	20	73	76.4	43.2	30.1	Amorphous Debris
2005	246	140	246.18	141.33	1	21	16.8	40.71	28.06	18.44	Amorphous Debris
2005	246	140	246.57	141.3	2	21	17.3	43.71	42.26	16.87	Flake
2005	246	140	146.95	141.28	3	21	4.1	32.12	19.95	10.78	Debris
2005	246	140	246.22	141.08	4	21	14.7	37.53	29.58	22.35	Amorphous Debris
2005	246	140	146.77	141.17	5	21	2.4	25.81	16.35	6.87	Debris
2005	246	140	146.49	141.04	6	21	8.3	38.15	32.09	11.2	Pebble
2005	246	140	143.37	141.29	7	21	0.4	22.59	4.86	4.02	Debris
2005	246	140	246.46	141.26	8	21	34	67.73	52.46	13.77	Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2005	246	140	246.5	140.295	9	21	34.8	55.39	42.67	22.89	Debris
2005	246	140	246.38	140.33	10	21	65.1	57.57	39.47	23.97	Pebble
2005	246	140	246.28	140.07	11	21	x	165	88.5	56.1	Flake Fragment
2005	246	140	246.36	140.41	12	21	2.6	27.9	16.52	8.15	Amorphous Debris
2005	246	140	246.3	140.57	13	21	2	23.61	15.06	8.65	Amorphous Debris
2005	246	140	246.36	140.92	14	21	45.8	60.07	44.39	21.52	Amorphous Debris
2005	246	140	246.92	140.53	15	21	6.7	38.69	32.16	13.52	Debris
2005	246	140	246.3	140.28	16	21	56.6	57.32	46.1	28.06	Amorphous Debris
2005	246	140	246.78	140.12	17	21	1.4	20.54	13.31	7.7	Debris
2005	246	140	247.285	141.38	18	21	3.1	25.26	19.86	8.73	Flake Fragment
2005	246	140	247.66	141.79	1		141	56.94	45.82	40.83	Amorphous Debris
2005	246	140	247.6	140.3	1						Flake Fragment
2005	246	140	246.5	141.2	2	16					Flake Fragment
2005	246	142	247.76	142.25	1	5	x	160	155.8	134.6	Amorphous Debris
2005	246	142	247.66	143.18	1	6	24.9	68.78	37.97	12.95	Flake
2005	246	142	247.5	143.5	2	6	68.2	69.49	51.28	20.44	Debris
2005	246	142	247.58	143.98	3	6	99.5	76.71	58.42	14.91	Broken Flake
2005	246	142	247.19	142.35	1	8	1.5	32.31	9.3	5.07	Flake
2005	246	142	247.68	143.63	1	9	112.8	74.14	40.81	40.95	Flake Fragment
2005	246	142	247.83	143.98	2	9	93.5	63.18	54.89	22.08	Flake Fragment
2005	246	142	247.2	143.45	3	9	x	110.02	68.52	73.82	Pebble
2005	246	142	247.63	143.3	4	9	118.9	60.88	59.39	38.57	Flake Fragment
2005	246	142	247.72	143.16	6	9	23.2	53.54	34.93	15.67	Flake Fragment
2005	246	142	247.63	143.86	1	10	0.5	20.7	5.8	5.2	Flake
2005	246	142	247.12	142.11	3	10	0.6	17.91	13.2	2.9	Flake Fragment

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2005	246	142	247.5	143.85	1	11	879.2	126.95	125.8	72.15	Pebble
2005	246	142	247.38	142.74	2	11	3.8	31.24	22.47	5.74	Flake Fragment
2005	246	142	247.91	142.83	3	11	44	63.8	38.4	26.9	Flake Fragment
2005	246	142	247.96	143.15	1	12					Flake Fragment
2005	246	142	246.84	142.12	2	12					Flake Fragment
2005	246	142	247.3	143.25	2	13	29.8	33.92	34.7	27.07	Debris
2005	246	142	247.96	143.17	1	14	16.2	42.75	29.69	17.2	Debris
2005	246	142	247.4	143.08	2	14	16.1	41.38	27.81	13.84	Amorphous Debris
2005	246	142	247.28	143	3	14	8.8	28.52	23.11	14.7	Amorphous Debris
2005	246	142	247.66	143.64	4	14	3.1	21.94	18.76	8.1	Amorphous Debris
2005	246	142	247.1	143.09	5	14	28.8	45.24	28.76	17.15	Amorphous Debris
2005	246	142	246.96	142.25	1	15	31.1	44.6	28.39	26.16	NA
2005	246	142	246.36	143.73	2	15	14.2	52.16	24.97	11.51	Amorphous Debris
2005	246	142	246.83	143.44	3	15	68.1	61.14	57.3	24.28	Pebble
2005	246	142	247.15	143.3	4	15	4.2	30.7	19.57	9.79	Debris
2005	246	142	246.76	142.33	1	16	x	141.26	102.47	55.84	Amorphous Debris
2005	246	142	246.77	142.6	2	16	14.1	46.62	21.63	15.53	Amorphous Debris
2005	246	142	247.05	142.85	3	16	309.6	90.05	82.84	49.6	Pebble
2005	246	142	247.66	142.33	4	16	136.4	73.57	59.44	39.51	Pebble
2005	246	142	247.07	142.86	5	16	0.1	8.3	3.9	0.8	Flake
2005	246	142	247.64	142.78	6	16	1	20.48	12.6	3.88	Flake Fragment
2005	246	142	247.46	142.83	7	16	1.1	15.83	16.21	4.39	Amorphous Debris
2005	246	142	247.13	142.74	8	16	29.5	37.99	32.54	17.43	Amorphous Debris
2005	246	142	247.77	142.67	9	16	47.4	48.58	35.83	21.8	Pebble
2005	246	142	247.49	142.66	10	16	6.2	36.42	23.07	12.8	Flake Fragment

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2005	246	142	247.38	142.66	11	16	39.5	44.44	34.86	25.11	Amorphous Debris
2005	246	142	247.49	142.53	12	16	28.5	48.62	38.86	27.79	Pebble
2005	246	142	247.2	142.49	13	16	25.7	44.36	38.38	18.12	Pebble
2005	246	142	247.1	142.28	14	16	35.1	32.86	32.02	24.77	Amorphous Debris
2005	246	142	247.8	142.2	15	16	34.1	43.7	38.31	23.41	Pebble
2005	246	142	247.06	142.1	16	16	18.7	41.21	36.88	21.68	Flake
2005	246	142	247.24	142.86	17	16	14.8	25.26	19.79	17.98	Pebble
2005	246	142	247.76	142.8	18	16	0.8	15.39	10.3	5.7	Debris
2005	246	142	247.06	142.1	19	16					Pebble
2005	246	142	247.78	143.01	20	16	1.5	19.24	11.29	7.37	Amorphous Debris
2005	246	142	247.52	142.97	21	16	2.9	25.13	19.69	7.7	Debris
2005	246	142	246.64	143.05	22	16	0.2	12.69	10.74	2.47	Flake
2005	246	142	246.21	143.39	23	16	2.1	27.62	14.38	7.8	Flake Fragment
2005	246	142	246.21	143.26	24	16	0.1	8.8	5.5	2.2	Flake Fragment
2005	246	142	246.48	142.66	1	17					Broken Flake
2005	246	142	246.84	142.12	2	17					Debris
2005	246	142	246.73	142.89	3	17					Flake Fragment
2005	246	142	247.12	142.4	4	17					Pebble
2005	246	142	247.06	142.19	5	17					Flake Fragment
2005	246	142	246.15	142.01	1	18	6.1	40.44	21.66	10	Amorphous Debris
2005	246	142	247.65	142.36	2	18	1.3	20.12	20.21	3.97	Amorphous Debris
2005	246	142	247.39	142.14	1	20	0.9	17.03	11.67	5.16	Amorphous Debris
2005	246	142	247.84	142.12	2	20	2.2	23.92	15.47	9.84	Debris
2005	246	142	247.6	142.31	1	21	2.1	29.24	14.4	10.82	Pebble
2005	246	142	247.87	142.13	2	21	1.3	17.06	12.62	7.18	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2005	246	142	246.8	142.375	3	21	126	80.47	67.15	34.63	Pebble
2005	246	142	246.63	143.15	4	21	92.7	71.97	40.87	46.31	Pebble
2005	246	142	246.37	143.07	5	21	64.8	48.75	40.62	26.64	Pebble
2005	246	142	246.44	143.19	6	21	x	137.48	109.52	75.32	Debris
2005	246	142	246.64	143.88	1	22					Pebble
2005	246	142	246.67	143.02	2	22	6.8	31.79	13.83	11.07	Pebble
2005	246	142	246.66	143.01	3	22	7.8	39.2	18.28	13.63	Amorphous Debris
2005	246	142	246.64	143.25	4	22	358.7	93.68	62.27	59.71	Debris
2005	246	142	247.55	142.34	5	22	868.7	153.4	59.07	92.96	Debris
2005	246	142	247.91	142.25	1	23	9.7	39.61	12.03	10.62	Debris
2005	246	142	247.64	142.03	2	23	302.2	129.38	52.89	54.31	Amorphous Debris
2005	246	142	246.44	142.04	3	23	8.7	42.01	25.21	12.39	Amorphous Debris
2005	246	142	246.2	142.04	4	23	1.9	24.89	9.4	9.42	Amorphous Debris
2005	246	142	246.57	142.69	5	23	31.1	43.65	27.45	23.21	Flake Fragment
2005	246	142	246.31	143.06	6	23	2.9	23.91	22.63	6.14	Amorphous Debris
2005	246	142	246.24	142.02	1	24	12.3	29.14	30.69	13.95	Pebble
2005	246	142	246.09	142.39	2	24	172.7	89.27	60.18	29.83	Pebble
2005	246	142	246.18	142.4	3	24	27.6	51.3	45.5	13.6	Broken Flake
2005	246	142	246.4	142.71	4	24	1	23.85	15.13	3.79	Flake Fragment
2005	246	142	246.34	142.72	5	24	3	23.9	19.3	6.3	Amorphous Debris
2005	246	142	246.205	142.45	6	24	141.6	70.9	61.2	23.6	Pebble
2005	246	142	246.28	143.37	1	25	3.5	32.1	21.5	7.5	Flake
2005	246	142	246.31	142.76	2	25	14.4	31.6	23.4	13.6	Amorphous Debris
2005	246	142	246.27	142.56	4	25	4.5	21.2	15.9	10.5	Amorphous Debris
2005	246	142	246.22	142.74	5	25	25.1	42	33.9	19.3	Flake Fragment

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2005	246	142	246.74	142.15	6	25	1.4	17.5	16.1	6.9	Flake
2005	246	142	246.85	143.15	7	25	1.2	18.5	13	6.7	Debris
2005	246	142	246.79	142.1	8	25	5	22.8	18.5	11.7	Amorphous Debris
2005	246	142	246.81	142.18	9	25	14.5	42.1	16.1	16.4	Amorphous Debris
2005	246	142	246.72	142.11	10	25	25.1	51.2	35.9	16.9	Debris
2005	246	142	247.04	142.29	11	25	2.2	19.5	15.6	11.3	Amorphous Debris
2005	246	142	247.1	142.33	12	25	99.7	68.4	64.2	34.2	Pebble
2005	246	142	247.15	142.34	13	25	5.9	25.8	19.9	6.9	Pebble
2005	246	142	247.2	142.42	14	25	12.1	44.8	31.8	13.4	Flake Fragment
2005	246	142	247.01	142.39	16	25	536.5	111.52	99.03	72.52	Debris
2005	246	142	246.21	143.07	1	26	1.2	13.74	10.71	6.02	Amorphous Debris
2005	246	142	248.93	142.9	1	X	63.3	53.73	37.09	27.18	Amorphous Debris
2005	246	142	247.36	142.4	2	x	1.9	16.2	22.8	5.3	Broken Flake
2005	248	140	248.6	141	1	8	X	x	X	X	Flake Fragment
2005	248	140	248.4	140.7	2	8	X	X	X	X	Flake Fragment
2005	248	140	248	140.9	3	8	X	X	X	X	Flake
2005	248	140	248.65	141.1	4	8	x	X	x	X	Flake Fragment
2005	248	140	248.9	140.85	2	9	x	183.3	168.6	119.6	Amorphous Debris
2006	242	140	242.57	141.37	2	1	4	24.2	18	8.4	Amorphous Debris
2006	242	140	242.66	141.75	3	1	1	20.1	9.8	5.4	Amorphous Debris
2006	242	140	242.78	141.6	4	1	26.2	47.7	27.4	24.2	Pebble
2006	242	140	242.82	141.63	5	1	12.3	33	28.9	16.7	Amorphous Debris
2006	242	140	242.83	141.64	6	1	3.2	22.4	20.1	9.7	Pebble
2006	242	140	242.855	141.635	7	1	3.3	18.8	16	11.7	Pebble
2006	242	140	242.8	141.58	8	1	2.9	26.5	18.6	11.4	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2006	242	140	242.655	141.325	9	1	2.9	29.8	18	9	Amorphous Debris
2006	242	140	242.77	141.56	1	1	0.8	15.47	11.61	4.16	Debris
2006	242	140	242.31	141.66	2	2	2.5	20.2	13.5	8.9	Amorphous Debris
2006	242	140	242.3	141.68	3	2	16.9	36.1	31.7	15.4	Amorphous Debris
2006	242	140	242.49	141.41	1	2	58	58.51	42.87	33.2	Debris
2006	242	140	242.35	141.85	4	2	174.2	75.57	76.97	37.1	Debris
2006	242	140	242.35	141.63	1	3	40.2	37.4	26.1	30.4	Amorphous Debris
2006	242	140	242.15	141.6	2	3	55.7	52.5	39.9	34.5	Pebble
2006	242	140	242.33	141.7	3	3	114.9	79.1	62.5	42.4	Pebble
2006	242	140	242.3	141.56	4	3	280.6	79.2	73	64.1	Amorphous Debris
2006	242	140	242.11	141.89	5	3	10.7	31	23.2	10.7	Amorphous Debris
2006	242	140	242.75	141.8	1	4	3.3	29.5	20.6	7.1	Debris
2006	242	140	242.52	141.32	3	4	31.1	49.1	31.8	23.7	Amorphous Debris
2006	242	140	242.29	141.47	4	4	43.7	62.5	45.1	27.2	Pebble
2006	242	140	242.96	141.76	2	4	0.9	12.6	9.8	8.1	Flake Fragment
2006	242	140	242.82	141.73	1	5	17.1	44.3	30.5	17.5	Amorphous Debris
2006	242	140	242.12	141.33	1	6	56.3	62.9	50.3	23	Pebble
2006	242	140	242.4	141.05	3	6	3.7	25.1	20	7.5	Amorphous Debris
2006	242	140	242.65	141.31	4	6	3.5	19.9	15.4	12.7	Amorphous Debris
2006	242	140	242.98	141.89	5	6	8.8	36.5	26.4	8.2	Pebble
2006	242	140	242.98	141.56	6	6	0.9	13.8	13.3	7.7	Amorphous Debris
2006	242	140	242.49	141.2	7	6	261.8	105	66.1	44	Amorphous Debris
2006	242	140	242.562	141.23	8	6	19.1	44.2	28	20.8	Pebble
2006	242	140	242.602	141.22	9	6	296.7	114.1	91.8	53.5	Pebble
2006	242	140	242.84	141.08	1	7	3.2	28.5	22.1	7.6	Flake

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2006	242	140	242.83	141.24	2	7	4.7	25	19.4	13.7	Debris
2006	242	140	242.92	141.69	4	7	18	46.5	30.9	17.8	Amorphous Debris
2006	242	140	242.35	140.84	3	7	1.6	22	12.6	6.1	Amorphous Debris
2006	242	140	242.58	141.29	1	8	6.8	30.3	17.8	10.5	Flake Fragment
2006	242	140	242.99	141.35	1	9	0.3	14.8	10.1	2	Amorphous Debris
2006	242	140	242.22	141.88	2	9	44	58	33.1	24	Debris
2006	242	140	242.81	141.83	3	9	2.3	20.6	16.4	5.5	Amorphous Debris
2006	242	140	242.48	141.25	4	9	94.2	78.2	42.5	38.5	Pebble
2006	242	140	242.95	141.23	5	9	5.3	26	20.4	11	Amorphous Debris
2006	242	140	242.8	141.32	7	9	2.4	20	15.1	12.9	Debris
2006	242	140	242.19	141.21	8	9	0.5	10.9	6.7	4.9	Amorphous Debris
2006	242	140	242.7	141.11	9	9	0.5	17.5	7.8	3.9	Amorphous Debris
2006	242	140	242.86	141.07	1	10	2.6	16.5	13.3	11	Amorphous Debris
2006	242	140	242.78	141.13	2	10	1.1	18.3	15.2	4.2	Debris
2006	242	140	242.72	141.82	4	10	0.3	8.3	9.4	2.8	Amorphous Debris
2006	242	140	242.98	141.13	5	10	10.4	42.4	20.9	14.5	Debris
2006	242	140	242.775	141.77	6	10	13.3	38.9	31.6	15.9	Broken Flake
2006	242	140	242585	141.76	9	10	0.2	12	5.1	2.4	Debris
2006	242	140	242.19	141.84	11	10	1.1	16.4	14.8	5.6	Amorphous Debris
2006	242	140	242.64	141.68	12	10	1.8	20.3	15.7	6.5	Flake Fragment
2006	242	140	242.47	141.73	7	10	33.9	34.41	33.41	23.11	Debris
2006	242	140	242.64	141.865	8	10	0.4	13.79	11.94	4.41	Amorphous Debris
2006	242	140	242.83	141.27	3	10	1.7	18.9	16.7	5.1	Amorphous Debris
2006	242	140	242.83	141.47	10	10	2.9	24.1	24	7.4	Flake Fragment
2006	242	140	242.97	141.09	1	11	0.8	15.7	11.5	3.9	Flake

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2006	242	140	242.42	141.59	2	11	93.3	69.7	51.5	34.3	Debris
2006	242	140	242.85	141.05	3	11	2.7	20.1	17.3	6	Debris
2006	242	140	242.45	141.52	4	11	31.6	47.9	42.5	25.3	Pebble
2006	242	140	242.15	141.54	5	11	36.3	48.4	35.4	26.8	Amorphous Debris
2006	242	140	242.14	141.39	6	11	0.5	14.9	13.6	4.5	Debris
2006	242	140	242.13	141.71	7	11	18.7	38.3	35.4	16	Debris
2006	242	140	242.03	141.84	8	11	37	51.6	36.6	25.4	Debris
2006	242	140	242.315	141.79	9	11	43	42.2	39.3	37.1	Pebble
2006	242	140	242.9	141.38	1	12	0.7	13.5	11.4	4.3	Debris
2006	242	140	242.96	141.78	2	12	18.7	50.7	32.7	20	Amorphous Debris
2006	242	140	242.83	141.23	3	12	2.9	33.5	20.9	6.8	Debris
2006	242	140	242.61	141.24	4	12	2.4	22.6	15.7	6.2	Amorphous Debris
2006	242	140	242.33	141.82	6	12	8.6	34.9	32.3	10.3	Amorphous Debris
2006	242	140	242.98	141.7	7	12	2.6	21.9	16	10.6	Flake
2006	242	140	242.09	141.81	8	12	0.7	17.1	7.9	3.7	Debris
2006	242	140	242.15	141.43	9	12	3.4	24.2	16.6	12.5	Amorphous Debris
2006	242	140	242.12	141.33	11	12	14.5	38	34.6	12.7	Broken Flake
2006	242	140	242.03	141.265	12	12	2.4	27.8	16.9	5.5	Amorphous Debris
2006	242	140	242.31	141.47	5	12	10.8	25.4	25.59	18.21	Debris
2006	242	140	242.04	141.71	10	12	2.9	20.3	14.5	7.8	Broken Flake
2006	242	140	242.53	141.92	1	13	17.4	40.1	27	20.5	Debris
2006	242	140	242.33	141.92	2	13	2	23.7	13.5	6.5	Debris
2006	242	140	242.12	141.9	3	13	4.1	18.7	15.5	12.9	Amorphous Debris
2006	242	140	242.11	141.19	5	13	2.3	22.4	21.6	8.1	Flake Fragment
2006	242	140	242.39	141.18	4	13	2.2	16.3	17.5	4.6	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2006	242	140	242.99	141.97	1	14	500.3	154.7	117.8	54.6	Broken Flake
2006	242	140	242.9	141.99	2	14	0.3	14.4	8.4	3.3	Debris
2006	242	140	242.99	141.22	3	14	5.2	30.5	23.6	10.4	Chert Flake
2006	242	140	242.4	141.07	5	14	30.5	42.8	41.3	32.4	Amorphous Debris
2006	242	140	242.43	141.71	6	14	28	51.1	31.9	20.5	Pebble
2006	242	140	242.54	141.18	7	14	13.6	32.2	21.7	12.3	Pebble
2006	242	140	242.26	141.21	8	14	232.1	76.1	65.8	46.7	Debris
2006	242	140	242.68	141.35	9	14	12.8	29.7	21.1	16.2	Amorphous Debris
2006	242	140	242.4	141.46	4	14	1.6	24.03	15.9	5.79	Debris
2006	242	140	242.83	141	1	15	182.9	91.5	69.6	43.9	Amorphous Debris
2006	242	140	242.57	141.15	2	15	7.6	33.7	18.3	13.6	Debris
2006	242	140	242.56	141.03	3	15	3.3	16.5	16	10.3	Amorphous Debris
2006	242	140	242.46	141.05	4	15	5.7	26.5	17.5	15.6	Pebble
2006	242	140	242.81	141.92	5	15	5.6	30.1	24.1	10.5	Debris
2006	242	140	242.45	141.75	6	15	7.3	45.4	17.8	12.6	Amorphous Debris
2006	242	140	242.07	141.71	7	15	15.5	32.8	25.8	16.1	Pebble
2006	242	140	242.82	141.82	1	16	x	x	x	x	Amorphous Debris
2006	242	140	242.9	141.82	2	16	7.9	29.6	22.3	14.1	Pebble
2006	242	140	242.82	141.97	3	16	1	10.4	9.4	5.4	Amorphous Debris
2006	242	140	242.97	141.63	4	16	1.5	19.9	14.6	7.5	Broken Flake
2006	242	140	242.8	141.1	5	16	65.5	67.1	52	23.5	Pebble
2006	242	140	242.2	141.5	7	16	0.4	13.4	10.8	3.7	Debris
2006	242	140	242.28	142.185	8	16	2.8	22.4	18.7	7.1	Flake
2006	242	140	242.23	141.28	6	16	6.5	26.78	29.21	11.6	Debris
2006	242	140	242.22	140.15	1	1	2.7	27.4	19.7	5.6	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2006	242	140	242.54	140.18	2	1	1.1	14.9	14.1	7	Amorphous Debris
2006	242	140	242.12	140.11	3	1	0.1	8.9	5	2.8	Pebble
2006	242	140	242.2	140.35	4	1	30.5	41.1	29.9	22.2	Pebble
2006	242	140	242.32	140.72	1	2	6	31.8	27.7	13.2	Amorphous Debris
2006	242	140	242.32	140.72	1	2	6	31.7	28.1	11.7	Broken Flake
2006	242	140	242.28	140.12	2	2	5.5	27.8	18.4	12.5	Amorphous Debris
2006	242	140	242.28	140.12	2	2	5.5	27.6	16.5	12.6	Debris
2006	242	140	242.38	140.5	3	2	2.2	26	15.9	6.9	Debris
2006	242	140	242.22	140.97	4	2	5.5	25	18.3	10.4	Amorphous Debris
2006	242	140	242.91	140.3	5	2	19.7	40.4	37.5	19.3	Amorphous Debris
2006	242	140	242.53	140.18	6	2	1.2	17.1	16.1	10.4	Amorphous Debris
2006	242	140	242.12	140.2	8	2	0.2	12.7	10	3.4	Amorphous Debris
2006	242	140	242.48	140.3	9	2	x	x	x	x	Amorphous Debris
2006	242	140	242.07	140.51	10	2	15.6	34.1	27.4	22.6	Amorphous Debris
2006	242	140	242.5	140.45	7	2	0.8	18.6	12.1	6	Flake Fragment
2006	242	140	242.13	140.28	1	3	19.2	31.7	24.3	25.3	Pebble
2006	242	140	242.37	140.2	1	4	8.4	45.8	28.5	9.8	Debris
2006	242	140	242.44	140.68	2	4	2.6	26.1	23	6.7	Debris
2006	242	140	242.09	140.27	3	4	0.8	17.2	13.3	5.2	Amorphous Debris
2006	242	140	242.14	140.25	4	4	14.1	37.4	32	19	Amorphous Debris
2006	242	140	242.24	140.68	1	5	4.4	30.55	23.39	8.14	Amorphous Debris
2006	242	140	242.5	140.45	2	5	X	156	134.7	95.7	Pebble
2006	242	140	242.75	140.2	1	6	22.8	49.7	28.3	22.3	Amorphous Debris
2006	242	140	242.46	140.68	2	6	x	x	x	x	Pebble
2006	242	140	242.42	141.24	2	6	2.6	20	14	5.3	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2006	242	140	242.86	140.93	1	7	3.2	31	14.8	9.3	Debris
2006	242	140	242.74	140.24	2	7	49.6	65.4	49.8	31.4	Amorphous Debris
2006	242	140	242.27	140.45	3	7	1.4	19.1	12.2	5.2	Debris
2006	242	140	242.4	140.53	4	7	0	11.1	3.9	2.6	Amorphous Debris
2006	242	140	242.04	140.29	7	7	89.3	70.3	54.7	26.7	Amorphous Debris
2006	242	140	242.02	140.52	8	7	6	26.8	19.2	9.5	Amorphous Debris
2006	242	140	242.94	140.23	9	7	0.7	18.5	16	4.7	Debris
2006	242	140	242.9	140.32	10	7					Debris
2006	242	140	242.17	140.19	6	7	4.4	29.66	23.31	7.6	Amorphous Debris
2006	242	140	242.31	140.68	5	7	6.1	26.1	21.3	10.2	Flake Fragment
2006	242	140	242.95	140.7	1	8	3.8	18.3	17.3	12.2	Debris
2006	242	140	242.95	140.7	2	8	2.1	18.6	13.1	8.8	Pebble
2006	242	140	242.79	140.19	3	8	1.4	26.2	15.8	7.7	Amorphous Debris
2006	242	140	242.53	140.3	4	8	5.2	31.7	25.5	7.7	Amorphous Debris
2006	242	140	242.31	140.225	5	8	1.3	16.9	16.3	5.7	Amorphous Debris
2006	242	140	242.98	140.8	1	9	0.1	9.4	5.4	1.7	Debris
2006	242	140	242.665	140.185	2	9	4.4	33.8	17	8.4	Amorphous Debris
2006	242	140	242.93	140.61	3	9	2.2	20.2	15.6	5.4	Debris
2006	242	140	242.68	140.66	5	9	2.3	18.2	13.4	8.7	Amorphous Debris
2006	242	140	242.7	140.68	4	9	5.7	29.17	15.56	11.64	Debris
2006	242	140	242.8	140.68	1	10	2.2	28.4	14.6	6.6	Debris
2006	242	140	242.92	140.6	2	10	1.3	12.8	14.2	9.7	Amorphous Debris
2006	242	140	242.82	140.72	3	10	1	17	16	4.6	Debris
2006	242	140	242.96	140.21	5	10	0.5	17.6	11.7	4.7	Amorphous Debris
2006	242	140	242.93	140.18	6	10	18.5	50.2	33.9	16.5	Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2006	242	140	242.025	140.09	8	10	1.3	20.1	12.9	7.6	Debris
2006	242	140	242.76	140.88	7	10	0.5	11.2	9.8	3.7	Amorphous Debris
2006	242	140	242.99	140.39	9	10	x	x	x		Pebble
2006	242	140	242.84	140.535	1	11	0.3	9.4	7.3	3.4	Amorphous Debris
2006	242	140	242.19	140.58	2	11	0.2	8.3	8	3.9	Broken Flake
2006	242	140	242.96	140.65	3	11	0.7	12.2	7.5	7.5	Amorphous Debris
2006	242	140	242.74	140.665	4	11	0.1	5.4	4.1	2.1	Amorphous Debris
2006	242	140	242.92	140.24	4	11	0.1	5.4	4.1	2.1	Debris
2006	242	140	242.95	140.22	5	11	0.4	10.7	8.3	4.9	Flake
2006	242	140	242.93	140.13	6	11	50.7	60.7	42.2	23.7	Pebble
2006	242	140	242.85	140.85	7	11	0.1	7.2	3.9	1.8	Amorphous Debris
2006	242	140	242.72	140.67	8	11	5.1	21.1	17.3	15.4	Pebble
2006	242	140	242.98	140.99	10	11	2.3	20.8	9	2.3	Debris
2006	242	140	242.63	140.7	11	11	1.4	24.6	12.5	4.3	Flake Fragment
2006	242	140	242.59	140.91	13	11	32.4	59.2	37.4	16.8	Flake Fragment
2006	242	140	242.58	140.8	14	11	28.5	36.7	32.6	19.2	Amorphous Debris
2006	242	140	242.54	140.84	15	11	62.1	54.5	54.3	27.7	Amorphous Debris
2006	242	140	242.04	140.37	16	11	0.8	13	9.9	7.2	Amorphous Debris
2006	242	140	242.13	140.9	17	11	2.2	17.5	15.1	8.2	Debris
2006	242	140	242.12	140.41	18	11	0.4	9	7.9	6.8	Amorphous Debris
2006	242	140	242.04	140.55	19	11	0.8	21.7	9.4	4.3	Debris
2006	242	140	242.85	140.31	1	12	2.1	20	17.9	7.1	Debris
2006	242	140	242.79	140.29	2	12	6.6	30.1	19.2	12.4	Debris
2006	242	140	242.93	140.38	3	12	0.6	11.4	8.8	4.6	Flake Fragment
2006	242	140	242.8	140.97	4	12	45.4	57.5	47.6	15.9	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2006	242	140	242.35	140.43	5	12	0.1	8.7	3.8	3.1	Flake Fragment
2006	242	140	242.25	140.77	6	12	4.6	28.4	16.8	13.1	Debris
2006	242	140	242.35	140.43	7	12	4.8	28.5	17.1	6.5	Pebble
2006	242	140	242.22	140.62	8	12	0.4	9.07	10.97	4.7	Amorphous Debris
2006	242	140	242.89	140.23	1	13	3.9	18.8	18.1	14.4	Debris
2006	242	140	242.38	140.63	3	13	2	21.4	10.9	7.1	Debris
2006	242	140	242.47	140.79	4	13	28.4	50.8	26.4	16.3	Amorphous Debris
2006	242	140	242.42	140.1	5	13	1.2	12.6	7.4	6.4	Amorphous Debris
2006	242	140	242.7	140.88	7	13	72.9	52.2	48.8	28.7	Pebble
2006	242	140	242.4	140.44	6	13	0.2	16.8	6.2	1.9	Debris
2006	242	140	242.93	140.36	1	14	8.4	27.9	25.4	11.5	Amorphous Debris
2006	242	140	242.55	140.36	2	14	113	64.5	50.8	34.2	Pebble
2006	242	140	242.56	140.34	3	14	1.6	18.7	15.5	7.7	Amorphous Debris
2006	242	140	242.32	140.32	4	14	12.6	41.14	25.78	15.26	Debris
2006	242	140	242.14	140	5	14	1	17.1	13.6	4.3	Amorphous Debris
2006	242	140	242.86	140.29	1	15	0.2	10.9	7.4	4.4	Amorphous Debris
2006	242	140	242.16	140.9	2	15	1.6	20.8	12.9	5.2	Amorphous Debris
2006	242	140	242.7	140.17	1	16	27.9	54.4	41.1	15.4	Amorphous Debris
2006	242	140	242.8	140.94	3	16	0.6	12.3	7.2	6.2	Debris
2006	242	140	242.73	140.36	2	16	0.2	8.16	8.84	19.7	Amorphous Debris
2006	242	140	242.33	140.8	4	16	0.5	16.22	15.62	3.17	Amorphous Debris
2006	242	142	242.15	142.32	5	1	2.3	27.77	16.36	7.11	Amorphous Debris
2006	242	142	242.28	142.14	1	1	0.7	17.35	10.19	3.24	Debris
2006	242	142	242.47	142.7	7	1	1.5	21.09	13.57	8.35	Debris
2006	242	142	242.12	142.9	8	1	0.4	14.7	7	3.6	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2006	242	142	242.9	142.17	1	2	2	25	19.4	6.5	Flake Fragment
2006	242	142	242.77	142.29	3	2	3.7	23.2	16.3	9.8	NA
2006	242	142	242.29	142.55	5	2	158.8	62.6	51.4	46.1	Pebble
2006	242	142	242.28	142.8	8	2	X	X	X	X	Amorphous Debris
2006	242	142	242.75	142.09	2	2	0.8	15.65	12.92	4.26	Flak Fragment
2006	242	142	242.655	142.55	4	2	2.9	16.5	14.9	7.3	Amorphous Debris
2006	242	142	242.82	142.88	9	2	54.6	48.6	43	28.6	Debris
2006	242	142	242.43	142.95	4	3	0.3	12.8	8.6	2.4	Broken Flake
2006	242	142	242.69	142.195	1	3	1.6	27.2	14.5	4.9	Debris
2006	242	142	242.86	142.16	2	3	2	24.8	13.6	7.2	Amorphous Debris
2006	242	142	242.98	142.44	3	5	7.7	34.8	27.8	8.2	Debris
2006	242	142	242.34	142.635	4	6	3.1	33.03	25.23	5.76	Broken Flake
2006	242	142	242.63	142.65	5	6	3.3	31.93	16.37	6.72	Debris
2006	242	142	242.07	142.49	1	7	4.3	31.5	20.7	9.03	Debris
2006	242	142	242.43	142.73	1	8	2.8	31.39	16.92	9.87	Debris
2006	242	142	242.41	142.41	1	4	x	x	x	x	Flake
2006	242	142	242.5	142.87	1	6	x	x	x	x	Pebble
2006	242	142	242.93	142.925	6	8	x	x	x	x	Amorphous Debris
2006	242	142	242.4	142.025	2	9	x	x	x	x	Pebble
2006	242	142	242.54	142.95	4	9	x	x	x	x	Pebble
2006	242	142	242.37	142.435	6	9	x	x	x	x	Pebble
2006	242	140	242.48	141.77	6	9	x	x	x	x	Debris
2006	242	142	242.37	142.06	1	9	x	x	x	x	Amorphous Debris
2006	242	142	242.48	142.12	6	2	x	x	x	x	Flake
2006	242	142	242.38	142.825	3	3	x	x	x	x	Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2006	242	142	242.745	142.895	2	5	x	x	x	x	Amorphous Debris
2006	242	142	242.19	142.815	3	3	x	x	x	x	Amorphous Debris
2006	242	142	242.205	142.58	2	6	x	x	x	x	Broken Flake
2006	242	142	242.62	142.58	6	6	x	x	x	x	Amorphous Debris
2006	242	142	242.44	142.94	2	7	x	x	x	x	Flake Fragment
2006	242	142	242.26	142.68	2	1	x	x	x	x	Debris
2006	242	142	242.03	142.32	2	4	x	x	x	x	Flake Fragment
2006	242	142	242.72	142.77	7	6	x	x	x	x	Amorphous Debris
2006	242	142	242.99	142.24	2	8	x	x	x	x	Debris
2006	242	142	242.71	142.99	3	9	x	x	x	x	Flake Fragment
2006	242	142	242.45	142.35	5	9	x	x	x	x	Debris
2007	242	140	242.97	141.94	1	17	1.3	19.7	19.2	3.4	Debris
2007	242	140	242.86	140.93	1	17	1.5	14.1	11.5	7.5	Amorphous Debris
2007	242	140	242.69	140.96	2	17	0.3	9.8	9.7	3.1	Debris
2007	242	140	242.48	140.85	3	17	3.5	17.7	13.4	11.1	Amorphous Debris
2007	242	140	242.11	140.7	4	17	2	15.7	12.4	6.9	Amorphous Debris
2007	242	140	242.08	140.26	5	17	7	22.9	14.3	14.1	Amorphous Debris
2007	242	140	242.32	140.12	6	17	0.8	14.7	10.1	5.4	Amorphous Debris
2007	242	140	242.71	140.44	7	17	35.7	40.1	30.1	25.9	Amorphous Debris
2007	242	140	242.77	140.4	8	17	0.9	20.1	12.5	3.7	Broken Flake
2007	242	140	242.87	140.3	9	17	1.3	16.5	8.4	4.7	Amorphous Debris
2007	242	140	242.91	140.03	10	17	4	27.5	13.7	12.8	Debris
2007	242	140	242.37	141.9	2	18	27	33.2	29.5	25.8	Pebble
2007	242	140	241.37	141.9	2	18	27	33.2	29.5	25.8	Amorphous Debris
2007	242	140	242.34	141.44	3	18	15.2	31.4	26.4	16.4	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2007	242	140	241.34	141.44	3	18	40.3	18	16.7	18.2	Pebble
2007	242	140	242.5	141.5	4	18	7.4	35.1	26.2	11.9	Flake
2007	242	140	242.84	140.29	2	18	3.6	20.9	16.6	12.4	Pebble
2007	242	140	242.84	140.08	3	18	16.5	44.6	26	22.5	Debris
2007	242	140	242.45	140.47	4	18	1.6	16.4	13.9	5.1	Debris
2007	242	140	242.2	140.54	5	18	1	16.1	11.9	5.1	Debris
2007	242	140	242.38	140.27	6	18	115.6	63.5	53.3	33	Pebble
2007	242	140	242.5	140.94	7	18	5.6	31.4	16	12.3	Debris
2007	242	140	242.44	140.75	9	18	28.2	46.4	33.5	16.8	Flake Fragment
2007	242	140	242.07	140.7	10	18	14.7	41.2	28.4	17.5	Amorphous Debris
2007	242	140	242.76	140.6	11	18	7.9	27.3	23.8	15.7	Amorphous Debris
2007	242	140	242.34	141.85	1	19	6.6	22.5	20.2	14	Pebble
2007	242	140	242.66	141.3	2	19	7.5	29.9	13.4	13	Pebble
2007	242	140	242.11	141.66	4	19	2.8	18.4	16.5	5.7	Amorphous Debris
2007	242	140	242.65	141.37	5	19	47.7	47.5	46.5	25.2	Pebble
2007	242	140	242.54	141.4	6	19	32.9	49.5	39.2	18.3	Amorphous Debris
2007	242	140	242.31	141.49	8	19	4.1	21.5	14.7	11.2	Pebble
2007	242	140	242.67	140.95	1	19	3.9	25.8	23.4	6.8	Debris
2007	242	140	242.64	140.78	2	19	30.8	47	33.4	22.5	Pebble
2007	242	140	242.99	140.76	3	19	50.2	54.5	35.8	30	Pebble
2007	242	140	242.47	140.72	4	19	2.7	20.7	9.8	10.6	Amorphous Debris
2007	242	140	242.44	140.48	5	19	0.9	23.1	9.8	10	Flake
2007	242	140	242.44	140.79	6	19	11.7	25	21.1	17.9	Amorphous Debris
2007	242	140	242.49	140.82	7	19	3.3	15.9	13.4	14.2	Amorphous Debris
2007	242	140	242.6	140.21	8	19	29.6	60.6	26.6	18.7	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2007	242	140	242.59	140.24	9	19	21.3	15.6	5.1	1.1	Debris
2007	242	140	242.48	140.19	10	19	53.7	50	42.1	27.8	Pebble
2007	242	140	242.05	140.62	12	19	7.3	29	27.7	10.9	Amorphous Debris
2007	242	140	242.1	140.02	13	19	1.3	22.7	12.6	4.8	Flake
2007	242	140	242.2	140.24	14	19	9.9	28.6	19.6	15	Amorphous Debris
2007	242	140	242.25	140.2	15	19	11.8	33	19.5	13.6	Amorphous Debris
2007	242	140	242.3	140.11	16	19	3.3	21.6	22.1	6.8	Amorphous Debris
2007	242	140	242.29	140.11	17	19	9.8	30.2	28.1	17.2	Debris
2007	242	140	242.29	140.04	18	19	11.8	39.3	20.6	15.1	Debris
2007	242	140	242.52	141.95	1	20	0.8	16.9	12.3	4.3	Debris
2007	242	140	242.67	141.97	2	20	12.4	25.6	20.7	16.3	Amorphous Debris
2007	242	140	242.84	141.42	3	20	5.5	20.6	17.2	14.9	Amorphous Debris
2007	242	140	242.82	141.78	4	20	1.1	15.1	13.2	4.9	Flake
2007	242	140	242.88	141.29	5	20	49.3	52.2	46	30.5	Pebble
2007	242	140	242.66	141.34	6	20	19.4	46.5	23.6	20.1	Pebble
2007	242	140	242.59	141.36	7	20	18.8	43.4	23.2	21.1	Chert Pebble
2007	242	140	242.94	141.12	8	20	10.9	10.8	4.4	0.7	Amorphous Debris
2007	242	140	242.44	141.64	9	20	21.1	36.2	27.3	15.9	Amorphous Debris
2007	242	140	242.05	141.92	12	20	2.1	23.2	14.5	6.2	Amorphous Debris
2007	242	140	242.25	141.82	13	20	0.3	12	7.4	3.1	Flake Fragment
2007	242	140	242.43	141.36	14	20	4.1	19.4	17	10.8	Pebble
2007	242	140	242.3	141.64	15	20	2.4	18.5	14	10.2	Debris
2007	242	140	242.79	140.85	1	20	10.5	25	21.9	15	Pebble
2007	242	140	242.66	140.74	2	20	35.5	57.5	31.8	27	Pebble
2007	242	140	242.59	140.72	3	20	16.9	43.6	28.4	17.6	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2007	242	140	242.38	140.49	4	20	36.9	50.7	38.7	19.3	Pebble
2007	242	140	242.45	140.95	5	20	16.6	49	37	14.4	Amorphous Debris
2007	242	140	242.25	140.88	6	20	67.7	84	46.1	18.8	Amorphous Debris
2007	242	140	242.27	140.8	7	20	15.6	43.6	22.2	13.3	Debris
2007	242	140	242.09	141.67	1	21	298	111.4	71.8	52.6	Debris
2007	242	140	242.99	141.95	2	21					Amorphous Debris
2007	242	140	242.99	141.87	2	21	4.4	22.8	13.7	13.5	Amorphous Debris
2007	242	140	242.81	141.8	3	21	4.4	29.3	14	10.2	Debris
2007	242	140	242.82	141.52	4	21	7.4	27.4	22	8.9	Pebble
2007	242	140	242.75	141.44	5	21	1.3	14.2	12	7	Amorphous Debris
2007	242	140	242.71	141.93	6	21	0.7	13.8	14.4	6.2	Debris
2007	242	140	242.71	141.22	7	21	90.9	83.7	40.4	29.9	Debris
2007	242	140	242.71	141.13	8	21	3.6	21	17.2	7.8	Amorphous Debris
2007	242	140	242.56	141.8	9	21	5.8	22.8	16.1	14.5	Amorphous Debris
2007	242	140	242.49	141.93	10	21	1.3	12.9	14.1	4.8	Amorphous Debris
2007	242	140	242.44	141.86	11	21	1.1	13.5	13.2	8.1	Amorphous Debris
2007	242	140	242.38	141.67	12	21	0.7	14.8	12.5	5	Amorphous Debris
2007	242	140	242.25	141.75	14	21	7.8	36.2	21.3	14.9	Debris
2007	242	140	242.24	141.32	15	21	16.2	36.3	28.8	11.6	Amorphous Debris
2007	242	140	242.16	141.72	16	21	12.3	34	21.8	13.6	Debris
2007	242	140	242.11	141.71	17	21	1.7	20.8	16.9	4.8	Flake
2007	242	140	242.11	141.17	18	21	2.1	18.7	16	8.8	Amorphous Debris
2007	242	140	242.06	141.98	19	21	12.8	39.7	32.6	12.3	Amorphous Debris
2007	242	140	242	141.8	20	21	0.7	15.4	12.2	4.4	Amorphous Debris
2007	242	140	242.61	140.96	3	21	8.2	27.2	18.8	13.1	Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2007	242	140	242.08	140.75	4	21	17.1	31.9	26.1	20.8	Pebble
2007	242	140	242.28	140.41	5	21	25.5	34.2	23.4	22.4	Debris
2007	242	140	242.3	140.04	6	21	5.1	20	17.8	15.4	Debris
2007	242	140	242.64	140.08	7	21	1.3	18.2	12.2	6.9	Amorphous Debris
2007	242	140	242.99	141.88	1	22	1.2	16.1	15.3	7.5	Flake Fragment
2007	242	140	242.26	141.26	3	22	0.1	11.6	6.3	2.4	Flake
2007	242	140	242.15	141.11	4	22	0.6	14.8	8.9	4.1	Pebble
2007	242	140	242.99	141.7	5	22	73.7	60.6	42.8	30.4	Pebble
2007	242	140	242.98	141.74	6	22	34.6	45.7	36.7	23.9	Pebble
2007	242	140	242.99	141.61	7	22	1.2	16.1	15.3	7.5	Debris
2007	242	140	242.93	141.36	8	22	2.6	18.3	17.7	7.2	Amorphous Debris
2007	242	140	242.9	141.65	9	22	15.1	41.9	27.5	20.1	Pebble
2007	242	140	242.87	141.93	10	22	2.8	21	16.9	11.3	Amorphous Debris
2007	242	140	242.89	141.93	11	22	2.5	21	11.5	10.2	Amorphous Debris
2007	242	140	242.7	140.52	12	22	2	26	15.1	7.9	Debris
2007	242	140	242.7	141.09	13	22	5.4	29.7	15	11.8	Amorphous Debris
2007	242	140	242.56	141.32	15	22	6.2	41.6	23.6	6.5	Amorphous Debris
2007	242	140	242.4	141.35	16	22	8.4	38.7	20.6	12.3	Amorphous Debris
2007	242	140	242.38	141.62	17	22	10.5	31.2	22.5	16.1	Debris
2007	242	140	242.28	141.7	18	22	2.6	24	13.7	10.5	Amorphous Debris
2007	242	140	242.26	141.44	19	22	45.5	54.8	53	17.4	Pebble
2007	242	140	242.28	141.18	20	22	3.1	19.7	16.2	10.2	Amorphous Debris
2007	242	140	242.18	141.79	21	22	21.8	44.8	26.9	17.8	Amorphous Debris
2007	242	140	242.18	141.73	22	22	27.4	40.2	28.5	25.6	Pebble
2007	242	140	242.13	141.79	23	22	19.5	42.7	26.9	23.8	Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2007	242	140	242.12	141.41	24	22	34.4	46.9	43.3	20.6	Broken Flake
2007	242	140	242.53	140.22	1	22	45.2	64.4	32.4	21.7	Amorphous Debris
2007	242	140	242.54	141.99	1	**23**	2.7	32.2	16.9	7.8	Debris
2007	242	140	242.88	141.6	2	**23**	0.9	22.8	17.7	3.5	Amorphous Debris
2007	242	140	242.92	141.35	3	**23**	13.7	31	24.5	19.9	Pebble
2007	242	140	242.875	141.29	4	**23**	2.6	24.4	15	9.9	Amorphous Debris
2007	242	140	242.945	141.22	5	**23**	5.2	21.4	23	10.4	Amorphous Debris
2007	242	140	242.785	141.28	6	**23**	2.7	25.7	14.9	9.6	Amorphous Debris
2007	242	140	242.71	141.79	7	**23**	9.3	32.7	25.3	17.5	Flake Fragment
2007	242	140	242.71	141.79	8	**23**	3.5	22.6	18.2	14.2	Debris
2007	242	140	242.58	141.26	9	**23**	10.1	35.9	26.1	13.2	Debris
2007	242	140	242.4	141.88	10	**23**	3.9	25.5	19.3	13.1	Amorphous Debris
2007	242	140	242.36	141.74	11	**23**	8.2	33.6	22.1	15.1	Debris
2007	242	140	242.26	141.71	12	**23**	11.7	27.9	22.5	18.1	Amorphous Debris
2007	242	140	242.28	141.63	13	**23**	0.8	13.7	12.1	5.5	Broken Flake
2007	242	140	242.13	141.91	14	**23**	5.5	27.9	18.9	14.3	Amorphous Debris
2007	242	140	242.1	141.79	15	**23**	13.9	27.8	24.5	19.4	Amorphous Debris
2007	242	140	242.08	141.99	16	**23**	2.9	21.9	23.4	5.8	Flake Fragment
2007	242	140	242	141.8	17	**23**	31.5	62.5	47.9	15.6	Flake Fragment
2007	242	140	2242.67	140.45	1	23	39.1	43.3	30.6	28.2	Amorphous Debris
2007	242	140	242.84	140.68	2	23	5.1	28.3	26.5	10.4	Amorphous Debris
2007	242	140	242.87	140.46	3	23	485	133.5	120.2	76.4	Pebble
2007	242	140	242.92	140.8	4	23	13.2	36.2	21.7	16.5	Amorphous Debris
2007	242	140	242.83	140.74	5	23	24.1	52.9	34.6	14.2	Amorphous Debris
2007	242	140	242.83	140.63	6	23	308	137.3	62.8	39.2	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2007	242	140	242.74	140.67	7	23	135.9	80.2	64.3	33.8	Amorphous Debris
2007	242	140	242.75	140.76	8	23	258.1	112.8	64.5	39.9	Pebble
2007	242	140	242.5	141.13	1	24	0.4	11.5	8.6	4.9	Amorphous Debris
2007	242	140	242.5	141.84	2	24	1.9	23.8	15.7	6.8	Flake Fragment
2007	242	140	242.8	141.17	3	24	29.2	46.6	40.8	21.9	Debris
2007	242	140	242.99	141.87	4	24	11.9	44.5	24.6	11.7	Amorphous Debris
2007	242	140	242.465	141.52	5	24	1.2	21.2	13.9	5.6	Flake
2007	242	140	242.73	141.99	6	24	2.5	27.4	16.1	7.8	Debris
2007	242	140	242.77	141.71	7	24	21.3	44	32.6	18.2	Pebble
2007	242	140	242.24	141.96	8	24	21.8	42.6	27.3	17.3	Pebble
2007	242	140	242.8	141.28	9	24	12.2	34.5	24.5	16.7	Amorphous Debris
2007	242	140	242.535	141.77	10	24	0.7	18.5	10.3	5.5	Amorphous Debris
2007	242	140	242.4	141.8	11	24	10.4	28.4	23.7	14	Amorphous Debris
2007	242	140	242.34	141.78	12	24	22.7	47	31.2	22.9	Amorphous Debris
2007	242	140	242.69	141.74	13	24	11.2	34.5	26.3	11.4	Debris
2007	242	140	242.32	141.93	14	24	1.2	21.6	10.4	8.6	Pebble
2007	242	140	242.94	141.8	15	24	2.9	20.2	16.9	10.2	Broken Flake
2007	242	140	242.28	141.95	16	24	29.8	47	34.4	18.3	Pebble
2007	242	140	242.93	141.81	17	24	21.2	52	33.5	14.5	Debris
2007	242	140	242.95	141.85	18	24	4.7	32.3	12.1	13.6	Debris
2007	242	140	242.23	141.71	19	24	2.9	19.6	12	15.2	Amorphous Debris
2007	242	140	242.14	141.91	20	24	0.5	14.7	10.5	6.7	Amorphous Debris
2007	242	140	242.16	141.13	21	24	7.6	28	25.3	13	Debris
2007	242	140	242.13	141.46	22	24	0.6	14.5	8.9	4	
2007	242	140	242.18	141.75	23	24	0.5	11.6	10.1	4.6	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2007	242	140	242.14	141.78	24	24	8.1	30.9	27.5	15.5	Pebble
2007	242	140	242.12	141.86	25	24	8.1	30.9	27.5	15.5	Pebble
2007	242	140	242.695	141.485	25	24	19.3	37.6	31.6	17.8	Pebble
2007	242	140	242.33	141.82	26	24	1.3	23.7	16	5.3	Chert Flake
2007	242	140	242.15	141.96	27	24	1.2	18.2	11.8	7.9	Amorphous Debris
2007	242	140	242.07	141.03	28	24	4.2	28.5	18.6	13.4	Pebble
2007	242	140	242.08	141.94	29	24	0.8	21.8	9.6	4.5	Flake Fragment
2007	242	140	242.25	141.93	12	25	12.8	37.6	25.2	10.6	Debris
2007	242	140	242.79	141.69	22	25	1.4	18.7	12	3.1	Pebble
2007	242	140	242.53	141.46	3	25	30.5	43.9	26.4	22.2	Amorphous Debris
2007	242	140	242.98	141.02	14	25	11.2	28.9	16.9	18.1	Amorphous Debris
2007	242	140	242.37	141.98	34	25	19.7	37.2	26.5	14.3	Amorphous Debris
2007	242	140	242.29	141.88	38	25	14.1	23.7	22.1	19.7	Amorphous Debris
2007	242	140	242.11	141.71	10	25	11.7	34.6	22.7	9.7	Amorphous Debris
2007	242	140	242.99	141.97	16	25	6.5	34	22.2	9.9	Debris
2007	242	140	242.98	141.54	18	25	1.1	20.2	10.5	4.6	Amorphous Debris
2007	242	140	242.84	141.85	20	25	10.5	44.9	30.4	11.5	Debris
2007	242	140	242.82	141.96	21	25	0.8	19.2	10.2	3.1	Flake Fragment
2007	242	140	242.71	141.92	24	25	2.8	25.7	19.4	9.6	Flake Fragment
2007	242	140	242.55	141.94	33	25	10.5	35.8	19.8	12.8	Amorphous Debris
2007	242	140	242.35	141.85	35	25	2.8	23.1	14.2	7.8	Amorphous Debris
2007	242	140	242.33	141.83	36	25	9.3	33.8	20.9	16.6	Debris
2007	242	140	242.26	141.61	40	25	25.5	28.2	24.2	15.7	Amorphous Debris
2007	242	140	242.07	141.71	9	25	36.4	42.1	38.9	29.1	Debris
2007	242	140	242.22	141.89	41	25	39	129.9	92.6	34.1	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2007	242	140	242.62	141.77	37	25	175.8	66.6	63.6	53.1	Pebble
2007	242	140	242.11	141	1	25	34.4	51.7	37.9	21	Debris
2007	242	140	242.39	141.21	2	25	23.9	38.4	35	20.6	Pebble
2007	242	140	242.58	141.51	4	25	44.3	53.3	44.3	25.6	Pebble
2007	242	140	242.34	141.68	7	25	31.8	58.9	49.4	17.7	Pebble
2007	242	140	242.4	141.79	11	25	9.2	34.5	33.8	10.7	Amorphous Debris
2007	242	140	242.99	141.86	15	25	17.4	47.9	31.7	14.4	Amorphous Debris
2007	242	140	242.95	141.22	17	25	20.9	38.5	28.7	19	Debris
2007	242	140	242.88	141.94	19	25	29.7	46	30.4	30.3	Pebble
2007	242	140	242.8	141.62	23	25	14.7	34.9	23	21.2	Amorphous Debris
2007	242	140	242.73	141.69	25	25	39.9	122	76.6	38.9	Pebble
2007	242	140	242.77	141.62	26	25	26.6	51.5	45.1	16.7	Amorphous Debris
2007	242	140	242.73	141.6	27	25	21	28.2	27.3	25.3	Pebble
2007	242	140	242.5	141.7	30	25	46.2	51.3	35.8	26.9	Pebble
2007	242	140	242.65	141.94	28	25	5.2	29.7	18.4	11.1	Debris
2007	242	140	242.67	141.88	29	25	25.2	44.3	42.1	16	Amorphous Debris
2007	242	140	242.59	141.98	42	25	9.8	37.3	20.2	18.5	Debris
2007	242	140	242.21	141.62	6	25	6.1	31.5	24.7	7	Flake Fragment
2007	242	140	242.99	141.68	13	25	33	48.2	27.2	20.8	Pebble
2007	242	140	242.27	141.6	5	25	5.2	21.5	20.4	11	Debris
2007	242	140	242.18	141.68	8	25	4.5	35.3	23.7	9	Chert Flake
2007	242	140	242.99	141.53	1	26	34.8	43	32.4	19	Debris
2007	242	140	242.93	141.48	2	26	18.4	39.2	39.8	17.7	Pebble
2007	242	140	242.98	141.96	3	26	11.3	31	27.2	15.1	Amorphous Debris
2007	242	140	242.94	141.81	4	26	37.5	59.1	34.6	22.4	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2007	242	140	242.76	141.82	6	26	31.2	44.5	36.5	24.1	Flake Fragment
2007	242	140	242.62	141.43	7	26	27.9	34.7	34.6	22.1	Amorphous Debris
2007	242	140	242.57	141.34	8	26	9.7	32.4	27.3	18.4	Amorphous Debris
2007	242	140	242.43	141.86	9	26	3.6	21.6	19.5	11	Debris
2007	242	140	242.37	141.37	10	26	35.8	61.9	44.5	13.8	Pebble
2007	242	142	243.12	142.25	1	8					Pebble
2007	242	142	243.12	142.2	2	8					Pebble
2007	242	142	243.085	142.45	1	9					Amorphous Debris
2007	242	142	243.12	142.58	2	9					Debris
2007	242	142	243.62	142.99	3	9					Amorphous Debris
2007	242	140	242.04	140.25	8	18	7.4	29.6	22.3	9.9	Debris
2007	242	140	242.31	140.42	11	19	19.2	35.8	29.2	14.3	Amorphous Debris
2007	242	140	242.29	141.42	7	19	14.2	27.4	27.8	15.7	Amorphous Debris
2007	242	140	242.46	141.92	11	20	11	42.7	23.3	14.5	Broken Flake
2007	242	140	242.99	140.59	2	21	17900	224	180	129.66	Debris
2007	242	140	242.99	140.5	1	21	x	174	148.98	109.11	Debris
2007	242	140	242.39	141.6	13	21	1.2	20.5	12.1	3	Debris
2007	242	140	242.54	141.77	14	22	30.5	49.86	40.94	18.73	Flake Fragment
2007	242	140	242.71	141.22	32	25	x	175	105.31	99.36	Debris
2007	242	140	242.97	141.59	31	25	x	177	100.41	75.05	Pebble
2007	242	140	242.26	141.66	39	25	9.3	43.7	21.2	10.7	Flake Fragment
2007	242	140	242.27	141.44	11	26	7.5	39.47	25.76	9.61	Flake Fragment
2007	242	140	242.89	141.72	5	26	58	58.1	42.3	30.1	Flake Fragment
2007	244	138	244.77	139.84	1	2	3.8	19.65	12.94	11.33	Pebble
2007	244	138	244.5	139.05	2	2	0.4	17.54	10.62	4.15	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2007	244	138	244.62	139.53	3	2	1.1	18.83	13.82	5.6	Amorphous Debris
2007	244	138	244.97	139.32	6	2	6.4	26.86	21.4	14.69	Amorphous Debris
2007	244	138	244.52	139.54	4	2	0.2	14.2	10.1	1.6	Debris
2007	244	138	244.85	139.51	1	3	66.6	62.73	41.73	33.89	Pebble
2007	244	138	244.47	139.59	2	3	3.5	22.62	27.46	15.64	Debris
2007	244	138	244.97	139.4	3	3	58.3	64.8	43.3	24.2	Pebble
2007	244	138	244.845	139.235	5	3	0.4	15.28	8.81	4.2	Debris
2007	244	138	244.265	139.145	7	3	0.1	10.2	6.24	3.06	Amorphous Debris
2007	244	138	244.89	139.29	4	4	59.7	44.68	36.86	28.1	Amorphous Debris
2007	244	138	244.09	139.49	3	4	2.7	15.14	15.04	8.81	Amorphous Debris
2007	244	138	244.89	139.27	7	4	6.7	23.53	18.74	14.98	Amorphous Debris
2007	244	138	244.67	139.41	8	4	3.7	21.06	16.15	10.28	Pebble
2007	244	138	244.3	139.22	6	4	0.2	11.37	11.64	2.65	Amorphous Debris
2007	244	138	244.84	139.85	1	4	0.4	16.25	8.94	6.28	Amorphous Debris
2007	244	138	244.77	139.59	2	4	1.9	18.78	13.28	8.31	Amorphous Debris
2007	244	138	244.165	139.18	5	4	0.5	18.3	7.7	2.6	Flake Fragment
2007	244	138	244.67	139.37	2	5	19.8	28.38	25.33	23.42	Amorphous Debris
2007	244	138	244.76	139.31	3	5	0.4	15.94	9.75	5.36	Debris
2007	244	138	244.67	139.84	4	5	4.7	38.89	23.3	10.15	Amorphous Debris
2007	244	138	244.67	139.84	5	5	0.7	12.24	13.82	4.74	Amorphous Debris
2007	244	138	244.225	139.83	6	5	0.4	17.11	4.44	3.93	Amorphous Debris
2007	244	138	244.44	139.19	7	5	0.2	9.05	8.06	2.6	Debris
2007	244	138	244.92	139.22	1	5	18.9	47.4	38.7	96.89	Debris
2007	244	138	244.44	139.88	2	6	0.9	26.71	16.33	3.65	Flake Fragment
2007	244	138	244.23	139.49	3	6	0.9	20.45	16.65	4.84	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2007	244	138	244.76	139.85	4	6	0.5	12.7	9.93	4.84	Amorphous Debris
2007	244	138	244.4	139.12	5	6	0.7	16.92	12.02	4.57	Amorphous Debris
2007	244	138	234.34	139.025	7	6	0.6	15.31	12.13	5.62	Amorphous Debris
2007	244	138	244.205	139	8	6	0.2	10.4	7.94	1.55	Amorphous Debris
2007	244	138	244.53	139.53	9	6	39.5	54.65	32.92	30.83	Pebble
2007	244	138	244.99	139.28	10	6	0.8	17.03	9.26	5.44	Flake Fragment
2007	244	138	244.295	139.48	6	6	1.4	20.2	14.7	5.9	Flake
2007	244	138	244.6	139.7	1	6	x	220	163	114.7	Pebble
2007	244	138	244.71	139.31	1	7	1.1	23.48	12.7	4.97	Flake Fragment
2007	244	138	244.47	139.88	2	7	1.5	21.75	12.86	10.44	Amorphous Debris
2007	244	138	244.32	139.48	3	7	0.3	10.66	8.91	5.15	Flake Fragment
2007	244	138	244.58	139.43	4	7	10.8	34.52	23.97	12.41	Amorphous Debris
2007	244	138	244.3	139.355	1	8	1.4	16.35	16.8	7.95	Amorphous Debris
2007	244	138	244.765	139.66	2	8	19	32.05	24.8	25.05	Debris
2007	244	138	244.39	139.55	3	8	1.5	18.56	11.63	7.2	Amorphous Debris
2007	244	138	244.39	139.76	4	8	2.9	18.32	18.77	8.15	Amorphous Debris
2007	244	138	244.46	139.905	5	8	3.9	33.55	15.78	68.8	Flake Fragment
2007	244	138	244.64	139.22	1	9	6.9	26.36	28.96	12.31	Broken Flake
2007	244	138	244.48	139.26	2	9	9.5	44.4	28.96	7.98	Flake Fragment
2007	244	138	244.54	139.76	3	9	3.7	27.59	22.64	6.55	Debris
2007	244	138	244.3	139.66	4	9	11.5	34.21	20.55	13.23	Debris
2007	244	138	244.15	139.63	5	9	1.4	27.27	11.1	6.71	Amorphous Debris
2007	244	138	244.17	139.93	6	9	2.7	36.79	22	6.15	Debris
2007	244	138	244.15	139.95	7	9	12.6	45.7	24.54	13.86	Flake Fragment
2007	244	138	244.21	139.93	9	9	275.9	88.74	56.99	51.75	Broken Flake

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2007	244	138	244.29	139.91	3	10	4.7	34.73	20.89	8.54	Amorphous Debris
2007	244	138	244.32	139.46	4	10	12.7	34.89	25.58	13.27	Amorphous Debris
2007	244	138	244.42	139.42	5	10	29.8	46.58	34.19	21.73	Amorphous Debris
2007	244	138	244.2	139.74	2	10	53	51.0	44.0	27.0	
2007	244	138	244	139	2	10	53	53.1	46.64	32.97	Amorphous Debris
2007	244	138	244.29	139.82	1	10	111.8	58.56	51.46	59.77	Broken Flake
2007	244	138	244.51	139.58	1	11	6.7	41.94	24.61	11.37	Amorphous Debris
2007	244	138	244.69	139.31	2	11	18.6	41.75	31.67	18.63	Amorphous Debris
2007	244	138	244.7	139.34	3	11	26.8	33.78	27.1	21.49	Amorphous Debris
2007	244	138	244.71	139.42	4	11	133.2	69.71	62.93	32.5	Amorphous Debris
2007	244	138	244.29	139.99	8		228.9	85.41	51.31	55.42	Debris
2007	242	140	242.7	140.85	9	23	9.6	43	27	13.3	Flake Fragment
2008	242	138	243.52	139.16	1	1	14.1	41.05	28.25	14.16	Broken Flake
2008	242	138	243.81	139.56	1	2	15	34.29	22.17	16.48	Amorphous Debris
2008	242	138	243.01	139.16	1	3	3.3	23.91	18.49	15.24	Pebble
2008	242	138	243.76	139.335	2	3	0.5	16.7	9.45	4.51	Amorphous Debris
2008	242	138	243.06	139.31	1	4	1.3	25.01	11.87	5.44	Debris
2008	242	138	243.29	139.395	2	4	5.6	26.09	20.49	12.85	Amorphous Debris
2008	242	138	243.36	139.5	3	4	18.3	52.53	39.12	15.73	Debris
2008	242	138	243.68	139.26	4	4	9.1	37.69	19.05	14.66	Amorphous Debris
2008	242	138	243.87	139.4	5	4	7.3	36.36	16.79	8.11	Amorphous Debris
2008	242	138	243.2	139.67	1	5	3.6	25.52	23.98	8.89	Debris
2008	242	138	242	139.565	2	5					Pebble
2008	242	138	243	139.625	2	5	3.1	23.44	14.44	8.21	Amorphous Debris
2008	242	138	243.95	139.68	4	5	2	19.47	14.11	11.56	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2008	242	138	243.85	139.355	5	5					Amorphous Debris
2008	242	138	243.885	139.16	7	5	0.5	15.14	12.73	3.96	Amorphous Debris
2008	242	138	243.825	139.12	8	5	2.2	19.9	15.93	7.51	Amorphous Debris
2008	242	138	243.94	139.25	6	5	0.5	12.46	12.04	2.58	Amorphous Debris
2008	242	138	242.215	139.89	1	6	2.4	18.03	12.2	7.15	Pebble
2008	242	138	242.085	139.68	2	6	0.6	19.32	15.44	2.59	Debris
2008	242	138	242.38	139.365	4	6	1.2	9.97	9.85	10.07	Amorphous Debris
2008	242	138	242.47	139.375	5	6	4.3	17.65	11.8	11.21	Amorphous Debris
2008	242	138	242.475	139.345	6	6	2.5	23.43	11.37	7.39	Amorphous Debris
2008	242	138	242.055	139.63	3	6	3.8	19.27	15.89	11.23	Amorphous Debris
2008	242	138	243.95	139.49	1	7	4.2	23.27	23.63	8.12	Broken Flake
2008	242	138	243.655	139.405	2	7	1.5	20.6	14.48	7.01	Amorphous Debris
2008	242	138	243.685	139.395	3	7	0.8	15.04	10.92	4.08	Pebble
2008	242	138	243.66	139.295	4	7	3.4	27.72	28.44	17.46	Debris
2008	242	138	243.025	139.665	5	7	1.2	19.53	5.94	5.03	Pebble
2008	242	138	243.225	139.085	6	7	0.7	15.35	9.68	4.75	Amorphous Debris
2008	242	138	242.85	139.17	1	8	0.9	16	13.6	3.32	Flake
2008	242	138	242	139.565	2	8	1.1	14.27	19.03	4.2	Flake Fragment
2008	242	138	243.105	139.595	3	9	3.1	24.65	9.13	10.79	Amorphous Debris
2008	242	138	243.895	139.902	1	9	0.5	16.3	12.75	2.2	Amorphous Debris
2008	242	138	243.865	139.37	2	9	37.9	38.86	33.8	20.35	Pebble
2008	242	138	243.215	139.29	4	9	1.5	27.71	18.22	5.06	Debris
2008	242	138	243.15	139.1	5	9	8.5	26.41	24.55	14.25	Amorphous Debris
2008	242	138	243.6	139.17	1	10	10.05	62.63	39.1	32.33	Debris
2008	242	138	243.6	139.17	1	10	10.05	62.63	39.1	32.33	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2008	242	138	243.855	139.075	2	10	6.5	38.2	27	11.36	Flake Fragment
2008	242	138	243.13	139.295	3	10	0.3	12.37	8.18	3.84	Amorphous Debris
2008	242	138	243.79	139.35	4	10	20.9	29.87	27.86	19.75	Pebble
2008	242	138	243.86	139.385	5	10	2.5	30.43	17.45	7.22	Debris
2008	242	138	243.315	139.615	6	10	14.8	27.3	23.94	15.94	Amorphous Debris
2008	242	138	243.345	139.67	7	10	1.4	18.02	13.16	5.38	Amorphous Debris
2008	242	138	243.6	139.17	8	10	10.7	37.78	25.71	15.1	Amorphous Debris
2008	242	138	243.95	139.88	1	11	141.2	102.26	58.2	28.11	Pebble
2008	242	138	243.16	139.74	2	11					Amorphous Debris
2008	242	138	243.76	139.46	3	11	27.8	35.5	33.16	17.52	Debris
2008	242	138	243.78	139.36	4	11	3.2	21.1	1858	6.61	Amorphous Debris
2008	242	138	243.59	139.235	5	11	0.9	17.55	14.86	2.02	Debris
2008	242	138	243.725	139.86	1	12	12.9	34.76	26.87	12.65	Pebble
2008	242	138	243.7	139.82	2	12	1.5	21.63	17.12	7.66	Debris
2008	242	138	243.545	139.83	3	12	60.3	59.38	41.41	34.69	Pebble
2008	242	138	243.57	139.7	4	12	1.8	21.28	17.,17	6.21	Debris
2008	242	138	243.45	139.63	5	12	1.2	14.51	12.58	7.62	Debris
2008	242	138	243.15	139.59	6	12	8.3	32.22	17.45	7.78	Pebble
2008	242	138	243.72	139.25	7	12	5.2	26.05	21.07	11.09	Pebble
2008	242	138	243.145	139.93	1	13	2.8	23.2	11.1	10.4	Pebble
2008	242	138	243.15	139.905	2	13	0.4	12.8	8.5	4.6	Amorphous Debris
2008	242	138	243.13	139.295	3	13	0.7	11.9	6.1	7.3	Pebble
2008	242	138	243.17	139.86	4	13	4	21.2	19.2	8.5	Pebble
2008	242	138	243.71	139.82	5	13	15.8	36.3	22.7	27.3	Pebble
2008	242	138	243.945	139.81	6	13	17.4	38	34	23.1	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2008	242	138	243.49	139.65	7	13	11.5	40.7	26.5	21.3	Pebble
2008	242	138	243.89	139.56	8	13	2.6	19.1	14	9.1	Pebble
2008	242	138	243.73	139.47	9	13	5.4	22.7	15	13.6	Pebble
2008	242	138	243.485	139.5	10	13	4.2	25.8	24.6	20	Amorphous Debris
2008	242	138	243.41	139.46	11	13	2.9	32.8	17.1	5.3	Flake
2008	242	138	243.55	139.325	12	13	82.4	66.8	45.9	32.6	Pebble
2008	242	138	243.505	139.175	13	13	0.7	13.8	12	4.6	Debris
2008	242	138	243.2	139.97	17	13	53.8	76.4	55.5	26.5	Flake
2008	242	138	243.51	139.15	14	14	3.4	26.4	19.2	9.1	Amorphous Debris
2008	242	140	242.16	141.28	1	26	18.6	26.6	24.7	20.9	Amorphous Debris
2008	242	140	242.17	141.38	3	26	4.9	28.1	19.2	8	Debris
2008	242	140	242.18	141.47	4	26	28.5	47.9	41	27.2	Debris
2008	242	140	242.18	141.46	6	26	46.6	64.1	37.2	18.4	Amorphous Debris
2008	242	140	242.74	141.48	8	26	23.2	45.6	33.9	17.2	Amorphous Debris
2008	242	140	242.76	141.46	9	26	27.6	42.3	37	22.5	Pebble
2008	242	140	242.88	141.49	10	26	14.2	34.1	20	19.3	Amorphous Debris
2008	242	140	242.104	141.34	11	26	5.7	30.9	15.5	16.7	Pebble
2008	242	140	242.105	141.88	12	26	1.2	14	11.3	5	Amorphous Debris
2008	242	140	242.05	141.31	1	27	58.6	62.3	33.7	29.8	Debris
2008	242	140	242.04	141.74	2	27	23	31.8	24.7	23.7	Amorphous Debris
2008	242	140	242.115	141.78	3	27	0.2	9.7	5.5	1.6	Debris
2008	242	140	242.46	141.13	4	27	15.2	34.9	27.2	22.4	Debris
2008	242	140	242.53	141.12	5	27	5.8	34.3	24.7	12.1	Amorphous Debris
2008	242	140	242.58	141.77	6	27	0.2	14.5	6.4	1.1	Amorphous Debris
2008	242	140	242.88	141.69	7	27	1.8	25.5	7.5	6.7	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2008	242	140	242.95	141.51	8	27	1.4	24.5	11.4	4.2	Debris
2008	242	140	242.93	141.62	9	27	11.9	28.7	24.3	15.1	Amorphous Debris
2008	242	140	242.83	141.52	10	27	22.9	59.6	40.4	10.3	Flake
2008	242	140	242.85	141.47	11	27	21	34.9	35.1	19.6	Broken Flake
2008	242	140	242.91	141.47	12	27	57.2	67.8	45.9	18.5	Amorphous Debris
2008	242	140	242.83	141.42	13	27	52.3	61.5	34.6	39	Pebble
2008	242	140	242.82	141.5	14	27	17.9	27.4	24.5	18.8	Amorphous Debris
2008	242	140	242.9	141.6	15	27	11.9	49.7	36.9	11.9	Pebble
2008	242	140	242.65	141.89	2	28	25.8	52.7	33.4	21.1	Debris
2008	242	140	242.56	141.78	3	28	5.4	22.5	21.9	15.7	Amorphous Debris
2008	242	140	242.95	141.73	4	28	51.1	52.2	35.7	27.3	Debris
2008	242	140	242.87	141.72	5	28	23.6	46.9	30.8	17.9	Amorphous Debris
2008	242	140	242.65	141.61	7	28	32.3	54.3	37.7	20	Pebble
2008	242	140	242.67	141.67	8	28	76.9	54.2	44.4	36.4	Pebble
2008	242	140	242.8	141.53	9	28	54.9	62.2	34.4	30.7	Pebble
2008	242	140	242.84	141.38	11	28	18.6	48.2	19.2	19.5	Amorphous Debris
2008	242	140	242.7	141.37	12	28	71.5	65.7	52.4	23.9	Debris
2008	242	140	242.91	141.17	13	28	2.1	20.2	17.3	7.8	Broken Flake
2008	242	140	242.76	141.13	14	28	47.3	59	50.8	19.9	Amorphous Debris
2008	242	140	242.88	141.23	15	28	57.8	60.4	45.9	27.4	Pebble
2008	242	140	242.37	141.56	16	28	1.3	21.7	11.4	5.1	Debris
2008	242	140	242.31	141.24	17	28	0.7	19.3	11.7	2.9	Amorphous Debris
2008	242	140	242.65	141.82	19	28	177.4	81.4	72.2	41	Pebble
2008	242	140	242.96	141.64	6	28	246.4	94.93	65.08	48.45	Amorphous Debris
2008	242	140	242.76	141.45	10	28	454.3	144.56	114.2	47.31	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2008	242	140	242.76	141.34	2	29	24.2	68.3	29.6	14.8	Debris
2008	242	140	242.49	140.14	17	17	31.4	50.2	32.9	26.9	Pebble
2008	242	140	242.527	140.925	1	24	15	25.1	24.3	15.3	Amorphous Debris
2008	242	140	242.808	140.94	2	24	32.7	41.2	34.3	24.9	Amorphous Debris
2008	242	140	242.779	140.915	3	24	32	39.9	36.6	22.7	Pebble
2008	242	140	242.752	140.796	4	24	66.8	50.2	46.6	30.9	Pebble
2008	242	140	242.766	140.865	5	24	24.1	31.3	25.3	24.7	Pebble
2008	242	140	242.78	140.882	6	24	4.3	26.1	9.5	9.8	Amorphous Debris
2008	242	140	242.688	140.582	7	24	10.8	28.6	19.4	17.7	Amorphous Debris
2008	242	140	242.834	140.636	8	24	7.2	34.5	18.7	20	Amorphous Debris
2008	242	140	242.68	140.83	1	25	19.3	46.4	39.6	11.7	Amorphous Debris
2008	242	140	242.576	140.828	2	25	12.5	49.5	38.4	22.6	Amorphous Debris
2008	242	140	242.692	140.298	3	25	20.2	33.4	29.1	14.5	Amorphous Debris
2008	242	140	242.654	140.792	4	25	7.4	26.4	13.6	10.7	Pebble
2008	242	140	242.637	140.464	5	25	15.8	445.1	30.1	15	Amorphous Debris
2008	242	140	242.656	140.76	6	25	32.9	51.9	37.9	17.2	Amorphous Debris
2008	242	140	242.748	140.742	7	25	52.4	75.2	52.1	15.6	Amorphous Debris
2008	242	140	242.732	140.705	8	25	198.6	88.8	59.3	44.3	Amorphous Debris
2008	242	140	242.806	140.592	11	25	112.3	63.1	50.3	37.5	Pebble
2008	242	140	242.726	140.948	13	25	53.2	52	38.8	30.4	Pebble
2008	242	140	242.632	140.405	14	25	50.6	60	35.2	25.4	Pebble
2008	242	140	242.882	140.1	15	25	50.1	53.8	36	27	Pebble
2008	242	140	242.47	140.03	16	25	18.8	42.8	25	24.2	Amorphous Debris
2008	242	140	242.64	140.1	18	25	26	38.5	29.9	27.1	Amorphous Debris
2008	242	140	242.52	140.45	19	25	23.1	49.9	23.6	20	Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2008	242	140	242.66	140.57	20	25					Amorphous Debris
2008	242	140	242.654	140.585	10	25	40.3	49.26	36.62	22.87	Amorphous Debris
2008	242	140	242.743	140.454	12	25	361.6	125.11	71.87	50.26	Debris
2008	242	140	242.646	140.205	1	26	119.6	105	54.1	22.5	Debris
2008	242	140	242.35	140.416	2	26	79.7	69.2	48.1	35.9	Pebble
2008	242	140	242.754	140.416	3	26	161	87.3	49.7	47.1	Amorphous Debris
2008	242	140	242.542	140.529	4	26	19.5	32.2	24.7	22.1	Amorphous Debris
2008	242	140	242.593	140.762	5	26	72.3	51.3	45.8	42	Pebble
2008	242	140	242.662	140.862	6	26	275.8	92.05	66.59	59.38	Pebble
2008	242	140	243.99	140	2		649.2	99.73	91.58	59.26	Debris
2008	242	140	243.99	140	1		x	236.3	140.74	83.61	Amorphous Debris
2008	242	142	243.37	142.36	1	10	5.3	21.3	14.9	12.7	
2008	242	142	243.37	142.36	2	10	1.7	19.3	13	9.8	Amorphous Debris
2008	242	142	243.09	142.21	3	10	0.8	16.4	9.6	4.4	Debris
2008	242	142	243.395	142.25	4	10	15.8	48.5	31.9	10.1	Debris
2008	242	142	243.38	142.22	5	10	9.3	31.4	27.5	11.3	Amorphous Debris
2008	242	142	243.68	142.9	6	10	2	13.3	16.9		Pebble
2008	242	142	243.245	142.38	1	11	1.1	14.8	12.7	5.9	Debris
2008	242	142	243.74	142.26	2	11	33.5	46.1	43.2	22.3	Debris
2008	242	142	242.77	142.355	3	11	13.5	33.2	24.5	27	Pebble
2008	242	142	242.9	142.79	4	11	139.1	79.5	59.6	32.9	Pebble
2008	242	142	243.89	142.97	1	12	23.6	46.6	32.5	19.3	Debris
2008	242	142	243.28	142.7	1	13	0.4	16.8	9.8	2.7	Amorphous Debris
2008	242	142	243.59	142.01	2	13	1.2	17.4	12.3	5.2	Amorphous Debris
2008	242	142	243.12	142.325	3	13	328.9	133.4	76	57	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2008	242	142	243.21	142.2	4	13	13.7	38.4	28.6	19.4	Pebble
2008	242	142	243.37	142.275	5	13	3.5	30.6	17.3	9.7	Pebble
2008	242	142	243.71	142.29	6	13	12.3	29	23.8	21.9	Pebble
2008	242	142	243.69	142.02	7	13	5	23.7	17.9	16.1	Pebble
2008	242	142	243.5	142.165	8	13	5.9	28.9	19	16.8	Amorphous Debris
2008	242	142	243.05	142.04	1	14	2.3	21.3	15.2	7.6	Pebble
2008	242	142	243.9	142	2	14	9.7	34.5	30.7	15.1	Pebble
2008	242	142	243.62	142.03	3	14	8.2	24.5	21.3	15	Pebble
2008	242	142	243.605	142.01	4	14	1.9	22.3	13.9	7.6	Amorphous Debris
2008	242	142	243.11	142.24	5	14	1.3	21.6	10.1	5.8	Pebble
2008	242	142	243.93	142.44	1	15	0.9	18.9	11.8	5.5	Amorphous Debris
2008	242	142	243.91	142.36	2	15	24.3	19	14.5	7.4	Amorphous Debris
2008	242	142	243.86	142.28	3	15	43	24.7	13.9	12.6	Flake Fragment
2008	242	142	243.48	142.14	4	15	7.6	39.8	35.3	5.9	Pebble
2008	242	142	243.59	142.62	1	16	3.3	19.7	12.3	9.8	Pebble
2008	242	142	243.085	142.71	2	16	0.7	15	13.8	6.6	Amorphous Debris
2008	242	142	243.05	142.52	3	16	12.6	43	24.7	13.9	Debris
2008	242	142	243.07	142.445	4	16	8.5	27	17.6	13.2	Amorphous Debris
2008	242	142	243.07	142.42	5	16	2	15.9	14.5	8.7	Amorphous Debris
2008	242	142	243.345	142.55	6	16	48.1	52.5	40.3	23.3	Amorphous Debris
2008	242	142	243.6	142.135	7	16	19	39.7	28	24.6	Pebble
2008	242	142	243.43	142.79	1	17	38.9	49.2	32.7	22.9	Pebble
2008	242	142	243.47	142.79	2	17	52.1	34.5	21.5	52.4	Amorphous Debris
2008	242	142	243.27	142.265	3	17	1.8	49.2	32.7	12.9	Flake Fragment
2008	242	142	243.1	142.93	1	18	1.5	21.7	15.6	9.4	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2008	242	142	243.63	142.84	2	18	6.1	27.1	20.2	17.1	Flake Fragment
2008	242	142	243.635	142.77	3	18	34.9	45.5	37.2	18.8	Flake Fragment
2008	242	142	243.1	142.94	4	18	0.5	14.6	9.5	4.9	
2008	242	142	243.66	142.955	1	19	5.6	24.3	22.7	13	Flake
2008	242	142	243.63	142.87	2	19	0.7	14.6	11.9	7.3	Amorphous Debris
2008	242	142	243.53	142.94	3	19	14.7	41.7	21.7	17.4	Flake Fragment
2008	242	142	243.69	142.71	5	19	2.2	23	12.8	7.6	Pebble
2008	242	142	243.68	142.675	6	19	3.1	27.8	18.4	11	Debris
2008	242	142	243.44	142.725	7	19	4.9	21	15.7	11.9	Debris
2008	242	142	243.345	142.93	1	20	43.8	68.1	29.1	27.2	Flake Fragment
2008	242	142	243.26	142.35	2	20	2.1	19.3	17.1	7.2	Amorphous Debris
2008	242	142	243.05	142.03	3	20	19.5	50.5	27.8	16.7	Amorphous Debris
2008	242	142	243.61	142.635	1	21	4.9	33.1	22.3	9.9	Flake
2008	242	142	243.26	142.67	2	21	1	19	15.8	5.8	Amorphous Debris
2008	242	142	243.27	142.69	3	21	7.9	57.3	27.4	7.8	Flake Fragment
2008	242	142	243.03	142.07	4	21	2.9	25.1	17.3	12.2	Amorphous Debris
2008	242	142	243.02	142.79	1	22	0.8	19.2	13.7	2.8	Flake Fragment
2008	242	142	243.04	142.44	2	22	6.1	27.1	20.2	17.1	Broken Flake
2008	242	142	243.27	142.7	3	22	34.9	45.5	37.2	18.8	Amorphous Debris
2008	242	142	243.27	142.71	4	22	50.7	50.6	42.4	23.3	Pebble
2008	242	142	243.99	142.87	5	22	39.8	61.4	38.6	25	Pebble
2008	242	142	243.24	142.28	2	23	12.1	39.5	17.9	11.8	Amorphous Debris
2008	242	142	243.32	142.42	3	23	18.4	65.4	43.7	8.6	Flake Fragment
2008	242	142	243.29	142.49	4	23	2.7	39.3	19.9	4.9	Debris
2008	242	142	243.1	142.61	5	23	2.2	24.7	15.1	6.5	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2008	242	142	243.11	142.7	6	23	2.8	21.8	12	12.5	Amorphous Debris
2008	242	142	243.29	142.76	7	23	1.1	17.1	15.3	5.3	Debris
2008	242	142	243.34	142.7	8	23	3.6	25.4	12.1	7.1	Pebble
2008	242	142	243.48	142.69	9	23	22.3	49.1	29.1	18.9	Debris
2008	242	142	243.71	142.65	10	23	20.3	36.2	29.3	18.9	Pebble
2008	242	142	243.42	142.52	11	23	6.9	42.8	30	7.7	Flake
2008	242	142	243.68	142.73	4						Debris
2008	242	142	242.37	142.38	7	7	173	113.5	74.2	40	Broken Flake
2008	242	142	242.18	142.05	1	10	19.3	38.4	39.4	12.7	Debris
2008	242	142	242.61	142.31	2	10	8.5	39	33.8	9.1	Debris
2008	242	142	243.05	142.99	3	10	6.7	35.3	16.2	15.8	Amorphous Debris
2008	242	142	242.08	142.96	4	10	3.7	30	19.5	7.4	Amorphous Debris
2008	242	142	243.81	139.56	1	11	2.6	21.1	16.5	11.1	Pebble
2008	242	142	242.6	142.4	1	11	2.6	21.1	16.5	11.1	Amorphous Debris
2008	242	142	242.55	142.41	2	11	21.3	47.1	35.8	18	Debris
2008	242	142	242.53	142.57	3	11	7.3	29.1	17.7	13	Debris
2008	242	142	242.34	142.74	4	11	1.6	21.6	16.2	10	Amorphous Debris
2008	242	142	242.06	142.69	5	11	4.6	32.3	14.6	12.7	Debris
2008	242	142	242.29	142.94	6	11	5	15.8	8	3.6	Amorphous Debris
2008	242	142	242.17	142.99	7	11	35.1	39.5	31.2	18.8	Pebble
2008	242	142	242.65	142.91	8	11	32.3	14.6	12.7	4.6	Debris
2008	242	142	242.81	142.13	1	12	0.5	20.2	10.4	2.9	Flake
2008	242	142	242.94	142.26	2	12	57.6	50.6	44.5	27	Pebble
2008	242	142	242.94	142.32	3	12	38	55.7	41.7	21.6	Pebble
2008	242	142	242.72	142.35	4	12	0.9	22.1	10.1	5.2	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2008	242	142	242.62	142.35	5	12	2.9	31.1	9.4	8	Debris
2008	242	142	242.62	142.4	6	12	1.5	19.6	11.3	5.3	Amorphous Debris
2008	242	142	242.29	142.47	8	12	1.4	17.6	14.6	6.9	Debris
2008	242	142	242.19	142.5	9	12	5.7	25.8	21.2	9	Amorphous Debris
2008	242	142	242.16	142.56	10	12	15.7	36.3	27.3	20.6	Chert Pebble
2008	242	142	242.15	142.62	11	12	28	38.5	24.9	21	quartz Pebble
2008	242	142	242.08	142.72	12	12	12.9	31.2	20.5	15.1	Amorphous Debris
2008	242	142	242.11	142.71	13	12	1.3	19.7	16.8	3.8	Flake
2008	242	142	242.73	142.73	14	12	3.7	15.4	11.7	11.3	Amorphous Debris
2008	242	142	242.18	142.55	16	12	4.4	20.4	14.4	12.3	Amorphous Debris
2008	242	142	242.19	142.49	17	12	1.9	18	7.4	6.9	Amorphous Debris
2008	242	142	242.11	142.72	18	12	1.6	17.7	11.4	6.5	Flake
2008	242	142	242.44	142.81	19	12	0.2	10.3	6.3	3.4	Amorphous Debris
2008	242	142	242.43	142.85	20	12	1	19.3	9.6	7.2	Debris
2008	242	142	242.25	142.87	21	12	5.9	22.4	18.3	11.9	Pebble
2008	242	142	242.662	142.99	22	12	3.7	22.2	15.3	14.7	Amorphous Debris
2008	242	142	242.38	142.99	23	12	0.7	17.5	8.9	4.8	Amorphous Debris
2008	242	142	242.22	142.96	24	12	3.6	21.8	13.6	12.7	Amorphous Debris
2008	242	142	242.27	142.1	25	12	3.1	33.3	16.1	7.7	Debris
2008	242	142	242.02	142.48	26	12	5.8	40.6	19.4	10.4	Flake
2008	242	142	242.22	142.97	27	12	0.2	13.3	4.7	2.9	Amorphous Debris
2008	242	142	242.25	142.54	30	13	4.3	20.9	15.6	8.9	Amorphous Debris
2008	242	142	242.25	142.54	32	13	1.2	22.7	8.7	4.6	Amorphous Debris
2008	242	142	242.89	142.67	37	13	6.4	23.3	17.4	11.1	Amorphous Debris
2008	242	142	242.25	142.51	71	13	2.7	21.5	2.4	9.6	Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2008	242	142	242.24	142.55	73	13	4.4	22.6	14	8.,3	Pebble
2008	242	142	242.62	142.27	9	13	3.1	14.6	13.8	10.9	Amorphous Debris
2008	242	142	242.68	142.37	12	13	4.5	21	13.7	11.1	Amorphous Debris
2008	242	142	242.31	142.37	13	13	16	33.8	26.5	19.2	Amorphous Debris
2008	242	142	242.29	142.41	22	13	7.9	26.6	20.1	12.4	Pebble
2008	242	142	242.47	142.54	27	13	10.2	25.5	19.3	16.7	Amorphous Debris
2008	242	142	242.27	142.54	29	13	4.1	18.3	12.3	11.8	Pebble
2008	242	142	242.09	142.59	36	13	3.1	19.3	14.7	9.6	Amorphous Debris
2008	242	142	242.15	142.66	49	13	10.4	33	15	13.3	Pebble
2008	242	142	242.06	142.78	54	13	3.7	17.1	15.2	11.5	Amorphous Debris
2008	242	142	242.77	142.99	64	13	5.7	24.5	13.2	11.6	Pebble
2008	242	142	242.4	142.45	69	13	6.1	24.2	18.3	11.9	Amorphous Debris
2008	242	142	242.13	142.68	75	13	3.5	26	14.1	6.8	Pebble
2008	242	142	242.44	142.11	5	13	15.1	48.3	34.7	14.7	Debris
2008	242	142	242.75	142.11	3	13	0.2	12.6	6.1	2.2	Debris
2008	242	142	242.2	142.55	34	13	0.9	15.9	12.3	4.5	Flake
2008	242	142	242.07	142.79	55	13	0.4	17.7	7	1.1	Flake
2008	242	142	242.22	142.87	62	13	0.9	18.1	17.8	2.9	Broken Flake
2008	242	142	242.15	142.82	53	13	7.2	26.9	17.4	14.5	Pebble
2008	242	142	242.61	142.06	4	13		34.6	28.9	13.6	Debris
2008	242	142	242.09	142.35	16	13	1.6	21.2	16.1	8.5	Amorphous Debris
2008	242	142	242.07	142.57	35	13	14.1	35.3	22.8	18.7	Amorphous Debris
2008	242	142	242.56	142.75	41	13	3.7	28.2	18.2	9.8	Amorphous Debris
2008	242	142	242.18	142.67	46	13	1.2	20.2	9.9	8.7	Amorphous Debris
2008	242	142	242.45	142.37	68	13	0.4	13.5	7.1	4.3	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2008	242	142	242.14	142.64	74	13	0.7	12.4	7.4	4.6	Amorphous Debris
2008	242	142	242.87	142.76	77	13	0.9	13.9	10.5	7.6	Flake
2008	242	142	242.38	142.9	59	13	2	24.1	9.6	8	Amorphous Debris
2008	242	142	242.12	142.72	51	13	28.2	44.8	30.9	19.5	Debris
2008	242	142	242.77	142.27	8	13	0.5	14.3	9.9	3.2	Amorphous Debris
2008	242	142	242.89	142	2	13	88.7	55.4	38.9	38.4	Pebble
2008	242	142	242.92	142.2	6	13	63.1	65	32.9	26.3	Pebble
2008	242	142	242.3	142.5	26	13	21.7	37.6	32.6	31.6	Pebble
2008	242	142	242.56	142.8	1	13	0.1	8.6	6.6	0.8	Amorphous Debris
2008	242	142	242.46	142.35	11	13	0.2	12.5	6.2	1.7	Flake Fragment
2008	242	142	242.77	142.43	18	13	22.8	40.7	28.9	23.8	Pebble
2008	242	142	242.36	142.41	21	13	5	29.3	12.8	12.5	Pebble
2008	242	142	242.39	142.48	24	13	17.9	32.4	28.8	22.9	Pebble
2008	242	142	242.26	142.55	28	13	8.1	28.7	24	17.9	Pebble
2008	242	142	242.2	142.52	33	13	8.2	29.8	14.6	13	Amorphous Debris
2008	242	142	242.75	142.66	39	13	3.6	24.6	133.4	13.3	Pebble
2008	242	142	242.47	142.72	42	13	11.8	29.4	24.7	17	Pebble
2008	242	142	242.22	142.59	44	13	6	23.6	20.1	14.4	Pebble
2008	242	142	242.75	142.93	56	13	5.4	28.4	21.2	11.2	Amorphous Debris
2008	242	142	242.16	142.9	63	13	10.4	31.9	19.2	18	Pebble
2008	242	142	242.39	142.46	70	13	2	21.2	12	11.9	Pebble
2008	242	142	242.55	142.3	67	13	3.8	23.4	18.3	9.5	Pebble
2008	242	142	242.42	142.41	19	13	1.6	17.8	11.1	8.1	Pebble
2008	242	142	242.41	140.43	20	13	47.2	57.8	48.1	22	Amorphous Debris
2008	242	142	242.42	142.89	58	13	1.8	18.4	15.8	9.3	Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2008	242	142	243.27	142.89	60	13	3.1	22	18	6.6	Amorphous Debris
2008	242	142	242.25	142.55	31	13	6.6	27.5	22.7	13.4	Pebble
2008	242	142	242.05	142.77	76	13	2.1	20.2	15.1	5.3	Flake
2008	242	142	242.75	142.23	7	13	1.8	19.2	18.4	8.6	Flake Fragment
2008	242	142	242.13	142.35	15	13	2.1	19.4	9.1	8.7	Amorphous Debris
2008	242	142	242.06	142.33	17	13	4.9	22.6	17.1	12.7	Pebble
2008	242	142	242.64	142.61	40	13	13.3	26.4	21.5	20.6	Pebble
2008	242	142	242.56	142.81	52	13	7	26	23.5	17.4	Pebble
2008	242	142	242.24	142.53	72	13	3.4	21.6	15.7	9.5	Pebble
2008	242	142	242.37	142.69	43	13	0.8	18.1	7.2	5.6	Amorphous Debris
2008	242	142	242.21	142.36	14	13	0.4	12.1	10.3	4	Pebble
2008	242	142	242.58	142.99	66	13	6.9	27.3	22.6	10.6	Pebble
2008	242	142	242.16	142.72	50	13	7.8	29.8	15.9	10.9	Pebble
2008	242	142	242.31	142.46	25	13	1.5	16.6	11.9	7.6	Debris
2008	242	142	242.67	142.99	65	13	0.8	12.8	11.3	5.2	Amorphous Debris
2008	242	142	242.82	142.69	38	13	12	32.7	18.9	18.1	Amorphous Debris
2008	242	142	242.19	142.62	45	13	3.7	21.1	14.4	10	Pebble
2008	242	142	242.56	142.3	10	13	9	22.1	21.8	17.7	Amorphous Debris
2008	242	142	242.48	142.72	74	13					Amorphous Debris
2008	242	142	242.54	142.93	57	13	10.5	31.3	26.8	18.8	Pebble
2008	242	142	242.24	142.42	23	13	51.3	57.5	39.5	27.9	Debris
2008	242	142	242.19	142.64	47	13	2.7	26.1	15.5	5.5	Amorphous Debris
2008	242	142	242.24	142.93	61	13	6.2	26.4	19.6	13.8	Amorphous Debris
2008	242	142	242.43	142.38	78	13	1	15.6	12.6	3.3	Amorphous Debris
2008	242	142	242.77	142.015	1	14	0.7	16.7	13.8	6.3	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2008	242	142	242.32	142.01	2	14	2.4	20.7	12.7	15.5	Amorphous Debris
2008	242	142	242.73	142.14	3	14	10.8	27.1	23.7	14.2	Amorphous Debris
2008	242	142	242.58	142.095	4	14	9.5	33.4	23.7	15.6	Amorphous Debris
2008	242	142	242.33	142.14	5	14	0.4	12.6	11.7	3.2	Amorphous Debris
2008	242	142	242.82	142.29	6	14	0.9	19.2	10.1	6.8	Broken Flake
2008	242	142	242.65	142.31	7	14	0.2	13.8	8	2.7	Flake
2008	242	142	242.55	142.3	8	14	1.9	22.6	8.8	7.9	Amorphous Debris
2008	242	142	242.49	142.36	9	14	12.6	33.7	21.8	18.5	Flake Fragment
2008	242	142	242.17	142.59	10	14	1.3	26.9	12.6	6.2	Flake
2008	242	142	242.69	142.71	11	14	0.4	14.7	10.9	3.6	Debris
2008	242	142	242.28	142.68	12	14	34.5	67.5	36.8	14.4	Amorphous Debris
2008	242	142	242.17	142.67	13	14	13	30.1	30.1	13.3	Flake Fragment
2008	242	142	242.75	142.78	14	14	4	22.1	26.5	8.8	Amorphous Debris
2008	242	142	242.69	142.91	15	14	0.8	22.8	6.2	3.2	Broken Flake
2008	242	142	242.48	142.84	16	14	1.5	21.6	10.3	8.8	Amorphous Debris
2008	242	142	242.28	142.87	17	14	9.6	28.7	15.7	15.6	Amorphous Debris
2008	242	142	242.25	142.94	18	14	2.2	18.1	15.6	7.4	Amorphous Debris
2008	242	142	242.8	142	1	15	6.4	24.9	22.2	15.8	Flake Fragment
2008	242	142	242.79	142.02	2	15	2.3	19.8	14,4	11.6	Amorphous Debris
2008	242	142	242.3	142.11	3	15	1.1	17.8	14.7	6.7	Flake Fragment
2008	242	142	242.66	142.24	4	15	0.7	9.7	9.4	4.3	Amorphous Debris
2008	242	142	242.67	142.27	5	15	1.2	13.3	14.1	6	Pebble
2008	242	142	242.15	142.43	6	15	0.9	18.9	8.7	5	Amorphous Debris
2008	242	142	242.73		7	15	35.5	54.9	36.4	19.3	Pebble
2008	242	142	242.1	142.625	8	15	8.8	31.1	25.1	19.5	Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2008	242	142	242.82	142.89	9	15	3.1	36	24.6	3.4	Broken Flake
2008	242	142	242.58	142.91	10	15	0.7	17,2	10.2	3.9	Flake
2008	242	142	242.19	142.96	11	15	6.3	29.2	18	12.7	Flake
2008	242	142	242.73	142.84		15					Pebble
2008	242	142	242.02	142.01	1	16	4.1	24.2	22.8	8.4	Amorphous Debris
2008	242	142	242.48	142.17	2	16	0.2	11.6	9.4	1.8	Pebble
2008	242	142	242.21	142.13	3	16	9.3	29	28.5	14	Pebble
2008	242	142	242.74	142.29	4	16	1.5	20.2	19.6	7.2	Pebble
2008	242	142	242.36	142.33	5	16	30.6	37.7	36.8	21.2	Amorphous Debris
2008	242	142	242.34	142.3	6	16	7.5	30.3	19.7	9.8	Flake Fragment
2008	242	142	242.4	142.53	7	16	31.7	46.5	28.7	26.3	Debris
2008	242	142	242.12	142.55	8	16	5.2	28.3	20.2	10.8	Pebble
2008	242	142	242.08	142.53	9	16	30.1	42.7	37.2	24.9	Flake
2008	242	142	242.59	142.67	10	16	2.3	25.1	15.7	5.8	Debris
2008	242	142	242.59	142.65	11	16	10.2	33.5	21.5	15.8	Flake
2008	242	142	242.29	142.65	12	16	81.2	62.3	45.2	33.5	Debris
2008	242	142	242.79	142.99	13	16	4.6	23.8	16	12.7	Debris
2008	242	142	242.22	142.98	15	16	3.4	20.9	18.1	10.7	Flake Fragment
2008	242	142	242.95	142.79	16	16	0.8	15.9	6.2	6.4	Flake Fragment
2008	242	142	242.48	142.21	17	16	78.9	66.9	56	23.7	Debris
2008	242	142	242.38	142.02	1	17	13.4	40.7	31.8	16.2	Flake
2008	242	142	242.76	142.46	2	17	2.6	23.3	15	7.4	Flake Fragment
2008	242	142	242.3	142.5	3	17	0.4	15.1	9.1	2.8	Flake
2008	242	142	242.23	142.49	4	17	6.6	21.7	20.3	17.8	Amorphous Debris
2008	242	142	242.56	142.62	5	17	2.2	23.9	17.3	6.5	Flake Fragment

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2008	242	142	242.18	142.6	6	17	2.2	20.4	12	8.5	Amorphous Debris
2008	242	142	242.55	142.69	7	17	0.4	16.3	7.5	3	Amorphous Debris
2008	242	142	242.37	142.67	8	17	60.2	63.6	53.6	31	Pebble
2008	242	142	242.9	142.99	9	17	14.6	33.9	32.5	14.5	Amorphous Debris
2008	242	142	242.53	142.37	1	18	2.1	21.7	17.3	7.1	Flake Fragment
2008	242	142	242.72	142.49	2	18	0.7	15.6	8.4	6.3	Amorphous Debris
2008	242	142	242.03	142.42	4	18	14.3	31.5	26.4	14.4	Amorphous Debris
2008	242	142	242.8	142.67	5	18	10.8	42	30.1	13.6	Broken Flake
2008	242	142	242.65	142.72	6	18	18.6	40.1	39.6	11.8	Amorphous Debris
2008	242	142	242.62	142.93	7	18	1.4	23.6	11.3	6.1	Flake
2008	242	142	242.37	142.99	8	18	3.4	27.3	11.1	7.9	Amorphous Debris
2008	242	142	242.32	142.99	9	18	3.9	27	26.4	7.2	Amorphous Debris
2008	242	142	242.17	142.49	3	18	380.6	92.14	95.02	63.32	Amorphous Debris
2008	242	142	242.67	142.05	1	19	5.3	26.8	20.4	12.2	Amorphous Debris
2008	242	142	242.75	142.36	2	19	30	39.8	31.9	25	Amorphous Debris
2008	242	142	242.15	142.3	3	19	4.6	30.3	22.2	10	Flake Fragment
2008	242	142	242.52	142.63	4	19	3.4	22.7	12.5	9.7	Amorphous Debris
2008	242	142	242.9	142.72	6	19	3.4	27.3	17.5	8.7	Amorphous Debris
2008	242	142	242.66	142.88	7	19	35.6	42.2	28.7	24.7	Amorphous Debris
2008	242	142	242.66	142.99	8	19	6.5	27.8	22.2	11.6	Flake Fragment
2008	242	142	242.47	142.02	1	20	7.6	31.2	21.5	8.5	Amorphous Debris
2008	242	142	242.71	142.08	2	20	50.5	61.7	35.9	25.7	Pebble
2008	242	142	242.49	142.24	3	20	21.3	35.4	31.3	16.1	Amorphous Debris
2008	242	142	242.34	142.31	4	20	0.2	13.8	8.2	3.3	Amorphous Debris
2008	242	142	242.18	142.23	5	20	3.2	20.6	14.6	10.5	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2008	242	142	242.06	142.25	6	20	2.9	25.4	17.4	9.3	Amorphous Debris
2008	242	142	242.26	142.36	7	20	31	55	37.9	23	Amorphous Debris
2008	242	142	242.1	142.4	8	20	46.9	50.2	43.5	23.2	Amorphous Debris
2008	242	142	242.15	142.5	9	20	25.9	51.9	26.8	18.7	Flake
2008	242	142	242.22	142.55	10	20	5	27.3	18.3	11.2	Amorphous Debris
2008	242	142	242.9	142.8	11	20	2.1	17.5	17.7	7.8	Broken Flake
2008	242	142	242.64	142.8	12	20	2.9	22.9	21.2	8	Amorphous Debris
2008	242	142	242.96	142.93	13	20	14.3	35.3	26.5	17.6	Pebble
2008	242	142	242.41	142.32	7	21	4.2	30.6	19	15.2	Amorphous Debris
2008	242	142	242.89	142.65	15	21	20.5	32.2	29.6	14.2	Amorphous Debris
2008	242	142	242.55	142.06	1	21	5	23.7	22	13.2	Amorphous Debris
2008	242	142	242.55	142.06	1	21	5	23.7	22	13.2	Amorphous Debris
2008	242	142	242.51	142.13	3	21	8.6	24.1	22.4	10.7	Amorphous Debris
2008	242	142	242.56	142.17	5	21	4.1	22.9	18	10.9	Amorphous Debris
2008	242	142	242.41	141.32	7	21	4.2	30.6	19	15.2	Amorphous Debris
2008	242	142	242.15	142.45	12	21	0.6	14.7	11.2	2.8	Amorphous Debris
2008	242	142	242.22	142.78	16	21	11.2	27.3	23.1	14.5	Amorphous Debris
2008	242	142	242.04	142.79	17	21	2	21.2	19.8	6.8	Amorphous Debris
2008	242	142	242.04	142.79	17	21	2	21.2	19.8	6.8	Amorphous Debris
2008	242	142	242.15	142.09	4	21	1.9	19.1	16	9.5	Pebble
2008	242	142	242.53	142.09	2	21	15.9	38	32.5	28.1	Amorphous Debris
2008	242	142	242.33	142.34	8	21	35.6	36.3	32.4	23.6	Flake Fragment
2008	242	142	242.33	142.34	8	21	35.6	36.3	32.4	23.6	Amorphous Debris
2008	242	142	242.67	142.59	13	21	3.1	15.4	13.8	15.8	Debris
2008	242	142	242.67	142.59	13	21	3.1	15.4	13.8	15.8	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2008	242	142	242.81	142.43	11	21	2	20.5	14.7	6.3	Amorphous Debris
2008	242	142	242.53	142.09	2	21	15.9	38	32.5	28.1	Amorphous Debris
2008	242	142	242.14	142.25	14	21	1.7	17.2	17	8.3	Debris
2008	242	142	242.14	142.25	10	21	3	25.8	9.9	8.6	Amorphous Debris
2008	242	142	242.68	142.29	6	21	14.4	31.4	25.9	13.1	Amorphous Debris
2008	242	142	242.15	142.09	4	21	1.9	19.1	16	9.5	Pebble
2008	242	142	242.93	142.68	14	21	1.7	17.2	17	8.3	Debris
2008	242	142	242.89	142.65	15	21	20.5	32.2	29.6	14.2	Amorphous Debris
2008	242	142	242.27	142.34	9	21	2.6	20.2	11.6	10.3	Amorphous Debris
2008	242	142	242.22	142.28	16	21	11.2	27.3	23.1	14.5	Amorphous Debris
2008	242	142	242.81	142.93	11	21	2	20.5	14.7	6.3	Amorphous Debris
2008	242	142	242.68	142.29	6	21	14.4	31.4	25.9	13.1	Debris
2008	242	142	242.79	142.69	18	21	0.2	10.8	8.8	2.4	Pebble
2008	242	142	242.91	142.9	28	22	1.5	16.1	15	6.8	Debris
2008	242	142	242.71	142.52	35	22	0.5	12.5	10.3	6.8	Amorphous Debris
2008	242	142	242.25	142.12	9	22	0.4	14.5	7.2	5.2	Pebble
2008	242	142	242.64	142.725	25	22	6.4	40.3	24.9	9.5	Pebble
2008	242	142	242.34	142.97	31	22	0.7	11.2	10.3	10.5	Amorphous Debris
2008	242	142	242.22	142.09	32	22	1	18.9	13.5	7.5	Amorphous Debris
2008	242	142	242.38	142.31	17	22	0.1	12	6.4	2.5	Amorphous Debris
2008	242	142	242.14	142.23	18	22	1.5	21.2	12.4	8	Amorphous Debris
2008	242	142	242.72	142.55	22	22	8.4	29.7	19.9	12.9	Debris
2008	242	142	242.44	142.98	30	22	0.8	19.1	11.1	6	Debris
2008	242	142	242.16	142.055	12	22	3.8	33.4	14.5	11.3	Amorphous Debris
2008	242	142	242.74	142.43	20	22	0.4	13.3	10.1	3.5	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2008	242	142	242.22	142.59	33	22	0.6	18.3	7.9	5.2	Amorphous Debris
2008	242	142	242.24	142.11	34	22	2.3	21.9	15.7	9	Flake Fragment
2008	242	142	242.89	142.78	36	22	2.4	18.7	17.8	7.7	Amorphous Debris
2008	242	142	242.77	142.28	14	22	0.5	13.9	11.5	3.9	Amorphous Debris
2008	242	142	242.57	142.32	16	22	0.6	16.3	14.8	3.7	Flake Fragment
2008	242	142	242.71	142.095	5	22	6.3	26.6	16.5	14.9	Amorphous Debris
2008	242	142	242.78	142.205	4	22	10.2	30.2	19.5	13.6	Amorphous Debris
2008	242	142	242.88	142.22	2	22	4.8	23.1	15	10.4	Pebble
2008	242	142	242.54	142.99	29	22	3.4	20.6	20.5	8.8	Pebble
2008	242	142	242.31	142.08	8	22	0.3	10.4	9.9	2.9	Amorphous Debris
2008	242	142	242.07	142.01	13	22	4.4	30.8	18.8	9.9	Debris
2008	242	142	242.72	142.52	21	22	55.2	53.1	43.9	30.1	Amorphous Debris
2008	242	142	242.14	142.53	23	22	14.9	37.9	27.2	12.6	Amorphous Debris
2008	242	142	242.82	142.72	24	22	1.8	20.7	16.4	10	Amorphous Debris
2008	242	142	242.63	142.81	26	22	5	38.4	15.1	13.2	Broken Flake
2008	242	142	242.22	142.07	10	22	4.4	24.8	16.3	10.6	Amorphous Debris
2008	242	142	242.22	142.05	11	22	2	22.7	15.6	8.2	Amorphous Debris
2008	242	142	242.77	142.32	15	22	33.1	37.9	33.8	28.5	Amorphous Debris
2008	242	142	242.05	142.195	19	22	9.4	27.5	27.2	14.9	Amorphous Debris
2008	242	142	242.78	142.17	3	22	2.5	23.3	18.2	7	Pebble
2008	242	142	242.21	142.69	27	22	11.5	43.8	22.4	11.7	Pebble
2008	242	142	242.89	142.125	1	22	3.7	22.9	16.1	12	Pebble
2008	242	142	242.57	142.1	6	22	1.1	22.7	11.8	6.2	Flake Fragment
2008	242	142	242.3	142.03	7	22	2.3	19.4	17.3	12.3	Debris
2008	242	142	243.48	142.1	5						Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2008	242	140	242.772	140.77	9	25	25.8	52.6	34.7	17.3	Flake Fragment
2008	242	140	242.27	141.26	2	26	527.1	99.81	83.27	67.38	Pebble
2008	242	140	242.23	141.42	5	26	176.9	83.63	67.91	33.9	Debris
2008	242	140	242.32	141.71	7	26	0.4	19.4	5.2	3.5	Flake Fragment
2008	242	140	242.64	141.86	1	28	276.4	133.16	37.28	73.88	Flake Fragment
2008	242	140	242.725	141.26	1	29	219.7	81.49	54.51	43.3	Debris
2008	242	142	243.18	142.61	8	19	9.3	12.8	10.1	9.4	Flake Fragment
2008	244	138	244.45	139.425	2	12	26.3	39.34	28.9	15.06	Debris
2008	244	138	244.63	139.235	3	12	48.8	44.72	35.98	32.43	Amorphous Debris
2008	244	138	244.46	139.655	4	12	5.9	21.72	15.92	17.13	Pebble
2008	244	138	244.585	139.49	5	12		28.19	24.61	9.92	Pebble
2008	244	138	244.53	139.37	6	12	14.7	34.18	22.34	13.17	Pebble
2008	244	138	244.185	139.32	7	12	5.7	24.41	17.97	14.42	Pebble
2008	244	138	244.11	139.245	8	12	3.2	22.54	15.41	6.13	Amorphous Debris
2008	244	138	244.055	139.2	9	12	12.9	26.46	25.95	16.36	Pebble
2008	244	138	244.97	139.42	10	12	9.7	26.29	21.35	12.49	Amorphous Debris
2008	244	138	244.775	139.545	11	12	2.4	19.79	12.75	10.05	Pebble
2008	244	138	244.79	139.5	12	12	2.9	21.96	15.45	13.16	Pebble
2008	244	138	244.59	139.27	13	12	6.8	35.37	26.23	13.92	Pebble
2008	244	138	244.62	139.265	14	12	53.2	45.59	35.35	23.54	Pebble
2008	244	138	244.66	139.26	15	12	4.6	22.36	17.88	9.39	Pebble
2008	244	138	244.53	139.24	16	12	2.9	23.53	21.85	8.23	Amorphous Debris
2008	244	138	244.365	139.095	17	12	1.8	18.4	11.57	8.87	Pebble
2008	244	138	244.605	139.21	18	12	1.3	14.99	11.59	9.17	Pebble
2008	244	138	244.63	139.225	19	12	10.5	27.16	23.67	15.41	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2008	244	138	244.77	139.245	20	12	1.1				Amorphous Debris
2008	244	138	244.77	139.205	21	12	20.4	47.39	39.3	22.34	Amorphous Debris
2008	244	138	244.92	139.185	22	12	2.5	19.87	22.11	7.14	Debris
2008	244	138	244.29	139.035	23	12	20.9	33.57	28.53	17.3	Pebble
2008	244	138	244.64	139.22	24	12	3.4	27.1	18.58	8.03	Amorphous Debris
2008	244	138	244.36	139.1	26	12	0.3	16.27	8.53	3.15	Amorphous Debris
2008	244	138	244.44	139.7	2	13	15.3	35.23	23.19	16.84	Amorphous Debris
2008	244	138	244.56	139.585	3	13	1.8	18.23	14.95	6.64	Amorphous Debris
2008	244	138	244.695	139.44	4	13	5.3	43.45	21.99	5.7	Debris
2008	244	138	244.465	139.34	5	13	23.3	35.67	33.19	12.06	Amorphous Debris
2008	244	138	244.61	139.25	6	13	41.1	59.33	42.21	22.14	Pebble
2008	244	138	244.52	139.21	7	13	24.4	35.96	31.18	27.86	Amorphous Debris
2008	244	138	244.61	139.19	8	13	2.5	24.4	14.95	6.83	Debris
2008	244	138	244.67	139.2	9	13	24.1	39.65	35.32	24.18	Pebble
2008	244	138	244.295	139.12	10	13	38.7	61.83	46.21	19.4	Amorphous Debris
2008	244	138	244.4	139.09	12	13	15.3	32.24	23.94	19.14	Amorphous Debris
2008	244	138	244.62	139.2	13	13	18.1	31.4	31.26	24.29	Pebble
2008	244	138	244.26	139.12	11	13	115.7	65.68	37.51	30.08	Debris
2008	244	138	244.46	139.63	1	14	11.3	50.47	27.84	7.7	Debris
2008	244	138	244.73	139.635	2	14	1.2	18.35	15.74	5.38	Broken Flake
2008	244	138	244.86	139.55	3	14	0.5	17.15	14.04	2.48	Amorphous Debris
2008	244	138	244.73	139.44	4	14	244.1	88.83	67.63	50.94	Pebble
2008	244	138	244.4	139.16	5	14	24.1	35.09	29.66	18.69	Amorphous Debris
2008	244	138	244.375	139.15	6	14	23.3	44.08	29	19.34	Pebble
2008	244	138	244.35	139.14	7	14	73.6	56.79	43.09	28.92	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2008	244	138	244.31	139.12	8	14	3.2	25.22	21.41	9.65	Amorphous Debris
2008	244	138	244.38	139.11	9	14	32.8	39.05	33.6	20.92	Amorphous Debris
2008	244	138	244.34	139.06	10	14	2.3	21.42	19.42	6.53	Not Visible
2008	244	138	244.31	139.03	11	14	118.1	69.39	44.66	47.13	Pebble
2008	244	138	244.29	139.055	12	14	52.4	51.46	39.17	21.33	Pebble
2008	244	138	244.7	139.44	1	15	58.5	56.79	46.02	17.57	Amorphous Debris
2008	244	138	244.545	139.31	2	15	21.3	32.78	27	19.32	Amorphous Debris
2008	244	138	244.495	139.24	3	15	51	77.68	32.91	39.81	Amorphous Debris
2008	244	138	244.42	139.19	4	15	15.5	38.16	26.9	13.89	Debris
2008	244	138	244.125	139.31	5	15	86.8	99.78	54.61	24.44	Flake Fragment
2008	244	138	244.405	139.22	6	15	16.5	30.24	22.62	17.7	Amorphous Debris
2008	244	138	244.22	139.13	7	15	44.6	61.66	37.23	25.95	Debris
2008	244	138	244.5	139.19	8	15	37.5	63.62	30.11	22.08	Debris
2008	244	138	244.365	139.13	9	15	1.8	16.8	16.12	6.2	Debris
2008	244	138	244.535	139.66	10	15	27.2	43.59	34.58	20.15	Pebble
2008	244	138	244.54	139.695	11	15	20.6	37.92	39.38	13.07	Amorphous Debris
2008	244	138	244.665	139.78	12	15	29.2	35.25	29.43	19.2	Pebble
2008	244	138	244.785	139.805	14	15	2	27.47	14.06	6.26	Debris
2008	244	138	244.11	139.63	15	15	13	30.07	24.95	15.66	Debris
2008	244	138	244.83	139.33	16	15	4.9	16.72	19.36	11.05	Flake Fragment
2008	244	138	244.32	139.11	17	15	33.2	34.87	31.99	17.1	Amorphous Debris
2008	244	138	244.17	139.75	18	15	93.1	58.66	34.95	36.06	Pebble
2008	244	138	244.18	139.25	19	15	11	28.72	18.22	15.3	Amorphous Debris
2008	244	138	244.385	139.097	20	15	1.4	23.39	14.52	5.39	Amorphous Debris
2008	244	138	244.15	139.047	21	15	77.7	63.86	41.35	41	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2008	244	138	244.26	139.03	22	15	46.5	56.61	39.74	29.45	Debris
2008	244	138	244.405	139.08	23	15	37.5	61.07	34.74	23.62	Pebble
2008	244	138	244.6	139.38	13	15	14.4	44.7	24.45	12.71	Flake Fragment
2008	244	138	244.355	139.44	1	16	22.8	38.15	24.12	18.19	Pebble
2008	244	138	244.375	139.12	2	16	22.4	26.26	23.97	19.63	Amorphous Debris
2008	244	138	244.145	139.02	3	16	7.8	40.43	25.73	14.67	Flake Fragment
2008	244	138	244.83	139.365	4	16	1.7	17.9	15.15	4.66	Debris
2008	244	138	244.9	139.51	1	17	4.1	26.35	17.55	10.15	Amorphous Debris
2008	244	138	244.97	139.26	2	17	8.3	25.28	18.41	15.12	Amorphous Debris
2008	244	138	244.21	139.64	1	18	0.4	19.82	13.81	16.7	Amorphous Debris
2008	244	138	244.3	139.33	2	18	5.3	33.36	19.17	11.28	Amorphous Debris
2008	244	138	244.37	139.35	3	18	1.4	19.69	7.63	8.24	Pebble
2008	244	138	244.365	139.3	4	18	0.8	15.83	10.13	6.28	Pebble
2008	244	138	244.032	139.255	5	18	3.3	16.62	10.22	13.02	Amorphous Debris
2008	244	138	244.165	139.125	6	18	4.4	27.85	20.32	9.24	Amorphous Debris
2008	244	138	244.2	139.11	7	18	23.8	38.19	33.18	20.88	Pebble
2008	244	138	244.175	139.055	8	18	7.8	31.1	27.49	13.37	Pebble
2008	244	138	244.185	139.41	9	18	12.8	37.2	18.49	13.87	Debris
2008	244	138	244.4	139.325	1	20	0.5	10.15	8.49	3.93	Pebble
2008	244	138	244.3	139.3	2	20	2.5	18.49	14.7	8.04	Pebble
2008	244	138	244.045	139.455	3	20	3.1	20	11.5	12.43	Amorphous Debris
2008	244	138	244.61	139	4	20	1.5	17.46	14.22	8.55	Pebble
2008	244	138	244.35	139.145	5	20	0.1	9.06	7.34	1.09	Amorphous Debris
2008	244	138	244.2025	139.65	6	20	0.5	26.25	9.18	1.86	Broken Flake
2008	244	138	244.02	139.765	1	21	0.7	11.98	8.87	7.5	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2008	244	138	244.145	139.665	2	21	1.2	12.45	12.77	6.71	Amorphous Debris
2008	244	138	244.03	139.625	3	21	0.7	18.53	13.52	4.08	Amorphous Debris
2008	244	138	244.545	139.125	1	22	0.2	11.15	37.2	34.7	Amorphous Debris
2008	244	138	244.05	139.225	2	22	0.8	15.41	11.37	4.72	Amorphous Debris
2008	244	138	244.035	139.56	3	22	0.7	20.21	9.61	4.79	Amorphous Debris
2008	244	138	244.155	139.655	4	22	9.4	30.7	26.26	14.45	Debris
2008	244	138	244.455	139.845	1	24	1.2	12.9	12.77	9.06	Amorphous Debris
2008	244	138	244.585	139.815	1	25	6.7	25.31	20.78	11.53	Amorphous Debris
2008	244	138	244.625	139.725	2	25	0.6	13.61	10.88	7.08	Amorphous Debris
2008	244	138	244.1	139.635	5	25	1.2	17.34	13.05	6.84	Amorphous Debris
2008	244	138	244.58	139.63	3	25	0.4	10.2	8.8	4.3	Debris
2008	244	138	244.32	139.775	1	26	12.1	29.29	19.15	16.66	Amorphous Debris
2008	244	138	244.25	139.24	2	26	33.5	40.86	38.44	32.7	Pebble
2008	244	138	244.245	139.35	3	26	3.3	19.64	13.74	8.56	Amorphous Debris
2008	244	138	244.09	139.655	1	27	2.5	20.24	16.09	8.4	Amorphous Debris
2008	244	138	244.73	139.795	1	28	7.5	27.07	19.47	17.67	Amorphous Debris
2008	244	138	244.46	139.615	1	30	0.4	9.52	7	5.51	Amorphous Debris
2008	244	138	244.49	139.19	2	30	0.3	14.22	8.82	2.24	Amorphous Debris
2008	244	138	244.435	139.735	1	31	15.8	29.88	32.26	12.38	Amorphous Debris
2008	244	138	244.32	139.3	2	31	1.6	19.38	10.24	5.19	Amorphous Debris
2008	244	138	244.01	139.14	3	31	7.5	26.65	26.33	13.85	Flake
2008	244	138	244.01	139.16	4	31	34.5	51.91	41.88	30.28	Pebble
2009	242	138	242.03	139.77	1	1		23.81	11.9	4.37	Debris
2009	242	138	243.53	139.56	6	6	0.1	10.99	4.61	18.8	Amorphous Debris
2009	242	138	243.69	139.68	2	14	17.1	35.1	20.6	19.3	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2009	242	138	243.45	139.78	1	14	23.8	59.8	31.1	23.2	Amorphous Debris
2009	242	138	243.84	139.53	4	14	159	89.7	57.3	37.7	Amorphous Debris
2009	242	138	243.44	139.55	3	14	46.3	54.6	38	24.1	Pebble
2009	242	138	243.23	139.15	3	15	7.4	33	18	12.3	Amorphous Debris
2009	242	138	243.73	139.17	2	15	15.9	45.5	30.3	12.6	Debris
2009	242	138	243.85	1339.43	1	15	499.2	115.7	92.4	79.4	Pebble
2009	242	138	243.85	139.035	4	15	59.5	66.4	49.2	26.7	Pebble
2009	242	138	243.59	139.825	6	16	6	21.8	15.1	5.1	Amorphous Debris
2009	242	138	243.7	139.37	4	16	10.5	31.9	25.2	13.2	Amorphous Debris
2009	242	138	243.03	139.03	5	16	23.6	40.8	36.2	17.6	Amorphous Debris
2009	242	138	243.41	139.775	7	16	385.6	109.1	88.3	54.4	Pebble
2009	242	138	243.75	139.66	2	16	15.5	48.1	39.1	12.4	Amorphous Debris
2009	242	138	243.78	139.64	3	16	14.3	50.6	38.3	13.5	Amorphous Debris
2009	242	138	243.69	139.91	1	16	7	34.3	26	7.9	Debris
2009	242	138	243.72	139.36	1	22	8.4	32.86	26.1	10.1	Flake
2009	242	138	243.14	139.08	2	22	37.5	54.56	42.66	16.7	Debris
2009	242	138	243.08	139.56	22	23	1.8	22.32	8.08	7.76	Amorphous Debris
2009	242	138	243.36	139.59	4	23	8.9	26.74	22.45	13.1	Debris
2009	242	138	243.64	139.78	2	23	1.9	23.84	18.74	57.4	Debris
2009	242	138	243.25	139.87	1	23	4	24.59	20.08	89.6	Amorphous Debris
2009	242	138	243.01	139.16	5	23	38.7	45.19	39.48	19.2	Pebble
2009	242	138	243.11	139.01	6	23	71	42.23	16.24	11.3	Amorphous Debris
2009	242	138	243.64	139.79	2	24	6.3	33.49	21.47	8.87	Debris
2009	242	138	243.11	139.08	3	24	1.8	22.11	11.36	7.89	Flake
2009	242	138	243.91	139.81	1	24	45.3	101.95	49.47	23.4	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2009	242	138	243.42	139.87	4	25	17.2	46.11	22.92	16.2	Debris
2009	242	138	243.38	139.73	3	25	53.4	64.71	44.36	19.8	Amorphous Debris
2009	242	138	243.61	139.77	5	25	3.2	25.7	17.5	8.9	Amorphous Debris
2009	242	138	243.73	139.13	7	25	1.4	24.54	8.89	5.13	Amorphous Debris
2009	242	138	243.3	139.73	2	25	1.5	10.44	13.18	11.8	Amorphous Debris
2009	242	138	243.21	139.79	1	25	6.1	20.3	21.97	9.68	Amorphous Debris
2009	242	138	243.61	139.76	1	26	35.6	33.9	35.1	21.2	Amorphous Debris
2009	242	138	243.86	139.52	2	26	2	14.28	15.82	7.67	Amorphous Debris
2009	242	138	243.58	139.77	2	27	0.3	13.47	8.97	3.21	Flake
2009	242	138	243.6	139.58	3	27	3.1	21.22	12.2	11.9	Amorphous Debris
2009	242	138	243.1	139.6	2	28	0.9	18.9	14.3	3.5	Flake
2009	242	138	243.27	139.375	4	28	1.1	16.3	12.7	5	Amorphous Debris
2009	242	138	243.17	139.5	3	28	11.8	33.1	24.2	12.8	Debris
2009	242	138	243.21	139.27	5	28	2.4	17.9	17.1	7.3	Amorphous Debris
2009	242	138	243.6	139.76	1	28	10.1	31.3	24.7	8.5	Debris
2009	242	138	243.39	139.77	4	29	1.4	24.1	16.8	6	Amorphous Debris
2009	242	138	243.62	139.67	7	29	0.6	16.1	10.6	3.5	Amorphous Debris
2009	242	138	243.42	139.72	5	29	3.6	23.9	12.8	11.5	Amorphous Debris
2009	242	138	243.9	139.31	20	29	0.6	15.7	13.8	5.3	Amorphous Debris
2009	242	138	243.57	139.65	6	29	2.1	21.3	17.6	7.1	Amorphous Debris
2009	242	138	243.26	139.56	10	29	0.7	16.7	12.8	5.3	Pebble
2009	242	138	243.3	139.23	17	29	36.6	49.6	34.7	16.2	Pebble
2009	242	138	243.65	139.74	1	29	134.4	70.2	59.6	32.2	Pebble
2009	242	138	243.33	139.52	11	29	5	22.5	22.1	11.2	Amorphous Debris
2009	242	138	243.2	139.6	9	29	2.3	20.7	10.4	13.1	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2009	242	138	243.96	139.3	16	29	4.3	31.2	19.9	8.6	Amorphous Debris
2009	242	138	243.65	139.67	8	29	0.1	6.6	6	1.2	Amorphous Debris
2009	242	138	243.69	139.56	13	29	0.7	10.4	10.8	4	Amorphous Debris
2009	242	138	243.94	139.14	18	29	0.4	13.1	11.8	2.4	Amorphous Debris
2009	242	138	243.9	139.58	14	29	5.8	29	22.8	11.7	Flake
2009	242	138	243.21	139.91	2	29	2	24	18.1	4.5	Pebble
2009	242	138	243.66	139.53	12	29	1	20.6	12.8	5.6	Amorphous Debris
2009	242	138	243.93	139.38	15	29	2.8	19	18.4	9.1	Amorphous Debris
2009	242	138	243.96	139.17	19	29					Amorphous Debris
2009	242	138	243.11	139.58	21	30	4.7	26.46	20.96	9.2	Debris
2009	242	138	243.46	139.66	4	30	10.1	32.17	29.94	10.7	Amorphous Debris
2009	242	138	243.25	139.84	10	30	0.7	20.08	8.66	3.77	Amorphous Debris
2009	242	138	243.25	139.66	2	30	147.3	89.23	85.18	26	Amorphous Debris
2009	242	138	243.22	139.79	11	30	1.2	20.77	11.63	4.81	Amorphous Debris
2009	242	138	243.18	139.08	27	30	20	33.05	34.27	13.5	Amorphous Debris
2009	242	138	243.78	139.47	17	30	4.6	20.95	16.15	12.1	Amorphous Debris
2009	242	138	243.23	139.11	26	30	13.4	36.27	19.15	15	Amorphous Debris
2009	242	138	243.46	139.63	14	30	8.3	25.35	14.93	18.3	Amorphous Debris
2009	242	138	243.56	139.63	13	30	7	33.47	22	8.68	Amorphous Debris
2009	242	138	243.11	139.71	16	30	4.1	32.31	20.22	9.95	Flake Fragment
2009	242	138	243.75	139.16	23	30	5.8	30.81	19.69	15	Debris
2009	242	138	243.32	139.59	20	30	0.6	12.68	9.42	6.08	Amorphous Debris
2009	242	138	243.28	139.68	15	30	5	29.36	20.87	7.86	Amorphous Debris
2009	242	138	243.93	139.86	6	30	80.9	61.26	44.27	39.3	Pebble
2009	242	138	243.44	139.55	19	30	4.7	27.22	23.29	10.6	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2009	242	138	243.6	139.105	25	30	3.1	31.53	17.1	6.96	Amorphous Debris
2009	242	138	243.76	139.62	12	30	2.4	25.55	13.8	8.24	Amorphous Debris
2009	242	138	243.77	139.75	9	30	2.4	15.81	17.4	7.13	Amorphous Debris
2009	242	138	243.55	139.53	18	30	1.2	23.21	15.04	7.19	Amorphous Debris
2009	242	138	243.99	139.735	5	30	5.1	28.43	24.51	9.79	Debris
2009	242	138	243.39	139.73	3	30	24.1	38.49	48.87	18.8	Amorphous Debris
2009	242	138	243.92	139.8	7	30	7.6	26.39	29.69	8.55	Amorphous Debris
2009	242	138	243.21	139	28	30	19.6	42.92	25.58	20.2	Debris
2009	242	138	243.23	139.56	24	30	1.4	20.36	14.87	6.32	Amorphous Debris
2009	242	138	243.79	139.72	8	30	1.6	21.93	12.35	7.87	Amorphous Debris
2009	242	138	243.41	139.79	1	30	1.5	17.66	13.78	7.86	Pebble
2009	242	138	243.9	139.2	31	31	22.3	50.67	29.74	16.5	Amorphous Debris
2009	242	138	243.54	139.61	14	31	20.6	41.23	32.55	23.2	Amorphous Debris
2009	242	138	243.015	139.47	30	31	7.9	33.29	15.54	15.1	Amorphous Debris
2009	242	138	243.58	139.62	15	31	11.3	38.34	31.16	15.5	Pebble
2009	242	138	243.22	139.12	37	31	0.3	13.41	7.83	30.1	Amorphous Debris
2009	242	138	243.89	139.78	4	31	13.8	26.73	18.16	20.9	Amorphous Debris
2009	242	138	243.79	139.5	20	31	1.5	14.6	16.19	6.18	Amorphous Debris
2009	242	138	243.04	139.93	8	31	0.3	12.69	6.39	4.82	Amorphous Debris
2009	242	138	243.2	139.48	28	31	7.3	35.63	19.69	9.03	Amorphous Debris
2009	242	138	243.1	139.37	29	31	4	21.22	21.85	15.8	Amorphous Debris
2009	242	138	243.7	139.53	18	31	9.6	36.22	22.39	13	Amorphous Debris
2009	242	138	243.95	139.85	3	31	14.5	27.53	25.95	16.5	Debris
2009	242	138	243.3	139.34	26	31	16.9	28.24	34.38	18.3	Amorphous Debris
2009	242	138	243.52	139.33	25	31	2.5	21.52	13.36	8.64	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2009	242	138	243.34	139.72	9	31	21.1	38.07	32.85	17.4	Amorphous Debris
2009	242	138	243.25	139.55	12	31	1.8	21.23	12.95	7.62	Amorphous Debris
2009	242	138	243.15	139.82	7	31	4.4	26.44	22.84	6.76	Flake Fragment
2009	242	138	243.1	139.62	11	31	0.8	15.55	13.26	5.35	Amorphous Debris
2009	242	138	243.3	139.64	10	31	1.1	20.81	12.43	6.91	Amorphous Debris
2009	242	138	243.6	139.03	35	31	7	31.07	22.76	13.3	Flake Fragment
2009	242	138	243.14	139.9	6	31	0.8	19.42	11.19	5.35	Amorphous Debris
2009	242	138	243.85	139.22	39	31	48.2	57.15	46.49	25.3	Amorphous Debris
2009	242	138	243.32	139.01	36	31	22.5	48.75	39.92	16.1	Amorphous Debris
2009	242	138	243.86	139.84	5	31	1	17.71	11.05	6.09	Debris
2009	242	138	243.52	139.49	17	31	82.1	79.51	41.1	22.3	Amorphous Debris
2009	242	138	243.74	139.49	19	31	90.3	69.15	39.29	37.2	Debris
2009	242	138	243.6	139.61	23	31	15.2	41.64	29.96	12.9	Debris
2009	242	138	243.23	139.56	24	31	8.4	33.14	31.78	11.03	Amorphous Debris
2009	242	138	243.92	139.79	38	31	235.5	137.77	72.81	35.4	Debris
2009	242	138	243.68	139.36	21	31	54	51.27	45.16	28.7	Pebble
2009	242	138	243.6	139.38	22	31	47.6	53.51	48.86	32.2	Pebble
2009	242	138	243.25	139.43	27	31	25.6	49.86	29.07	21.2	Pebble
2009	242	138	243.69	139.05	34	31	40.2	53.56	42.3	116	Pebble
2009	242	138	243.61	139.01	40	31	10.9	50.45	34.42	7.16	Flake Fragment
2009	242	138	243.62	139.56	16	31	8.2	40.99	32.66	6.64	Debris
2009	242	138	243.5	139.62	13	31	5.1	26.61	17.65	12.5	Amorphous Debris
2009	242	138	243.57	139.03	41	31	0.8	20.15	10.28	3.26	Amorphous Debris
2009	242	138	243.92	139.04	33	31	0.4	14.62	7.63	4.68	Broken Flake
2009	242	138	243.86	139.18	32	32	12.6	41.05	28.38	13.2	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2009	242	138	243.63	139.14	24						
2009	242	138	243.21	139.82	3						
2009	242	142	243.08	139.56	22	30	4.6	19.95	21.42	12.3	Amorphous Debris
2009	242	142	243.77	142.7	1	24	8.6	27.5	21.9	12.1	Pebble
2009	242	142	243.18	142.06	2	24	4.1	31.1	15.1	10.8	Amorphous Debris
2009	242	142	243.22	142.33	3	25	5	23.7	14.7	16.3	Amorphous Debris
2009	242	142	243.44	142.31	4	25	2.6	38.5	18.3	3.8	Amorphous Debris
2009	242	142	243.58	142.08	2	25	32.8	48.8	39.8	20.4	Amorphous Debris
2009	242	142	243.85	142	1	25	1.6	29.6	11.7	4.8	Broken Flake
2009	242	142	243.57	142.56	5	25	3.1	20.9	19.1	9.8	Debris
2009	242	142	243.675	142.725	6	25	0.4	12.7	10.1	4.3	Broken Flake
2009	242	142	243.39	142.39	7	25	208.5	80.4	54.8	62	Amorphous Debris
2009	242	142	243.445	142.14	2	26	1.6	20.4	14.9	5.3	Amorphous Debris
2009	242	142	243.22	142.62	4	26	1.4	21.8	9.1	7.3	Amorphous Debris
2009	242	142	243.09	142.82	6	26	16.9	40.7	36.1	8.5	Debris
2009	242	142	243.28	142.22	3	26	3.4	28.6	17.6	9.8	Amorphous Debris
2009	242	142	243.37	142.82	5	26	27.3	63.8	40.6	17.9	Amorphous Debris
2009	242	142	243.36	142.15	1	26	10.9	80.5	32.7	13	Debris
2009	242	142	243.33	142.23	2	27	44.6	55.5	46	16.8	Pebble
2009	242	142	243.825	142.43	3	27	0.3	17.9	9.4	4.1	Debris
2009	242	142	243.61	142.15	1	27	53.3	89.6	29.5	28.1	Debris
2009	242	142	243.84	142.87	5	27	2.1	24.1	17.8	6.6	Amorphous Debris
2009	242	142	243.8	142.39	4	27	5.9	39.2	25	8.3	Flake Fragment
2009	242	142	243.51	142.23	6	27					Debris
2009	242	142	243.69	142.1	3	28	3.4	28.59	13.51	8.73	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2009	242	142	243.83	242.34	1	28	382.1	102.53	58.74	53.42	Debris
2009	242	142	243.38	142.34	7	28	30.9	46.68	32.66	15.94	Flake Fragment
2009	242	142	243.17	142.32	5	28	10	42.62	30.75	8.3	Debris
2009	242	142	243.3	142.37	6	28	4.1	22.81	14.76	11.1	Debris
2009	242	142	243.56	142.14	4	28	16.1	48.35	24.62	12.01	Debris
2009	242	142	243.875	142.1	2	28	7.7	41.04	26.33	9.05	Flake Fragment
2009	242	142	243.25	142.125	3	29	51.6	59.32	43.89	24.18	Pebble
2009	242	142	243.85	142.65	5	29	3.6	27.86	13.24	7.57	Amorphous Debris
2009	242	142	243.05	142.89	4	29	4.6	28.99	9.22	12.25	Amorphous Debris
2009	242	142	243.82	242.12	1	29	X	227.47	151.61	57.33	Debris
2009	242	142	243.04	142.27	2	29	0.4	11	9.85	3.15	Amorphous Debris
2009	242	142	243.45	142.92	11	30	71	59.7	37.7	35.3	Amorphous Debris
2009	242	142	243.42	142.07	10	30	73.1	71.4	52.4	20	Amorphous Debris
2009	242	142	243.43	142.68	12	30	39.7	43.3	37	18.9	Amorphous Debris
2009	242	142	243.76	142.76	14	30	7	35.3	12.4	4.9	Amorphous Debris
2009	242	142	243.27	142.655	7	30	3.9	33.2	19	8.7	Amorphous Debris
2009	242	142	243.19	142.69	8	30	3.7	22.7	17.1	13.3	Amorphous Debris
2009	242	142	243.87	142.95	13	30	2.6	20.1	28.6	10.8	Debris
2009	242	142	243.71	142.63	15	30	3	25.9	16	10.9	Debris
2009	242	142	243.09	142.16	18	30	12.5	37.7	23.2	13.2	Debris
2009	242	142	243.05	142.76	6	30	3.3	24.6	17.2	10.7	Debris
2009	242	142	243.64	142.47	17	30	17.8	38.1	32.4	24.6	Amorphous Debris
2009	242	142	243.34	142.8	9	30	1.5	18.5	14.2	7.9	Amorphous Debris
2009	242	142	243.62	142.52	16	30	15.8	43.5	29.8	17.4	Amorphous Debris
2009	242	142	243.01	142.145	1	30	1.7	29.8	16.5	4.6	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2009	242	142	243.32	142.29	3	30	13.5	23.7	20.8	18.8	Amorphous Debris
2009	242	142	243.53	142.37	5	30	13.6	30.2	29.1	15.3	Pebble
2009	242	142	243.49	142.37	4	30	78.1	54.1	43.7	35.4	Debris
2009	242	142	243.4	142.05	2	30	22.8	56.7	30.1	13.8	Pebble
2009	242	142	243.11	142.82	19	30	14	32.8	25.1	23	Amorphous Debris
2009	242	142	243.72	142.69	14	31	18.7	28.5	27.3	20.6	Amorphous Debris
2009	242	142	243.34	142.81	16	31	33.2	56.8	28.1	18.2	Pebble
2009	242	142	243.47	142.915	11	31	3.4	31.3	10.6	9.7	Debris
2009	242	142	243.46	142.98	12	31	14.7	55.8	22.2	10.3	Debris
2009	242	142	243.79	142.08	1	31	32	46.9	42.6	18.2	Debris
2009	242	142	243.5	142.87	10	31	25	54.3	33.3	24.6	Pebble
2009	242	142	243.54	142.75	15	31	37.3	46.9	41.3	19.5	Amorphous Debris
2009	242	142	243.71	142.44	13	31	1.7	22.5	13.3	9.7	Amorphous Debris
2009	242	142	243.83	142.67	16	31	3.7	26.9	18	9.9	Amorphous Debris
2009	242	142	243.13	142.66	7	31	5.7	26.1	25.7	7.6	Amorphous Debris
2009	242	142	243.27	142.85	8	31	46.3	66.2	44.5	24.3	Amorphous Debris
2009	242	142	243.05	142.09	2	31	18.3	35.3	29.6	17.8	Amorphous Debris
2009	242	142	243.12	142.32	5	31	18.4	32.7	31.7	17.5	Amorphous Debris
2009	242	142	243.295	142.12	4	31	4.2	34.8	21.2	13.3	Amorphous Debris
2009	242	142	243.08	142.395	6	31	3.1	25.7	17.8	7.9	Amorphous Debris
2009	242	142	243.22	142.1	3	31	55	49.8	32.4	26.1	Amorphous Debris
2009	242	142	243.38	142.89	9	31	53.3	45.5	35.7	22.9	Pebble
2009	242	142	243.06	142.75	25	32	7.6	27.6	26.1	11.9	Debris
2009	242	142	243.33	142.18	4	32	70.7	50.1	36.4	12.7	Pebble
2009	242	142	243.15	142.15	3	32	12	42.5	25.2	16.4	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2009	242	142	243.32	142.54	13	32	17.4	46.7	32.4	16.3	Amorphous Debris
2009	242	142	243.06	142.96	18	32	54.4	49.9	44.8	27.6	Debris
2009	242	142	243.49	142.56	15	32	31.6	52.5	31.6	21.8	Pebble
2009	242	142	243.03	142.48	16	32	37.8	47.9	45.3	28.2	Pebble
2009	242	142	243.71	142.69	21	32	23.2	54.2	35.7	19.4	Pebble
2009	242	142	243.09	142.035	1	32	51.8	65.6	51.7	12.7	Amorphous Debris
2009	242	142	243.21	142.5	12	32	3.1	18.7	15	11.5	Amorphous Debris
2009	242	142	243.64	142.945	22	32	0.3	17	8.4	3	Flake Fragment
2009	242	142	243.19	142.71	24	32	0.1	15.6	4.9	2.8	Debris
2009	242	142	243.51	142.1	2	32	48	81.4	53.4	19.4	Debris
2009	242	142	243.63	142.89	23	32	107.7	78.3	53.1	34.5	Pebble
2009	242	142	243.29	142.34	8	32	12.5	44	25.1	12.5	Amorphous Debris
2009	242	142	243.32	142.27	7	32	33	54.4	31.5	25.1	Pebble
2009	242	142	243.09	142.38	9	32	13.4	29.7	24.8	22	Amorphous Debris
2009	242	142	243.255	142.48	11	32	10.8	33.9	21.2	18.3	Amorphous Debris
2009	242	142	243.39	142.19	10	32	158.5	70.5	61.5	40.6	Pebble
2009	242	142	243.21	142.79	17	32	86.6	60.6	37.4	28.5	Amorphous Debris
2009	242	142	243.27	142.28	6	32	59.5	41.1	34	28.8	Amorphous Debris
2009	242	142	243.33	142.225	5	32	13	27.9	19.6	18.1	Amorphous Debris
2009	242	142	243.36	142.575	14	32	12.1	28.6	23.1	17.6	Amorphous Debris
2009	242	142	243.16	142.92	19	32	55.5	45.7	37.2	25.7	Amorphous Debris
2009	242	142	243.49	142.79	20	32	25.7	35	28.7	23.5	Pebble
2009	242	142	243.42	142.95	28	33	5.8	28.1	22.8	8.2	Amorphous Debris
2009	242	142	243.16	142.93	40	33	15.4	37	23	15.9	Amorphous Debris
2009	242	142	243.06	142.36	8	33	13	37.6	28.3	12.9	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2009	242	142	243.03	142.455	10	33	1.7	20.2	15.1	7.8	Debris
2009	242	142	243.12	142.88	26	33	11.4	45.1	24	14.5	Debris
2009	242	142	243.13	142.96	27	33	3.2	27.6	11.9	10.8	Amorphous Debris
2009	242	142	243.35	142.75	34	33	11.4	29.2	22.1	17.8	Amorphous Debris
2009	242	142	243.05	142.43	7	33	9.9	24.9	17.3	18.8	Amorphous Debris
2009	242	142	243.1	142.33	6	33	26.4	32.1	29.2	21.4	Amorphous Debris
2009	242	142	243.38	142.65	31	33	16	33.8	23.7	15.8	Amorphous Debris
2009	242	142	243.01	142.92	25	33	10.6	26.7	17.6	15.3	Amorphous Debris
2009	242	142	243.13	142.75	35	33	12.7	27.1	24.3	12	Amorphous Debris
2009	242	142	243.18	142.73	29	33	11	25.8	22	15.3	Amorphous Debris
2009	242	142	243.24	142.27	12	33	42.6	33.4	31.6	29.7	Pebble
2009	242	142	243.17	142.185	1	33	3.6	26.8	18.9	8.6	Amorphous Debris
2009	242	142	243.44	142.44	18	33	5.2	31.1	17	9.5	Pebble
2009	242	142	243.07	142.9	38	33	15.6	36.2	24.9	20.6	Pebble
2009	242	142	243.285	142.38	14	33	14	33.6	27	19.4	Amorphous Debris
2009	242	142	243.6	142.48	19	33	27.8	48.3	40.4	17.1	Debris
2009	242	142	243.17	142.64	22	33	1.3	20.8	16.6	5	Flake Fragment
2009	242	142	243.02	142.6	17	33	62.7	54.3	43.8	30.6	Pebble
2009	242	142	243.14	142.64	21	33	103.8	62.2	40.7	38.7	Pebble
2009	242	142	243.06	142.8	24	33	60.1	51.7	40.9	39.8	Pebble
2009	242	142	243.28	142.71	33	33	7.2	39	19.1	14.5	Amorphous Debris
2009	242	142	243.65	142.52	20	33	108.6	62.4	46	37	Amorphous Debris
2009	242	142	243.22	142.33	15	33	1.5	16.3	15.2	6.6	Amorphous Debris
2009	242	142	243.36	142.175	2	33	1.3	21.1	14.8	8.6	Amorphous Debris
2009	242	142	243.52	142.17	3	33	18.4	54.4	34.6	16.7	Flake Fragment

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2009	242	142	243.035	142.32	5	33	2.3	25	15.1	7.5	Amorphous Debris
2009	242	142	243.22	142.71	30	33	1.7	18.4	12.1	7.7	Amorphous Debris
2009	242	142	243.27	142.68	32	33	0.6	16.3	11.2	5.8	Amorphous Debris
2009	242	142	243.02	142.74	36	33	29	49.6	36.7	17.4	Amorphous Debris
2009	242	142	243.21	142.39	13	33	8.2	39.6	21.1	14.7	Amorphous Debris
2009	242	142	243.22	142.28	11	33	17.4	52.1	42.3	8.1	Debris
2009	242	142	243.1	142,35	16	33	8.8	31.1	14.7	13.4	Amorphous Debris
2009	242	142	243.1	142.74	23	33	10.4	44.2	20.4	14.2	Pebble
2009	242	142	243.03	142.27	4	33	5.9	28.9	25.8	11.1	Amorphous Debris
2009	242	142	243.82	142.625	12	34	6.6	25.7	17.5	15.7	Pebble
2009	242	142	243.59	142.235	4	34	0.5	19.2	12.4	7.4	Amorphous Debris
2009	242	142	243.54	142.52	9	34	17.5	35.9	28.6	24.9	Pebble
2009	242	142	243.79	142.92	13	34	16.3	37.8	29.2	22.7	Pebble
2009	242	142	243.3	142.08	2	34	119	87.2	62.9	36.9	Pebble
2009	242	142	243.41	142.145	3	34	0.8	12.5	12.1	7.2	Amorphous Debris
2009	242	142	243.3	142.5	7	34	3.9	26.1	20.4	9.1	Amorphous Debris
2009	242	142	243.54	142.44	8	34	17.5	47.7	30.8	18.1	Pebble
2009	242	142	243.52	142.59	10	34	7.2	28.8	27.2	14	Chert Amorphous Debris
2009	242	142	243.462	142.71	11	34	1.2	19.9	15.5	8.6	Amorphous Debris
2009	242	142	243.21	142.1	1	34	118.2	79.8	45.5	42.3	Pebble
2009	242	142	243.05	142.57	5	34	41.1	51.7	41.1	26.5	Amorphous Debris
2009	242	142	243.01	142.49	6	34	14.2	35.8	24.2	14.8	Amorphous Debris
2009	242	142	243.64	142.31	12	35	40.7	72	40.5	20	Pebble
2009	242	142	243.29	142.165	2	35	8	28.7	20.9	19.4	Amorphous Debris
2009	242	142	243.155	142.22	6	35	17.4	37.4	35	19.8	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2009	242	142	243.67	142.32	13	35	1.3	19.5	19.9	4.8	Debris
2009	242	142	243.62	142.46	16	35	11.8	39.5	38	13.2	Amorphous Debris
2009	242	142	243.69	142.455	17	35	2.1	15	14.7	10.5	Amorphous Debris
2009	242	142	243.275	142.17	1	35	8.5	27.6	20.1	18.3	Debris
2009	242	142	243.55	142.36	10	35	2.6	19..9	17.5	9.5	Amorphous Debris
2009	242	142	243.73	142.3	14	35	1.8	25.2	13.1	5.4	Amorphous Debris
2009	242	142	243.825	142.34	15	35	7.2	28.6	21.2	14.4	Pebble
2009	242	142	243.34	142.12	3	35	12.7	47.1	29	15.4	Amorphous Debris
2009	242	142	243.75	142.06	7	35	4.7	25.5	18.7	8	Debris
2009	242	142	243.59	142.275	9	35	13.9	38.8	28.7	14.2	Amorphous Debris
2009	242	142	243.56	142.4	11	35	1.4	10.7	13.8	4.9	Amorphous Debris
2009	242	142	243.41	142.16	5	35	35.4	59.5	33.2	29.8	Pebble
2009	242	142	243.37	142.1	4	35	3.1	22.4	15.6	10.4	Pebble
2009	242	142	243.43	142.095	8	35	1	18.8	13.2	3.6	Debris
2009	242	142	243.02	142.92	37	37					Pebble
2009	242	142	243.11	142.88	39	39					Amorphous Debris
2009	242	142	242.54	142.42	10	23	13.6	43	25.5	12.6	Amorphous Debris
2009	242	142	242.92	142.52	7	23	11.1	26.3	32.6	16.2	Amorphous Debris
2009	242	142	242.12	142.24	5	23	3	27.1	19.7	6.3	Amorphous Debris
2009	242	142	242.64	142.41	6	23	3	25.3	16	9.6	Amorphous Debris
2009	242	142	242.105	142.17	4	23	3.1	21.3	20.7	11.5	Amorphous Debris
2009	242	142	242.33	142.86	12	23	21.5	46.3	43.8	16.3	Amorphous Debris
2009	242	142	242.07	142.74	14	23	215.7	117.2	74.7	24.1	Amorphous Debris
2009	242	142	242.1	142.075	3	23	1.5	19.3	15.5	8.9	Debris
2009	242	142	242.55	142.49	8	23	1	19.1	11.8	4.9	Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2009	242	142	242.39	142.52	9	23	3.6	26	16.5	8.8	Flake
2009	242	142	242.49	142.65	11	23	19.7	36.3	27.2	21.3	Amorphous Debris
2009	242	142	242.38	142.35	13	23	5.6	24.9	21.8	11.9	Amorphous Debris
2009	242	142	242.35	142.12	2	23	0.2	11.4	7.1	7.8	Amorphous Debris
2009	242	142	242.88	142.13	1	23	7.8	30.8	21.2	10.9	Amorphous Debris
2009	242	142	242.85	142.11	2	24	28.3	39.6	27	19.1	Amorphous Debris
2009	242	142	242.39	142.11	4	24	1.2	24.5	10.2	6.2	Debris
2009	242	142	242.32	142.04	5	24	1	17.2	11.2	4.2	Debris
2009	242	142	242.23	142.05	6	24	1.5	18.5	16.5	5.1	Broken Flake
2009	242	142	242.62	142.95	9	24	77.6	65.1	59.6	25.6	Pebble
2009	242	142	242.47	142.43	10	24	4.5	25.4	16.7	13.3	Debris
2009	242	142	242.34	142.62	15	24	36.5	38	31.5	23.4	Amorphous Debris
2009	242	142	242.74	142.86	18	24	4.8	29.2	17.1	9.5	Amorphous Debris
2009	242	142	242.86	142.15	3	24	4.3	22.4	18.8	7.1	Amorphous Debris
2009	242	142	242.56	142.29	8	24	4.9	27.9	18.4	15.2	Amorphous Debris
2009	242	142	242.26	142.5	11	24	2.8	28.3	19.3	5.5	Amorphous Debris
2009	242	142	242.11	142.54	16	24	6.8	29.6	22	12.2	Pebble
2009	242	142	242.87	142	1	24	2.5	23.8	13.6	6.6	Debris
2009	242	142	242.77	142.36	7	24	2.1	18.9	14.7	8.7	Debris
2009	242	142	242.9	142.57	12	24	36.7	59.7	29.4	24	Pebble
2009	242	142	242.58	142.31	14	24	5	27.1	22.3	8	Debris
2009	242	142	242.85	142.72	17	24	0.8	16.2	6.2	5.2	Amorphous Debris
2009	242	142	242.29	142.99	19	24	1.7	21.8	12	6.4	Amorphous Debris
2009	242	142	242.79	142.01	3	25	2.7	21.4	15.7	4.8	Broken Flake
2009	242	142	242.77	142.02	5	25	28.1	31.3	28.7	21.5	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2009	242	142	242.7	142.01	6	25	18	35.4	25.2	13.6	Amorphous Debris
2009	242	142	242.2	142.41	19	25	15.8	26.9	22.5	17.5	Amorphous Debris
2009	242	142	242.86	142.58	24	25	36.2	33.5	28.3	28.1	Amorphous Debris
2009	242	142	242.85	142.23	8	25	39.4	47.5	30.3	25.4	Amorphous Debris
2009	242	142	242.71	142.61	26	25	8.3	26	20.3	11.7	Amorphous Debris
2009	242	142	242.69	142.8	32	25	55.4	51	28.8	26.6	Amorphous Debris
2009	242	142	242.7	142.01	6	25					Amorphous Debris
2009	242	142	242.63	142.65		25					Amorphous Debris
2009	242	142	242.28	142.38	17	25	1.7	22.9	14.9	8.4	Debris
2009	242	142	242.58	142.19	10	25	0.7	23.5	14.2	3	Amorphous Debris
2009	242	142	242.23	142.26	13	25	0.5	17.8	9.8	3.9	Amorphous Debris
2009	242	142	242.85	142.75	30	25	31.3	43.5	37.9	17.6	Debris
2009	242	142	242.86	142.78	31	25	4.4	19.4	20.7	11.1	Broken Flake
2009	242	142	242.59	142.34	14	25	3.4	24.2	15.9	11	Debris
2009	242	142	242.4	142.75	34	25	2.6	26.6	16.4	9.9	Debris
2009	242	142	242.04	142.97	36	25	4.5	22.4	23.9	14.4	Debris
2009	242	142	242.88	142.55	23	25	41.4	58.3	40.8	23.9	Amorphous Debris
2009	242	142	242.65	142.59	27	25	36.9	51.2	36.6	21.5	Amorphous Debris
2009	242	142	242.63	142.59	25	25	3.1	27.5	16.3	15.6	Flake Fragment
2009	242	142	242.23	142.51	22	25	24.8	44.3	36.3	28.6	Pebble
2009	242	142	242.41	142.31	16	25	3	14.5	14.1	11	Amorphous Debris
2009	242	142	242.45	142.53	21	25	3.9	20.5	14.5	10.5	Amorphous Debris
2009	242	142	242.66	142.87		25					Amorphous Debris
2009	242	142	242.79	142.06	4	25	1.5	22	18.5	6.4	Amorphous Debris
2009	242	142	242.64	142.14	9	25	7.4	33.3	22.8	16.4	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2009	242	142	242.18	142.2	11	25	28.3	52.1	37.7	16.5	Debris
2009	242	142	242.54	142.07	7	25	14.8	30.7	26.7	18.1	Amorphous Debris
2009	242	142	242.09	142.7	33	25	1	18.8	10.5	6.2	Amorphous Debris
2009	242	142	242.78	142.01	2	25	7.4	31.6	25.8	10.7	Debris
2009	242	142	242.48	142.37	15	25	24.8	54	34.2	12.9	Flake Fragment
2009	242	142	242.87	142.05	1	25	20.9	36.6	28.9	18.5	Amorphous Debris
2009	242	142	242.54	142.51	20	25	13.3	35.9	31.5	12	Amorphous Debris
2009	242	142	242.35	142.14	12	25	3.5	24	16.2	2.1	Amorphous Debris
2009	242	142	242.77	142.43	18	25	7.6	23.9	20.8	12.2	Amorphous Debris
2009	242	142	242.59	142.6	29	25	36	63.2	36.5	15.4	Amorphous Debris
2009	242	142	242.49	142.23	3	26	12.3	36.1	26	15.7	Flake Fragment
2009	242	142	242.5	142.52	5	26	27	60.7	31.3	22	Pebble
2009	242	142	242.57	142.39	4	26	3.1	30.8	19	7.1	Flake Fragment
2009	242	142	242.69	142.51	7	26	55.5	43.6	46.5	19.9	Amorphous Debris
2009	242	142	242.62	142.72	11	26	14.3	41.7	21.4	16.6	Debris
2009	242	142	242.49	142.11	2	26	1.3	17.4	15.6	5.3	Debris
2009	242	142	242.3	142.67	6	26	1	17.5	16.4	4.6	Debris
2009	242	142	242.56	142.72	12	26	2.9	23.3	24	6.3	Debris
2009	242	142	242.7	142.8	14	26	10.1	34.7	33.1	9	Amorphous Debris
2009	242	142	242.83	142.91	17	26	12.3	41.6	25.7	10.5	Flake
2009	242	142	242.82	142.2	1	26	32.2	58.9	32.7	19	Debris
2009	242	142	242.84	142.71	9	26	24	40	32.6	17.6	Amorphous Debris
2009	242	142	242.67	142.76	10	26	15.4	32.4	31.5	22.3	Debris
2009	242	142	242.68	142.81	13	26	12.3	49.5	22.2	10.9	Amorphous Debris
2009	242	142	242.79	142.83	15	26	37.8	54.8	27.9	18.1	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2009	242	142	242.85	142.81	16	26	25.8	45.6	24.9	21.4	Flake Fragment
2009	242	142	242.72	142.62	8	26	41.1	51.9	40.5	22.9	Amorphous Debris
2009	242	142	242.53	142.65	2	27	70.4	62.3	44.8	35.4	Amorphous Debris
2009	242	142	242.77	142.07	4	27	2	21.5	13.1	6.4	Flake
2009	242	142	242.68	142.8	1	27	1.7	18.5	15.8	4.9	Broken Flake
2009	242	142	242.56	142.81	3	27	0.9	18.9	9.6	5.7	Amorphous Debris
2009	242	142	242.85	143.36	2	29	3.2	32.41	15.81	7.1	Debris
2009	242	142	242.86	142.8	4	29	1.9	20.98	15.2	5.24	Debris
2009	242	142	243.01	142.45	9						
2009			242.65	142.67							Flake Fragment
2009	246	138	246.54	138.86	1	10	2.3	30.6	20.8	3.8	Flake
2009	246	138	246.91	138.99	1	11	0.2	19.1	3.9	2.3	Pebble
2009	246	138	246.58	138.68	1	11	0.2	19.1	3.9	2.3	Debris
2009	246	138	246.4	138.7	2	11	0.1	13.7	5.9	0.2	Flake Fragment
2009	246	138	246.39	138.87	1	12	37.5	45.3	32.9	18.3	Amorphous Debris
2009	246	138	246.7	138.92	1	12	0.8	22.6	12.4	4	Flake Fragment
2009	246	138	246.37	138.82	2	12	17.2	40.4	30	16.4	Flake Fragment
2009	246	138	246.4	138.55	2	12	1.5	32.3	15.2	3.5	Flake
2009	246	138	246.42	138.5	3	12	93.7	58	52.8	40.9	Pebble
2009	246	138	246.39	138.34	3	12	1.6	31	22	4.3	Flake
2009	246	138	246.95	138.9	4	12	102.3	79.4	44.3	33.6	Pebble
2009	246	138	246.39	138.1	4	12	106.3	83	75.8	27.8	Amorphous Debris
2009	246	138	246.71	138.16	5	12	272.7	85.6	71.6	61.5	Pebble
2009	246	138	246.94	138.1	6	12	114.2	66.5	40.5	34	Debris
2009	246	138	246.82	138.36	7	12	286	114.4	64.9	39.1	Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2009	246	138	246.96	138.77	1	13	4.8	35.3	22.6	9	Amorphous Debris
2009	246	138	246.97	139.05	1	13	66.5	71.7	49.9	30.2	Flake Fragment
2009	246	138	246.34	138.55	1	13	1.3	21.56	21.31	55.6	Flake
2009	246	138	246.47	139.53	1	**14**	82.2	60.7	48.9	31.1	Pebble
2009	246	138	246.54	139.53	2	14	188.3	81.2	67.2	50.9	Pebble
2009	246	138	246.26	139.13	1	15	x	x	120.6	99.6	Debris
2009	246	138	246.7	138.28	1	15	26.8	54.1	36.9	19.1	Debris
2009	246	138	246.6	139.38	2	15	x	x	141.7	88.8	Pebble
2009	246	138	246.9	138.76	2	15	45.8	50.5	39.3	20.3	Amorphous Debris
2009	246	138	246.67	139.62	1	16	185.9	100.9	81	40.3	Pebble
2009	246	138	246.97	139.36	2	16	80.4	62.2	45.8	32.8	Pebble
2009	246	138	246.92	139.55	1	17	456.9	101.9	84.8	60.2	Pebble
2009	246	138	246.45	138.83	1	17	2.1	26.5	17.5	9.3	Flake
2009	246	138	246.83	139.36	2	17	6.7	32.6	14.8	15.8	Debris
2009	246	138	246.37	138.47	2	17	1.1	22.5	13.8	5.4	Flake
2009	246	138	246.83	139.36	1	18	581.1	57.1	46.1	30.9	Pebble
2009	246	138	246.79	139.1	2	18	359.5	134.9	107.3	40.2	Pebble
2009	246	138	246.13	139.88	1	19	x	133.33	112.6	83.4	Pebble
2009	246	138	247	139.86	1	20	117.8	73.1	63.7	45.4	Pebble
2009	246	138	246.16	138.52	1	20	1.2	21.1	14.6	3.9	Flake
2009	246	138	246.89	138.14	1	21	3	22.8	21.9	9.5	Flake Fragment
2009	246	140	247.55	141.66	1	23	x	170.8	144.8	65.8	Amorphous Debris
2009	246	140	247.65	141.5	2	23	475.6	139.8	86.7	52.4	Debris
2009	246	140	247.67	141.76	3	23	4.9	46	17.4	9.6	Amorphous Debris
2009	246	140	247.36	141.1	4	23	8.6	44.8	20.7	18.2	Flake Fragment

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2009	246	140	247.9	141.65	5	23	46.7	**84.5**	**55.5**	**33.5**	**Amorphous Debris**
2009	246	140	247.95	141.63	6	23	x	132	86.1	90.6	Debris
2009	246	140	247.96	141.76	7	23	68.9	83.3	43.1	32.8	Amorphous Debris
2009	246	140	247.98	141.74	8	23	46.1	51.5	47.1	20.5	Pebble
2009	246	140	247.55	140.4	1	23	x	300.3	158.6	72.5	Amorphous Debris
2009	246	140	247.12	140.58	2	23	29				Debris
2009	246	140	247.12	140.76	3	23	58.8				Pebble
2009	246	140	247.52	140.99	4	23	511.3				Debris
2009	246	140	247.9	140.68	5	23	13.2	30.5	21.7	14.3	Pebble
2009	246	140	247.74	141.98	1	24					Amorphous Debris
2009	246	140	247.88	141.8	2	24					Amorphous Debris
2009	246	140	247.61	141.79	3	24					Amorphous Debris
2009	246	140	247.37	141.81	4	24					Amorphous Debris
2009	246	140	247.22	141.69	5	24					Debris
2009	246	140	247.17	141.08	6	24					Amorphous Debris
2009	246	140	246.68	141.24	1	24	6.8				Amorphous Debris
2009	246	140	246.8	141.05	2	24	442				Pebble
2009	246	140	246.63	141.16	3	24	15.6				Amorphous Debris
2009	246	140	246.42	141.31	4	24	4.7				Broken Flake
2009	246	140	246.24	141.64	5	24	4.5				Amorphous Debris
2009	246	140	246.33	141.61	6	24	5.6				Amorphous Debris
2009	246	140	246.36	141.61	7	24	128.6				Amorphous Debris
2009	246	140	247.27	141.77	1	25	469.6	102	76.8	79.2	Debris
2009	246	140	246.7	140.77	1	25	5				Amorphous Debris
2009	246	140	245.43	140.97	2	25	5				Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2009	246	140	246.3	142.6	3	25	15				Amorphous Debris
2009	246	140	246.42	140.64	1	26	10				Amorphous Debris
2009	246	140	246.56	141.34	1	F107	33.8	47.7	36.5	22.4	Pebble
2009	246	140	246.79	141.46	2	F107	0.2	13.8	8.4	1.6	Amorphous Debris
2009	246	140	246.65	141.645	3	F107	3.7	25.2	14.3	14.9	Pebble
2009	246	140	246.58	141.68	4	F107	7.8	39	25.1	11.1	Pebble
2009	246	140	246.38	141.52	5	F107					Pebble
2009	246	140	246.27	141.64	6	F107	41.5	46.2	35.3	23	Pebble
2009	246	140	246.3	141.56	7	F107	482.7	94.7	105.1	90.4	Pebble
2009	246	140	246.53	141.745	8	F107	7.4	25.3	29.3	11.7	Pebble
2009	246	140	246.92	141.505	9	F107	428.9	109.4	97.4	59	Pebble
2009	246	140	246.455	141.4	10	F107	108.8	56.2	51.2	38.1	Pebble
2009	246	140	246.625	141.48	11	F107	x	154.5	121.8	78.9	Pebble
2009	246	140	246.33	141.31	1	F94					Amorphous Debris
2009	246	140	246.31	141.41	2	F94		118.49	92.6	43.1	Flake
2009	246	140	246.27	141.24	3	F94		82.7	68.8	61.5	Amorphous Debris
2009	246	140	246.92	141.06	4	F94	485.4	139	79.7	71.1	Amorphous Debris
2009	246	140	246.66	141.43	5	F94	x	223	132	102.6	Amorphous Debris
2009	246	140	246.2	141.3	6	F94		190	118.6	68.1	Pebble
2009	246	140	246.2	141.45	7	F94		104.8	75.7	61.5	Amorphous Debris
2009	246	140	244.406	141.31	8	F94		29.4	30.6	9.1	Debris
2009	246	140	246.56	141.1	9	F94		61.5	51.6	16.5	Debris
2009	246	140	246.45	141.45	10	F94					Amorphous Debris
2009	246	140	246.2	141.57	11	F94	x	158.2	117.5	58.3	Amorphous Debris
2009	246	140	246.48	141.18	12	F94	x	162	132	100.2	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2009	246	140	246.405	141.14	13	F94		106.7	75.8	35	Amorphous Debris
2009	246	140	246.48	141.3	14	F94	472	130.1	68.1	78.6	Amorphous Debris
2009	246	140	246.295	141.29	15	F94		33.1	17.4	10	Amorphous Debris
2009	246	140	246.445	141.245	16	F94		41.2	20.1	9.6	Flake Fragment
2009	246	140	246.4	141.3	17	F94		58.8	65.7	37.5	Amorphous Debris
2009	246	140	246.33	141.33	18	F94		22.5	15.9	7	Pebble
2009	246	140	246.58	141.235	19	F94		65.2	54	17.8	Broken Flake
2009	246	140	246.65	141.305	20	F94		77.9	78.6	61.2	Pebble
2009	246	140	246.68	141.27	21	F94		81.3	85	44.8	Pebble
2009	246	140	246.xx	140.xx							Debris
2009	246	142	246.2	142.97	1	27	0.4	13.28	10.09	2.25	Flake
2009	246	142	246.55	142.91	2	27	0.3	11.59	14.04	3.41	Flake
2009	248	140	248.16	141.35	1	3	x	37.8			Pebble
2009	248	140	248.56	140.8	1	20	32	63.9	32.43	17.76	Debris
2009	248	140	248.73	140.88	1	21	267	43.5	33.5	15.3	Amorphous Debris
2009	248	140	248.3	140.82	2	21	X	180.1	101.8	81.2	Pebble
2009	248	140	248.55	140.26	3	21	492	97.7	86.7	58.4	Pebble
2009	248	140	248.35	140.24	4	21	186.6	122.4	81.6	22.5	Flake
2009	248	140	248.27	140.78	5	21	29.6	35.3	25.3	20	Pebble
2009	248	140	248.34	140.64	6	21	47.9	50.8	43.6	25.1	Pebble
2009	248	140	248.93	140.8	7	21	31.4	51.1	29.5	23.5	Amorphous Debris
2009	248	140	248.17	140.34	8	21	23.8	48.7	28.9	22.1	Pebble
2009	248	140	248.18	141.13	1	22	137.3	99.2	55.6	35.4	Amorphous Debris
2009	248	140	248.45	141.01	2	22	122.8	90.9	50.8	37.4	Amorphous Debris
2009	248	140	248.27	141.7	2	22	x				Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2009	248	140	248.62	141.02	3	22	510.8	101.1	132.3	96.2	Debris
2009	248	140	248.87	141.01	4	22	517.2	122.9	123.5	101	Debris
2009	248	140	248.38	141.75	5	22	32.7	50.2	33.01	24.13	Pebble
2009	248	140	248.71	141.59	5	22	180.2	82.1	69.1	51.5	Pebble
2009	248	140	248.44	141.59	6	22	65.8	67.3	45.23	34.11	Flake
2009	248	140	248.88	141.6	6	22	89.2	67.6	47.1	31.4	Amorphous Debris
2009	248	140	248.44	141.77	7	22	22.5	48.15	37.53	16.65	Pebble
2009	248	140	248.12	141.68	8	22	38.2	47.78	41.17	14.88	Pebble
2009	248	140	248.1	141.74	9	22	24.7	55.52	38.66	20.6	Amorphous Debris
2009	248	140	248.17	141.99	10	22	470.3	101.7	92.25	56.15	Debris
2009	248	140	248.57	141.6	12	22	37	59.68	32.02	22.81	Pebble
2009	248	140	248.07	140.78	1	22	94.6	70.9	55.1	25.4	Flake
2009	248	140	248.55	140.09	1	22	211	112.6	72.9	40.1	Amorphous Debris
2009	248	140	248.82	140.06	2	22	503.9	156.7	69.3	73.2	Pebble
2009	248	140	248.89	140.22	3	22	488.5	91.5	75.6	66.3	Debris
2009	248	140	248.01	141.86	1	23	57.6	43.9	35.6	24.8	Amorphous Debris
2009	248	140	248.05	140.47	1	23	218.2	103.8	50.1	39.5	Amorphous Debris
2009	248	140	248.49	140.84	2	23	497.7	141.2	71	71.1	Pebble
2009	248	140	248.81	140.84	3	23	507	144.4	85.7	60.5	Debris
2009	248	140	248.6	141.38	1	24	48.8	55.51	38.23	39.21	Pebble
2009	248	140	248.98	141.41	2	24	3.5	42	20.4	4.9	Debris
2009	248	140	248.57	140.92	1	24	24.4	49.04	30.56	24.26	Amorphous Debris
2009	248	140	248.3	140.24	2	24	53.2	61.09	43.99	25.47	Debris
2009	248	140	248.77	140.89	3	24	x	92.3	109.56	76.23	Pebble
2009	248	140	248.58	140.63	4	24	465.9	116.66	77.08	70.76	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2009	248	140	248.91	140.28	5	24	158	80	64.8	47	Pebble
2009	248	140	248.12	140.57	6	24	490.1	146.7	91.5	67.5	Debris
2009	248	140	248.39	140.41	7	24	70.9	52.5	44.4	31.9	Debris
2009	248	140	248.06	141.67	3	F105	324.8	100.1	81.5	53.2	Debris
2009	248	140	248.58	141.6	11	F105	68.1	57.3	27.5	38.9	Debris
2009	246	140	247.32	141.875	1	1	7.5	49.7	24.7	10.1	Debris
2009	246	140	247.1	141.42	2	3	6.6	32.1	19.5	11.5	Amorphous Debris
2009	246	140	247.54	141.71	1	3	6.9	25.8	26.3	12.9	Debris
2009	246	140	247.02	141.48	3	3	156.7	96.6	54	43.3	Pebble
2009	246	140	246.18	141.18	1	3	2.4	25.35	15.4	11.04	Flake Fragment
2009	246	140	246.18	141.18	1	3	2.4	25.35	15.4	11.04	Debris
2009	246	140	246.35	141.19	2	3					Debris
2009	246	140	247.06	141.12	1	4	15.8	41.9	30.3	12.9	Pebble
2009	246	140	247	141.47	1	4	33.4	51.5	43.3	16.2	Pebble
2009	246	140	246.465	141.43	6	4	0.4	10.9	10	2.2	Amorphous Debris
2009	246	140	246.15	141.43	3	4	0.6	21.7	9.3	3.6	Flake
2009	246	140	246.978	141.27	9	4	0.7	18.2	12.6	5.5	Amorphous Debris
2009	246	140	246.505	141.855	1	4	0.9	15.8	14.4	5.3	Amorphous Debris
2009	246	140	246.235	141.05	5	4	0.9	20.5	8.1	6.3	Amorphous Debris
2009	246	140	246.13	141.42	4	4	1.5	17.5	13.5	9.7	Amorphous Debris
2009	246	140	246.05	141.55	2	4	7.3	44.1	28.4	14.5	Amorphous Debris
2009	246	140	246.935	141.35	8	4	28.1	62.3	45.6	13.9	Flake
2009	246	140	246.4	141.31	7	4	119.8	65.7	50.1	43.3	Pebble
2009	246	140	246.19	141.38	1	5	38.9	37.75	40.89	19.6	Amorphous Debris
2009	246	140	246.07	141.26	2	5	120.9	74.6	66.2	43.4	Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2009	246	140	246.92	141.8	9	5	0.6	16.59	9.53	3.8	Amorphous Debris
2009	246	140	246.532	141.12	4	5	1	14.67	12.75	7.5	Pebble
2009	246	140	246.37	141.39	5	5	1.1	21.7	16.02	6.48	Amorphous Debris
2009	246	140	246.06	141.8	7	5	1.9	21.31	14.02	9.99	Amorphous Debris
2009	246	140	246.995	141.86	10	5	2.7	26.83	20.54	10.2	Amorphous Debris
2009	246	140	246.4	141.63	8	5	3.6	18.88	23.3	9.5	Amorphous Debris
2009	246	140	246.15	141.665	6	5	3.9	26.1	17.1	12.1	Amorphous Debris
2009	246	140	246.515	141.03	1	5	6.5	30.23	23.26	13.8	Pebble
2009	246	140	246.673	141.12	3	5	8.6	37.84	24.68	16.4	Pebble
2009	246	140	246.655	141.0325	2	5	11.1	31.25	28.35	11.1	Debris
2009	246	140	246.28	141.86	3	6	0.5	18.89	6.99	3.8	Flake Fragment
2009	246	140	246.11	141.83	2	6	1.4	15.7	10.82	9.14	Amorphous Debris
2009	246	140	246.85	141.27	5	6	5.5	32	23.18	10.1	Debris
2009	246	140	246.82	141.15	6	6	5.9	25.75	26.26	7.07	Flake Fragment
2009	246	140	246.77	141.43	4	6	25.6	45.03	47.26	9.72	Flake Fragment
2009	246	140	247.92	141.26	2	7	7.1	34.7	18.1	15.6	Amorphous Debris
2009	246	140	247.88	141.73	3	7	53.7	51.9	33.2	27.1	Amorphous Debris
2009	246	140	247.73	141.73	1	7	x	99.7	89.8	95.6	Amorphous Debris
2009	246	140	247.07	141.205	4	7	26.3	46.64	29.82	26.4	Pebble
2009	246	140	246.835	141.44	9	7	0.3	11	6.6	4.2	Amorphous Debris
2009	246	140	246.05	141.16	1	7	0.8	15,.7	13.8	4.1	Debris
2009	246	140	246.27	141.8	11	7	1.1	18.5	11.1	5.4	Amorphous Debris
2009	246	140	246.37	141.19	4	7	2.8	23.2	15.1	11.3	Amorphous Debris
2009	246	140	246.63	141.13	6	7	2.9	26.3	15.8	7.7	Amorphous Debris
2009	246	140	246.8	141.43	10	7	5.7	29.4	19.1	10.9	Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2009	246	140	246.67	141.4	8	7	9	33.7	27.7	10.2	Debris
2009	246	140	246.5	141.33	5	7	9.5	39.7	25.3	13.5	Amorphous Debris
2009	246	140	246.7	141.235	7	7	15.7	36.8	22.1	14.3	Amorphous Debris
2009	246	140	246.14	141.22	2	7	16	48.6	19.5	15.3	Amorphous Debris
2009	246	140	246.2	141.74	12	7	22.8	69	34.9	16.1	Amorphous Debris
2009	246	140	246.34	141.06	3	7	26.9	44.5	35.3	14.5	Amorphous Debris
2009	246	140	246.87	141.05	6	8	1.7	25.5	11.7	9.4	Debris
2009	246	140	246.74	141.58	10	8	2	18.8	14.3	7.5	Debris
2009	246	140	246.91	141.35	9	8	3.1	26	14.7	13.8	Amorphous Debris
2009	246	140	246.26	141.02	1	8	5	22.8	19.3	13.9	Amorphous Debris
2009	246	140	246.88	141.06	5	8	5	40.1	16.6	9.4	Debris
2009	246	140	246.59	141.91	11	8	5.3	27.7	19.2	10.9	Amorphous Debris
2009	246	140	246.13	141.87	7	8	5.7	39.2	14.5	11.7	Amorphous Debris
2009	246	140	246.13	141.28	3	8	6.8	27.7	20.8	11.7	Pebble
2009	246	140	246.21	141.17	2	8	8.2	29.2	26.1	16.4	Amorphous Debris
2009	246	140	246.83	141.37	8	8	19.6	51.1	39.7	14.5	Flake
2009	246	140	246.59	141.27	9	9	0.4	15.7	9.8	3	Amorphous Debris
2009	246	140	246.05	141.91	1	9	0.5	12.4	11.2	4.7	Amorphous Debris
2009	246	140	246.88	141.38	10	9	0.5	13.3	7.3	4.9	Debris
2009	246	140	246.15	141.71	4	9	1.1	18.4	13.6	6.9	Amorphous Debris
2009	246	140	246.15	141.39	4	9	1.1	18.4	13.6	6.9	Amorphous Debris
2009	246	140	246.4	141.91	2	9	1.4	18.3	13.9	5.7	Amorphous Debris
2009	246	140	246.31	141.6	5	9	3.8	17	17.5	10.6	Amorphous Debris
2009	246	140	246.35	141.4	7	9	4.9	22.5	15.8	13.3	Amorphous Debris
2009	246	140	246.72	141.75	6	9	7.4	22.1	18	16.3	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2009	246	140	246.15	141.76	3	9	8.2	40.58	16.45	8.54	Amorphous Debris
2009	246	140	246.63	141.1	11	9	10.5	26.7	23	12.5	Amorphous Debris
2009	246	140	246.07	141.45	8	9	55.8	54.01	34.94	42.1	Pebble
2009	246	140	246.34	141.01	1	10	0.7	20.3	9.1	3.1	Debris
2009	246	140	246.56	141.14	2	10	1.5	20.8	16.7	5.6	Amorphous Debris
2009	246	140	246.48	141.2	3	10	6.3	31	25.2	11.4	Flake
2009	246	140	246.64	141.385	5	10	6.6	21.7	23.7	13.1	Debris
2009	246	140	246.52	141.48	6	10	17.5	36.3	21.7	14.6	Amorphous Debris
2009	246	140	246.46	141.36	4	10	25.6	58.4	30.7	17.4	Amorphous Debris
2009	246	140	246.11	141.69	8	10	107.5	90.4	55.1	20.9	Debris
2009	246	140	246.68	141.58	7	11					Pebble
2009	246	142	246.74	142	1	1	0.2	13.03	9.23	2.04	Flake
2009	246	142	246.37	142.1	1	1	138.9	77.7	31.1	71.5	Debris
2009	246	142	246.717	142.76	6	2	0.5	17.98	10.28	3.28	Flake Fragment
2009	246	142	246.21	142.59	3	2	1.5	16	14.8	6.8	Amorphous Debris
2009	246	142	246.27	142.9	4	2	2.4	25.3	12.6	9.5	Debris
2009	246	142	246.045	142.19	1	2	3.8	17.9	21.5	13.3	Pebble
2009	246	142	246.58	142.45	5	2	181	99.99	64.2	54.5	Pebble
2009	246	142	246.19	142.4	2	2	2.5	16.6	13.7	8	Amorphous Debris
2009	246	142	246.83	142.2	7	2	0.9	16.1	13.4	5.6	Broken Flake
2009	246	142	246.59	142.215	5	3	x	x	x	x	Pebble
2009	246	142	246.288	142.93	9	3	0.5	15.5	11.1	3.2	Amorphous Debris
2009	246	142	246.305	142.9	8	3	1	15.1	14.6	4.3	Broken Flake
2009	246	142	246.26	142.92	10	3	0.7	15.41	13.87	3.74	Debris
2009	246	142	246.457	142.18	1	3	1.6	20.64	18.23	38.3	Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2009	246	142	246.79	142.46	3	3	8.5	19.96	22.85	14.8	Amorphous Debris
2009	246	142	246.1	142.63	7	3	10.6	38.43	21.99	96.3	Amorphous Debris
2009	246	142	246.142	142.6	6	3	0.2	9.89	10.01	2.27	Amorphous Debris
2009	246	142	246.8	142.392	4	3	0.8	19.23	8.24	5.38	Amorphous Debris
2009	246	142	246.427	142.573	3	3	0.2	10.2	8.21	1.7	Amorphous Debris
2009	248	140	248.32	140.76	1	2	7.3	38.1	30.3	8.2	Debris
2009	248	140	248.39	140.1	2	2	24.6	38	22.4	21.8	Amorphous Debris
2009	248	140	248.2	140.26	1	3	4.8	29.8	23.2	11.6	Amorphous Debris
2009	248	140	248.65	140.89	4	3	29.3	55.7	35.3	15.4	Pebble
2009	248	140	248.94	140.13	3	3	48	43.6	41.2	31.8	Pebble
2009	248	140	248.28	140.14	2	3	313.8	95.7	64.7	57	Amorphous Debris
2009	248	140	248.48	140.82	2	4	1.4	23.6	11.2	6.1	Debris
2009	248	140	248.46	140.82	1	4	3.7	31.7	17.8	10.7	Amorphous Debris
2009	248	140	246.45	141.08	1	5	14.6	49.43	32.85	16.07	Flake Fragment
2009	248	140	248.24	140.4	1	5	0.9	18.1	11.9	2.8	Flake
2009	248	140	248.1	140.12	2	5	10.3	33.8	30.1	12	Pebble
2009	248	140	248.03	141.08	1	6	0.7	13.4	11.5	6.4	Amorphous Debris
2009	248	140	248.68	141.88	2	6	2.6	20.9	18.1	8.9	Pebble
2009	248	140	248.565	140.36	1	6	15.1	42.2	25.8	15	Debris
2009	248	140	248.74	140.235	2	6	257.7	94.2	77.5	53.7	Pebble
2009	248	140	248.835	141.8	2	7	3.2	25.2	11.6	9.2	Amorphous Debris
2009	248	140	248.83	141.18	1	7	19.4	14.9	6.9	1.9	Amorphous Debris
2009	248	140	248.67	140.335	1	7	6.8	33.2	20.5	13.9	Debris
2009	248	140	248.92	141.11	2	8	1.1	20.2	13.4	5	Amorphous Debris
2009	248	140	248.233	141.255	1	8	2.1	15	14.6	8.9	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2009	248	140	248.945	141.13	3	8	2.4	21.1	14.2	8	Amorphous Debris
2009	248	140	248.67	141.555	4	8	13.1	30.6	21.5	20.8	Amorphous Debris
2009	248	140	248.615	141.615	5	8	29	45.4	39.2	16.2	Amorphous Debris
2009	248	140	248.42	140.75	1	8	2	25.9	14.4	5.6	Flake Fragment
2009	248	140	248.46	141.44	2	9	0.4	13.4	8.3	4.4	Pebble
2009	248	140	248.215	141.11	1	9	0.6	13.6	11.1	3.1	Debris
2009	248	140	248.67	141.67	4	9	31.3	18	5.3	3.4	Debris
2009	248	140	248.75	141.57	3	9	160.8	78	57.5	40.1	Pebble
2009	248	140	248.18	140.05	1	9	0.9	16.9	9.5	4.8	Debris
2009	248	140	248.41	140.08	7	9	1	18.8	11.1	6.2	Debris
2009	248	140	248.49	140.3	4	9	2	21.7	21.2	8.3	Pebble
2009	248	140	248.26	140.36	6	9	2.3	24.1	14.1	6.9	Debris
2009	248	140	248.175	140.235	3	9	2.8	18.4	15.9	9.3	Debris
2009	248	140	248.41	140.19	2	9	5.6	24.8	23.5	16.2	Debris
2009	248	140	248.665	141.13	4	10	1.4	20.1	13.9	6.7	Flake Fragment
2009	248	140	248.55	141.645	5	10	1.8	21.6	12.7	5.1	Flake
2009	248	140	248.86	141.22	3	10	1.9	20.7	10.9	10.5	Amorphous Debris
2009	248	140	248.95	141.21	2	10	948.8	146.3	115.9	83.9	Debris
2009	248	140	248.435	141.29	1	10	x	156.5	136.9	79.7	Pebble
2009	248	140	248.3	140.11	2	10	0.7	22.7	13.3	1.7	Flake
2009	248	140	248.15	140.245	4	10	0.9	18.12	8.99	6.44	Amorphous Debris
2009	248	140	248.54	140.19	3	10	1	24.9	8.9	5	Debris
2009	248	140	248.23	140.3	5	10	2.9	26.9	15.6	8.7	Amorphous Debris
2009	248	140	248.26	140.05	6	10	5	27.4	18.3	10.5	Debris
2009	248	140	24826	140.33	1	10	8.1	42.5	23.1	16.2	Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2009	248	140	248.5	141.115	1	11	1.1	15.3	12.7	4	Amorphous Debris
2009	248	140	248.89	141.3	3	11	3.2	18.9	13	11.8	Pebble
2009	248	140	248.69	141.23	2	11	9.6	40.2	26	9.1	Amorphous Debris
2009	248	140	248.46	141.545	4	11	42.6	54.4	42.4	23.5	Pebble
2009	248	140	248.19	141.735	3	12	5.1	35.51	27.34	5.59	Flake
2009	248	140	248.27	141.1	2	12	47.1	50.3	41.2	32.4	Amorphous Debris
2009	248	140	248.26	141.16	1	12	x	156	139.59	79.6	Debris
2009	244	138	244.9	138.7			5.2	24.5	26.4	6.7	Debris
2010	246	140	246.52	140.55	6	1	77.7	71.84	56.94	29.72	Flake Fragment
2010	246	140	246.36	140.635	4	1	1.2	20.65	16.61	4.49	Amorphous Debris
2010	246	140	247.01	140.955	1	1	2.8	19.7	9.3	9.8	Amorphous Debris
2010	246	140	246.5	140.44	3	1	3.5	29.1	11.14	10.33	Pebble
2010	246	140	247.945	140.81	2	1	7.2	33.2	18.6	11.1	Pebble
2010	246	140	246.94	140.63	2	1	7.5	25.24	21.79	12.53	Pebble
2010	246	140	247.745	140.55	3	1	10	42.5	21.6	14.6	Pebble
2010	246	140	246.91	140.98	5	1	95.8	67.65	48.93	30.63	Pebble
2010	246	140	246.66	140.925	1	1	x	154.73	94.16	108.63	Pebble
2010	246	140	247.45	140.78	1	2	6.7	21.6	15.2	16.1	Amorphous Debris
2010	246	140	246.66	140.8	1	2	9.5	32.1	20.5	16.1	Pebble
2010	246	140	247.18	140.87	2	2	20	32.1	29.1	26.8	Flake Fragment
2010	246	140	246.6	140.61	3	3	0.5	13.7	11.1	3.9	Debris
2010	246	140	246.21	140.915	1	3	1.2	19.6	14.4	7.1	Amorphous Debris
2010	246	140	247.69	140.77	1	3	32.7	37.9	25.9	22.4	Pebble
2010	246	140	246.46	140.92	2	3	56.4	64.6	54.2	27.1	Pebble
2010	246	140	246.42	140.62	9	4	7.8	19.82	32.57	11.49	Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2010	246	140	246.76	140.18	14	4	2.8	20.26	14.22	10.34	Flake Fragment
2010	246	140	246.17	140.95	3	4	23.8	45.33	44.31	28.34	Debris
2010	246	140	247.635	140.97	2	4	0.2	14.4	7.4	3.1	Amorphous Debris
2010	246	140	247.07	140.95	5	4	0.4	16.4	8.8	5.1	Amorphous Debris
2010	246	140	247.659	140.54	7	4	2	18.8	13.7	8.5	Amorphous Debris
2010	246	140	247.905	140.965	1	4	3.9	21.6	14.3	10.8	Amorphous Debris
2010	246	140	247.13	140.72	6	4	12.1	33.3	25	13.6	Amorphous Debris
2010	246	140	247.05	140.97	3	4	16.6	30.6	21.5	18.8	Pebble
2010	246	140	247.08	140.88	4	4	22.4	35.3	33.9	18	Pebble
2010	246	140	247.11	140.12	9	4	25.5	45.8	37	22.4	Pebble
2010	246	140	247.87	140.57	8	4	41.4	53.3	41	29.6	Pebble
2010	246	140	246.5	140.94	5	4	6.8	30.67	24.85	13.38	Pebble
2010	246	140	246.16	140.73	7	4	22.8	42.4	29.86	22.71	Pebble
2010	246	140	246.93	140.56	12	4	9.8	28.68	19.64	14.67	Pebble
2010	246	140	246.63	140.28	13	4	14.9	30.3	37.06	13.56	Pebble
2010	246	140	246.15	140.99	1	4	1	24.69	12.19	11.47	Amorphous Debris
2010	246	140	246.22	140.99	2	4	2	17.92	15.97	10.42	Amorphous Debris
2010	246	140	246.47	140.99	4	4	1.2	22	11.22	5.7	Flake Fragment
2010	246	140	246.83	140.88	6	4	29.9	31.5	43.76	32.36	Flake Fragment
2010	246	140	246.29	140.72	8	4	12.4	20.25	16.49	21.61	Amorphous Debris
2010	246	140	246.13	140.51	10	4	3.4	20.03	15.74	8.51	Amorphous Debris
2010	246	140	246.56	140.5	11	4	7.2	27.98	18.48	17.33	Amorphous Debris
2010	246	140	246.6	140.13	15	4	0.4	13.92	9.43	4.05	Amorphous Debris
2010	246	140	247.41	140.75	2	5	76.9	69.7	51.1	21.85	Flake Fragment
2010	246	140	247.56	140.785	1	5	274.4	120.38	70.85	45.19	Flake Fragment

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2010	246	140	247.18	140.75	13	5	10.3	35.6	24.38	20.21	Debris
2010	246	140	247.42	140.93	7	5	0.3	11.87	8.74	2.91	Debris
2010	246	140	247.485	140.61	14	5	0.4	11.13	9.59	2.77	Debris
2010	246	140	247.08	140.73	12	5	0.6	18.43	8.46	5.05	Amorphous Debris
2010	246	140	247.12	140.48	15	5	0.7	14.15	11.23	7.02	Debris
2010	246	140	247.395	140.59	17	5	1.1	18.18	11.7	6	Debris
2010	246	140	247.13	140.64	16	5	1.2	17.3	18.15	5.72	Amorphous Debris
2010	246	140	247.55	140.95	6	5	2.2	24.78	19.62	6.8	Flake
2010	246	140	247.65	140.78	10	5	2.4	29.35	17.23	6.85	Flake Fragment
2010	246	140	247.335	140.86	8	5	2.8	18.11	16.16	9.65	Amorphous Debris
2010	246	140	247.19	140.1	18	5	3.1	30.18	18.38	6.95	Debris
2010	246	140	247.98	140.5	11	5	4.2	16.18	12.82	10.55	Amorphous Debris
2010	246	140	247.52	140.8	19	5	8.1	28.34	17.67	14.71	Flake Fragment
2010	246	140	247.81	140.97	5	5	12.7	24.21	23.86	19.17	Amorphous Debris
2010	246	140	247.385	140.85	9	5	15.2	27.89	39.2	17.94	Amorphous Debris
2010	246	140	247.315	140.81	3	5	19.4	45.37	30.6	20.51	Pebble
2010	246	140	247.045	140.94	4	5	28.9	38.65	30.18	27	Pebble
2010	246	140	247.04	141.42	4	8	2.1	24.8	14.2	7.4	Amorphous Debris
2010	246	140	247.56	141.935	3	8	7.3	24	18.7	12.1	Pebble
2010	246	140	247.755	141.6	2	8	14.5	33.3	24.1	15.1	Pebble
2010	246	140	247.542	141.065	1	8	36.2	48.7	38.6	19.2	Amorphous Debris
2010	246	140	247.48	141.15	6	9	0.6	12.4	8.8	3.4	Debris
2010	246	140	247.52	141.32	5	9	0.6	17.5	10.8	4.3	Flake Fragment
2010	246	140	247.71	141.14	4	9	1.1	21.6	9	6.8	Flake Fragment
2010	246	140	247.71	141.3	3	9	1.5	22.9	14.8	5.4	Flake Fragment

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2010	246	140	247.98	141.88	2	9	12.9	28.7	22	15.8	Amorphous Debris
2010	246	140	247.26	141.15	8	9	14.3	35.4	29.9	19.6	Flake Fragment
2010	246	140	247.08	141.37	9	9	18.2	49.2	29.6	19.6	Pebble
2010	246	140	247.3	141.46	7	9	24.4	33.9	23.2	21.5	Pebble
2010	246	140	247.64	141.47	1	9	76.9	65.8	48.5	42.5	Pebble
2010	246	140	247.66	141.68	17	10	37.5	58.7	24.6	21.3	Flake
2010	246	140	247.8	141.74	18	10	14.9	44.3	30.4	16.7	Debris
2010	246	140	247.8	141.31	5	10	0.2	12.6	7.5	1.4	Amorphous Debris
2010	246	140	247.54	141.3	8	10	8.4	32.4	27.7	10.9	Pebble
2010	246	140	247.36	141.62	15	10	0.8	22.8	9.9	2.6	Debris
2010	246	140	247.65	141.09	4	10	8.7	31.08	15.44	14.97	Amorphous Debris
2010	246	140	247.57	141.33	7	10	5.7	21.62	26.87	13.55	Pebble
2010	246	140	247.12	141.31	12	10	3	21.79	17.07	9.67	Amorphous Debris
2010	246	140	247.99	141.88	25	10	36	41.7	31.65	32.12	Pebble
2010	246	140	247.99	141.09	1	10	4	23.11	18.8	7.33	Amorphous Debris
2010	246	140	247.89	141.08	2	10	1.9	24.65	10.72	9.87	Flake Fragment
2010	246	140	247.84	141.05	3	10	1.9	22.27	10.82	10.6	Pebble
2010	246	140	247.65	141.35	6	10	4.2	27.73	17.74	6.04	Pebble
2010	246	140	247.32	141.22	10	10	3.9	23.63	15.87	8.94	Amorphous Debris
2010	246	140	247.25	141.47	14	10	8.9	24.63	20.32	13.03	Amorphous Debris
2010	246	140	247.42	141.59	16	10	3.3	21.49	11.51	11.3	Amorphous Debris
2010	246	140	247.88	141.68	19	10	8.7	27.48	27.43	13.32	Pebble
2010	246	140	247.79	141.91	20	10	2.5	27.22	16.9	5.69	Flake
2010	246	140	247.43	141.76	21	10	11.6	41.76	32.82	12.85	Debris
2010	246	140	247.25	141.76	22	10	3.9	23.02	15.38	0.97	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2010	246	140	248	141.6	26	10	3.2	23.14	16.33	8.36	Amorphous Debris
2010	246	140	247.43	141.3	9	10	9.2	32.64	16.16	12.79	Amorphous Debris
2010	246	140	247.08	141.1	11	10	1.5	22.84	14.81	7.27	Amorphous Debris
2010	246	140	247.14	141.36	13	10	1	12.1	9.59	6.03	Amorphous Debris
2010	246	140	247.2	141.78	23	10	2.5	17.23	12.15	8.68	Amorphous Debris
2010	246	140	247.07	141.65	24	10	1	14.67	9.92	6.95	Amorphous Debris
2010	246	142	246.225	142.13	2	4	0.6	10.6	11.5	4.5	Broken Flake
2010	246	142	246.045	142.32	4	4	0.7	15.6	11.4	5.4	Amorphous Debris
2010	246	142	246.92	142.85	6	4	1.7	20.8	16.6	7.2	Pebble
2010	246	142	246.87	142.1	3	4	5.4	27.3	15.5	17.9	Flake Fragment
2010	246	142	246.65	142.78	5	4	15.5	38.9	16.5	12.2	Amorphous Debris
2010	246	142	246.52	142.36	1	4	16.5	35.7	32.3	19.9	Amorphous Debris
2010	246	142	246.67	142.92	7	4	30.8	49.3	31.6	32.5	Debris
2010	246	142	246.61	142.77	7	5	32.2	54.2	36.8	14.4	Debris
2010	246	142	246.28	142.04	1	5	1.5	21.1	14.6	5.6	Flake Fragment
2010	246	142	246.59	142.14	3	5	1.7	17	14.6	7.2	Amorphous Debris
2010	246	142	246.07	142.38	2	5	1.8	21.4	16.1	6.2	Amorphous Debris
2010	246	142	246.71	142.31	5	5	3.1	15.6	13.3	12.3	Pebble
2010	246	142	246.49	142.72	8	5	4.3	32.6	15.3	10.3	Pebble
2010	246	142	246.2	142.89	9	5	4.8	33.2	19.5	13.9	Pebble
2010	246	142	246.1	142.84	10	5	12	29.4	21.2	23.4	Pebble
2010	246	142	246.89	142.27	6	5	12.5	33	24.3	15.3	Pebble
2010	246	142	246.64	142.22	4	5	22.8	44.3	32.9	27.5	Pebble
2010	246	142	246.28	142.825	9	6	2.2	23.1	17.8	6.1	Debris
2010	246	142	246.94	142.165	1	6	0.3	15.9	10.8	4.1	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2010	246	142	246.17	142.11	4	6	1.9	26.7	12.1	7	Amorphous Debris
2010	246	142	246.775	142.81	10	6	3.3	25.2	20	10.6	Amorphous Debris
2010	246	142	246.27	142.4	5	6	3.6	22	21.4	7.3	Debris
2010	246	142	246.53	142.17	3	6	4.2	25.9	17.9	12.6	Amorphous Debris
2010	246	142	246.84	142.44	7	6	4.3	22.2	16.4	9.5	Pebble
2010	246	142	246.57	142.24	2	6	4.9	31.8	22.5	9.7	Amorphous Debris
2010	246	142	246.61	142.42	6	6	8.8	30.3	29.4	12.6	Amorphous Debris
2010	246	142	246.57	142.51	8	6	15.8	27.7	25.1	16	Amorphous Debris
2010	246	142	246.19	142.54	8	7	25.8	47.01	37.78	21.15	Debris
2010	246	142	246.68	142.325	2	7	0.5	14.21	11.6	3.72	Flake Fragment
2010	246	142	246.45	142.22	4	7	0.9	11.29	13.17	5.36	Pebble
2010	246	142	246.75	142.725	9	7	2.8	23.98	19.89	9.58	Pebble
2010	246	142	246.17	142.87	15	7	3.3	25.72	20.8	9.21	Amorphous Debris
2010	246	142	246.735	142.8925	12	7	3.7	24.35	13.02	9.77	Amorphous Debris
2010	246	142	246.375	142.23	16	7	4.6	30.06	22.49	9.51	Amorphous Debris
2010	246	142	246.74	142.645	5	7	4.7	20.9	15.57	14.93	Amorphous Debris
2010	246	142	246.625	142.265	3	7	6.2	32.13	29.06	10.35	Amorphous Debris
2010	246	142	246.71	142.62	6	7	6.7	27.36	20.11	13.07	Amorphous Debris
2010	246	142	246.775	142.135	1	7	7	27.04	23.34	15.52	Pebble
2010	246	142	246.32	142.82	11	7	8.5	29.93	19.8	11.01	Amorphous Debris
2010	246	142	246.5	142.95	14	7	10.9	32.58	28.45	21.37	Pebble
2010	246	142	246.58	142.93	13	7	19.3	36.37	30.54	25.81	Pebble
2010	246	142	246.295	142.605	7	7	28.28	35.57	29.7	28.27	Pebble
2010	246	142	246.15	142.7	10	7	35	50.87	38.78	20.91	Pebble
2010	246	142	246.41	142.675	9	8	2	25.57	12.11	7.98	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2010	246	142	246.07	142.29	3	8	4.5	22.52	20.62	10.78	Pebble
2010	246	142	246.79	142.43	5	8	5.7	10.68	25.77	19.59	Pebble
2010	246	142	246.71	142.715	8	8	5.9	21	15.13	12.36	Pebble
2010	246	142	246.245	142.35	4	8	6.4	33.68	15.04	12.76	Amorphous Debris
2010	246	142	246.225	142.63	10	8	7.2	27.93	26.71	13.46	Amorphous Debris
2010	246	142	246.735	142.725	7	8	8.6	39.87	22.2	12.35	Amorphous Debris
2010	246	142	246.635	142.2	1	8	11	37.72	21.53	18.97	Pebble
2010	246	142	246.49	142.18	2	8	14.6	31.86	24.74	19.85	Pebble
2010	246	142	246.71	142.51	6	8	25.4	42.13	29.61	36.43	Pebble
2010	248	140	248.09	141.05	9	12	0.7	12.56	7.73	7.17	Flake Fragment
2010	248	140	248.015	141.58	12	12	1	21.54	13.22	5.42	Amorphous Debris
2010	248	140	248.09	141.33	14	13	478.5	160.3	128.32	55	Debris
2010	248	140	248.27	141.04	10	13	1	12.54	13.44	6.24	Pebble
2010	248	140	248.04	141.84	2	13	1.7	17.97	13.1	27.57	Amorphous Debris
2010	248	140	248.02	141.31	13	13	1.8	26.07	17.5	5.81	Amorphous Debris
2010	248	140	248.63	141.155	8	13	1.9	19.23	17.24	9.42	Amorphous Debris
2010	248	140	248.76	141.64	4	13	2.2	22.83	19.52	4.33	Flake
2010	248	140	248.76	141.11	7	13	2.8	16.09	15.78	10.72	Pebble
2010	248	140	248.15	141.505	6	13	2.9	20.58	13.52	9.51	Pebble
2010	248	140	248.14	141.6	5	13	3.2	29.42	16.76	10.59	Flake Fragment
2010	248	140	248.015	141.23	11	13	3.7	17.59	118.85	8.07	Pebble
2010	248	140	248.13	141.73	3	13	11..4	28.38	18.14	14.81	Pebble
2010	248	140	248.24	141.64	9	14	x	213.8	131.7	84.8	Flake Fragment
2010	248	140	248.45	141.69	6	14	0.4	14.92	6.62	4.49	Debris
2010	248	140	248.84	141.85	7	14	1.1	18.37	15.33	3.35	Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2010	248	140	248.115	141.65	5	14	2	20.68	13.2	9.19	Pebble
2010	248	140	248.065	141.05	2	14	6.6	19.91	18.96	12.31	Amorphous Debris
2010	248	140	248.015	141.44	1	14	9.2	29.53	28.76	18.86	Pebble
2010	248	140	248.35	141.11	3	14	14.6	30.74	25.03	13.37	Amorphous Debris
2010	248	140	248.24	141.72	8	14	21.3	46.13	30.67	17.81	Pebble
2010	248	140	248.82	141.04	4	14	25.1	45.69	35.36	24.29	Pebble
2010	248	140	248.075	141.9	1	15	4.6	24.73	22.61	9.32	Amorphous Debris
2010	248	140	248.54	141.8	10	15	3.9	31.22	16.3	10.39	Flake Fragment
2010	248	140	248.125	141.92	2	15	1	20.11	12.31	5.39	Amorphous Debris
2010	248	140	248.71	141.94	9	15	1.8	25.17	15.49	9.78	Pebble
2010	248	140	248.43	141.58	7	15	4.8	24.02	14.54	9.99	Pebble
2010	248	140	248.46	141.16	4	15	5.1	24.56	21.54	13.42	Pebble
2010	248	140	248.53	141.66	8	15	5.4	28.92	14.07	8.62	Pebble
2010	248	140	248.375	141.55	6	15	7.5	22.75	24.3	11.35	Amorphous Debris
2010	248	140	248.14	141.91	1	15	10.9	27.95	29.53	13.57	Flake Fragment
2010	248	140	248.24	141.61	3	15	12.3	32.44	24.33	19.04	Pebble
2010	248	140	248.59	141.18	5	15	18	31.39	26.17	23.86	Pebble
2010	263	145	263.865	146.63	1	1					Amorphous Debris
2010	263	145	263.96	146.49	2	3		32.5	10.7	9.7	Amorphous Debris
2010	263	145	264.03	146.87	3	3	1.1	18.6	10.1	6.9	Amorphous Debris
2010	263	145	263.76	146.93	1	3		20.2	11.3	4.4	Amorphous Debris
2010	263	145	263.51	146.6	4	3		21.9	9.4	5.7	Amorphous Debris
2010	263	145	263.62	145.12	1	7		40.6	38.1	19.7	Amorphous Debris
2010	263	145	263.12	145.1	3	8		13.5	11.8	3.7	Amorphous Debris
2010	263	145	263.24	145.38	2	8		17.8	17	5.5	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2010	263	145	263.93	145.41	1	8		152.2	133	76.3	Amorphous Debris
2010	263	145	264.81	146.6	1	9		11.6	10.3	2.4	Amorphous Debris
2010	263	145	263.99	146.21	1	10		20	14.6	9.9	Amorphous Debris
2010	263	145	263.21	146.24	1	11		11.8	12.4	5.4	Broken Flake
2011	246	140	246.265	140.105	9	**11**	0.5	19.8	9.4	0.9	Broken Flake
2011	246	140	246.625	140.095	5	**11**	1.4	17.7	9.7	9.4	Debris
2011	246	140	246.26	140.09	8	**11**	1.5	16.6	15.3	7.2	Amorphous Debris
2011	246	140	246.43	140.745	14	**11**	2.9	24.3	21.4	9.5	Debris
2011	246	140	246.18	140.01	10	**11**	4.1	25.2	25.1	11.3	Amorphous Debris
2011	246	140	246.38	140.08	7	**11**	4.2	29.3	17.7	13.5	Pebble
2011	246	140	246.705	140.63	4	**11**	4.4	23.5	19.9	14.1	Pebble
2011	246	140	246.79	140.62	3	**11**	5	22.9	16.5	12.6	Pebble
2011	246	140	246.9	140.08	2	**11**	5.8	37.6	20.6	10.5	Amorphous Debris
2011	246	140	246.415	140.575	13	**11**	6.3	24	20.4	15.3	Pebble
2011	246	140	246.525	1440.1	6	**11**	6.3	26.6	18.7	10.7	Pebble
2011	246	140	246.13	140.28	12	**11**	7	27	18.1	11.6	Pebble
2011	246	140	246.96	140.43	1	**11**	8.3	27.1	19.5	15.7	Pebble
2011	246	140	246.1	140.275	11	**11**	9.7	25.8	22.1	12.6	Pebble
2011	246	140	246.39	140.88	15	**11**	17.4	33.3	25.4	17.5	Pebble
2011	246	140	246.37	140.47	11	12	1.7	22	12.1	7.5	Amorphous Debris
2011	246	140	246.625	140.653	2	12	4.2	23	13.8	12.8	Amorphous Debris
2011	246	140	246.59	140.095	5	12	5.8	18.4	17.7	13.5	Amorphous Debris
2011	246	140	246.61	140.352	4	12	6.1	38.4	15.8	14.5	Debris
2011	246	140	246.13	140.676	7	12	7.9	32.2	29.8	9.5	Amorphous Debris
2011	246	140	246.047	140.315	10	12	8	29.5	21.8	13.1	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2011	246	140	246.54	140.45	3	12	8.5	27.6	16.1	11.7	Amorphous Debris
2011	246	140	246.92	140.83	1	12	11.8	27.6	21.2	16.8	Pebble
2011	246	140	246.136	140.562	8	12	15.2	38.5	26	19.4	Pebble
2011	246	140	246.036	140.518	9	12	15.5	27	27.9	20.9	Amorphous Debris
2011	246	140	246.355	140.88	6	12	16.4	41	19.7	14.6	Amorphous Debris
2011	246	140	246.7	140.35	1	13	3.6	29	12.5	12.2	Amorphous Debris
2011	246	140	246.385	140.28	5	13	5.1	19.4	18.7	17.4	Pebble
2011	246	140	246.62	140.745	2	13	5.9	26.6	24.5	14	Amorphous Debris
2011	246	140	246.36	140.345	3	13	10	31.2	25.4	15	Pebble
2011	246	140	246.385	140.27	6	13	12.2	38.6	25.6	18.7	Pebble
2011	246	140	246.315	140.485	4	13	20.6	38.8	29.5	20.5	Pebble
2011	246	140	246.085	140.665	7	13	40.7	67.6	41.3	41.6	Pebble
2011	246	140	247.1	140.88	4	6	2.4	24.4	14.4	5.7	Amorphous Debris
2011	246	140	247.42	140.76	2	6	4.6	23.3	17	13.8	Amorphous Debris
2011	246	140	247.32	140.6	5	6	8.8	26	21.4	16.8	Amorphous Debris
2011	246	140	247.43	140.86	3	6	13.8	32.1	18.3	15.3	Pebble
2011	246	140	247.22	140.19	1	6	17.4	23.8	22.9	15.9	Amorphous Debris
2011	246	140	247.07	140.51	4	7	0.6	13.3	10.7	5.8	Pebble
2011	246	140	247.44	140.72	6	7	1.9	27.6	12.7	3.9	Flake
2011	246	140	247.35	140.39	2	7	8.4	31.7	24	18.8	Pebble
2011	246	140	247.05	140.52	5	7	11.6	30.9	21.3	17.2	Debris
2011	246	140	247.04	140.47	3	7	14.1	36.6	31	15	Debris
2011	246	140	247.18	140.24	1	7	25.8	39.7	28.1	15.2	Amorphous Debris
2011	246	140	247.19	140.83	3	8	8.6	29.5	23.8	14.4	Pebble
2011	246	140	247.3	140.89	4	8	10.5	37	27.7	13	Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2011	246	140	247.87	140.68	2	8	11.5	34.8	21.2	22	Pebble
2011	246	140	247.06	140.59	1	8	27.7	47.6	32.4	27.1	Amorphous Debris
2011	246	140	246.38	140.34	6	9	2.4	27.8	16.9	5.3	Amorphous Debris
2011	246	140	246.16	140.89	3	9	2.6	27.2	18	7.2	Amorphous Debris
2011	246	140	246.57	140.975	2	9	4.4	25.6	21.9	13.6	Pebble
2011	246	140	246.33	141.01	1	9	5	33.2	24.4	12.1	Pebble
2011	246	140	246.05	140.8	4	9	17.6	31.5	30.6	18,6	Amorphous Debris
2011	246	140	246.45	140.59	5	9	19.5	41.9	38.1	14.2	Pebble
2011	246	140	246.64	140.27	6	5	0.2	12.7	7.6	0.6	Amorphous Debris
2011	246	140	246.64	140.28	7	5	0.3	12.8	9.9	2	Debris
2011	246	140	246.61	140.92	2	5	2.9	23.7	20.2	6.7	
2011	246	140	246.02	140.88	4	5	7.7	32.7	19.6	17.2	Pebble
2011	246	140	246.45	140.37	5	5	13.3	31.4	28.5	20.4	Amorphous Debris
2011	246	140	246.54	140.71	3	5	49.8	61	38.1	19.8	Debris
2011	246	140	246.77	140.88	1	5	68.7	52.6	40.3	32.4	PEBBLE
2011	246	140	246.59	140.98	1	6	0.6	16.8	9.6	2.9	Flake Fragment
2011	246	140	246.28	140.49	7	6	2.2	26.7	13.7	9.9	Debris
2011	246	140	246.09	140.33	9	6	3.4	29.8	22.3	8.3	Pebble
2011	246	140	246.06	140.36	8	6	3.5	27.4	17.9	10	Debris
2011	246	140	246.53	140.95	2	6	3.7	24.1	14.4	10	Amorphous Debris
2011	246	140	246.24	140.49	6	6	7.9	25.3	19.2	13.2	Pebble
2011	246	140	246.85	140.65	4	6	7.9	27	20.3	15.1	Pebble
2011	246	140	246.23	140.54	5	6	12.5	32.7	30.9	25	Pebble
2011	246	140	246.7	140.87	3	6	12.6	38.7	27.4	10.9	Flake
2011	246	140	246.69	140.61	8	7	0.3	19.3	7.8	1	Flake

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2011	246	140	246.68	140.07	23	7	0.5	13.6	9.6	3.5	Amorphous Debris
2011	246	140	246.11	140.33	14	7	0.7	15.7	14.5	3.3	Debris
2011	246	140	246.31	140.41	13	7	1.2	17.2	13.6	4.7	Pebble
2011	246	140	246.265	140.72	6	7	1.2	17.6	13.2	6.1	Debris
2011	246	140	246.49	140.52	11	7	2.7	24.2	24.1	9.7	Pebble
2011	246	140	246.62	140.83	3	7	2.9	30.9	24.7	5	Amorphous Debris
2011	246	140	246.79	140.65	22	7	3.1	18.4	17.5	9.5	Pebble
2011	246	140	246.705	140.09	19	7	3.2	21.7	11.1	7.6	Pebble
2011	246	140	246.975	140.93	2	7	3.3	23.6	16	7.7	Amorphous Debris
2011	246	140	246.2	140.69	7	7	5	24.6	18.3	12.5	Pebble
2011	246	140	246.575	140.11	17	7	5.3	30	18.1	9.9	Pebble
2011	246	140	246.33	140.47	12	7	5.6	25.2	14.7	11	Pebble
2011	246	140	246.88	140.655	10	7	5.9	18.6	17.4	11.2	Pebble
2011	246	140	246.28	140.18	15	7	7.1	26.9	24.1	11.2	Pebble
2011	246	140	246.82	140.375	16	7	10.9	40.5	30.2	11.3	Debris
2011	246	140	246.69	140.93	21	7	12.5	36.8	30.2	15	Pebble
2011	246	140	246.82	140.65	9	7	14.6	37.2	26.7	17.4	Pebble
2011	246	140	246.03	140.72	20	7	17.1	37.9	27.4	24.9	Pebble
2011	246	140	246.43	140.02	18	7	26.2	39.9	38.6	24.7	Pebble
2011	246	140	246.71	140.93	1	7	33.4	40.8	25.5	26.9	Amorphous Debris
2011	246	140	246.57	140	1	7	38	43.4	37.4	30.1	Pebble
2011	246	140	246.98	140.75	4	7	38.8	45.3	41.6	24.9	Pebble
2011	246	140	247.04	141...	5	7	42.8	51.4	30.3	23.9	Pebble
2011	246	140	246.45	140.72	12	8	0.4	12.2	11.9	2.8	Pebble
2011	246	140	246.3	140.14	23	8	0.5	15.8	12.1	3.7	Flake Fragment

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2011	246	140	246.54	140.96	3	8	0.8	17.6	11.6	4.2	Pebble
2011	246	140	246.825	140.17	25	8	0.8	16.7	11.6	4.2	Amorphous Debris
2011	246	140	246.915	140.54	18	8	1.9	18.9	17.5	4.7	Flake
2011	246	140	246.84	140.8	13	8	2	22.41	16.7	5.9	Amorphous Debris
2011	246	140	246.62	140.815	7	8	2.8	26.8	11.6	10.2	Debris
2011	246	140	246.99	140.76	14	8	2.9	25.5	14	11.5	Pebble
2011	246	140	246.25	140.595	17	8	3.1	23.7	17.1	9.2	Amorphous Debris
2011	246	140	246.16	140.72	11	8	3.6	25.7	12.1	9.4	Pebble
2011	246	140	247.01	140.36	24	8	4.3	26.3	25.9	9.1	Amorphous Debris
2011	246	140	246.525	140.325	20	8	5.7	23.8	18.4	12.2	Pebble
2011	246	140	246.52	140.84	5	8	5.9	26.3	21.7	6.8	Debris
2011	246	140	247	140.65	16	8	6.2	26.6	22	14.8	Pebble
2011	246	140	246.69	140.98	6	8	6.3	27.3	25.6	15.1	Pebble
2011	246	140	246.58	140.76	8	8	8.5	29.2	15.4	12.7	Amorphous Debris
2011	246	140	246.12	140.36	19	8	8.9	35.1	20.3	13.4	Amorphous Debris
2011	246	140	246.7	140.29	21	8	9	30.5	15.4	12.8	Amorphous Debris
2011	246	140	246.215	140.9	2	8	9.1	31.6	26.3	17.7	Pebble
2011	246	140	246.96	141.05	15	8	12.9	32.5	28.1	24.8	Pebble
2011	246	140	247.04	141.07	1	8	15.4	30.8	26	16.7	Amorphous Debris
2011	246	140	246.07	140.08	22	8	18.9	40.6	33.3	22.2	Pebble
2011	246	140	246.68	140.76	9	8	21.5	56.7	56.1	14.6	Debris
2011	246	140	246.63	140.75	10	8	23.1	42.7	34.7	21.1	Pebble
2011	246	140	246.51	140.9	4	8	54.3	53.4	38.9	33.4	Pebble
2011	246	140	246.74	140.58	6	9	2.1	25.5	20.8	3.8	Broken Flake
2011	246	140	246.32	140.855	1	9	11.4	26.5	17.6	16.8	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2011	246	140	246.31	140.62	5	9	13.1	31.2	21.5	15.9	Amorphous Debris
2011	246	140	246.735	140.4	7	9	12	31.5	22.9	17.2	Pebble
2011	246	140	246.38	140.19	12	9	2.9	26.9	20.7	10.6	Pebble
2011	246	140	246.94	140.11	13	9	1	20.3	9.2	4.9	Amorphous Debris
2011	246	140	246.09	140.09	15	9	0.7	16.7	6.2	3.5	Amorphous Debris
2011	246	140	246.45	140.78	2	9	5	27.8	16.3	13.7	PEBBLE
2011	246	140	246.23	140.64	4	9	6	26.4	18.4	10.9	Pebble
2011	246	140	246.09	140.1	11	9	10.2	28.3	27.5	20.3	Pebble
2011	246	140	246.88	140.46	8	9	18	33.7	18.1	16	Pebble
2011	246	140	246.915	140.465	9	9	1.1	17.6	12.3	6.8	Debris
2011	246	140	246.9	140.08	16	9	10.3	32	20.4	15.4	Pebble
2011	246	140	246.95	140.28	10	9	24.2	27.5	23.5	19	Pebble
2011	246	140	246.01	140.9	14	9	57.3	88.4	37.9	22.6	Amorphous Debris
2011	246	140	247	140.65	3	9	4.3	24.8	23.1	10.1	Amorphous Debris
2011	246	140	246.87	140.34	17	10	1	19.1	12.4	4.3	Pebble
2011	246	140	246.34	140.37	14	10	1.5	22.9	15.3	4.1	Amorphous Debris
2011	246	140	246.97	140.42	18	10	1.7	26.3	15.7	4.7	Flake
2011	246	140	246.18	140.03	23	10	1.9	20.5	8.9	9.1	Amorphous Debris
2011	246	140	246.54	140.19	26	10	2	21.2	16.9	9.8	Flake
2011	246	140	246.935	140.82	9	10	2.2	21	15.6	8.6	Amorphous Debris
2011	246	140	246.85	140.37	16	10	3.7	33.1	15.1	14.8	Pebble
2011	246	140	246.71	140.95	3	10	4.1	24.1	28.2	10.3	Pebble
2011	246	140	246.625	140.42	15	10	5.2	23.1	13.3	10.3	Pebble
2011	246	140	246.495	140.62	11	10	5.5	26.3	17.1	10	Amorphous Debris
2011	246	140	246.15	140.15	21	10	5.9	27.2	20.9	10.1	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2011	246	140	246.87	140.82	8	10	7.1	33.9	18.5	15.5	Pebble
2011	246	140	246.69	140.84	6	10	7.2	28	26.2	12.2	Pebble
2011	246	140	246.45	140.57	10	10	7.5	26.8	16.4	13.6	Pebble
2011	246	140	246.46	140.105	24	10	9.2	28	22.3	18.1	Pebble
2011	246	140	246.53	140.455	13	10	9.4	24	20.1	14.4	Pebble
2011	246	140	246.77	140.06	27	10	9.6	35.3	19.4	15.3	Pebble
2011	246	140	246.15	140.08	22	10	9.6	40.5	19.4	15.3	Pebble
2011	246	140	246.69	140.98	2	10	10.8	27.5	20.5	16	Amorphous Debris
2011	246	140	246.26	140.86	1	10	11.4	35.6	28.7	19.1	Pebble
2011	246	140	246.46	140.19	25	10	16.9	32.2	29.2	17.4	Pebble
2011	246	140	246.015	140.23	19	10	17.8	17.4	25	23.1	Flake
2011	246	140	246.65	140.54	12	10	18.6	38.4	31.2	15.8	Amorphous Debris
2011	246	140	246.93	141.03	4	10	20.4	36.9	27.7	17.2	Amorphous Debris
2011	246	140	246.27	140.22	20	10	22.2	18.2	16.1	5	Pebble
2011	246	140	246.77	140.8	7	10	32.2	41.2	39.5	28	Pebble
2011	246	140	246.58	140.795	3	11	1	17.2	9.9	6.7	Pebble
2011	246	140	246.28	140.38	10	11	1.4	25.2	12.1	4.1	Flake
2011	246	140	246.32	140.47	8	11	2	22	13.4	6.9	Amorphous Debris
2011	246	140	246.48	140.38	12	11	2.1	28.3	16	12.2	Debris
2011	246	140	246.89	140.98	1	11	2.2	22.6	19.4	10.2	Pebble
2011	246	140	246.93	140.315	15	11	2.3	19.4	15.7	9.4	Pebble
2011	246	140	246.24	140.31	11	11	2.6	19.1	12.9	10.8	Amorphous Debris
2011	246	140	246.05	140.54	6	11	3.5	24.6	17.6	6.1	Pebble
2011	246	140	246.87	140.41	13	11	4.1	23	15.9	9.3	Pebble
2011	246	140	246.04	140.77	2	11	4.2	32.9	26.4	16.3	PEBBLE

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2011	246	140	246.185	140.47	7	11	4.5	22.9	17.3	9.8	Pebble
2011	246	140	246.74	140.04	17	11	5	21.5	18.8	9.1	Amorphous Debris
2011	246	140	246.47	140.6	5	11	6	26.8	18.1	11.9	Pebble
2011	246	140	246.69	140.05	16	11	7.9	31.2	26.2	11.9	Pebble
2011	246	140	246.92	140.85	4	11	20	42.3	23.1	25.4	Pebble
2011	246	140	246.71	140.59	9	11	22.3	40.1	25.4	14.4	Amorphous Debris
2011	246	140	246.93	140.4	14	11	24.8	35.8	32	19	Amorphous Debris
2011	246	140	246.26	140.18	18	11	391.3	105.8	66	58.2	Amorphous Debris
2011	246	140	246.25	140.4	10	12	15.3	30.7	23.1	12.9	Pebble
2011	246	140	246.715	140.58	8	12	1.9	31.5	13.7	5.3	Debris
2011	246	140	246.43	140.3	15	12	2.5	29.7	18.5	3.5	Amorphous Debris
2011	246	140	246.42	140.1	17	12	7.3	34.9	24.7	15.9	Amorphous Debris
2011	246	140	246.53	140.35	11	12	17.6	44.1	30.8	16.4	Debris
2011	246	140	246.61	140.99	1	12	1.8	21.5	12.6	6.3	Pebble
2011	246	140	246.725	140.27	13	12	10.8	45.7	32.6	12.2	Pebble
2011	246	140	246.69	140.35	12	12	11.3	31.3	24.2	19.3	Pebble
2011	246	140	246.85	140.56	9	12	11.5	39	26.7	15.9	Pebble
2011	246	140	246.28	140.31	14	12	13.5	31.4	28.2	15.7	Pebble
2011	246	140	246.86	140.65	5	12	20	32.9	24.2	20.6	Pebble
2011	246	140	246.22	140.7	2	12	9.8	28.8	17.3	17.6	PEBBLE
2011	246	140	246.92	140.78	6	12	19.3	34.7	23.5	19.2	Pebble
2011	246	140	246.9	140.33	16	12	3.5	38.3	9.2	8	Amorphous Debris
2011	246	140	246.985	140.75	7	12	10.7	29.2	20.7	19.6	Pebble
2011	246	140	246.59	140.77	4	12	12.9	30.8	20.1	19.4	Pebble
2011	246	140	246.475	140.73	3	13					Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2011	246	140	246.67	140.76	5						
2011	246	142	246.846	142.595	16	9	0.7	14.3	11.8	3.6	Debris
2011	246	142	246.155	142.4	2	9	2	20.1	13	10.4	Debris
2011	246	142	246.43	142.77	11	9	5.2	29.6	20.5	9.5	Debris
2011	246	142	246.055	142.615	4	9	5.9	27.9	20	10.5	Flake
2011	246	142	246.07	142.11	1	9	6.5	25.6	19.8	12.3	Debris
2011	246	142	246.22	142.57	6	9	6.8	30.8	18.5	15	Flake Fragment
2011	246	142	246.825	142.85	17	9	6.8	30.8	18.5	15	Amorphous Debris
2011	246	142	246.725	142.51	15	9	6.8	25.5	17.9	11.5	Debris
2011	246	142	246.535	142.482	13	9	7	26.6	22.1	15.6	Amorphous Debris
2011	246	142	246.623	142.93	14	9	10.1	28.2	19.3	18.5	Debris
2011	246	142	246.347	142.51	9	9	11.6	30.5	20	12.5	Debris
2011	246	142	246.425	142.53	12	9	12.3	36.5	22.2	16	Amorphous Debris
2011	246	142	246.245	142.41	3	9	13.2	42.6	20.8	17.8	Flake
2011	246	142	246.175	142.75	8	9	15.3	26.8	23.4	20.3	Amorphous Debris
2011	246	142	246.195	142.69	7	9	16.8	35.4	25.8	20.3	Amorphous Debris
2011	246	142	246.09	142.59	5	9	23.4	31.9	21.3	21.7	Debris
2011	246	142	246.38	142.655	10	9	27.4	42.1	34.1	28.4	Amorphous Debris
2011	246	142	246.87	142.4	15	10	1.6	15.1	16.9	13.2	Amorphous Debris
2011	246	142	246.32	142.54	11	10	1.7	14.4	13.3	11	Amorphous Debris
2011	246	142	246.71	142.59	18	10	1.9	20.7	16.4	7.9	Amorphous Debris
2011	246	142	246.09	142.78	25	10	2.3	19.1	15	111.6	Amorphous Debris
2011	246	142	246.64	142.02	1	10	2.3	24.4	13.4	9	Amorphous Debris
2011	246	142	246.01	142.85	29	10	2.4	17.7	13.6	9.9	Amorphous Debris
2011	246	142	246.36	142.66	16	10	3.6	24	13..8	11.2	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2011	246	142	246.72	142.38	13	10	3.6	25	21.1	9.5	Amorphous Debris
2011	246	142	246.72	142.38	13	10	3.6	25	21.1	9.5	Amorphous Debris
2011	246	142	246.58	142.73	23	10	4	30.9	16.3	8.4	Amorphous Debris
2011	246	142	246.31	142.53	12	10	4	24.2	21.9	12.8	Amorphous Debris
2011	246	142	246.63	142.67	19	10	4.6	25.8	24.1	8.5	Amorphous Debris
2011	246	142	246.72	142.11	3	10	5	22.6	15.2	10.3	Amorphous Debris
2011	246	142	246.5	142.45	9	10	5.8	21.1	12.7	13.1	Amorphous Debris
2011	246	142	246.06	142.24	6	10	6.4	23.8	15.6	17.1	Amorphous Debris
2011	246	142	246.03	142.35	8	10	7.2	19.8	20.5	12.6	Amorphous Debris
2011	246	142	246.55	142.75	22	10	7.3	27	18.7	11.1	Amorphous Debris
2011	246	142	246.4	142.69	17	10	7.7	26.5	23.1	15.9	Amorphous Debris
2011	246	142	246.8	142.35	14	10	7.8	26.9	15.6	12.2	Amorphous Debris
2011	246	142	246.6	142.09	2	10	8.2	22.2	21.6	17.6	Amorphous Debris
2011	246	142	246.6	142.09	2	10	8.2	22.2	21.6	17.6	Amorphous Debris
2011	246	142	246.03	142.3	7	10	10.1	38.5	18	16.5	Amorphous Debris
2011	246	142	246.86	142.08	4	10	13.3	41.4	20	15.7	Amorphous Debris
2011	246	142	246.86	142.08	4	10	13.3	41.4	20	15.7	Amorphous Debris
2011	246	142	246.69	142.84	27	10	14.8	40.9	40.1	10.1	Amorphous Debris
2011	246	142	246.64	142.88	26	10	21	34.1	23.6	24.4	Amorphous Debris
2011	246	142	246.46	142.5	10	10	21.6	43.2	25.1	21	Amorphous Debris
2011	246	142	246.75	142.67	20	10	24.7	34.8	25.4	22	Amorphous Debris
2011	246	142	246.53	142.71	21	10	31.2	45.5	34.7	29.7	Amorphous Debris
2011	246	142	246.48	142.29	5	10	34.2	40.1	40.6	21.1	Amorphous Debris
2011	246	142	246.58	142.78	24	10	43.6	58.6	43.1	20.7	Amorphous Debris
2011	246	142	246.2	142.91	28	10					Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2011	246	142	246.14	142.58	10	11	27.4	42.1	34.1	28.4	Pebble
2011	246	142	246.63	142.72	20	11	3.9	33.6	14.7	9.4	Pebble
2011	246	142	246.34	142.47	7	11	7.1	24.9	21.2	17.6	Pebble
2011	246	142	246.82	142.52	9	11	6.4	24.1	19.7	13.4	Amorphous Debris
2011	246	142	246.19	142.67	11	11	2.8	24.4	12.4	11	Pebble
2011	246	142	246.63	142.72	21	11	3.9	26	15.4	12	Pebble
2011	246	142	246.33	142.77	22	11	4.8	23.5	16.9	11.4	Pebble
2011	246	142	246.48	142.73	17	11	4.9	18.6	14.5	12	Pebble
2011	246	142	246.02	142.96	24	11	7.8	26.5	21.3	15	Pebble
2011	246	142	246.45	142.35	5	11	12.9	35.8	29	20.2	Pebble
2011	246	142	246.51	142.73	18	11	24.1	39.1	32.5	20.1	Pebble
2011	246	142	246.85	142.17	4	11	11.1	36.7	24.3	13.9	Pebble
2011	246	142	246.26	142.68	12	11	9.5	30.5	22.1	19.4	Pebble
2011	246	142	246.73	142.16	3	11	19.3	62.7	27.9	13.8	Pebble
2011	246	142	246.44	142.69	16	11	3.3	26	22.2	6.9	Amorphous Debris
2011	246	142	246.2	142.45	6	11	3.5	25.1	23.5	7.2	Pebble
2011	246	142	246.55	142.12	2	11	10.7	25.7	20	13.9	Pebble
2011	246	142	246.42	142.61	15	11	1.8	21.6	10.8	5.3	Pebble
2011	246	142	246.34	142.97	25	11	1.2	23.1	14.9	4.3	Pebble
2011	246	142	246.36	142.67	14	11	3.4	27.8	16	10.9	Pebble
2011	246	142	246.35	142.81	23	11	3.2	22.9	17.8	10	Pebble
2011	246	142	246.44	142.97	26	11	4.7	22.6	18.8	14.7	Pebble
2011	246	142	246.27	142.62	13	11	8	26.7	18.2	18.8	Pebble
2011	246	142	246.57	142.74	19	11	10.4	22.5	18.6	17.3	Pebble
2011	246	142	246.72	142.42	8	11	15.3	26.8	23.4	20.3	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2011	246	142	246.61	142.01	1	11	29.1	41.9	38.2	26.3	Pebble
2011	246	142	246.38	142.92	29	12	2.6	23.6	12.8	8.5	Pebble
2011	246	142	246.2	142.39	8	12	2.7	27.5	10.6	6.8	Pebble
2011	246	142	246.43	142.34	6	12	2.9	22.8	18.3	7.8	Pebble
2011	246	142	246.72	142.77	24	12	3.1	25.7	11.5	6.1	Pebble
2011	246	142	246.69	142.65	19	12	3.1	22.3	20.2	8.1	Pebble
2011	246	142	246.2	142.96	30	12	3.5	27.6	18.4	12.3	Pebble
2011	246	142	246.02	142.75	23	12	3.6	21.7	21.4	13	Pebble
2011	246	142	246.78	142.68	20	12	3.6	22.4	18.9	10.5	Pebble
2011	246	142	246.75	142.98	31	12	3.7	32.5	21.5	9.4	Pebble
2011	246	142	246.86	142.03	2	12	3.7	24.5	15.5	12	Pebble
2011	246	142	246.61	142.12	5	12	3.8	21.8	18.6	12.3	Pebble
2011	246	142	246.58	142.63	18	12	4.2	28.4	20.7	8.6	Pebble
2011	246	142	246.44	142.44	12	12	4.3	25.8	11.2	6.8	Pebble
2011	246	142	246.6	142.74	21	12	4.5	31.8	15	11.7	Pebble
2011	246	142	246.16	142.44	13	12	4.5	23.8	18	13.6	Pebble
2011	246	142	246.18	142.47	14	12	5.6	24.9	19.2	14.8	Pebble
2011	246	142	246.65	142.43	10	12	6	20.5	20	14.1	Pebble
2011	246	142	246.16	142.04	1	12	6.1	26.4	24.7	19.5	Pebble
2011	246	142	246.49	142.4	9	12	6.4	32	21.2	19.6	Pebble
2011	246	142	246.58	142.8	25	12	6.5	23.8	18.1	9.2	Pebble
2011	246	142	246.12	142.4	11	12	6.9	22	16.7	14.1	Pebble
2011	246	142	246.35	142.9	28	12	7	19.4	17.4	11.6	Pebble
2011	246	142	246.68	142.81	27	12	8.4	25.2	22.8	14.4	Pebble
2011	246	142	246.87	142.33	7	12	9.2	51.7	22.2	13.4	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2011	246	142	246.74	142.73	22	12	10.2	32.2	20.8	17.3	Pebble
2011	246	142	246.13	142.18	3	12	10.3	25.1	18.3	16.5	Pebble
2011	246	142	246.57	142.19	4	12	12.7	34.9	28	11	Pebble
2011	246	142	246.77	142.59	17	12	13.1	38	24.7	15.6	Pebble
2011	246	142	246.71	142.59	16	12	13.6	31.5	29.2	20.8	Pebble
2011	246	142	246.91	142.57	15	12	15.4	35.7	30.1	16.9	Pebble
2011	246	142	246.61	142.83	26	12	20.3	35	31.4	26	Pebble
2011	246	142	246.415	142.925	21	13	2	18.1	12.9	9.7	Pebble
2011	246	142	246.63	142.67	19	13	2.4	21.5	15.6	8.3	Pebble
2011	246	142	246.495	142.58	16	13	5.1	30.5	15.1	12.1	Pebble
2011	246	142	246.31	142.265	6	13	24.1	32.3	24	21.7	Pebble
2011	246	142	246.86	142.91	23	13	26.5	32.5	29.7	21.5	Pebble
2011	246	142	246.72	142.75	18	13	2.7	17.4	15	12	Pebble
2011	246	142	246.74	142.58	14	13	6	22.3	18.7	10.9	Pebble
2011	246	142	246.77	142.625	15	13	6.8	23.8	20.8	10.6	Pebble
2011	246	142	246.66	142.12	2	13	62.7	52.6	43.9	33.2	Pebble
2011	246	142	246.69	142.38	11	13	5.3	33.4	13.9	10.6	Pebble
2011	246	142	246.38	142.1	3	13	2.6	24.4	15.2	11.8	Pebble
2011	246	142	246.175	142.97	22	13	3.5	25	14.4	13.5	Pebble
2011	246	142	246.74	142.51	13	13	6.4	24.9	24	14	Pebble
2011	246	142	246.63	142.45	10	13	6.4	24.9	24	14	Pebble
2011	246	142	246.38	142.38	9	13	11.7	34.5	25.1	17.6	Pebble
2011	246	142	246.76	142.42	12	13	15.6	36.9	27.5	24.7	Pebble
2011	246	142	246.822	142.705	17	13	38.3	48.8	35.1	24.3	Pebble
2011	246	142	246.11	142.095	5	13	103.5	55.4	52.6	24.8	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2011	246	142	246.695	142.785	19	13	2.4	21.5	15.6	8.3	Pebble
2011	246	142	246.77	142.875	20	13	1.4	28.7	20.8	10.8	Pebble
2011	246	142	246.22	142.325	8	13	3.4	26	12.7	8.3	Pebble
2011	246	142	246.395	142.18	4	13	1.6	21.8	11.3	7.9	Pebble
2011	246	142	246.79	142.02	1	13	3	22.7	20.7	8.2	Pebble
2011	246	142	246.17	142.295	7	14					Pebble
2011	248	140	248.29	140.88	6	16	1.1	19.8	18.3	3.4	Debris
2011	248	140	248.14	140.83	7	16	5.7	36.8	18.5	15.3	Pebble
2011	248	140	248.495	140.76	4	16	6.4	27	14.2	11.2	Flake
2011	248	140	248.79	140.66	3	16	12.7	25.7	21.7	18.8	Amorphous Debris
2011	248	140	248.74	140.39	2	16	12.7	30	25.1	22.3	Amorphous Debris
2011	248	140	248.75	140.35	1	16	19.2	44.6	27.1	21.6	Amorphous Debris
2011	248	140	248.37	140.82	5	16	22.4	38.9	28.9	23.8	Pebble
2011	248	140	248.625	140.01	6	17	0.9	18.9	13.7	3.6	Pebble
2011	248	140	248.21	140.11	3	17	4.5	21.9	11.7	11.9	Pebble
2011	248	140	248.15	140.09	2	17	6.7	25.6	24.8	12.8	Pebble
2011	248	140	248.165	140.17	1	17	14.3	35.3	30.4	17.1	Pebble
2011	248	140	248.52	140.32	7	17	15.1	38.8	25.4	22.5	Pebble
2011	248	140	248.355	140.205	4	17	22.4	42	41.5	15.2	Pebble
2011	248	140	248.44	140.14	5	17					Pebble
2012	246	138	246.92	139.57	3	3	15.5	31.8	10.1	21.7	Pebble
2012	246	138	246.44	139.46	1	3	2.2	22.5	13.4	10.4	Amorphous Debris
2012	246	138	246.89	139.09	2	3	0.8	24.1	8.9	6	Debris
2012	246	138	246.2	138.05	1	3	19	28.2	21.7	21.3	Amorphous Debris
2012	246	138	246.2	138.05	1	3	19	28.2	21.7	21.3	

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2012	246	138	246.23	139.92	4	4	27.4	30.5	29.4	20.8	Pebble
2012	246	138	246.32	139.24	2	4	20.7	38.1	32.5	24.5	Pebble
2012	246	138	246.33	139.55	11	4	7.1				Amorphous Debris
2012	246	138	246.12	139.07	1	4	6.3	27.5	26	14	Amorphous Debris
2012	246	138	246.12	139.84	6	4	5.8	28.5	27.4	9	Amorphous Debris
2012	246	138	246.38	139.52	8	4	17.1	33.9	26.7	16.1	Amorphous Debris
2012	246	138	246.04	139.88	7	4	7.4	22.4	18.6	12.2	Pebble
2012	246	138	246.18	139.94	5	4	7.9	16.7	16.8	20.1	Pebble
2012	246	138	246.31	139.81	3	4	8.8	32.8	30.3	10.8	Debris
2012	246	138	246.32	139.45	9	4	3.9	31.9	17.2	15	Amorphous Debris
2012	246	138	246.29	139.5	10	4		131.6	158.6	88.7	Boulder
2012	246	138	246.61	139.81	4	5	4.4	18.9	23.4	16	Amorphous Debris
2012	246	138	246.22	139.71	3	5	7.5	25.3	19.7	15	Pebble
2012	246	138	246.2	139.63	2	5	6.9	27.6	22.8	13.1	Pebble
2012	246	138	246.13	139.23	1	5	6.1	27	18.6	15.2	Amorphous Debris
2012	246	138	246.23	138.13	1	5	4.5	33.7	22.3	7.6	Debris
2012	246	138	246.25	138.05	2	5	36.5	42.9	29.1	22	Amorphous Debris
2012	246	138	246.68	138.78	5	5	20.2	34	28.6	14.7	Pebble
2012	246	138	246.5	138.19	3	5	3	19.3	18.5	10.2	Amorphous Debris
2012	246	138	246.63	138.6	4	5	1.2	23.4	12.4	4.6	Debris
2012	246	138	246.03	138.77	6	5	40.1	35.1	34.1	23.9	
2012	246	138	246.6	139.23	5	6	5	26.9	25.2	8.9	Amorphous Debris
2012	246	138	246.35	138.36	4	6	11.6	32.6	19.9	12.4	Pebble
2012	246	138	246.23	138.65	2	6	11	30.7	25.7	13.3	Amorphous Debris
2012	246	138	246.04	138.37	1	6	14.9	28.9	31	18.9	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2012	246	138	246.48	139.63	8	6	6.9	24.5	23.3	11.2	Pebble
2012	246	138	246.3	139.59	7	6	5	26.3	17.7	14	Pebble
2012	246	138	246.68	139.49	6	6	12.1	39.5	26.4	15.6	Pebble
2012	246	138	246.18	138.97	3	6	9.2	27	17	11.8	Amorphous Debris
2012	246	138	246.17	138.54	5	6	10.4	29.9	26	14	Pebble
2012	246	138	246.21	138.45	3	6	1.9	22.9	13	7.2	Amorphous Debris
2012	246	138	246.35	138.45	4	6	1.3	16.4	8.9	7.9	Amorphous Debris
2012	246	138	246.68	138.13	2	6	1.7	25.2	12.1	7.3	Debris
2012	246	138	246.05	138.38	1	6	13.6	35.6	28.3	14.1	Pebble
2012	246	138	246.48	139.175	3	7	0.2	13.9	7.6	2.8	Flake
2012	246	138	246.71	139.44	6	7	6.4	29.1	15.5	13.1	Amorphous Debris
2012	246	138	246.99	139.9	2	7					Amorphous Debris
2012	246	138	246.925	139.68	8	7	2.4	24.4	15.8	7.8	Debris
2012	246	138	246.11	139.99	1	7					Debris
2012	246	138	246.88	139.885	9	7	9.9	27.6	23.7	11.6	Pebble
2012	246	138	246.55	139.99	14	7	10.1	34.5	22.3	19.1	Pebble
2012	246	138	246.99	139.21	5	7	4.4	27.5	17.3	12.6	Pebble
2012	246	138	246.94	139.7	10	7	4.8	24.9	22.4	12.3	Amorphous Debris
2012	246	138	246.85	139.79	13	7	6.2	29.8	20.9	10.3	Debris
2012	246	138	246.95	139.87	12	7	8.1	27.6	21.4	20.5	Pebble
2012	246	138	246.685	139.5	7	7	36.9	43.4	43.4	22.2	Debris
2012	246	138	246.96	139.85	11	7	5.4	21.4	20.2	9.8	Pebble
2012	246	138	246	139	4	7	10.7	31	24.9	18.3	Pebble
2012	246	138	246.11	138.09	11	7	10.4	26.5	19.2	14.4	Pebble
2012	246	138	246.15	138.7	2	7	1.8	22.11	12.1	8.3	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2012	246	138	246.18	138.1	10	7	12.3	25.4	20.6	16.4	Amorphous Debris
2012	246	138	246.21	138.115	1	7	10.4	31.4	27	17.8	Pebble
2012	246	138	246.66	138.82	6	7	3	24	14.8	7.1	Pebble
2012	246	138	246.82	138.45	8	7	8.2	27.3	25.2	10.2	Amorphous Debris
2012	246	138	246.67	138.75	7	7	0.5	12.6	10.7	5.6	Debris
2012	246	138	246.72	138.09	9	7	4.7	23.5	18.5	13.2	Amorphous Debris
2012	246	138	246.51	138.87	5	7	5.2	21.2	18.6	9.1	Pebble
2012	246	138	246.09	138.9	3	7	5.2	29.9	17.7	9.7	
2012	246	138	246.22	138.89	4	7	5.1	23.6	13.2	9.2	
2012	246	138	246.17	139.13	5	8	9.7	26.5	24	18.7	Pebble
2012	246	138	246	139.04	6	8	14.7	30.2	22.9	17.1	Pebble
2012	246	138	246.86	139.98	12	8	10.9	33.7	25.5	20.8	Pebble
2012	246	138	246.64	139.1	2	8	6.9	28.4	19.6	14.3	Pebble
2012	246	138	246.98	139.41	7	8	6.1	24.7	18.4	16.2	Pebble
2012	246	138	246.98	139.64	10	8	5.3	25.1	26.4	10.7	Amorphous Debris
2012	246	138	246.98	139.7	11	8	2.4	19.3	15.7	11.9	Amorphous Debris
2012	246	138	246.78	139.71	9	8	7	25.5	19.5	15	Pebble
2012	246	138	246.19	139.05	4	8	16.1	30.8	26.2	21.1	Debris
2012	246	138	246.3	139.18	3	8	12.9	31	24.2	15.6	Pebble
2012	246	138	246.55	139.68	8	8	1.2	21.6	16.2	4.3	Debris
2012	246	138	246.99	139.08	1	8	5.7	30.9	19.8	9.4	Pebble
2012	246	138	246.46	138.87	10	8	2	17.6	12	9	Pebble
2012	246	138	246.03	138.38	5	8	3.6	20.1	18.5	8.4	Amorphous Debris
2012	246	138	246.34	138.21	1	8	0.5	16	9.6	3.8	Debris
2012	246	138	246.16	138.7	7	8	1.9	22.1	16.5	4.8	Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2012	246	138	246.04	138.4	6	8	2.1	19.7	18.6	11	Amorphous Debris
2012	246	138	246.11	138.84	8	8	2.6	17.3	14.8	11.6	Pebble
2012	246	138	246.41	138.58	11	8	2.4	19.9	13.9	12.4	Pebble
2012	246	138	246.29	138.27	2	8	5.2	18.3	17.6	10.3	Pebble
2012	246	138	246.17	188.43	4	8	17.7	36.1	30.7	16.9	Pebble
2012	246	138	246.28	138.85	9	8	2.8	15.3	13.1	11.2	Pebble
2012	246	138	246.97	138.92	12	8	3.2	22.6	20.1	14.2	Debris
2012	246	138	246.25	138.3	3	8	8.6	33.3	19.5	15.9	Amorphous Debris
2012	246	138	246.04	139.42	5	9	6.4	29.4	20.4	15.1	Pebble
2012	246	138	246.42	139.33	6	9	1.3	17.4	12.2	5.9	Amorphous Debris
2012	246	138	246.28	139.74	8	9	1.1	18.2	12.6	5.5	Amorphous Debris
2012	246	138	246.08	139.07	1	9	19.6	35.1	34.2	16.7	Pebble
2012	246	138	246.912	139.11	4	9	16.9	37.1	34.7	13.4	Pebble
2012	246	138	246..15	139.76	7	9	3.2	26	14.3	10.2	Amorphous Debris
2012	246	138	246.79	139.97	13	9	28.4	32.7	32	24.5	Pebble
2012	246	138	246.79	139.2	14	9	186.1	77.6	72.5	40.3	cobble
2012	246	138	246.39	139.56	15	9	198.5	87.1	87.4	34.6	cobble
2012	246	138	246.58	139.94	12	9	6.8	19.8	19.9	12.5	Pebble
	246	138	246.39	138.15	16	9					Amorphous Debris
2012	246	138	246.981	139.65	9	9	2.8	22.2	12.6	8.9	Amorphous Debris
246.11	246	138	139.97	96.9	10	9	7.1	25.8	19.5	14.9	Pebble
246.36	246	138	139.91	96.87	11	9	0.7	13.3	15.1	5.5	Flake
2012	246	138	246.42	139.2	2	9	7.9	18.8	21	20.9	Pebble
2012	246	138	246.66	139.055	3	9	1.2	17.6	17.9	4.4	Flake
2012	246	138	246.99	138.78	14	9		13.5	12.8	6	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2012	246	138	246.41	138.56	8	9		16	17.6	9.8	Pebble
2012	246	138	246.09	138.21	1	9		24.9	15.1	7.2	Amorphous Debris
2012	246	138	246.13	138.61	5	9		27.3	17.1	13.1	Amorphous Debris
2012	246	138	246.88	138.65	13	9		16.9	16.3	13.9	Pebble
2012	246	138	246.73	138.75	11	9		15.3	15.1	5.6	Amorphous Debris
2012	246	138	246.24	138.33	2	9		17	15.4	11.7	Pebble
2012	246	138	246.86	138.69	12	9		12.8	11.6	3.8	Flake Fragment
2012	246	138	246.4	138.62	7	9		14.4	12.4	9.7	Pebble
2012	246	138	246.84	138.87	10	9		18.4	9.5	10	Pebble
2012	246	138	246.18	138.57	4	9		12.5	12.7	6.4	Pebble
2012	246	138	246.41	138.7	20	9		61.4	59.5	25	Debris
2012	246	138	246.2	138.5	3	9		18.5	17.5	7.8	Amorphous Debris
2012	246	138	246.8	138.64	6	9		22.5	13.7	11.4	Amorphous Debris
2012	246	138	246.37	138.15	19	9		63.7	48.8	35.4	Debris
2012	246	138	246.83	138.28	18	9		15.1	14.8	15.5	Pebble
2012	246	138	246.52	138.32	17	9		13.4	22.7	8.5	Amorphous Debris
2012	246	138	246.64	138.94	9	9		15.1	13.2	4.3	Flake
2012	246	138	246.58	138.47	16	9		18.7	17.2	8.8	Amorphous Debris
2012	246	138	246.5	138.55	15	9		14.3	13.6	12.4	Pebble
2012	246	138	246.97	139.44	10	10	7.9	25.3	23.1	13.5	Pebble
2012	246	138	246.46	139.37	5	10	15.5	27.8	23.4	17.5	Pebble
2012	246	138	246.16	139.99	17	10	8.2	22.8	24.6	20.2	Pebble
2012	246	138	246.95	139.92	19	10	5	28.7	18.4	13.2	Pebble
2012	246	138	246.83	139.37	9	10	11.9	32.7	18.9	14.3	Pebble
2012	246	138	246.04	139.85	16	10	13.6	46	33	9.9	Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2012	246	138	246.76	139.55	15	10	18.6	40.4	26.6	18	Pebble
2012	246	138	246.99	139.79	20	10	21.2	37.4	29.2	12.1	Amorphous Debris
2012	246	138	246.43	139.07	2	10	10.5	35.8	23.7	12.4	Debris
2012	246	138	246.44	139.5	12	10	6.3	27	18.3	10.5	Amorphous Debris
2012	246	138	246.59	139.37	6	10	5.7	27	15.4	16.3	Pebble
2012	246	138	246.66	139.36	8	10	9.5	39.7	22.4	12.5	Pebble
2012	246	138	246.62	139.4	7	10	7.1	24	23.2	16.3	Pebble
2012	246	138	246.16	139.57	11	10	6.5	26.4	20.7	15.6	Pebble
2012	246	138	246.61	139.08	3	10	8.7	29	18.8	16.2	Amorphous Debris
2012	246	138	246.7	139.47	13	10	5.9	33.5	15.2	11.9	Amorphous Debris
2012	246	138	246.7	139.55	14	10	40.2	53.6	40.8	17	Pebble
2012	246	138	246.47	139.8	18	10	0.5	13	9.3	5.6	Amorphous Debris
2012	246	138	246.12	139.25	1	10	1.1	19.6	10	6.6	Debris
2012	246	138	246.48	139.34	4	10	1	17.2	17.5	3.9	Flake
2012	246	138	246.52	138.35	8	10		31.6	19.7	14.4	Pebble
2012	246	138	246.55	138.27	7	10		26.2	24.3	12.2	Pebble
2012	246	138	246.07	138.22	4	10		29.5	24.3	14	Amorphous Debris
2012	246	138	246.8	138.29	12	10		15	8.8	7.3	Debris
2012	246	138	246.66	138.44	9	10		25.5	18.6	8.9	Debris
2012	246	138	246.29	138.62	3	10		23	14.1	11.1	Pebble
2012	246	138	246.27	138.11	5	10		19.1	19.6	9.6	Pebble
2012	246	138	246.09	138.51	2	10		19.9	19.6	10.6	Pebble
2012	246	138	246.42	138.79	1	10		19.3	16	11.3	Pebble
2012	246	138	246.26	138.17	6	10		38.4	35.6	11.7	Debris
2012	246	138	246.34	138.48	13	10		100	76.2	70.1	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2012	246	138	246.78	138.13	11	10		17.5	12.6	6.2	Debris
2012	246	138	246.47	138.38	10	10		14.6	9.8	4.4	Flake
2012	246	138	246.86	139.86	15	11		31.7	26.6	17.1	Pebble
2012	246	138	246.77	139.9	14	11		25.4	15.7	13.9	Pebble
2012	246	138	246.78	139.25	20	11		18.6	15.6	10.6	Pebble
2012	246	138	246.37	139.98	18	11		16.3	12.5	5.6	Debris
2012	246	138	246.15	139.68	7	11		32.8	21.3	10	Debris
2012	246	138	246.92	139.88	16	11		28.7	25.1	11.9	Amorphous Debris
2012	246	138	246.59	139.46	3	11		20.7	18	6.6	Amorphous Debris
2012	246	138	246.03	139.36	1	11		14.7	12.5	8.6	Amorphous Debris
2012	246	138	246.57	139.37	2	11		22.6	15	9.6	Pebble
2012	246	138	246.23	138.69	8	11		21.3	13.7	9.8	Amorphous Debris
2012	246	138	246.07	139.88	11	11		23.3	15	7.8	Debris
2012	246	138	246.52	139.83	13	11		19.5	14.1	6.5	Amorphous Debris
2012	246	138	246.97	139.67	9	11		28.2	28.2	13.6	Amorphous Debris
2012	246	138	246.4	139.57	4	11		25	23.8	11.3	Amorphous Debris
2012	246	138	246.05	139.92	12	11		24.2	17.7	10.4	Amorphous Debris
2012	246	138	246.77	139.51	6	11		21.8	20.9	6.6	Debris
2012	246	138	246.52	139.59	5	11		18.5	12.8	2.7	Debris
2012	246	138	246.8	139.26	21	11		20.8	12.6	7.6	Debris
2012	246	138	246.99	139.77	10	11		28.6	20.3	10.3	Amorphous Debris
2012	246	138	246.98	139.86	17	11		27.4	21.1	11.1	Pebble
2012	246	138			19	11		35.3	32.8	24.8	
2012	246	138	246.45	138.76	13	11		18.2	15.3	9.2	Pebble
2012	246	138	246.18	138.71	5	11		21.2	15.4	12.1	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2012	246	138	246.31	138.72	8	11		11.2	5.7	1.8	Amorphous Debris
2012	246	138	246.82	138.79	21	11		33.7	18.3	18	Amorphous Debris
2012	246	138	246.3	138.98	4	11		13.5	11.4	7.3	Amorphous Debris
2012	246	138	246.29	138.91	24	11		18.4	14.3	10.7	Pebble
2012	246	138	246.5	138.52	25	11		16.1	13.1	9.5	Pebble
2012	246	138	246.03	138.27	1	11		21.2	18.2	10.9	Pebble
2012	246	138	246.7	138.7	18	11		22.3	15.9	13.3	Amorphous Debris
2012	246	138	246.17	138.44	19	11		16.1	14.4	9.4	Amorphous Debris
2012	246	138	246.39	138.49	9	11		26.9	17.1	9.9	Amorphous Debris
2012	246	138	246.4	138.65	10	11		19	10.3	6.2	Pebble
2012	246	138	246.49	138.85	14	11		19.4	16.4	12.5	Amorphous Debris
2012	246	138	246.12	138.4	6	11		16	10.6	7.4	Pebble
2012	246	138	246.25	138.86	3	11		17.6	13.7	4.1	Amorphous Debris
2012	246	138	246.78	138.87	22	11		40.3	45.8	20.1	Amorphous Debris
2012	246	138	246.48	138.13	17	11		20.7	17.4	13.4	Amorphous Debris
2012	246	138	246.52	138.48	16	11		17.2	11.8	6.2	Pebble
2012	246	138	246.22	138.37	7	11		12.9	11.9	6.7	Amorphous Debris
2012	246	138	246.41	138.68	11	11		17.2	11.8	7.3	Amorphous Debris
2012	246	138	246.84	138.88	23	11		14.5	12	9.9	Pebble
2012	246	138	246.45	138.71	12	11		34.3	27.2	21.2	Pebble
2012	246	138	246.78	138.77	20	11					Pebble
2012	246	138	246.45	138.8	15	11		35.5	20.2	10.5	Amorphous Debris
2012	246	138	246.01	138.38	2	11		22.8	16	10.6	Amorphous Debris
2012	246	138			9	12		22	24.3	15.4	Pebble
2012	246	138	246.3	139.58	20	12		24.4	26.9	19.1	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2012	246	138	246.26	139.48	17	12		24.6	9.5	7.8	Amorphous Debris
2012	246	138	246.295	139.34	6	12		12.4	12.8	7.8	Pebble
2012	246	138	246.24	139.25	5	12		20.4	15.1	8.1	Amorphous Debris
2012	246	138	246.09	139.55	19	12		40.9	25.6	22	Amorphous Debris
2012	246	138			15	12		47.1	33.1	31.7	Pebble
2012	246	138	246.62	138.2	10	12		21.8	24.5	13.3	Pebble
2012	246	138	246.28	139.12	4	12		23.9	12.3	12.6	Debris
2012	246	138	246.445	139.68	23	12		24.4	19.9	12.9	Pebble
2012	246	138	246.555	139.31	14	12		34.4	21.7	13.8	Pebble
2012	246	138	246.95	139.29	12	12		24.4	23.6	17.4	Pebble
2012	246	138	246.7	139.79	30	12		17.9	15.3	3	Flake
2012	246	138	246.205	139.15	3	12		16.9	16.7	4.1	Amorphous Debris
2012	246	138	256.56	139.15	16	12		13.7	14.4	3.4	Flake
2012	246	138	246.64	139.95	31	12		18.1	16	11.4	Pebble
2012	246	138	246.41	139.21	7	12		23.7	24.9	18.6	Pebble
2012	246	138	246.2	139.78	27	12		22.7	20.8	10.4	Amorphous Debris
2012	246	138	246.98	139.25	11	12		23.6	19.1	10.5	Pebble
2012	246	138	246.28	139.75	28	12		27.6	22.4	22.3	Pebble
2012	246	138	246.23	139.64	21	12		22.7	22.3	13.8	Pebble
2012	246	138	246.49	139.17	8	12		25.1	16.3	12.1	Amorphous Debris
2012	246	138	246.045	139.39	13	12		21.1	15.8	8.8	Pebble
2012	246	138	246.25	139.1	32	12		67.9	130.4	48.4	cobble
2012	246	138	241.92	139.6	22	12		22.4	10.2	5.1	Flake
2012	246	138	246.565	139.79	29	12		34.4	29.2	16.9	Pebble
2012	246	138	246.23	139.78	33	12		20.7	19.5	12.1	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2012	246	138	246.18	139.76	26	12		18.8	22.2	11.4	Pebble
2012	246	138	246.71	139.56	18	12		23.8	18.5	17.1	Pebble
2012	246	138	246.07	139.71	1	12		83.1	46.8	16	Debris
2012	246	138	246	139.76	24	12		20	18.2	11.8	Amorphous Debris
2012	246	138	246.06	139.76	25	12		14	11.3	5.2	Amorphous Debris
2012	246	138	246.07	139.79	2	12		39.8	34.5		Debris
2012	246	138	246.44	139.23	34	12					
2012	246	138	246.17	139.45	12	13		20.7	16	7	Amorphous Debris
2012	246	138	246.52	139.23	4	13		28.2	19.5	12.7	Pebble
2012	246	138	246.2	139.75	17	13		22.6	12.6	8.8	Pebble
2012	246	138	246.17	139.94	18	13		18.6	16.6	7.4	Amorphous Debris
2012	246	138	246.79	139.06	9	13		23.9	30.1	19.8	Amorphous Debris
2012	246	138	246.28	139.62	16	13		29.1	18.4	12	Pebble
2012	246	138	246.27	139.09	1	13		23.2	17.6	13.3	Amorphous Debris
2012	246	138	246.36	139.41	13	13		13.1	11.3	5.7	Amorphous Debris
2012	246	138	246.57	139.06	7	13		23.6	17.8	12.8	Pebble
2012	246	138	246.65	139.04	14	13		25.2	13.5	4.1	Broken Flake
2012	246	138	246.68	139.17	10	13		19.7	21.3	7.9	Pebble
2012	246	138	246.56	139.04	5	13		28.7	19.5	12.7	Amorphous Debris
2012	246	138	246.55	139.1	8	13		16.6	16.2	8.9	Pebble
2012	246	138	246.22	139.16	2	13		27.8	13.5	10.9	Amorphous Debris
2012	246	138	246.94	139.37	15	13		24.1	24.2	17.6	Pebble
2012	246	138	246.93	139.25	11	13		25.6	21.4	10.6	Pebble
2012	246	138	2446.66	139.43	21	13		24.8	19.6	9.6	Pebble
2012	246	138	246.41	139.22	3	13		18.6	11.8	5.6	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2012	246	138	246.58	139.02	6	13		14.4	12.1	5.2	Amorphous Debris
2012	246	138	246.99	139.94	20	13		21	19.7	11.6	Amorphous Debris
2012	246	138	246.09	139.91	19	13		25.5	12.6	11.5	Amorphous Debris
2012	246	140	246.55	141.04	5	11	0.2				Amorphous Debris
2012	246	140	246.96	141.9	11	11	9	28.3	17.7	14.3	Amorphous Debris
2012	246	140	246.7	141.45	7	11	5.7	20.3	19.8	11.4	Amorphous Debris
2012	246	140	246.33	141.35	4	11	14.9	30.8	22.8	17.2	Pebble
2012	246	140	246.13	141.58	1	11	36.5	52.6	36.5	26	Pebble
2012	246	140	246.28	141.63	3	11	3.7	25.9	19	12.7	Pebble
2012	246	140	246.6	141.54	6	11	1.3	18.4	13.3	5.2	Broken Flake
2012	246	140	246.84	141.65	9	11	14.7	30.1	28.6	20.9	Pebble
2012	246	140	246.2	141.48	2	11	19.6	30.3	30.4	25.5	Pebble
2012	246	140	246.79	141.15	8	11	6	22.1	17.1	19	Pebble
2012	246	140	246.95	141.63	10	11	5.5	21.3	20.5	16.7	Pebble
2012	246	140	246.64	141.25	13	12	10.1	25.2	23.5	17.3	Pebble
2012	246	140	246.32	141.19	3	12	4.9	31.6	23.2	9.1	Broken Flake
2012	246	140	246.81	141.6	9	12	10.5	39.4	30.7	12.1	Amorphous Debris
2012	246	140	246.1	141.49	1	12	13	31.7	26.2	15.5	Debris
2012	246	140	246.95	141.54	12	12	6.2	36	19.6	16.3	Pebble
2012	246	140	246.95	141.81	10	12	1.6	16.6	12.5	8.8	Amorphous Debris
2012	246	140	246.13	141.3	2	12	7	33.8	21.7	11.8	Amorphous Debris
2012	246	140	246.53	141.11	4	12	9.3	33.8	23.1	16	Pebble
2012	246	140	246.81	141.02	14	12	8.4	29.9	19.7	13	Amorphous Debris
2012	246	140	246.8	141.8	8	12	22	38.3	25.5	16	Pebble
2012	246	140	246.58	141.83	6	12	32.8	41.8	32.5	26.5	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2012	246	140	246.71	141.95	7	12	3.5	25.2	16.6	11.4	Debris
2012	246	140	246.52	141.45	5	12	14.1	41.8	21.8	12.7	Amorphous Debris
2012	246	140	246.93	141.84	11	12	9.4	27.1	22	19.8	Pebble
2012	246	140	246.87	141.67	13	13	2.6	18.8	11.8	8.8	Pebble
2012	246	140	246.36	141.41	4	13	7	30.7	25.8	12	Amorphous Debris
2012	246	140	246.61	141.955	7	13	3.9	22.9	17.6	13.1	Pebble
2012	246	140	246.36	141.98	5	13	2.7	17.6	14.2	10.6	Amorphous Debris
2012	246	140	246.84	141.62	15	13	3	23.4	18.5	15.4	Flake Fragment
2012	246	140	246.8	141.85	16	13	2.2	21.7	15.1	9.1	Pebble
2012	246	140	246.79	141.07	19	13	3.6	18.3	12.4	10.8	Pebble
2012	246	140	246.85	141.8	12	13	8.2	23.5	19.4	15.4	Amorphous Debris
2012	246	140	246.83	141.13	18	13	0.7	17.4	12	4.7	Broken Flake
2012	246	140	246.53	141.17	9	13	2	17.8	11.9	6.5	Pebble
2012	246	140	246.44	141.88	6	13	21.3	38	29.8	22.7	Pebble
2012	246	140	246.96	141.9	20	13	2.2	18.1	15.4	7.9	Amorphous Debris
2012	246	140	246.56	141.17	10	13	18.2	38.4	27.3	70.4	Pebble
2012	246	140	246.18	141.14	1	13	17.8	37.1	27.2	18	Pebble
2012	246	140	246.55	141.51	8	13	9	30.6	26.5	13.3	Pebble
2012	246	140	246.84	141.66	14	13	5.5	23.4	18.5	15.4	Pebble
2012	246	140	246.03	141.65	2	13	2.7	21	14.1	11.7	Pebble
2012	246	140	246.67	141.72	11	13	7	23.9	22	12.8	Pebble
2012	246	140	246.92	141.36	17	13	9.8	35.4	21.9	15.1	Amorphous Debris
2012	246	140	246.18	141.72	3	13	32.9	40.1	33.4	28.3	Pebble
2012	246	140	246.035	140.1	2	13	3.6	20.7	17.4	11.9	Pebble
2012	246	140	246.03	140.17	3	13	1.6	21.6	12.2	9.8	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2012	246	140	246.65	140.35	6	13	2.9	21.6	19.4	10.5	Pebble
2012	246	140	246.06	140.58	10	13	4.1	22.1	17	12.3	Pebble
2012	246	140	246.18	140.69	11	13	3.2	21.8	16.1	12.8	Pebble
2012	246	140	246.58	140.55	12	13	4.6	22.5	19.8	14	Pebble
2012	246	140	246.87	140.64	18	13	5.7	25.5	20.6	15.2	Pebble
2012	246	140	246.66	140.73	20	13	40.4	44.1	34.3	28	Pebble
2012	246	140	246.66	140.96	22	13	5	30.5	21.5	11.2	Amorphous Debris
2012	246	140	246.72	140.56	16	13	3.3	22.4	17.1	11.9	Debris
2012	246	140	246.61	140.8	19	13	0.2	13.9	8.4	2.7	Broken Flake
2012	246	140	246.76	141.74	23	13	0.9	20.2	11.4	6.5	Pebble
2012	246	140	246.03	140.05	1	13	2.7	21.8	17.8	8.5	Debris
2012	246	140	246.54	140.295	4	13	6.2	32.7	23.5	11	Complete Flake
2012	246	140	246.7	140.485	9	13	1.6	20.6	15.4	7.5	Complete Flake
2012	246	140	246.92	140.81	24	13	1.5	20.7	17.4	5.5	Amorphous Debris
2012	246	140	246.46	140.64	13	13	3.7	25.6	17.8	10.3	Debris
2012	246	140	246.94	140.51	17	13	3.8	25	11.7	10.8	Debris
2012	246	140	246.36	140.55	7	13	4.5	23.2	18.8	12.9	Amorphous Debris
2012	246	140	246.61	140.99	21	13	3.3	18.4	14.4	10.7	Pebble
2012	246	140	246.59	140.43	8	13	7.8	23.1	19.8	14.3	Pebble
2012	246	140	246.44	140.71	14	13	32.6	45.3	29	23	Pebble
2012	246	140	246.65	140.29	5	13	2.9	25	18.8	11.6	Pebble
2012	246	140	246.58	140.55	15	13	6	24.3	22.4	17.6	Pebble
2012	246	140	246.98	140.72	25	13	26.9	38.1	32.1	19.7	Pebble
2012	246	140	246	140.06	26	13	7	27.1	25.5	13.1	Debris
2012	246	140	247.06	141.21	3	14	0.6	18.3	12.2	3.9	Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2012	246	140	247.29	141.93	4	14	13.5	34.7	29.8	19.9	Pebble
2012	246	140	247.27	141.21	5	14	37.2	31.8	51.3	31.8	Pebble
2012	246	140	247.86	141.85	8	14	4.8	29.6	15.1	7	Pebble
2012	246	140	247.02	141.92	1	14	5	18.9	19.4	10	Pebble
2012	246	140	247.04	141.36	2	14	5.6	28.7	25.1	10.9	Debris
2012	246	140	247.81	141.66	7	14	12.6	29.5	21.2	16.3	Pebble
2012	246	140	247.5	141.14	6	14	1	20.1	15.7	2.3	complete Flake
2012	246	140	246.52	141.42	2	14		39.2	27	11.6	Pebble
2012	246	140	246.59	141.8	3	14		25.2	7.7	5.7	Amorphous Debris
2012	246	140	246.7	141.71	4	14		29.6	19.6	15.1	Amorphous Debris
2012	246	140	246.75	141.92	6	14		25.2	16	12.3	Pebble
2012	246	140	246.86	141.81	8	14		26.4	18.7	10.8	Pebble
2012	246	140	246.1	141.36	11	14		17.4	11.4	2.7	Broken Flake
2012	246	140	246.13	141.54	16	14		18	12.4	4	Broken Flake
2012	246	140	246.4	141.18	25	14		23	18.3	8.2	Amorphous Debris
2012	246	140	246.02	141.46	37	14		36.2	29.4	14	Pebble
2012	246	140	246.66	141.8	5	14		35.1	18	8	Amorphous Debris
2012	246	140	246.39	141.15	26	14		19.5	8.4	4.1	Flake
2012	246	140	246.8	141.49	35	14		40.8	21.2	16.5	Pebble
2012	246	140	246.14	141.59	14	14		34.2	18.9	16.3	Amorphous Debris
2012	246	140	246.04	141.52	19	14		17.4	10.5	7.3	Debris
2012	246	140	246.18	141.34	23	14		33.3	20.8	17.1	Amorphous Debris
2012	246	140	246.16	141.19	24	14		29.2	11.7	5.2	Broken Flake
2012	246	140	246.54	141.21	27	14		24.1	16.8	6.9	Broken Flake
2012	246	140	246.6	141.53	29	14		38.6	21.9	16	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2012	246	140	246.2	141.52	34	14		25	17.5	8.6	Amorphous Debris
2012	246	140	246.15	141.34	22	14		28	13.2	8.7	Debris
2012	246	140	246.84	141.51	9	14		39.1	25.5	13	Debris
2012	246	140	246.21	141.52	17	14		34.8	37.2	18.7	Pebble
2012	246	140	246.64	141.19	28	14		30.5	26.6	19.1	Pebble
2012	246	140	246.18	141.32	32	14		36.4	19.5	19.9	Debris
2012	246	140	246.07	141.74	12	14		58.9	32	30.4	Amorphous Debris
2012	246	140	246.08	141.64	13	14		21.9	16	10.8	Amorphous Debris
2012	246	140	246.12	141.31	31	14		48.1			Amorphous Debris
2012	246	140	246.31	141.995	1	14		18.1	15	5.4	Flake
2012	246	140	246.77	141.85	7	14		18.8	15.5	7.9	Pebble
2012	246	140	246.04	141.54	33	14		19.4	18.3	13.4	Pebble
2012	246	140	246.76	141.44	10	14		32.5	26.7	14.7	Pebble
2012	246	140	246.02	141.59	15	14		27	12.8	10.3	Amorphous Debris
2012	246	140	246.24	141.49	18	14		25.2	16	12.3	Amorphous Debris
2012	246	140	246.03	141.48	20	14		27.3	18.8	8.3	Debris
2012	246	140	246.12	141.3	36	14		20	16	10.8	Pebble
2012	246	140	246.06	141.28	30	14		24.3	13.5	7.2	Broken Flake
2012	246	140	246.02	141.38	21	14		41.6	35.9	28.2	Pebble
2012	246	140	246.16	140.76	22	14	1.3	28	13.2	8.7	Amorphous Debris
2012	246	140	246.67	140.35	12	14	0.6	58.9	32	30.4	Amorphous Debris
2012	246	140	246.33	140.07	3	14	5.9	25.2	7.7	5.7	Pebble
2012	246	140	246.35	140.45	11	14	1.1	17.4	11.4	2.7	Amorphous Debris
2012	246	140	246.05	140.95	26	14	9	19.5	8.4	4.1	Pebble
2012	246	140	246.29	140.65	19	14	3.4	17.4	10.5	7.3	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2012	246	140	246.18	140.99	30	14	3.7	24.3	13.5	7.2	Pebble
2012	246	140	246.61	140.42	13	14	0.1	21.9	16	10.8	Amorphous Debris
2012	246	140	246.82	140.22	6	14	0.4	25.2	16	12.3	Debris
2012	246	140	246.64	140.64	20	14	1.4	27.3	18.8	8.3	Amorphous Debris
2012	246	140	246.44	140.61	18	14	0.3	32.3	18.4	13.3	Amorphous Debris
2012	246	140	246.04	140.38	7	14	0.3	18.8	15.5	7.9	Debris
2012	246	140	246.74	140.57	14	14	0.3	34.2	18.9	16.3	Flake
2012	246	140	246.99	140.72	24	14	3.7	29.2	11.7	5.2	Pebble
2012	246	140	246.04	140.55	15	14	4.4	27	12.8	10.3	Amorphous Debris
2012	246	140	246.04	140.02	1	14	7.3	18.1	15	5.4	Pebble
2012	246	140	246.23	140.99	28	14	29.5	30.5	26.6	19.1	Pebble
2012	246	140	246.35	140.91	25	14	2.5	23	18.3	8.2	Amorphous Debris
2012	246	140	246.39	140.03	2	14	0.8	39.2	27	11.6	Amorphous Debris
2012	246	140	246.32	140.29	5	14	2.4	35.1	18	8	Amorphous Debris
2012	246	140	246.89	140.38	8	14	1.7	26.4	18.7	10.8	Amorphous Debris
2012	246	140	246.25	140.63	17	14	5	34.8	37.2	18.7	Pebble
2012	246	140	246.34	140.52	16	14	1.3	18	12.4	4	Broken Flake
2012	246	140	246.86	140.65	21	14	5.6	41.6	35.9	28.2	Amorphous Debris
2012	246	140	246.54	140.295	4	14	1.8	29.6	19.6	15.1	Flake
2012	246	140	246.34	140.72	29	14	2.7	38.6	21.9	16	Amorphous Debris
2012	246	140	246.15	140.95	27	14	7.1	24.1	16.8	6.9	Pebble
2012	246	140	246.48	140.36	9	14	5.2	39.1	25.5	13	Pebble
2012	246	140	246.11	140.41(?)	10	14	1.8	32.5	26.7	14.7	Flake
2012	246	140	246.33	140.71	23	14	4.7	33.3	20.8	17.1	Pebble
2012	246	140	247.43	141.58	5	15	21.5	33.1	29.8	19.6	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2012	246	140	247.73	141.46	6	15	11.7	31.1	28.2	10.5	Amorphous Debris
2012	246	140	247.26	141.97	4	15	4.3	27.4	19.2	7.9	Pebble
2012	246	140	247.84	141.89	7	15	2.2	25.6	12.7	6.6	complete Flake
2012	246	140	247.94	141.16	8	15	17.4	40.2	23.1	17.5	Pebble
2012	246	140	247.26	141.3	3	15	9.9	25.8	19.5	11.7	Amorphous Debris
2012	246	140	247.03	141.54	1	15	6.4	36.5	18.5	9.2	Debris
2012	246	140	247.06	141.45	2	15	14.3	31.4	22.5	17.9	Amorphous Debris
2012	246	140	246.65	141.93	5	15	9.5	22.6	19.4	17.2	Amorphous Debris
2012	246	140	246.12	141.66	2	15	14.3	33.9	23	11.8	Amorphous Debris
2012	246	140	246.14	141.71	1	15	5.8	25.6	25.4	11.2	Pebble
2012	246	140	246.84	141.74	4	15	11.5	35.8	27.6	14.6	Debris
2012	246	140	246.64	141.81	3	15	8.4	40.7	22.8	10	Amorphous Debris
2012	246	140	247.23	140.48	2	16	15.9	37.3	27.7	13.8	Pebble
2012	246	140	247.16	140.9	3	16	35.5	56.5	42.3	21.2	Debris
2012	246	140	247.77	140.44	1	16	1.4	18.9	14.9	5.6	Debris
2012	246	140	247.11	140.94	4	16	4.9	30.8	21.5	6.8	Flake
2012	246	140	247.32	140.98	5	16	16.5	32.1	29.7	14.9	Pebble
2012	246	140	246.51	141.76	18	16	3.1	23	21.7	8.3	Amorphous Debris
2012	246	140	246.1	141.86	16	16	11.7	32	24.7	15.5	Pebble
2012	246	140	246.34	141.26	5	16	4.2	23.7	14.2	9.8	Pebble
2012	246	140	246.3	141.37	7	16	7	32	22.7	11.1	Amorphous Debris
2012	246	140	246.16	141.15	2	16	5.6	23.4	19.1	14	Amorphous Debris
2012	246	140	246.12	141.04	1	16	5.3	22.8	20.3	13.3	Amorphous Debris
2012	246	140	246.58	141.68	17	16	1.3	17.1	12.9	6.7	Broken Flake
2012	246	140	246.76	141.22	12	16	8.3	23.8	19.1	13.9	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2012	246	140	246.61	141.14	8	16	11	37.7	19.3	13.9	Debris
2012	246	140	246.95	141.27	13	16	3.1	24.1	16.7	8.9	Amorphous Debris
2012	246	140	246.3	141.12	3	16	9.1	24.6	21.8	19.5	Pebble
2012	246	140	246.97	141.56	15	16	19.3	47.8	32.1	18.2	Amorphous Debris
2012	246	140	246.92	141.31	14	16	12.6	31.6	28.8	21.3	Pebble
2012	246	140	246.36	141.25	6	16	45.9	62.1	37.6	22.3	Debris
2012	246	140	246.65	141.12	10	16	10	27.4	22.7	11.5	Amorphous Debris
2012	246	140	246.56	141.82	19	16	21.3	42.5	31.4	21.3	Pebble
2012	246	140	246.42	141.15	4	16	2.8	21.9	15.1	9.7	Debris
2012	246	140	246.76	141.07	11	16	8.2	38.3	25.6	10.6	Debris
2012	246	140	246.61	141.02	9	16	5.8	30.4	18.7	13.2	Pebble
2012	246	140	246.55	140.49	15	16	2.1	18.4	13.7	6.2	Flake
2012	246	140	246.43	140.59	13	16	3.1	21.4	17.2	6.1	Debris
2012	246	140	246.38	140.54	10	16	2.7	21.3	15.7	7.8	Amorphous Debris
2012	246	140	246.61	140.96	23	16	5.6	24	15.8	10.4	Amorphous Debris
2012	246	140	246.39	140.88	19	16	2.9	22	17.6	6.2	Amorphous Debris
2012	246	140	246.33	140.55	9	16	6.3	30.9	23.3	10.6	Flake
2012	246	140	246.29	140.09	1	16	1.3	18.7	13.2	9	Amorphous Debris
2012	246	140	246.62	140.67	29	16	8.5	25.5	23.5	16.4	Pebble
2012	246	140	246.61	140.66	17	16	1.6	22.6	14	8.8	Amorphous Debris
2012	246	140	246.31	140.67	1	16	6.3	21.8	16.7	11.8	Pebble
2012	246	140	246.82	140.65	27	16	23.8	46.3	21.3	19	Amorphous Debris
2012	246	140	246.04	140.55	7	16	4.8	29.2	14.7	12.3	Debris
2012	246	140	246.55	140.71	16	16	6.5	22.9	16.2	13.4	Amorphous Debris
2012	246	140	246.59	140.88	25	16	8.1	31	20.2	17.9	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2012	246	140	246.61	140.86	24	16	14.5	27.9	23.7	20.1	Debris
2012	246	140	246.5	140.24	2	16	2.9	25.5	16.9	10.2	Amorphous Debris
2012	246	140	246.15	140.15	6	16	6.8	24.2	20.4	16	Pebble
2012	246	140	246.36	140.62	12	16	29.1	41.6	37.8	22.4	Pebble
2012	246	140	246.03	140.46	4	16	7.1	26	18.6	12.3	Pebble
2012	246	140	246.45	140.41	3	16	7.4	22.1	18.1	17.2	Amorphous Debris
2012	246	140	246.76	140.69	26	16	6.7	32.7	23	11.1	Broken Flake
2012	246	140	246.63	140.73	18	16	2.9	25.4	13.8	9.7	Amorphous Debris
2012	246	140	246.14	140.66	14	16	7	26.7	21.4	15.2	Pebble
2012	246	140	246.58	140.96	22	16	8	25.7	20.3	15.2	Amorphous Debris
2012	246	140	246.5	140.99	21	16	1.1	18.4	15.7	4.1	Debris
2012	246	140	246.4	140.94	20	16	2.8	17.4	14.4	10.5	Amorphous Debris
2012	246	140	246.78	140.62	28	16	8.8	26.8	23.7	16.8	Debris
2012	246	140	246.04	140.63	8	16	3.1	22.5	17.5	13.4	Amorphous Debris
2012	246	140	246.13	140.51	5	16	8.9	25.6	21.9	12.8	Pebble
2012	246	142	246.51	142.05	2	14	8.6	31.3	24.2	20.5	Pebble
2012	246	142	246.3	142.3	9	14	9.5	23.6	20.3	14.9	Pebble
2012	246	142	246.4	142.7	26	14	6.7	19.2	15.7	11.3	Pebble
2012	246	142	246.89	142.29	15	14	0.2	11.5	9.5	2.5	Amorphous Debris
2012	246	142	246.59	142.28	11	14	0.6	19.2	12.4	3.5	Amorphous Debris
2012	246	142	246.46	142.2	7	14	9.3	29.9	22.7	18	Pebble
2012	246	142	246.31	142.72	25	14	9.6	28.4	23.5	16.1	Pebble
2012	246	142	246.91	142.22	14	14	6.8	24.6	19.6	15.1	Pebble
2012	246	142	246.44	142.3	10	14	5.2	23.4	16.9	8.5	Amorphous Debris
2012	246	142	246.36	142.41	18	14	7.8	29.9	18.5	13.1	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2012	246	142	246.63	142.9	27	14	0.7	13.1	12.1	4.5	Flake
2012	246	142	246.48	142.43	20	14	1.8	18.8	12.6	10	Amorphous Debris
2012	246	142	246.48	142.09	3	14	4.5	20.7	14.6	13	Pebble
2012	246	142	246.27	142.41	17	14	3.6	21	11.4	12.2	Pebble
2012	246	142			28	14	0.7	14.9	11.6	5	Amorphous Debris
2012	246	142	246.7	142.07	4	14	3.3	20.8	14.4	9.1	Pebble
2012	246	142	246.3	142.15	6	14	3.1	19.5	18.2	16.1	Pebble
2012	246	142	246.3	142.23	8	14	1.9	19.9	12.2	9.6	Pebble
2012	246	142	246.92	142.45	22	14	1.1	16.7	14.4	7.1	Pebble
2012	246	142	246.31	142.64	24	14	5.5	24.5	21.2	14.2	Amorphous Debris
2012	246	142	246.89	142.29	16	14	8.7	25.8	19.3	15.6	Pebble
2012	246	142	246.87	142.21	13	14	1.2	19.4	10.9	6.5	Amorphous Debris
2012	246	142	246.91	142	5	14	15.4	32	28.7	13.4	Pebble
2012	246	142	246.64	142.94	29	14	2.2	21.7	16.1	9.7	Amorphous Debris
2012	246	142	246.49	142	1	14	6.3	23.3	15.6	12.1	Pebble
2012	246	142	246.54	142.44	21	14	5.2	24.8	19.6	15.2	Amorphous Debris
2012	246	142	246.43	142.42	19	14	8.1	24.3	19.9	13.9	Amorphous Debris
2012	246	142	246.63	142.27	12	14	3.6	17.3	13.7	11.7	Pebble
2012	246	142	246.22	142.63	23	14	1.7	13.7	14	9.3	
2012	246	142	246.08	142.06	1	15	10	29.2	22.5	17.7	Pebble
2012	246	142	246.52	142.16	15	15	0.25	15.5	8.3	1.8	Debris
2012	246	142	246.93	142.27	19	15	1.5	19.4	12.4	7.9	Amorphous Debris
2012	246	142	246.58	142.22	16	15	0.05	11.6	5	1.1	Amorphous Debris
2012	246	142	246.58	142.22	17	15	1.6	33.9	10.9	9.2	complete Flake
2012	246	142	246.63	142.78	6	15	2.7	21.2	17.2	8.3	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2012	246	142	246.28	142.28	3	15	5	32.8	20.4	13.5	Pebble
2012	246	142	246.59	142.04	14	15	6.5	21.5	16.1	12.8	Pebble
2012	246	142	246.41	142.07	12	15	5.7	20.8	18.8	14.4	Pebble
2012	246	142	246.66	142.36	13	15	7.7	33.7	17	14.9	Pebble
2012	246	142	246.14	142.93	2	15	9.9	29.8	25	12.9	Pebble
2012	246	142	246.82	142.89	7	15	12.8	37.2	25.1	18.8	Pebble
2012	246	142	246.74	142.7	9	15	10.5	26.1	24	19.3	Pebble
2012	246	142	246.42	142.8	4	15	2.5	74.5	60.4	23.1	Amorphous Debris
2012	246	142	246.89	142.34	11	15	15.1	42.8	27.6	15.9	Amorphous Debris
2012	246	142	246.76	142.15	21	15	19	32.8	28.1	20.9	Pebble
2012	246	142	246.81	142.16	20	15	8.7	34.6	33.1	9.3	Pebble
2012	246	142	246.63	142.26	18	15	3.7	20.9	14	13.5	Pebble
2012	246	142	246.73	142.11	23	15	11.4	34.8	24.3	18	Amorphous Debris
2012	246	142	246.92	142.87	8	15	44	44.2	31.9	26.6	Debris
2012	246	142	246.68	142.6	10	15	8.5	28.1	21.2	14.6	Pebble
2012	246	142	246.58	142.88	5	15	6.1	24.3	19.4	16	Pebble
2012	246	142	246.81	142.14	22	15	11.8	34.6	33.1	9.3	Amorphous Debris
2012	246	142	246.89	142.77	4	16	5.5	24	15.8	11.6	Amorphous Debris
2012	246	142	246.89	142.37	6	16	5.8	26.8	22.3	7.5	Pebble
2012	246	142	246.27	142.09	7	16	8.3	29.1	19.2	17.3	Pebble
2012	246	142	246.92	142.19	9	16	10.8	26.3	21.2	14.9	Amorphous Debris
2012	246	142	246.49	142.89	2	16	5.1	25.6	20	16.1	Amorphous Debris
2012	246	142	246.81	142.15	8	16	0.6	14.2	10.6	5	Flake Fragment
2012	246	142	246.37	142.97	1	16	2	18.5	14.5	9.9	Amorphous Debris
2012	246	142	246.8	142.58	5	16	5.2	21.2	18.5	10.1	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2012	246	142	246.57	142.84	3	16	7.1	28.9	24.2	13.3	Amorphous Debris
2012	246	142	246.31	142.81	1	17	1.3	21.1	9.8	6.6	Amorphous Debris
2012	246	142	246.72	142.02	5	17	0.1	11.3	6.9	2.2	complete Flake
2012	246	142	246.73	142.66	9	17	2.1	20.7	7.5	8	Pebble
2012	246	142	246.76	142.49	12	17	6.4	33.7	24.1	10.8	Debris
2012	246	142	246.92	142.67	13	17	3.6	24.3	11.3	9.6	Amorphous Debris
2012	246	142	246.8	142.55	14	17	1.1	20.8	14	4.8	Debris
2012	246	142	246.65	142.51	16	17	7.4	36.1	22.1	13.8	Pebble
2012	246	142	246.83	142.55	17	17	7.5	26.8	17.5	13.3	Amorphous Debris
2012	246	142	246.57	142.12	4	17	33.6	56.9	46.5	19.7	Debris
2012	246	142	246.62	142.51	11	17	0.8	18.6	10.9	4.6	Amorphous Debris
2012	246	142	246.63	142.18	6	17	2	16.9	16.3	6	Amorphous Debris
2012	246	142	246.58	142.52	10	17	0.9	17.3	6.1	6.2	Amorphous Debris
2012	246	142	246.03	142.02	3	17	0.2	8.7	2.7	3.6	Amorphous Debris
2012	246	142	246.88	142.98	15	17	29.1	49.5	28	17.4	Debris
2012	246	142	246.13	142.32	2	17	0.4	9.6	5.9	4	Amorphous Debris
2012	246	142	246.84	142.26	7	17	0.5	13.4	10.5	5	Amorphous Debris
2012	246	142	246.55	142.64	8	17	5	25.4	21.5	10.9	Amorphous Debris
2012	248	140	248.2	141.5	1	18	4.1	24.3	12.8	11.9	Pebble
2012	248	140	248.51	141.98	8	18	5.1	21.5	19.9	13.8	Pebble
2012	248	140	248.6	141.44	9	18	1.7	21.2	16.7	6	Pebble
2012	248	140	248.83	141.08	14	18	30.4	47.5	31.9	20.1	Pebble
2012	248	140	248.5	141.86	7	18	1.3	20	14.7	6.8	Broken Flake
2012	248	140	248.52	141.65	6	18	7.3	27.4	18.5	17.5	Pebble
2012	248	140	248.81	141.47	13	18	0.8	18.9	9.6	6.7	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2012	248	140	248.43	141.49	4	18	5	28.2	15.8	13.1	Amorphous Debris
2012	248	140	248.63	141.42	10	18	17	33.2	25.4	15.9	Amorphous Debris
2012	248	140	248.36	141.75	15	18	3.1	21.1	16.1	11.1	Debris
2012	248	140	248.63	141.34	11	18	1.9	21.6	17.2	9.5	Debris
2012	248	140	248.48	141.59	5	18	2.4	20.1	15	9.9	Pebble
2012	248	140	248.74	141.26	12	18	3.5	31.1	16.9	10.3	Amorphous Debris
2012	248	140	248.28	141.46	2	18	3.3	28.1	15.2	9.8	Pebble
2012	248	140	248.35	141.74	3	18	11.6	32.1	29.1	18.1	Pebble
2012	248	140	248.25	141.57	4	19	2.4	29.2	14.8	7.9	Amorphous Debris
2012	248	140	248.74	141.7	15	19	8.3	33.8	30.7	10.1	Debris
2012	248	140	248.6	141.07	11	19	7.7	25.3	19.8	13.8	Amorphous Debris
2012	248	140	248.4	141.75	8	19	3.5	24.3	18.2	10.2	Pebble
2012	248	140	248.64	141.23	12	19	2.5	20.4	14.3	12.3	Amorphous Debris
2012	248	140	248.53	141.82	10	19	5.2	24.9	19.5	16	Pebble
2012	248	140	248.77	141.94	14	19	35.5	44.8	35.3	23.2	Pebble
2012	248	140	248.41	141.66	7	19	14.9	31.8	19.8	18.3	Amorphous Debris
2012	248	140	248.05	141.42	3	19	6.3	29.5	24.1	15.7	Pebble
2012	248	140	248.31	141.48	5	19	29.1	39.8	28.6	18.1	Amorphous Debris
2012	248	140	248.53	141.19	9	19	5.5	27.6	18.4	14.7	Pebble
2012	248	140	248.92	141.2	1	19	6.1	33.7	19.6	12.6	Debris
2012	248	140	248.09	141.17	2	19	0.9	19.3	16.3	3.6	Flake
2012	248	140	248.38	141.17	6	19	12.3	29.4	24.6	14.6	Amorphous Debris
2012	248	140	248.7	141.36	13	19	1.4	19	13.2	6.2	Amorphous Debris
2012	248	140	248.31	141.77	2	20	1.3	17.9	15.1	5.6	Amorphous Debris
2012	248	140	248.77	141.52	12	20	3.5	23.8	10.3	9	Flake Fragment

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2012	248	140	248.89	141.12	16	20	8.2	26.6	23.5	12.6	Pebble
2012	248	140	248.9	141.07	17	20	5.3	25.5	15.5	11.3	Pebble
2012	248	140	248.09	141.53	1	20	1.1	16.9	15.1	5.2	Broken Flake
2012	248	140	248.37	141.18	5	20	7.3	29.6	14.9	10.4	Pebble
2012	248	140	248.57	141.4	9	20	21	35.3	25	19.6	Amorphous Debris
2012	248	140	248.73	141.31	10	20	5.9	22.5	18.6	12.4	Debris
2012	248	140	248.79	141.38	11	20	11.5	33.1	21.3	19.8	Pebble
2012	248	140	248.96	141.13	20	20	8.4	28	19.2	12.5	Pebble
2012	248	140	248.92	141.04	21	20	4.2	28.5	19	9.5	Debris
2012	248	140	248.9	141.83	14	20	10.9	26.7	17.3	13.9	Amorphous Debris
2012	248	140	248.9	141.17	15	20	2.7	17.8	11.8	11.7	Amorphous Debris
2012	248	140	248.55	141.12	6	20	5.8	30.4	17.2	13.3	Pebble
2012	248	140	248.17	141.96	19	20	10.6	32.6	21.4	19.2	Pebble
2012	248	140	248.6	141.15	7	20	47.3	51	41.3	17.6	Amorphous Debris
2012	248	140	248.3	141.99	3	20	4.2	23.8	21.6	13.9	Pebble
2012	248	140	248.88	141.82	13	20	2.3	22.1	17	11.2	Pebble
2012	248	140	248.41	141.92	4	20	13.8	32.6	18.7	19.5	Pebble
2012	248	140	248.67	141.15	8	20	78.5	52.1	51.1	22.8	Pebble
2012	248	140	248.89	141.05	18	20	3.6	31.6	15.8	9.4	Pebble
2012	248	140	248.44	141.16	8	21	2.8	25.1	19	6.7	Debris
2012	248	140	248.31	141.74	4	21	1.2	16.8	15.3	5.2	Debris
2012	248	140	248.55	141.45	17	21		117.3	773.1	59.6	Debris
2012	248	140	248.14	141.97	2	21	5.9	22.8	16.6	10.9	Amorphous Debris
2012	248	140	248.95	141.09	15	21	12.4	29.8	18.5	16.4	Amorphous Debris
2012	248	140	248.53	141.79	7	21	6.4	27.8	19.9	18.7	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2012	248	140	248.55	141.28	10	21	11.2	38.9	27.2	16.3	Amorphous Debris
2012	248	140	248.22	141.99	3	21	4.8	21	18.8	12.4	Flake
2012	248	140	248.68	141.03	12	21	0.5	17.3	9.3	5.5	Flake
2012	248	140	248.49	141.82	6	21	9	28.2	22.9	19.3	Pebble
2012	248	140	248.58	141.28	9	21	10.7	36.2	25.1	16	Pebble
2012	248	140	248.75	141	13	21	8.7	23.3	20.8	12.7	Pebble
2012	248	140	248.7	141.66	16	21	8	26.4	72.2	13.8	Debris
2012	248	140	248.89	141.1	14	21	4.4	23.1	20.8	11.4	Amorphous Debris
2012	248	140	248.65	141.1	18	21	0.6	16.1	9.3	10.4	Amorphous Debris
2012	248	140	248.05	141.83	1	21	3.1	25.4	15.6	10.4	Pebble
2012	248	140	248.58	141.07	11	21	3.6	25.6	17.7	11.1	Pebble
2012	248	140	248.4	141.85	5	21	6.3	35.8	21.4	8.1	Flake Fragment
2012	248	140	248.14	141.29	7	21F117	1.5	22.2	12.5	9.3	Amorphous Debris
2012	248	140	248.27	141.39	3	21F117	24.2	45	36.3	21	Pebble
2012	248	140	248.22	141.34	8	21F117	13.1	31.82	22.2	12.8	Pebble
2012	248	140	248.26	141.44	2	21F117	35.4	55.5	44.6	20	Pebble
2012	248	140	248.2	141.33	4	21F117	68.8	74.5	60.4	23.1	Pebble
2012	248	140	248.27	141.86	6	21F117	339.8	112.9	72.3	67.5	Pebble
2012	248	140			1	21F117	0.9				
2012	248	140	248.2	141.26	5	21F117	3.6	24.9	23	10.1	Pebble
2012	248	140	248.22	140.4	1	11	399.8				Pebble
2012	248	140	248.1	140.4	2	11	0.3				Broken Flake
2012	248	140	248.27	140.38	11	12	10.3	26.1	20.9	16.8	Amorphous Debris
2012	248	140	248.24	140.93	2	12	0.2	14.6	8.2	2.3	Amorphous Debris
2012	248	140	248.34	140.79	3	12	4.8	30.2	20	9.9	Amorphous Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2012	248	140	248.1	140.42	9	12	1.8	22.4	10.4	10.6	Pebble
2012	248	140	248.34	140.74	4	12	2.3	37.1	19.4	6.5	Broken Flake
2012	248	140	248.16	140.16	12	12	4.9	25	18.8	8.7	Pebble
2012	248	140	248.51	140.76	6	12	1.9	25.7	19	13.9	Amorphous Debris
2012	248	140	248.49	140.1	15	12	4.6	22.2	16.8	14.4	Pebble
2012	248	140	248.37	140.19	14	12	2.6	22.6	15.8	6.7	Amorphous Debris
2012	248	140	248.06	140.42	8	12	48.9	49.5	35.8	26.9	Pebble
2012	248	140	248.04	140.89	1	12	4.4	29.9	18.4	13.1	Pebble
2012	248	140	248.15	140.11	13	12	10.4	36.2	20.6	12.8	Pebble
2012	248	140	248.48	140.77	5	12	2.6	16.4	15.2	8.8	Debris
2012	248	140	248.12	140.4	10	12	2.6	23.9	12.7	9.9	Pebble
2012	248	140	248.57	140.71	7	12	0.5	19.3	7.2	3.8	Debris
2012	248	140	248.19	140.93	1	13	9.6	28.5	26.3	17.6	Pebble
2012	248	140	248.91	140.79	2	13	2.1	21.5	16	8.8	Pebble
2012	248	140	248.47	140.55	4	13	0.2	13.1	8.3	1.9	Flake
2012	248	140	248.13	140.25	6	13	3.5	18.1	16.4	11	Amorphous Debris
2012	248	140	248.23	140.1	7	13	8	28.5	19.7	16.9	Pebble
2012	248	140	248.57	140.1	9	13	2.2	24.9	22	6	Debris
2012	248	140	248.12	140.48	3	13	3.3	21.6	15.8	12.2	Pebble
2012	248	140	248.94	140.31	10	13	0.5	15.4	8.6	5.5	Amorphous Debris
2012	248	140	248.59	140.16	8	13	6.7	28	23.2	14.4	Pebble
2012	248	140	248.52	140.5	5	13	2.3	22.8	16.6	7.7	Pebble
2012	248	140	248.61	140.88	2	14	13.7	29.4	24.2	20.1	Pebble
2012	248	140	248.15	140.73	3	14	4.5	28.3	18.7	12.2	Pebble
2012	248	140	248.24	140.68	4	14	0.8	12.3	5.2	6.3	Debris

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2012	248	140	248.63	140.71	5	14	2.6	20.1	17.1	7.4	Amorphous Debris
2012	248	140	248.93	140.58	6	14	4.8	40.2	10.3	12.4	complete Flake
2012	248	140	248.94	140.55	7	14	2	24.2	14.9	4.2	Debris
2012	248	140	248.78	140.51	8	14	3.9	27	14.1	11.8	Pebble
2012	248	140	248.22	140.23	11	14	3.1	22.9	18.1	10.2	Pebble
2012	248	140	248.42	140.29	12	14	0.1	7.9	5.3	0.8	Debris
2012	248	140	248.17	140.22	14	14	0.5				Debris
2012	248	140	248.15	140.28	10	14	3.5	22	15.2	10.3	Pebble
2012	248	140	248.45	140.2	13	14	0.2	14.2	6.1	1.2	complete Flake
2012	248	140	248.07	140.91	1	14	4.1	21.8	15.7	14	Pebble
2012	248	140	248.89	140.4	9	14	2.4	20.3	21.2	4.2	complete Flake
2012	248	140	248.83	140.86	4	15	0.7	12.5	8.7	7.2	Debris
2012	248	140	248.93	140.9	6	15	1.1	15.2	9.2	7.5	Amorphous Debris
2012	248	140	248.3	140.7	8	15	10.3	23.4	25	13.5	Amorphous Debris
2012	248	140	248.4	140.59	9	15	1.1	15.8	10.7	7.4	Pebble
2012	248	140	248.1	140.41	12	15	8.7	26.4	22.4	15.2	Pebble
2012	248	140	248.28	140.14	16	15	8.7	23.3	17.9	14.4	Pebble
2012	248	140	248.75	140.3	13	15	0.5	18.5	7.7	2.7	Debris
2012	248	140	248.04	140.2	14	15	0.5	16	12.5	1.6	complete Flake
2012	248	140	248.37	140.94	2	15	0.7	10.3	11.9	6.3	Amorphous Debris
2012	248	140	248.02	140.76	7	15	8.4	41.1	18.5	12.7	Debris
2012	248	140	248.37	140.99	1	15	1.3	14	9.6	5.9	Debris
2012	248	140	248.83	140.85	5	15	8.3	27.3	19.5	14.9	Pebble
2012	248	140	248.58?	140.8	3	15	6.8	26	21.1	13.7	Pebble
2012	248	140	248.28	140.22	15	15	5.1	22.1	22.6	9.1	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2012	248	140	248.2	140.46	11	15	0.3	14.2	5	2.7	Broken Flake
2012	248	140	248.06	140.5	10	15	22.6	38.9	28.3	19.5	Pebble
2012	248	140	248.87	140.54	7	16	2.6	21.4	14.4	8.5	Pebble
2012	248	140	248.2	140.55	10	16	19.7	35.8	27.4	22.1	Pebble
2012	248	140	248.13	140.44	14	16	2.9	20.5	14.1	13	Pebble
2012	248	140	248.05	140.07	21	16	19.5	37.1	29.8	20.8	Pebble
2012	248	140	248.33	140.55	9	16	13.8	31.1	23.5	21.5	Pebble
2012	248	140	248.12	140.03	22	16	5.3	27.5	16.8	14.6	Pebble
2012	248	140	248.91	140.39	16	16	2.9	22	15.9	12.4	Pebble
2012	248	140	248.82	140.62	6	16	5	35.8	27.2	7.8	Flake
2012	248	140	248.12	140.2	20	16	4.6	23	14.5	9.2	Pebble
2012	248	140	248.67	140.85	4	16	1.3	22	14	6	Flake
2012	248	140	248	140.53	12	16	1	16.6	13.8	4.9	Amorphous Debris
2012	248	140	248.12	140.81	3	16	3.5	24.3	14.9	13	Pebble
2012	248	140	248.63	140.7	5	16	2.5	23.9	18.2	9.9	Debris
2012	248	140	248.48	140.57	8	16	6.2	32.3	20.2	13.6	Amorphous Debris
2012	248	140	248.12	140.95	2	16	5.6	23.1	13.9	12.6	Amorphous Debris
2012	248	140	248.03	140.59	11	16	9.9	30.4	21.5	21.3	Amorphous Debris
2012	248	140	248.19	140.19	19	16	15.5	41.9	27.8	15.1	Debris
2012	248	140	248.43	140.25	17	16	0.5	15.5	9.1	6	Debris
2012	248	140	248.34	140.22	18	16	6.1	32.8	22	11.7	Debris
2012	248	140	248.13	140.51	13	16	17.5	38	31.4	18.9	Pebble
2012	248	140	248.35	140	23	16	0.8	20.4	14.5	9.2	Debris
2012	248	140	248.18	140.32	15	16	0.4	13.5	8.3	4.3	Debris
2012	248	140	248.34	140.71?	1	16	41.1	58.8	49.4	18.1	

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2012	248	140	248.47	140.75	13	17	3.3	17.2	13.7	12.9	Pebble
2012	248	140	248.11	140.58	8	17	5.3	21.9	19.1	16.5	Amorphous Debris
2012	248	140	248.41	140.06	36	17	10.8	21.3	20.6	16.3	Pebble
2012	248	140	248.77	140.67	17	17	4.7	21.7	19.5	12.1	Pebble
2012	248	140	248.31	140.12	37	17	9.6	29	21.8	21.1	Pebble
2012	248	140	248.49	140.3	29	17	0.3	11.6	10.4	2.9	Amorphous Debris
2012	248	140	248.72	140.45	31	17	0.4	11	5.8	6.3	Amorphous Debris
2012	248	140	248.8	140.52	32	17	2.1	21.5	10	9.9	Amorphous Debris
2012	248	140	248.83	140.39	33	17	0.2	9.9	7.9	5.1	Amorphous Debris
2012	248	140	248.88	140.47	34	17	0.1	14.3	13.2	6.3	Amorphous Debris
2012	248	140	248.87	140.2	35	17	1	16.9	9.6	7.5	Debris
2012	248	140	248.51	140.71	12	17	0.3	9.6	7.9	5.8	Pebble
2012	248	140	248.76	140.81	2	17	10.7	32	23.3	18.6	Pebble
2012	248	140	248.01	140.49	21	17	0.2	11.8	8	3.2	Flake
2012	248	140	248.25	140.62	7	17	14	26.8	26.3	22.1	Pebble
2012	248	140	248.88	140.61	19	17	3.3	20.8	15.9	11	Pebble
2012	248	140	248.47	140.32	28	17	8.2	27.3	19.1	18.7	Pebble
2012	248	140	248.91	140.63	20	17	5.3	21	20.6	14.7	Pebble
2012	248	140	248.56	140.57	16	17	3.5	21.1	16	10.5	Pebble
2012	248	140	248.8	140.44	23	17	6	20.8	16.9	14.5	Pebble

Table A30-1 continued

Year	N	E	N	E	Art	Level	Weight	Length	Width	Thickness	Classification
2012	248	140	248.6	140.44	22	17	3.5	23.9	14.3	13	Pebble
2012	248	140	248.81	140.64	18	17	79.3	48.3	34.6	31.4	Pebble
2012	248	140	248.11	140.4	24	17	13.3	37.6	28.3	14.9	Amorphous Debris
2012	248	140	248.43	140.67	10	17	0.4	12.8	8.6	6.1	Debris
2012	248	140	248.39	140.6	9	17	0.8	17.8	12.9	5.3	Amorphous Debris
2012	248	140	248.62	140.3	30	17	1.5	21.7	12.7	8.2	Pebble
2012	248	140	248.22	140.29	26	17	0.7	18.6	11.1	3.9	Debris
2012	248	140	248.68	140.92	1	17	0.3	12.3	7.2	3.4	Amorphous Debris
2012	248	140	248.53	140.78	14	17	1.8	21.7	15.8	8.7	Amorphous Debris
2012	248	140	248.45	140.71	11	17	0.4	10.6	10.2	10.2	Amorphous Debris
2012	248	140	248.21	140.68	5	17	7.6	25.1	25.1	12.9	Amorphous Debris
2012	248	140	248.33	140.3	27	17	0.7	14.1	6.8	6.1	Amorphous Debris
2012	248	140	248.24	140.69	4	17	0.9	19.7	17.1	5.5	Amorphous Debris
2012	248	140	248.22	140.47	25	17	6.9	26.8	24.5	14.2	Pebble
2012	248	140	248.18	140.79	3	17	2.1	20.4	10.9	8.3	Amorphous Debris
2012	248	140	248.12	139.99	38	17	1.3	96.6	67.9	23.3	Debris
2012	248	140	248.24	140.65	6	17	1.4	20.1	16.1	3.9	Flake
2012	248	140	248.42	140.66	15	17	6.8	25.6	16.5	15.3	Pebble

APPENDIX 31

TECHNOLOGICAL ATTRIBUTES OF MAPPED ARTIFACTS FROM THE TOPPER SITE (38AL23)

Table A31-1
Technological Attributes of Mapped Artifacts from the Topper Site (38AL23)

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
1998	244	130	244.17	131.64	1	19	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
1998	244	130	245.33	131.13	1	21	10	no	Visible	Not Visible	Visible	Intact	Debris
1998	244	130	245.92	131.36	1	21 F	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
1998	244	130	245.14	131.93	1	x	9	no	Visible	Not Visible	Visible	Broken	Debris
1998	244	130	244	131.04	2	19	12	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
1998	244	130	244.055	131.2	2	21 F	6	no	Visible	Not Visible	Visible	NA	Flake Fragment
1998	244	130	244.1	130.75	2	x	2	no	Visible	Not Visible	Visible	Broken	Debris
1998	244	130	244.09	130.88	3	21 F	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
1998	244	130	244.12	131.12	4	21 F	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1998	244	130	244.05	131.12	5	21 F	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1998	244	130	244.02	131.12	6	21 F	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
1998	244	130	244.08	131.16	7	21 F	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
1998	244	130	244.025	131.28	8	21 F	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
1998	244	130	244	130.81	9	21 F	1	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1998	244	130	244.04	130.85	10	21 F	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1998	244	130	244	130.94	11	21 F	5	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
1998	244	130	244	131.09	12	21 F	7	no	Visible	Not Visible	Visible	NA	Flake Fragment
1998	244	130	244	131.15	13	21 F	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1998	244	130	244.065	130.92	14	21 F	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
1998	244	130	244.03	130.965	15	21 F	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1998	244	130	244.09	130.94	16	21 F	5	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
1998	244	130	244.08	131.12	17	21 F	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
1998	244	130	244.035	131.31	18	21 F	4	no	Not Visible	Not Visible	Visible	Broken	Debris
1998	244	130	244.02	130.89	19	21 F	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1998	244	130	244	131.19	20	21 F	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1998	244	130	244.035	131.07	21	21 F	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1998	244	130	245.36	130.92	22	21 F	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1998	244	130	245.22	131.37		21	9	yes	Visible	Visible	Visible	Broken	Broken Flake
1999	242	130	242.94	130.85	1	9	7	no	Visible	Visible	Visible	Intact	Flake Fragment
1999	242	130	243.01	130.95	1	11	3	yes	Visible	Visible	Visible	Intact	Flake Fragment
1999	242	130	242.31	130.76	1	12	3	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
1999	242	130	243.61	131.68	1	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	130	243.78	131.56	1	x	7	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
1999	242	130	243.4	131.2	2	10	10	yes	Visible	Visible	Visible	Intact	Flake
1999	242	130	242.8	131.46	2	12	2	yes	Visible	Visible	Visible	Intact	flake
1999	242	130	243.84	131.49	3	12	2	no	Visible	Not Visible	Visible	Intact	Flake Fragment

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
1999	242	130	243.725	130.86	6	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	130	243.61	130.485	18	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	130	243.565	130.535	19	17	5	yes	Not Visible	Not Visible	Not Visible	Intact	Debris
1999	242	130	243.885	130.49	24	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	130	243.775	130.695	25	17	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
1999	242	130	243.83	130.69	26	17	0	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
1999	242	130	243.86	131.275	30	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	130	243.89	130.82	30	17	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
1999	242	130	243.88	131.285	31	17	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
1999	242	130	243.88	130.865	31	17	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
1999	242	130	243.88	130.865	35	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	130	243.81	131.045	36	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	130	243.86	131.035	39	17	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
1999	242	130	243.85	131.155	40	17	8	no	Visible	Visible	Not Visible	Intact	Broken Flake
1999	242	130	243.54	131.23	41	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	130	243.76	131.8	x	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	130	243.85	130.95	x	16	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
1999	242	130	243.625	130.685	x	17	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
1999	242	130	243.825	131.02	x	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	130	243.88	130.52	x	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	130	243.8	131.05	x	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	130	243.84	131.065	x	17	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
1999	242	130	243.715	130.745	x	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	130	243.925	130.63	x	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	130	243.86	130.72	x	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	130	243.74	130.47	x	17	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
1999	242	130	243.745	130.29	x	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	130	243.85	131.11	x	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	130	243.67	130.34	x	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	130	243.72	130.51	x	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	130	243.9	130.765	x	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	130	243.7	130.385	x	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	130	243.655	130.485	x	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	130	243.92	130.97	x	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
1999	242	130	243.695	130.275	x	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	130	243.95	130.68	x	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	130	243.88	130.99	x	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	130	243.85	130.89	x	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	130	243.84	130.47	x	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	130	243.65	130.03	x	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	130	243.62	130.915	x	17	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
1999	242	130	243.755	130.745	x	17	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
1999	242	130	243.86	130.96	x	17	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
1999	242	130	243.88	130.52	x	17	1	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	130	242.52	130.97	x	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	132	243.588	133.52	1	3	9	no	Visible	Not Visible	Visible	Intact	Flake Fragment
1999	242	132	242.075	133.43	1	3	19	no	Visible	Not Visible	Visible	Intact	Flake Fragment
1999	242	132	x	x	1	14	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
1999	242	132	243.78	133.97	1	15	6	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
1999	242	132	243.62	134	1	15	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
1999	242	132	243.69	133.95	1	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	132	242.25	132.45	2	3	42	no	Visible	Not Visible	Visible	Broken	Flake Fragment
1999	242	132	243.145	131.545	2	3	17	no	Visible	Not Visible	Visible	Broken	Flake Fragment
1999	242	132	243.21	132.29	2	16	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
1999	242	132	243.33	133.18	3	3	18	no	Visible	Not Visible	Visible	Broken	Flake Fragment
1999	242	132	243.23	132.24	3	3	11	no	Visible	Not Visible	Visible	Broken	Flake Fragment
1999	242	132	243.71	133.15	3	15	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
1999	242	132	243.21	132.23	3	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	132	243.29	132.13	4	3	18	no	Visible	Not Visible	Visible	Intact	Flake Fragment
1999	242	132	243.43	132.08	4	15	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
1999	242	132	243.18	133.71	5	3	34	no	Visible	Not Visible	Visible	Intact	Flake Fragment
1999	242	132	243.07	133.7	5	15	12	no	Visible	Not Visible	Visible	Intact	Flake Fragment
1999	242	132	243	133.66	5	16	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
1999	242	132	242.27	132.26	6	3	16	no	Visible	Not Visible	Visible	Broken	Flake Fragment
1999	242	132	242.33	132.73	6	15	4	no	Visible	Not Visible	Visible	Intact	Debris
1999	242	132	242.45	133.08	6	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	132	243.22	131.27	7	3	15	no	Visible	Not Visible	Visible	Intact	Flake Fragment
1999	242	132	243.4	132.6	7	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
1999	242	132	243.4	133.87	7	15	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
1999	242	132	243.78	133.97	8	3	0	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
1999	242	132	242.3	133.25	8	15	18	no	Visible	Not Visible	Visible	Intact	Flake Fragment
1999	242	132	243.27	132.3	8	15	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
1999	242	132	243.76	133.93	8	16	6	no	Not Visible	Not Visible	Visible	Intact	Debris
1999	242	132	242.58	134	9	3	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	132	243.26	132.8	9	15	1	no	Not Visible	Not Visible	Visible	NA	Debris
1999	242	132	243.72	133.89	9	16	4	no	Visible	Not Visible	Not Visible	Intact	Amorphous Debris
1999	242	132	243.44	132.28	10	3	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
1999	242	132	243.68	133.85	10	15	26	no	Visible	Not Visible	Visible	Intact	Flake Fragment
1999	242	132	243.25	132.75	10	16	9	no	Not Visible	Not Visible	Visible	Intact	Debris
1999	242	132	243.76	133.89	11	3	14	no	Visible	Not Visible	Visible	Broken	Flake Fragment
1999	242	132	243.78	133.93	11	16	3	no	Not Visible	Not Visible	Visible	Intact	Debris
1999	242	132	243.64	133.9	12	3	20	no	Visible	Not Visible	Visible	Intact	Flake Fragment
1999	242	132	243.7	133.83	12	16	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
1999	242	132	242.86	133.88	14	16	12	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2000	242	130	243.56	131.01	2		2	no	Visible	Not Visible	Visible	Intact	Debris
2000	242	130	243.33	131.63	2		10	No	Visible	Visible	Visible	Broken	Flake Fragment
2000	242	128	242.02	129.59	6		13	no	Visible	Not Visible	Visible	NA	Flake Fragment
2000	244	146	245.84	147.22	8	180	5	no	Visible	Not Visible	Visible	Intact	Debris
2000	242	130	242.15	131.05	5	185	11	no	Visible	Not Visible	Visible	Intact	Debris
2000	242	130	243.23	131.85	1	185	10	no	Visible	Not Visible	Visible	Intact	Debris
2000	242	130	242.27	130.7	4	190	15	no	Visible	Not Visible	Visible	Intact	Debris
2000	242	130	243.82	130.53	1	190	8	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2000	242	130	242.45	130.73	3	190	4	no	Visible	Not Visible	Visible	Intact	Debris
2000	244	132	244.52	133.5	5		0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2001	240	130	241.36	131.46	1	23	2	yes	Visible	Visible	Visible	Intact	Flake
2001	240	130	240.45	130.56	18		54	no	Visible	Not Visible	Visible	Intact	Broken Flake
2001	240	132	240.3	132.76	19	2	37	no	Visible	Not Visible	Visible	Broken	Broken Flake
2001	240	132	240.7	132.87	1	16	6	no	Visible	Not Visible	Visible	Intact	Debris
2001	240	132	240.46	132.805	9	16	9	no	Visible	Not Visible	Visible	Broken	Debris
2001	240	132	240.58	132.91	4	16	4	yes	Visible	Not Visible	Visible	Intact	Flake Fragment
2001	240	132	240.6	132.87	3	16	10	no	Visible	Not Visible	Visible	Intact	Debris
2001	240	132	240.49	132.91	6	16	7	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2001	240	132	240.435	132.84	8	16	9	yes	Visible	Visible	Visible	Intact	Flake
2001	240	132	240.48	132.715	12		5	no	Not Visible	Not Visible	Visible	NA	Amorphous Debris
2001	240	132	240.55	132.82	19		3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2001	240	132	240.475	132.72	11		8	no	Not Visible	Not Visible	Visible	NA	Amorphous Debris
2001	240	132	240.58	132.795	17		3	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2001	240	132	240.51	132.78	16		3	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2001	240	132	240.605	132.8	18		7	no	Visible	Not Visible	Visible	Broken	Amorphous Debris
2001	240	132	240.49	132.71	14		6	yes	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2001	240	132	240.51	132.935	20		7	no	Not Visible	Not Visible	Visible	NA	Amorphous Debris
2001	240	132	240.46	132.69	15		12	no	Not Visible	Not Visible	Visible	NA	Amorphous Debris
2001	240	132	240.52	132.9	45		3	yes	Visible	Visible	Visible	Intact	Flake
2001	240	132	240.54	132.8	46		7	no	Visible	Not Visible	Visible	Intact	Debris
2001	240	132	240.65	132.87	2		11	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2001	240	132	240.46	132.82	41		5	no	Visible	Not Visible	Visible	Intact	Debris
2001	240	132	240.51	132.96	5		18	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2001	240	132	240.52	132.87	44		14	no	Visible	Not Visible	Visible	Intact	Debris
2001	240	132	240.45	132.68	42		8	no	Visible	Not Visible	Visible	Intact	Debris
2001	240	132	240.91	132.91	49		6	no	Visible	Not Visible	Visible	Intact	Debris
2001	240	132	240.88	132.14	48		5	no	Visible	Not Visible	Visible	Broken	Debris
2001	240	132	240.47	132.59	10		8	no	Visible	Not Visible	Visible	Intact	Debris
2001	240	132	240.89	132.86	50		6	no	Visible	Not Visible	Visible	Intact	Debris
2001	240	132	240.5	132.83	43		7	yes	Visible	Not Visible	Visible	Intact	Debris
2001	240	132	240.83	132.98	47		20	no	Not Visible	Not Visible	Visible	Intact	Debris
2001	240	132	241.12	132.58	1	18	6	no	Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2001	240	132	241.3	132.6	1	18	3	no	Visible	Not Visible	Visible	NA	Debris
2001	240	132	241.27	132.62	8	18	5	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2001	240	132	241.3	132.54	5	18	8	no	Visible	Not Visible	Visible	Intact	Debris
2001	240	132	241.17	132.47	2	18	10	no	Visible	Not Visible	Visible	Intact	Debris
2001	240	132	241.20	132.56	7	18	12	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2001	240	132	241.29	132.47	4	18	7	no	Visible	Not Visible	Visible	Intact	Debris
2001	240	132	241.2	132.53	3	18	8	no	Visible	Not Visible	Visible	Intact	Debris
2001	240	132	240.67	132.43	2	18	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2001	240	132	240.87	132.45	3	18	2	yes	Visible	Visible	Visible	Intact	Flake
2001	240	132	240.85	132.6	4	18	5	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2002	240	134	240.36	135.45	11		35	no	Visible	Not Visible	Visible	NA	Flake
2002	242	136	243.84	137.09	4	18	7	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	242	136	243.2	136.88	2	18	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	136	242.42	137.85	3	18	0	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2002	242	136	242.33	137.52	5	18	13	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	242	136	242.96	136.9	1	18	4	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	242	138	243.9	138.02	12	2	16	no	Visible	Not Visible	Visible	Broken	Debris
2002	242	138	242.96	138.57	1	4	8	yes	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	242	138	243.26	138.57	2	4	35	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	242	138	243.97	138.64	1	11	3	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	242	138	242.34	139.78	3	12	5	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	242	138	242.95	139.34	2	12	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	242	138	243.64	139.21	1	13	18	no	Visible	Not Visible	Visible	NA	Flake Fragment
2002	242	138	243.22	139.965	PP7	14	4	no	Visible	Not Visible	Visible	Broken	Debris
2002	242	138	243.26	139.97	PP6	14	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	242	138	243.75	139.89	PP11	14	5	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2002	242	138	243.85	139.9	PP12	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	138	243.49	139.965	PP8	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	138	243.5	139.9	PP9	14	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	242	138	243.4	139.855	PP10	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	138	243.29	139.15	PP4	14	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	242	138	242.77	139.2	1	14	17	no	Visible	Visible	Visible	Intact	Broken Flake
2002	242	138	242.64	139.33	2	14	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	242	138	243.72	139.82	4	14	8	no	Visible	Not Visible	Visible	NA	Debris
2002	242	138	243.87	139.7	5	14	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	242	138	242.61	139.3	PP1	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	138	243.3	139.215	PP5	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	138	242.75	139.86	PP3	14	7	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	242	138	243.85	139.98	3	14	6	no	Visible	Not Visible	Visible	Intact	Debris
2002	242	138	242.75	139.74	PP2	14	4	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	242	138	242.05	139.5	3	15	1	no	Not Visible	Not Visible	Visible	NA	Amorphous Debris
2002	242	138	243.16	139	1	15	10	no	Visible	Not Visible	Visible	NA	Flake Fragment
2002	242	138	243.48	138.34	4	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2002	242	138	243.03	138.62	5	15	8	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	242	138	242.3	139.97	4	15	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	242	138	243.32	138.98	6	15	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	242	138	243.43	138.16	PP1	15	5	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	242	138	243.2	139.64	1	16	14	yes	Visible	Visible	Visible	Intact	flake
2002	242	138	243.14	138.64	1	17	9	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	242	138	242.14	139.39	4	17	13	yes	Visible	Visible	Visible	Intact	Flake
2002	242	138	242.85	139.95	2	17	7	yes	Visible	Visible	Visible	Intact	flake
2002	242	138	242.7	138.43	8	17	6	no	Visible	Not Visible	Visible	NA	Debris
2002	242	138	242.9	139.51	3	17	9	no	Visible	Not Visible	Visible	Intact	Debris
2002	242	138	242.09	139.3	2	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	138	242.8	138.3	6	17	7	yes	Visible	Visible	Visible	Intact	flake
2002	242	138	242.87	138.93	7	17	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	242	138	242.23	138.63	5	17	8	yes	Visible	Not Visible	Visible	Intact	Debris
2002	242	138	242.27	139.94	1	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	138	242.96	139.14	3	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	138	243.74	139.09	1	18	3	no	Visible	Visible	Visible	Intact	Broken Flake
2002	242	138	243.08	138.18	4	18	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	242	138	243.03	138.87	2	18	10	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	242	138	242.5	139.09	1	18	8	no	Visible	Not Visible	Visible	NA	Debris
2002	242	138	242.96	139.11	2	18	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	138	243.45	138.98	5	18	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	138	243.09	139.2	3	18	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	138	243.14	139.87	PP7	19	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	138	243.09	139.64	PP6	19	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	138	243.3	139.97	PP9	19	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2002	242	138	242.74	139.5	PP4	19	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	138	243.75	139.99	PP8	19	9	no	Visible	Not Visible	Visible	Intact	Debris
2002	242	138	242.95	138.92	PP2	19	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	138	242	138.78	PP1	19	24	no	Visible	Not Visible	Visible	Intact	Debris
2002	242	138	242.1	139.34	PP3	19	9	no	Visible	Not Visible	Visible	Intact	Debris
2002	242	138	242.54	139.09	2	19	23	no	Visible	Not Visible	Visible	NA	Debris
2002	242	138	242.46	139.08	PP5	19	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	138	242.32	138.8	1	19	17	no	Visible	Not Visible	Visible	NA	Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2002	242	138	243.93	138.32	7	F87	4	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	242	138	242.45	139.1	2		5	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	242	138	242.26	139.59	1		6	no	Not Visible	Not Visible	Visible	NA	Amorphous Debris
2002	242	140	242	141.75	4	4	20	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	242	140	242.63	141.88	2	4	16	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	242	140	243.39	139.02	1	4	16	yes	Visible	Visible	Visible	Intact	flake
2002	242	140	242.75	141.97	5	4	5	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	242	140	243.1	140.31	3	4	21	no	Visible	Visible	Visible	Intact	Flake
2002	242	140	243.55	140.58	2	6	22	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	242	140	243.88	140.37	1	6	13	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	242	140	243.63	140.23	1	11	12	no	Not Visible	Visible	Visible	Visible	Flake Fragment
2002	242	140	243.77	140.79	1	12	8	yes	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	242	140	243.5	140.57	3	15	0	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	242	140	243.53	141.04	6	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	140	243.6	141.02	5	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	140	243.23	141.4	12	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	140	243.18	141.323	10	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	140	243.63	141.14	8	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	140	243.65	141.42	PP3	16	5	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	242	140	242.84	141.7	2	16	6	no	Visible	Not Visible	Visible	NA	Debris
2002	242	140	244	140.12	3	16	10	no	Visible	Not Visible	Visible	NA	Debris
2002	242	140	242.84	141.76	1	16	2	no	Visible	Not Visible	Not Visible	Broken	Debris
2002	242	140	243.55	141.57	PP5	16	11	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2002	242	140	243.6	141.4	PP2	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	140	243.5	141.57	PP6	16	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	242	140	243.12	141.28	PP1	16	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	242	140	243.74	141.44	PP4	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	140	243.45	141.69	PP&	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	140	243.12	140.09	4	16	5	no	Visible	Not Visible	Visible	Intact	Debris
2002	242	140	242.64	142	4	17	6	no	Visible	Not Visible	Visible	NA	Broken Flake
2002	242	140	242.84	141.82	3	17	5	no	Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	242	140	242.58	141.64	1	17	10	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	242	140	242.56	141.85	5	17	1	no	Visible	Not Visible	Not Visible	Broken	Debris
2002	242	140	242.8	141.65	2	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2002	242	140	242.6	141.89	6	17	20	no	Visible	Not Visible	Visible	NA	Debris
2002	242	140	243.06	140.05	7	17	6	no	Visible	Not Visible	Not Visible	Broken	Debris
2002	242	140	243.54	141.95	PP2	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	140	243.85	141.9	PP3	17	11	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2002	242	140	243.12	141.12	PP4	17	6	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	242	140	242.67	141.86	PP1	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	140		141.6	3	C2	39	no	Visible	Not Visible	Visible	Broken	Broken Flake
2002	242	140	242.92	140.66	6	C2	72	no	Visible	Not Visible	Visible	Broken	Broken Flake
2002	242	140	244.75	140.04	5	C2	31	no	Visible	Not Visible	Visible	NA	Broken Flake
2002	242	140	243.53	140.09	1		13	no	Visible	Visible	Visible	Broken	Broken Flake
2002	242	140	243.21	141.08	7		13	no	Visible	Not Visible	Visible	NA	Debris
2002	242	140	243.29	141.12	9		1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	242	140	243.56	141.02	2		3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	242	140	243.39	141.64	11		11	yes	Visible	Not Visible	Visible	Intact	Debris
2002	242	142	243.71	142.21	1	7	19	yes	Visible	Visible	Visible	Intact	flake
2002	242	142	243.65	143.06	2	11	4	yes	Visible	Visible	Visible	Intact	flake
2002	242	142	243	143.39	1	11	23	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	242	142	243.12	143.45	1	12	7	no	Visible	Not Visible	Visible	Intact	Broken Flake
2002	242	142	243.27	145.09	2	14	5	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	242	142	243.28	142.98	3	15	10	yes	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	242	142	242.81	143.9	10	15	11	no	Visible	Not Visible	Not Visible	Intact	Debris
2002	242	142	243.68	143.74	9	15	3	yes	Visible	Visible	Not Visible	Intact	Flake
2002	242	142	243.33	142.72	4	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	142	243.7	142.91	2	15	6	yes	Visible	Not Visible	Visible	Intact	Broken Flake
2002	242	142	243.05	143.75	12	15	14	no	Visible	Not Visible	Visible	Intact	Debris
2002	242	142	243	142.09	6	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	142	243.34	143.59	11	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	142	243.97	142.4	1	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	242	142	242.95	142.38	7	15	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	242	142	243.61	142.72	6	16	5	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	242	142	243.39	144	1	16	4	yes	Visible	Visible	Visible	Intact	Broken Flake
2002	242	142	243.57	142.72	7	16	8	yes	Visible	Not Visible	Visible	Intact	Broken Flake
2002	242	142	243.1	143.77	2	16	6	yes	Visible	Not Visible	Visible	Intact	Debris
2002	242	142	243.21	143.23	5	16	1	no	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2002	242	142	242	142	1	16	5	yes	Visible	Visible	Visible	Intact	Flake
2002	242	142	243.4	142.54	3	16	5	no	Visible	Not Visible	Visible	Intact	Debris
2002	242	142	243.36	142.31	5	16	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	242	142	243.1	142.46	4	16	11	yes	Visible	Visible	Visible	Intact	Debris
2002	242	142	243.58	145.62	1		1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2002	244	136	244.25	137.525	2	5	8	yes	Visible	Visible	Visible	Broken	Broken Flake
2002	244	136	245.48	136.03	1	5	9	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	136	244.14	137.09	1	12	3	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	136	245.74	136.94	1	15	8	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	136	244.85	137.05	3	15	6	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	244	136	245.05	137.63	2	15	15	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	136	244.14	136.69	1	20	4	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	244	136	244.5	137.78	16	F87	8	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	136	243.95	137.46	9	F87	6	no	Not Visible	Not Visible	Visible	Broken	Debris
2002	244	136	244.38	137.58	14	F87	6	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	136	243.9	137.25	6	F87	4	no	Not Visible	Not Visible	Visible	Broken	Debris
2002	244	136	244.55	137.46	12	F87	3	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	136	244.36	137.84	18	F87	8	yes	Visible	Visible	Visible	Intact	flake
2002	244	136	243.85	137.1	4	f87	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	136	244.46	137.5	13	F87	11	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	136	244.37	137.93	21	F87	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	136	243.92	137.18	5	f87	7	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	136	243.47	137.95	2	F87	6	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2002	244	136	243.42	137.77	3	F87	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	136	244.59	137.91	19	F87	13	no	Not Visible	Not Visible	Visible	Intact	Debris
2002	244	136	244.17	137.4	11	F87	16	no	Visible	Visible	Visible	Intact	flake
2002	244	136	244.06	137.88	17	F87	47	no	Visible	Visible	Visible	Intact	flake
2002	244	136	244.35	137.76	15		1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	244	138	244.93	139.12	2	2	17	no	Visible	Not Visible	Visible	Broken	distal
2002	244	138	245.38	138.18	2	3	14	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	244	138	244	138	1	3	29	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	138	245.67	138.91	1	4	3	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	244	138	245.24	138.61	2	4	13	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	244	138	244.03	139.61	4	4	6	yes	Visible	Visible	Visible	Broken	Broken Flake

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2002	244	138	245.8	138.43	1	5	61	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	138	245.94	138.44	2	5	44	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	244	138	245.78	138.2	1	8	37	no	Visible	Not Visible	Visible	NA	Flake Fragment
2002	244	138	246	138.42	1	9	3	yes	Visible	Visible	Visible	Intact	flake
2002	244	138	244.47	138.51	1	10	41	no	Visible	Visible	Visible	NA	Debris
2002	244	138	245.43	138.23	1	12	7	no	Visible	Visible	Visible	Broken	Broken Flake
2002	244	138	245.61	138.12	2	12	4	yes	Visible	Visible	Visible	Intact	flake
2002	244	138	243.63	138.19	1	13	24	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	244	138	244.13	139.71	3	13	6	No	Visible	Not Visible	Visible	Broken	Debris
2002	244	138	244.82	139.91	7	13	1	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	244	139.8	12	14	7	no	Visible	Not Visible	Visible	NA	Flake Fragment
2002	244	138	244.67	139.555	PP2	14	2	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2002	244	138	245.42	138.78	PP5	14	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	244	138	245.56	139.62	6	14	1	No	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	244	138	245.11	139.82	10	14	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	244	138	244.76	139.93	2	14	5	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	138	245.2	139.52	8	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	244.95	139.86	PP4	14	3	no	Visible	Not Visible	Visible	Intact	Debris
2002	244	138	245.57	139.56	5	14	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	244	138	245.03	139.84	11	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	245.94	139.18	3	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	245.99	139.49	PP1	14	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	244	138	245.94	139.61	4	14	8	no	Visible	Not Visible	Not Visible	Intact	Debris
2002	244	138	245.21	139.89	9	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	244.91	139.35	PP3	14	4	no	Visible	Not Visible	Visible	Intact	Debris
2002	244	138	245.58	139.93	7	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	245.7	139.68	1	14	10	yes	Not Visible	Visible	Not Visible	NA	Debris
2002	244	138	245.37	138.73	13	14	32	no	Visible	Visible	Visible	Intact	flake
2002	244	138	244.47	139.13	6	15	9	No	Visible	Not Visible	Visible	Broken	Debris
2002	244	138	244.31	139.22	5	15	2	No	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	244	138	244.12	139.63	4	15	12	No	Visible	Not Visible	Visible	Intact	Debris
2002	244	138	244.37	139.59	2	15	5	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	244	138	245.7	139.93	2	15	4	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	244	138	244.73	139.68	1	15	13	no	Visible	Not Visible	Not Visible	Intact	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2002	244	138	245.54	138.69	2	16	6	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	244	138	245.01	139.95	3	16	13	no	Visible	Not Visible	Visible	NA	Flake Fragment
2002	244	138	244.54	139.05	1	16	12	no	Visible	Not Visible	Not Visible	NA	Debris
2002	244	138	244.19	138.21	25	16	16	yes	Visible	Visible	Visible	NA	Debris
2002	244	138	244.37	138.01	20	16	5	yes	Not Visible	Visible	Not Visible	Intact	Flake Fragment
2002	244	138	244.14	137.93	21	16	6	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2002	244	138	244.19	138.04	23	16	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	244	138	244.3	138.1	24	16	5	no	Visible	Visible	Not Visible	Intact	Flake Fragment
2002	244	138	244.28	138	22	16	6	No	Visible	Not Visible	Visible	NA	Debris
2002	244	138	245.59	138.1	26	16	8	yes	Visible	Visible	Visible	Intact	flake
2002	244	138	244.35	138.47	1	17	2	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	138	245.5	138.85	2	17	4	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	138	245.7	138.72	3	17	25	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	138	245.52	138.74	4	17	21	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	138			1	19	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	244.24	139.1	1	20	3	no	Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	244	138	244	138	3	20	4	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	244	138	244	138	2	20	2	no	Visible	Not Visible	Visible	Broken	Debris
2002	244	138	244	138	1	20	NA	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	244.83	138.76	7	D2	36	no	Visible	Not Visible	Visible	NA	flake
2002	244	138	244.64	138.32	30	F87	4	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	244	138	243.95	137.43	8	F87	2	no	Not Visible	Not Visible	Visible	Broken	Debris
2002	244	138	244.14	138.63	44	F87	5	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	244	138	244.19	137.9	51	F87	7	no	Not Visible	Not Visible	Visible	NA	Amorphous Debris
2002	244	138	244.35	138.51	62	F87	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	244	138	244.23	138.38	57	F87	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	244.36	138.58	41	F87	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	244.27	138.63	64	F87	5	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2002	244	138	244.3	138.11	54	F87	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	244.26	138.34	32	F87	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	244.13	138.57	65	F87	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	244.4	138.53	40	F87	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	244	138	244.2	138.53	38	F87	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	244.23	138.46	36	F87	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2002	244	138	244.34	138.42	58	F87	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	244	138	244.46	138.38	56	F87	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	244	138	244.26	138.41	59	F87	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	244.19	138.62	42	F87	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	244.27	138.51	66	F87	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	244.16	138.1	24	F87	5	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2002	244	138	243.94	137.45	49	F87	5	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	244	138			6	F87	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	244.25	138.51	67	F87	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138			8	F87	1	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2002	244	138	244.53	138.49	63	F87	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	243.5	139.46	3	F87	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	244	138			3	F87	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
	244	138	244.73	138.01	20	F87	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138			10	F87	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	244.55	138.23	55	F87	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2002	244	138	244.11	138.62	43	F87	7	no	Visible	Not Visible	Visible	Intact	Debris
2002	244	138	244.34	138.47	61	F87	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138			4	F87	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	244.15	137.35	50	F87	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138			11	F87	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	244.36	138.09	53	F87	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	244.15	138.53	37	F87	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	244	138	244.22	138.26	33	F87	10	no	Not Visible	Not Visible	Visible	Intact	Debris
2002	244	138			2	F87	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	244.15	138.45	60	F87	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	245.92	138.35	46	F87	7	no	Visible	Not Visible	Visible	Intact	Debris
2002	244	138			5	F87	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	244.31	138.53	39	F87	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	243.82	137.7	48	F87	5	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2002	244	138	244.34	138.13	27	F87	2	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2002	244	138	244.14	138.04	23	F87	4	yes	Visible	Visible	Visible	Intact	flake
2002	244	138	244.28	138	22	F87	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	243.5	138.6	1	F87	10	no	Visible	Not Visible	Visible	Intact	Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2002	244	138	244.53	138.25	29	F87	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	243.88	138.86	47	F87	19	no	Visible	Not Visible	Visible	NA	Debris
2002	244	138	244.64	137.5	13	F87	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	244	138	243.5	138.6	1	F87	4	no	Visible	Not Visible	Visible	Intact	Debris
2002	244	138	244.3	138.21	28	F87	11	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	138	244.28	138.1	26		2	no	Visible	Not Visible	Visible	Intact	Debris
2002	244	138	243.32	138.32	31		0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	244.3	138.39	35		0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	244.15	138.73	45		0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	138	243.95	137.46	9		0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	140	244.6	140.16	6	4	8	yes	Visible	Visible	Visible	Intact	Flake
2002	244	140	244.54	140.24	5	4	9	yes	Visible	Visible	Visible	Intact	Flake
2002	244	140	245.63	140.27	1	4	11	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	140	245.81	141.12	2	4	14	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	244	140	244.78	141.78	9	4	18	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	244	140	245.11	140.3	4	4	9	no	Not Visible	Not Visible	Visible	Broken	Debris
2002	244	140	244.24	140.22	3	5	9	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	244	140	244.11	140.48	1	5	27	no	Visible	Not Visible	Visible	NA	Debris
2002	244	140	245.67	140.7	2	5	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	140	245.18	141.73	5	5	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	140	245.82	140.73	4	5	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	140	245.38	141.38	1	13	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	244	140	245.22	141.47	2	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	140	245.54	140.7	1	14	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	244	140	245.93	141.38	1	15	15	yes	Visible	Visible	Visible	Intact	Flake
2002	244	140	244.08	140.8	4	16	15	no	Visible	Visible	Visible	Broken	Broken Flake
2002	244	140	244.72	140.9	5	16	7	no	Visible	Not Visible	Visible	Broken	Debris
2002	244	140	244.43	140.44	2	16	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	244	140	244.1	141.81	15	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	140	244.6	140.35	4	16	4	no	Visible	Not Visible	Visible	Intact	Amorphous Debris
2002	244	140	245.2	141.2	13	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	140	244.27	140.76	2	16	4	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	244	140	245.51	141.58	8	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	140	245.93	141.15	10	16	6	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2002	244	140	245.93	141.08		16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	140	244.52	140.6	5	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	140	245.73	141.88	12	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	140	244.4	140.96	14	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	140	245.21	141.15	6	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	140	244.3	140.46	1	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	140	245.66	141.84	11	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	140	244.32	140.6	5	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	140	245.13	141.16	7	16	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	244	140	244.68	141.18	12	17	9	no	Visible	Not Visible	Visible	Intact	Debris
2002	244	140	244.93	141.24	10	17	3	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	140	244.75	141.2	11	17	2	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2002	244	140	244.25	140.62	10	17	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	244	140	244.8	141.11	11	17	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	244	140	244.27	141.07	6	17	4	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2002	244	140	244.16	140.63	9	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	140	245.66	140.87	1	17	31	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	140	244.69	141.06	7	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	140	244.19	141.29	4	17	2	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2002	244	140	244.09	141.5	1	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	140	244.29	140.85	8	17	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2002	244	140	245.45	140.85	2	17	33	no	Visible	Not Visible	Visible	Intact	flake
2002	244	140	244.45	141.33	2	17	9	no	Visible	Not Visible	Visible	NA	Debris
2002	244	140	244.7	141.23	3	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	140	244.9	141.2	5	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	140	244.51	141.54	1	18	17	no	Visible	Not Visible	Visible	NA	Debris
2002	244	140	245.5	141.27	4		22	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	140	244.19	140.56	9		9	no	Visible	Not Visible	Visible	Intact	Debris
2002	244	140	244.91	140.8	7		7	no	Visible	Not Visible	Visible	Intact	Debris
2002	244	140	244.1	140.82	8		8	no	Visible	Not Visible	Visible	NA	Debris
2002	244	140	244.17	140.86	5		12	no	Visible	Not Visible	Visible	NA	Debris
2002	244	140	244.87	141.08	6		7	no	Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2002	244	140	245.58	141.08	3		17	no	Visible	Not Visible	Visible	Intact	Debris
2002	244	140	245.45	140.45	3		21	no	Visible	Not Visible	Visible	Intact	Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2002	244	140	244.7	140.7	1		16	no	Visible	Not Visible	Visible	Intact	Debris
2002	244	142	244.7	143.05	1	3	5	yes	Visible	Visible	Visible	*Intact*	Flake
2002	244	142	245.27	142.57	3	3	1	no	Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	244	142	244.66	142.25	5	4	2	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	142	244.9	142.18	1	4	11	no	Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	244	142	244.74	143.8	1	4	25	no	Visible	Not Visible	Visible	NA	Flake Fragment
2002	244	142	244.35	143.52	4	4	20	no	Visible	Not Visible	Not Visible	Intact	Debris
2002	244	142	245.65	142.53	3	4	25	no	Visible	Not Visible	Not Visible	NA	Debris
2002	244	142	244.35	143.77	1	5	8	yes	Visible	Visible	Visible	Intact	Flake
2002	244	142	245.16	143.3	1	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	142	244.46	143.85	2	11	16	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	142	245.58	143.39	3	12	5	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	244	142	245.48	143.29	5	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	142	245.6	143.45	4	12	9	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2002	244	142	245.4	143.8	1	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	142	245.65	143.88	2	13	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	244	142	245.2	143.4	1	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	142	245.68	143.92	3	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	142	245.6	142.95	4	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	142	245.43	142.08	2	14	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	142	245.47	142.33	1	14	6	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	142	244.46	143.5	5	15	7	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2002	244	142	245.96	143.43	4	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	142	244.62	143.78	1	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	142	245.55	142.94	2	15	5	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	244	142	244.58	142.51	6	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	142	245.89	143.14	3	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	142	244.83	142.25	7	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	142	245.06	142.05	8	15	12	no	Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	244	142	244.45	143.09	5	16	1	no	Not Visible	Not Visible	Visible	Broken	Debris
2002	244	142	244.43	143.09	4	16	6	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	142	244.24	143.07	1	16	2	no	Visible	Not Visible	Visible	Intact	Debris
2002	244	142	244.43	143.35	2	16	9	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	244	142	244.16	143.28	1	16	10	no	Not Visible	Not Visible	Visible	Intact	Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2002	244	142	244.87	142.1	2	B2	23	no	Visible	Not Visible	Visible	Intact	Broken Flake
2002	244	142	244.87	142.1	2	B2	24	no	Visible	Not Visible	Visible	Intact	Flake
2002	244	142	244.65	142.86	45	F 88	3	no	Not Visible	Not Visible	Visible	Broken	Debris
2002	244	142	244.91	142.39	63	F87	15	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	142	244.86	142.66	65	F87	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	142	245.1	142.39	27	F87	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	244	142	244.68	142.17	30	F87	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	244	142	245.3	142.81	25	F87	5	no	Visible	Not Visible	Visible	Intact	Debris
2002	244	142	245	143.9	12	F87	0	no	Not Visible	Not Visible	Not Visible	Broken	Pebble
2002	244	142	244.6	143.33	7	F87	8	no	Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	244	142	244.81	142.42	23	F87	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2002	244	142	244.84	142.62	64	F88	6	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2002	244	142	244.38	142.98	37	F88	1	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	142	244.9	142.48	59	F88	3	no	Not Visible	Not Visible	Visible	Broken	Debris
2002	244	142	244.69	142.49	62	F88	1	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	244	142	244.92	142.49	58	F88	2	no	Not Visible	Not Visible	Visible	NA	Amorphous Debris
2002	244	142	244.96	142.7	53	F88	4	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	244	142	244.44	142.99	38	F88	3	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	244	142	244.72	142.76	47	F88	1	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	142	244.58	142.93	42	F88	2	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	142	244.59	142.85	43	F88	6	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	244	142	244.68	142.77	46	F88	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	244	142	244.62	142.88	44	F88	7	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	244	142	244.84	142.49	67	F88	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	142	244.78	142.72	50	F88	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	142	244.49	142.87	40	F88	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	244	142	244.78	142.45	68	F88	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	142	244.88	142.62	66	F88	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	142	244.55	142.91	41	F88	16	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	244	142	244.79	142.68	51	F88	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	142	244.81	142.62	56	F88	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	244	142	244.91	142.52	57	F88	6	no	Not Visible	Not Visible	Visible	Broken	Debris
2002	244	142	244.87	142.62	55	F88	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	244	142	244.86	142.49	60	F88	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2002	244	142	244.47	142.98	39	F88	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	244	142	244.87	142.69	52	F88	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2002	244	142	244.93	142.65	54	F88	6	no	Not Visible	Not Visible	Visible	NA	Debris
2002	244	142	244.79	143.8	8		2	no	Not Visible	Not Visible	Visible	Broken	Debris
2002	244	142	244.78	142.77	48		2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	244	142	244.72	142.27	29		4	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	142	244.82	142.74	49		10	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	244	142	243.88	142.96	16		0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	142	244.83	142.78	35		2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2002	244	142	243.82	142.95	14		0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	142	244.46	142.45	21		0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	142	244.35	143.15	3		0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	142	244	142.8	15		7	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	244	142	244.02	142.98	17		0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	142	244.52	143.08	6		0	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2002	244	142	244.8	142.47	61		1	no	Not Visible	Not Visible	Visible	Broken	Debris
2002	244	142	244.56	142.77	33		0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	142	244.5	142.82	34		0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	142	244.27	142.63	19		8	no	Not Visible	Not Visible	Visible	Intact	Debris
2002	244	142	244.38	142.9	32		0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	142	244.28	142.49	20		3	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2002	244	142	245.28	142.77	26		1	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	142	244.51	142.59	31		4	yes	Visible	Not Visible	Visible	Intact	flake
2002	244	142	245.32	143.88	11		1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2002	244	142	244.02	142.9	13		12	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	142	244.62	142.4	22		0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	142	244.6	143.33	7		13	no	Visible	Not Visible	Visible	Intact	Debris
2002	244	142	245.08	143.74	9		26	no	Visible	Visible	Visible	Broken	Broken Flake
2002	244	142	244.96	143.2	10		6	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	142	244.45	142.72	18		43	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	244	142	245.35	143.23	12		7	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	244	142	245.18	142.89	4		0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	142	244.83	142.36	28		0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	244	142	245.1	143.85	4		22	no	Visible	Not Visible	Visible	Broken	Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2002	244	242	245.01	143.8	7	B2	13	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	246	136	246	137.6		E7		no	Visible	Not Visible	Visible	NA	flake
2002	246	138	246.3	139.6	1	3	24	no	Visible	Not Visible	Visible	NA	Flake Fragment
2002	246	138	246.8	138.78	2	4	28	yes	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	246	138	246.18	138.9	1	4	41	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	246	138	246.9	139.75	5	4	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	246	138	246.6	139.2	3	4	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	246	138	246.85	139.65	4	4	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2002	246	138	246.8	139.65	9	D12	30	no	Visible	Not Visible	Visible	NA	Broken Flake
2002	246	140	246.14	142	1	3	21	no	Visible	Not Visible	Visible	NA	Flake Fragment
2002	246	142	246.85	143.9	6	2	26	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	246	142	246.55	142.27	1	3	5	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	246	142	246.97	143.26	4	3	21	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	246	142	246.91	142.3	3	3	9	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002	246	142	246.93	142.94	2	3	6	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	246	142	246.7	142.35	3	4	8	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	246	142	246.9	142.78	4	4	17	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2002	246	142	246.7	142.25	2	4	22	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2002		140		141.8	2	C2	9	no	Visible	Not Visible	Visible	Broken	Broken Flake
2002		140		141.9	4	C2	11	no	Visible	Not Visible	Visible	Broken	Broken Flake
2002		140		141.85	2	C4	16	no	Visible	Not Visible	Visible	Broken	Broken Flake
2002			242.5	137.55	4	17	8	no	Visible	Not Visible	Visible	Intact	Debris
2003	242	140	242.97	141.97	5	18	10	no	Visible	Not Visible	Visible	Intact	Debris
2003	242	140	243.3	140.73	10	19	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	242	140	242.6	141.73	12	19	0	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2003	242	140	243.76	141.95	6	19	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	242	140	243.42	141.32	5	19	0	no	Not Visible	Not Visible	Visible	NA	Pebble
2003	242	140	242.3	141.16	13	19	1	no	Not Visible	Not Visible	Visible	NA	Pebble
2003	242	140	243.37	140.44	8	19	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2003	242	140	243.49	140.8	9	19	4	no	Visible	Not Visible	Visible	NA	Debris
2003	242	140	242.63	140.29	3	19	6	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2003	242	140	243.08	141.59	1	19	10	no	Visible	Not Visible	Visible	Intact	Debris
2003	242	140	243.08	141.59	1	19	10	no	Visible	Not Visible	Visible	Intact	Debris
2003	242	140	242.86	140.18	10	20	0	no	Not Visible	Not Visible	Not Visible	NA	Chert Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2003	242	140	243.65	140.79	6	20	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	242	140	242.65	140.35	3	20	0	yes	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	242	140	242.6	140.13	1	20	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2003	242	140	242.3	140.67	4	20	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2003	242	140	242.88	140.38	9	20	4	no	Visible	Not Visible	Visible	Intact	Debris
2003	242	140	242.58	140.22	2	20	4	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2003	242	140	242.07	140.6	7	20	5	no	Visible	Not Visible	Visible	Intact	Debris
2003	242	140	242.8	140.07	5	20	7	no	Visible	Not Visible	Not Visible	NA	Amorphous Debris
2003	242	140	242.84	140.3	8	20	7	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2003	242	140	243	140.23	11	20	14	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2003	242	140	243.28	141.03	11	F90	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	242	140	243.1	141.03	10	F90	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	242	140	243.04	141.06	6	F90	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	242	140	243.13	141.03	13	F90	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	242	140	242.95	140.93	1	F90	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2003	242	140	243.19	141	4	F90	5	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2003	242	140	243.06	140.97	7	F90	7	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2003	242	140	242.98	141.01	5	F90	8	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2003	242	140	242.98	141.05	12	F90	9	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2003	242	140	243.23	140.9	3	F90	9	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2003	242	140	243.12	141.15	9	F90	17	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2003	242	140	242.97	141.12	8	F90	25	no	Visible	Not Visible	Visible	NA	Flake Fragment
2003	242	140	243.35	141.21	2	F90	31	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2003	242	140	242.49	140.12	11		2	no	Visible	Not Visible	Visible	Intact	Broken Flake
2003	242	140	243.82	141.38	4		12	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2003	242	140	243.27	140.43	7		11	no	Visible	Not Visible	Visible	Intact	Debris
2003	242	142	242.71	142.03	3	17	5	no	Visible	Visible	Visible	NA	Broken Flake
2003	242	142	242.75	143.66	5	17	17	yes	Visible	Visible	Visible	Intact	flake
2003	242	142	242.9	143	5	18	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	242	142	243	143.25	3	18	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2003	242	142	243.17	143.98	4	18	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2003	242	142	242.8	142.72	2	18	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2003	242	142	243.28	143.51	15	19	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	242	142	243.54	143.89	7	19	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2003	242	142	242.6	143.96	19	19	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	242	142	243.64	143.07	16	19	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	242	142	243.16	143.45	21	19	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	242	142	242.6	143.35	3	19	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	242	142	242.42	143.29	4	19	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	242	142	242.54	143.9	10	19	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	242	142	243.6	143.86	8	19	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	242	142	243.2	143.92	22	19	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	242	142	242.3	142.27	26	19	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	242	142	243.65	143.85	23	19	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	242	142	242.46	142.25	27	19	0	yes	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	242	142	243.48	143.89	5	19	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2003	242	142	243.25	142.91	28	19	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2003	242	142	242.73	143.03	1	19	3	no	Visible	Not Visible	Visible	Broken	Debris
2003	242	142	243.74	143	24	19	3	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2003	242	142	243.66	143.99	18	19	2	no	Visible	Not Visible	Visible	Intact	Broken Flake
2003	242	142	243.07	143.04	14	19	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2003	242	142	243.79	143.84	6	19	1	no	Visible	Not Visible	Visible	Intact	Broken Flake
2003	242	142	243.67	143.79	9	19	5	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2003	242	142	242.4	143.57	2	19	12	no	Visible	Not Visible	Visible	Intact	Debris
2003	242	142	242.89	143.57	12	19	12	no	Visible	Not Visible	Visible	Intact	Debris
2003	242	142	242.6	143.78	11	19	15	no	Visible	Not Visible	Visible	Intact	Debris
2003	242	142	242.47	142.82	25	19	17	no	Visible	Not Visible	Visible	Intact	Debris
2003	242	142	242.9	143.07	13	19	26	no	Visible	Not Visible	Visible	NA	Debris
2003	242	142	242.85	142.53	1		13	no	Visible	Not Visible	Visible	NA	Flake Fragment
2003	244	138	245.76	138.25	1	11	2	no	Visible	Not Visible	Visible	Intact	Broken Flake
2003	244	140	245.76	140.65	2	18	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	244	140	245.43	140.43	1	18	12	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2003	244	140	245.8	140.44	1	20	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	244	140	244.13	140.1	2	20	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2003	244	140	244.63	140.34	3	20	8	no	Visible	Not Visible	Visible	Intact	Debris
2003	244	142	245.21	143.12	7	17	5	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2003	244	142	244.17	142.53	3	17	6	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2003	244	142	245.71	143.63	6	17	15	yes	Visible	Visible	Visible	Intact	Flake

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2003	244	142	244.87	142.73	2	17	17	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2003	244	142	245.75	142.7	1	18	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	244	142	245.62	142.78	2	18	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	244	142	244.89	142.29	4	18	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	244	142	245.8	143.19	6	18	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	244	142	244.16	142.69	5	18	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	244	142	245.54	143.94	13	18	1	no	Visible	Not Visible	Visible	Intact	Debris
2003	244	142	245.26	143.94	11	18	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2003	244	142	245.06	143.97	9	18	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2003	244	142	245.18	142.83	3	18	5	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2003	244	142	245.48	143.74	14	18	5	no	Visible	Not Visible	Visible	Intact	Debris
2003	244	142	245.35	143.37	7	18	10	no	Visible	Not Visible	Visible	NA	Debris
2003	244	142	245.06	143.71	8	18	12	yes	Visible	Visible	Visible	Intact	Flake
2003	244	142	245.35	143.91	12	18	20	no	Visible	Visible	Visible	Intact	Broken Flake
2003	244	142	245.16	143.89	10	18	21	no	Visible	Not Visible	Visible	Intact	Debris
2003	244	142	245.35	142.82	10	19	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	244	142	244.21	143.68	20	19	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	244	142	245.78	142.55	8	19	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	244	142	245.8	142.54	9	19	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	244	142	245.4	143.75	21	19	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	244	142	244.24	143.43	19	19	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	244	142	244.8	143.63	12	19	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2003	244	142	245.9	142.6	7	19	1	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2003	244	142	245.32	143.3	22	19	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2003	244	142	244.2	143.3	15	19	3	no	Not Visible	Not Visible	Visible	NA	Amorphous Debris
2003	244	142	245.07	143.73	3	19	4	yes	Visible	Visible	Visible	Intact	Flake
2003	244	142	245.42	142.85	5	19	5	yes	Visible	Not Visible	Visible	Intact	Flake Fragment
2003	244	142	244.2	143.42	18	19	9	yes	Visible	Visible	Visible	Intact	Flake
2003	244	142	244.28	143.5	24	19	9	no	Visible	Not Visible	Visible	Intact	Debris
2003	244	142	245.03	143.14	1	19	6	yes	Visible	Visible	Visible	Intact	Broken Flake
2003	244	142	244.92	142.66	23	19	10	no	Visible	Not Visible	Not Visible	Intact	Debris
2003	244	142	244	142.58	17		1	no	Visible	Not Visible	Not Visible	NA	Amorphous Debris
2003	244	142	245.13	143.14	2		3	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2003	244	142	245.13	142.9	6		5	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2003	244	142	244.03	143.41	14		5	yes	Visible	Visible	Visible	Intact	Broken Flake
2003	244	142	244.77	143.15	11		7	no	Not Visible	Not Visible	Visible	NA	Debris
2003	244	142	245.48	142.83	4		13	yes	Visible	Visible	Visible	Broken	Broken Flake
2003	244	142	244.5	143.87	13		26	no	Visible	Not Visible	Visible	Intact	Debris
2003			243.54	143.26	20	19	2	no	Visible	Not Visible	Visible	Intact	Broken Flake
2004	242	140	242.28	140.78	1	1	6	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2004	242	140	242.54	142.64	1	2	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2004	242	140	243.34	141.27	1	2	3	no	Not Visible	Not Visible	Visible	Broken	Debris
2004	242	140	243.39	141.73	2	3	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2004	242	140	242.52	141.5	2	3	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2004	242	140	242.55	140.82	5	3	0	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2004	242	140	242.16	140.36	6	3	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2004	242	140	242.37	140.56	4	3	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2004	242	140	242.3	140.66	2	3	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2004	242	140	242.26	140.83	1	3	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2004	242	140	242.3	140.78	3	3	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2004	242	140	243.39	141.74	1	3	5	no	Not Visible	Not Visible	Visible	NA	Amorphous Debris
2004	242	140	243.59	141.425	1	4	1	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2004	242	140	242.54	141.28	2	4	6	no	Not Visible	Not Visible	Visible	Intact	Debris
2004	242	140	242.92	141.9	1	4	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2004	242	140	242.11	140.42	1	4	5	no	Visible	Not Visible	Visible	Intact	Debris
2004	242	140	242.24	140.74	3	4	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2004	242	140	242.18	140.41	2	4	8	no	Visible	Not Visible	Visible	Intact	Debris
2004	242	140	243.56	141.61	1	5	5	no	Not Visible	Not Visible	Visible	Broken	Debris
2004	242	140	242.04	140.34	2	5	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2004	242	140	242.63	140.56	1	5	0	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2004	242	140	242.7	141.57	2	5	3	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2004	242	140	242.69	141.65	1	5	5	no	Not Visible	Not Visible	Visible	Broken	Debris
2004	242	140	242.4	142.18	7	6	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2004	242	140	242.35	141.25	5	6	3	no	Not Visible	Not Visible	Visible	Intact	Debris
2004	242	140	242.74	141.02	6	6	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2004	242	140	242.65	141.67	2	6	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2004	242	140	242.56	141.15	9	6	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2004	242	140	242.11	141.78	8	6	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2004	242	140	242.69	141.12	4	6	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2004	242	140	242.76	141.15	10	6	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2004	242	140	242.12	141.88	1	6	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2004	242	140	242.78	141.18	3	6	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2004	242	140	242.19	140.06	1	6	7	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2004	242	140	242.54	141.16	9	7	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2004	242	140	242.92	141.71	4	7	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2004	242	140	242.78	141.64	1	7	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2004	242	140	242.36	141.22	7	7	6	no	Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2004	242	140	242.51	141.33	6	7	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2004	242	140	242.93	141.72	5	7	4	no	Visible	Not Visible	Visible	Intact	Debris
2004	242	140	242.87	141.57	2	7	5	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2004	242	140	242.22	141.75	10	7	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2004	242	140	242.93	141.65	3	7	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2004	242	140	242.41	140.5	11	7	10	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2004	242	140	242.31	141.12	8	7	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2004	242	140	242.73	140.82	1	7	5	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2004	242	140	242.07	140.82	3	7	0	no	Not Visible	Not Visible	Not Visible	Broken	Pebble
2004	242	140	242.33	140.73	2	7	4	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2004	242	140	243.06	141.165	2	8	2	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2004	242	140	243.185	141.22	1	8	2	yes	Visible	Visible	Visible	Intact	flake
2004	242	140	242.15	140.09	1	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2004	242	140	242.12	140.21	1	9	1	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2004	242	140	242.14	140.25	2	9	0	no	Not Visible	Not Visible	Not Visible	Broken	Pebble
2004	242	140	242.6	140.35	4	9	5	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2004	242	140	242.3	140.31	3	9	13	no	Visible	Visible	Visible	Intact	Flake Fragment
2004	242	140	242.31	140.21	3	10	2	yes	Visible	Not Visible	Visible	Intact	Flake Fragment
2004	242	140	242.32	140.35	4	10	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2004	242	140	242.33	140.2	1	10	11	no	Visible	Not Visible	Visible	Intact	Debris
2004	242	140	242.27	140.3	2	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2004	242	140	242.61	140.17	1	11	6	no	Visible	Not Visible	Visible	Intact	Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2004	242	140	242.37	140.21	2	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2004	242	140	242.55	140.17	4	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2004	242	140	242.36	140.18	3	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2004	242	140	243.84	141.89			1	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2004	242	140	243.29	141.69	1		3	yes	Visible	Visible	Visible	Intact	Flake
2004	242	140	242.6	141.8	1								
2004	242	142	242.24	142.69	1	1	2	no	Not Visible	Not Visible	Visible	Intact	Debris
2004	242	142	242.66	142.01	2	3	4	no	Visible	Not Visible	Visible	Intact	Debris
2004	242	142	242.39	142.08	3	3	2	yes	Not Visible	Visible	Visible	Intact	Flake Fragment
2004	242	142	242.15	142.24	4	3	3	no	Visible	Not Visible	Visible	Intact	Debris
2004	242	142	242.71	142.06	1	3	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2004	242	142	242.75	142.75	5	4	1	yes	Not Visible	Not Visible	Visible	Intact	Broken Flake
2004	242	142	242.41	142.64	2	4	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2004	242	142	242.17	142.54	3	4	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2004	242	142	242.67	142.11	1	4	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2004	242	142	242.51	142.08	4	4	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2004	242	142	242.84	142.13	1	5	7	no	Visible	Visible	Not Visible	Intact	Flake Fragment
2004	242	142	242.92	143	6	6	8	no	Visible	Not Visible	Visible	Intact	Debris
2004	242	142	242.18	142.46	4	6	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2004	242	142	242.14	142.62	3	6	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2004	242	142	242.67	142.77	2	6	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2004	242	142	242.92	142.88	5	6	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2004	242	142	242.52	142.81	1	6	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2004	242	142	242.59	142.64	6	7	2	yes	Visible	Not Visible	Visible	Intact	Broken Flake
2004	242	142	242.39	142.8	3	7	0	no	Not Visible	Not Visible	Visible	Intact	Debris
2004	242	142	242.38	142.84	2	7	1	no	Not Visible	Not Visible	Visible	Intact	Debris
2004	242	142	242.64	142.77	5	7	0	yes	Visible	Visible	Not Visible	Intact	Flake Fragment
2004	242	142	242.78	142.79	9	7	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2004	242	142	242.52	142.81	11	7	2	yes	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2004	242	142	242.17	142.01	10	7	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2004	242	142	242.91	142.86	12	7	6	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2004	242	142	242.64	142.8	8	7	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2004	242	142	242.79	142.94	4	7	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2004	242	142	242.49	142.93	7	7	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2004	242	142	242.7	142.92	1								
2004	244	142	242.42	142.55	1		1	no	Visible	Not Visible	Visible	Complete	Flake Fragment
2004	242	140	244.13	142.25		1	6	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2005	242	140	243.08	141.84	1	1	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.08	141.87	2	1	2	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2005	242	140	243.27	141.92	3	1	7	No	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	242	140	243.23	141.92	4	1	7	No	Visible	Not Visible	Visible	Broken	Debris
2005	242	140	243.1	141.96	1	2	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.34	141.84	2	2	3	yes	Not Visible	Not Visible	Visible	Intact	Debris
2005	242	140	243.18	140.18	2	2	5	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2005	242	140	243.31	141.74	3	2	1	Yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2005	242	140	243.96	141.89	4	2	1	yes	Visible	Visible	Visible	Intact	flake
2005	242	140	243.38	141.65	5	2	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.03	141.27	6	2	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.18	141.42	7	2	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.39	141.73	8	2	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.35	141.69	9	2	4	yes	Visible	Visible	Visible	Intact	flake
2005	242	140	243.1	141.61	10	2	1	No	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	242	140	243.22	141.49	11	2	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.47	141.74	12	2	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.29	141.74	14	2	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.09	141.57	16	2	0	Yes	Not Visible	Visible	Not Visible	Intact	Debris
2005	242	140	243.34	140.77	17	2	3	no	Not Visible	Not Visible	Visible	Intact	Debris
2005	242	140	243.1	142	18	2	4	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243.13	141.74	1	3	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.43	140.21	1	3	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.41	141.75	2	3	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.75	140.1	2	3	0	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2005	242	140	243.12	141.77	3	3	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.42	141.75	4	3	1	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	242	140	243.18	141.75	5	3	1	no	Not Visible	Not Visible	Visible	Intact	Debris
2005	242	140	243.49	141.95	6	3	4	No	Yes	Not Visible	Yes	NA	Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2005	242	140	243.66	140.28	6	3	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.5	141.54	7	3	1	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2005	242	140	243.22	140.28	8	3	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2005	242	140	243.23	141.4	9	3	6	No	Visible	Not Visible	Not Visible	NA	Debris
2005	242	140	243.89	140.12	9	3	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.22	141.1	10	3	6	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243	141.91	11	3	0	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	242	140	243.16	141.17	12	3	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243.78	140.07	12	3	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.91	140	13	3	1	No	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2005	242	140	243.5	141.7	1	4	2	yes	Visible	Not Visible	Visible	Intact	Debris
2005	242	140	243.77	140.365	1	4	5	No	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2005	242	140	243.25	141.8	2	4	0	no	Not Visible	Not Visible	Visible	Intact	Debris
2005	242	140	243.79	140.33	2	4	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.05	141.94	3	4	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.82	140.33	3	4	5		Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	242	140	243.17	141.35	4	4	1	yes	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2005	242	140	243.74	140.37	4	4	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.15	141.92	5	4	5	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243.78	140.36	5	4	0	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243.57	141.8	6	4	6	No	Visible	Not Visible	Not Visible	NA	Debris
2005	242	140	243.48	141.57	7	4	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.79	140.2	7	4	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.05	141.7	8	4	4	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2005	242	140	243.77	140.33	8	4	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.42	141.82	9	4	5	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243.47	141.84	10	4	2	Yes	Visible	Not Visible	Not Visible	Intact	Debris
2005	242	140	243.88	140.2	10	4	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.37	141.64	11	4	2	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2005	242	140	243.67	140.05	11	4	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.3	141.19	12	4	9	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243.34	141.2	13	4	2	yes	Visible	Visible	Visible	Intact	Broken Flake
2005	242	140	243.25	141.35	14	4	1	No	Not Visible	Not Visible	Visible	NA	Amorphous Debris
2005	242	140	243.93	140.05	14	4	4	Yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2005	242	140	243.35	141.09	15	4	2	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	242	140	243.38	141.72	1	5	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243.05	141.92	2	5	4	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	242	140	243.17	141.29	3	5	1	yes	Visible	Visible	Visible	Intact	flake
2005	242	140	243.66	140.18	3	5	0	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2005	242	140	243.07	141.4	4	5	3	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	242	140	243.52	140.27	4	5	0	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2005	242	140	243.3	141.94	5	5	5	no	Not Visible	Not Visible	Visible	Broken	Debris
2005	242	140	243.89	140.21	5	5	3	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243.77	140.14	6	5	4	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243.8	140.16	7	5	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.84	140.23	8	5	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.85	140.12	9	5	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243.94	140.14	10	5	0	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	242.82	140.05	11	5	6	no	Not Visible	Not Visible	Visible	Intact	Flake Fragment
2005	242	140	243.38	141.55	1	6	6	no	Not Visible	Visible	Not Visible	Intact	Amorphous Debris
2005	242	140	243.55	140.19	1	6	5	no	Visible	Not Visible	Not Visible	Intact	Debris
2005	242	140	243.82	140.35	1	6	2	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243.5	141.86	2	6	3	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	242	140	243.37	140.2	2	6	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.01	141.1	3	6	7	no	Visible	Not Visible	Visible	NA	Debris
2005	242	140	243.41	140.22	4	6	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.79	140.02	5	6	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243.55	141.72	6	6	3	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243.6	140.25	7	6	3	Yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2005	242	140	243.53	140.24	8	6	0	No	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	242	140	243.53	140.23	9	6	2	Yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2005	242	140	243.52	140.2	10	6	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.71	140.08	11	6	6	Yes	Not Visible	Visible	Visible	Intact	Debris
2005	242	140	243.77	140.17	12	6	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243.75	140.14	13	6	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.74	140.09	14	6	0	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	242	140	243.92	140.15	15	6	2	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243.82	140.02	16	6	2	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2005	242	140	243.72	140	17	6	0	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243.75	140.21	18	6	3	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243.51	140.15	19	6	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.41	140.21	20	6	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	242	140	243.32	140.29	21	6	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.3	140.37	22	6	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.53	140.11	23	6	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.5	140.1	24	6	0	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2005	242	140	243.29	140.34	25	6	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.38	140.12	26	6	4	No	Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243.38	140.15	27	6	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243.54	140.13	28	6	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.54	140.13	29	6	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243.52	140.06	30	6	5	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243.51	140.08	31	6	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243.54	140.07	32	6	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243.34	140.15	33	6	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.54	140.04	34	6	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.52	140.08	35	6	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.56	140.04	36	6	2	Yes	Not Visible	Visible	Not Visible	NA	Flake
2005	242	140	243.52	140.08	37	6	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.06	140.69	38	6	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243	140.64	39	6	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.15	140.88	40	6	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.73	140.41	1	7	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.16	140.25	2	7	1	Yes	Not Visible	Visible	Visible	Intact	Flake
2005	242	140	243.11	140.48	3	7	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.2	140.60	4	7	2	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243.22	140.69	5	7	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.19	140.67	6	7	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.17	140.71	7	7	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.09	140.58	8	7	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.08	140.71	9	7	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.22	140.87	10	7	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2005	242	140	243.08	140.55	11	7	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.08	140.83	12	7	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.18	140.89	13	7	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.15	140.88	14	7	11	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243.07	140.26	15	7	0	No	Not Visible	Not Visible	Not Visible	NA	quartz Pebble
2005	242	140	243.58	140.23	16	7	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243.56	140.18	17	7	2	Yes	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	242	140	243.58	140.15	18	7	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.58	140.12	19	7	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	242	140	243.69	140.22	20	7	4	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2005	242	140	243.65	140.15	21	7	3	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243.18	140.42	22	7	8	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2005	242	140	243.4	140.64	1	10	2	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	242	140	243.34	140.24	2	10	3	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243.3	140.9	3	10	6	no	Visible	Not Visible	Visible	Broken	Debris
2005	242	140	243.07	140.88	4	10	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	242	140	243.3	140.66	5	10	4	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2005	242	140	243.7	140.56	1	11	5	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2005	242	140	243.52	140.14	2	11	2	yes	Visible	Visible	Visible	Intact	flake
2005	242	140	243.68	140.09	3	11	4	no	Not Visible	Not Visible	Visible	Intact	Debris
2005	242	140	243.56	140.36	2	12	6	no	Not Visible	Not Visible	Visible	Broken	Debris
2005	242	140	243.58	140.18	3	12	5	no	Not Visible	Not Visible	Visible	Broken	Debris
2005	242	140	243.88	140.37	4	12	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	242	140	243.59	140.27	5	12	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	242	140	243.61	140.19	6	12	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	242	140	243.38	140.91	2	13	6	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	242	140	243	140.55	2	13	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	242	140	243	140.55	2	13	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	242	144	243.09	144.54	1	10	20	no	Visible	Not Visible	Visible	Intact	Debris
2005	244	140	244.31	140.02	1	4	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	244	140	244.64	140.07	2	4	3	yes	Visible	Not Visible	Visible	Intact	Debris
2005	244	140	244.7	140.15	3	4	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	244	140	244.44	140.3	1	5	2	no	Visible	Not Visible	Visible	Intact	Flake
2005	244	140	244.21	140.05	2	5	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2005	244	140	244.28	140.03	3	5	4	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	244	140	244.87	140.87	1	6	2	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	244	140	244.87	140.63	2	6	5	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	244	140	244.37	140.14	3	6	5	no	Not Visible	Not Visible	Visible	Broken	Debris
2005	244	140	244.46	140.04	4	6	8	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	244	140	244.51	140.08	5	6	2	yes	Visible	Not Visible	Visible	Intact	Debris
2005	244	140	244.46	140.37	1	7	4	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	244	140	244.48	140.08	2	7	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2005	244	140	244.9	140.17	1	10	1	No	Not Visible	Not Visible	Visible	NA	Amorphous Debris
2005	244	140	244.65	140.05	1	10	2	no	Not Visible	Not Visible	Visible	Broken	Debris
2005	244	140	244.43	140.53	1	12	2	yes	Visible	Visible	Visible	Intact	Flake Fragment
2005	244	140	244.23	140.14	2	12	5	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	244	140	244.9	140.44	1	14	3	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	244	140	244.9	140.3	2	14	11	no	Not Visible	Not Visible	Visible	Intact	Debris
2005	244	140	244.84	140.16	3	14	13	yes	Visible	Not Visible	Not Visible	Intact	Debris
2005	244	140	244.42	140.49	1	15	6	No	Not Visible	Not Visible	Not Visible	NA	Debris
2005	244	140	244.35	140.41	2	15	0	No	Not Visible	Not Visible	Not Visible	NA	NA
2005	244	140	244.11	140.1	1	16	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	244	140	244.5	140.17	2	16	3	no	Not Visible	Not Visible	Visible	Intact	Debris
2005	244	140	244.28	140.24	3	16	2	no	Not Visible	Not Visible	Visible	Broken	Debris
2005	244	140	244.21	140.1	1	17	3	no	Not Visible	Not Visible	Visible	NA	Debris
2005	244	144	244.3	144.8			12	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	246	140	247.62	141.48	1	1	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	246	140	247.6	140.26	2	1	12	no	Visible	Visible	Visible	Broken	Broken Flake
2005	246	140	247.96	141	1	9	7	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	246	140	247.89	140.93	3	9	7	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2005	246	140	247.38	141.19	4	9	18	no	Visible	Not Visible	Visible	Intact	Debris
2005	246	140	247.77	140.82	5	9	14	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	246	140	247.92	140.32	6	9	5	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2005	246	140	247.3	140.32	1	10	12	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	246	140	247.49	141.69	2	10	4	yes	Visible	Not Visible	Visible	no	Flake Fragment
2005	246	140	247.96	140.43	3	10	4	yes	Visible	Visible	Visible	Intact	Broken Flake
2005	246	140	247.95	140.25	1	12	1	yes	Visible	Visible	Visible	Intact	Flake
2005	246	140	247.1	141.85	1	13	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2005	246	140	246.85	141.56	1	14	4	yes	Visible	Visible	Visible	Broken	Broken Flake
2005	246	140	246.84	141.67	2	14	6	yes	Visible	Visible	Visible	Intact	Flake
2005	246	140	246.69	141.73	3	14	5	yes	Visible	Visible	Visible	Broken	Broken Flake
2005	246	140	246.5	141.76	4	14	4	yes	Visible	Visible	Visible	Broken	Broken Flake
2005	246	140	246.46	141.25	5	14	5	yes	Visible	Visible	Visible	Intact	flake
2005	246	140	247.71	140.88	1	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	140	246.28	141.4	2	15	1	no	Visible	Visible	Visible	Intact	Broken Flake
2005	246	140	246.3	141.3	3	15	6	no	Visible	Not Visible	Visible	Intact	Debris
2005	246	140	246.8	141.42	4	15	5	yes	Visible	Visible	Visible	Intact	flake
2005	246	140	246.37	141.46	5	15	3	yes	Visible	Visible	Visible	Intact	Flake
2005	246	140	246.28	141.46	6	15	4	yes	Visible	Visible	Visible	Intact	Flake
2005	246	140	247.65	141.97	1	17	9	no	Not Visible	Not Visible	Visible	Intact	Debris
2005	246	140	246.62	141.53	2	17	0	yes	Visible	Visible	Visible	Intact	Flake
2005	246	140	246.7	141.3	3	17	0	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	246	140	246.76	141.93	4	17	4	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	246	140	246.5	141.41	5	17	7	no	Visible	Not Visible	Not Visible	Intact	Debris
2005	246	140	246.46	141.26	6	17	5	no	Visible	Not Visible	Not Visible	Intact	Debris
2005	246	140	246.25	141.4	7	17	5	no	Visible	Not Visible	Visible	NA	Flake Fragment
2005	246	140	246.16	141.96	8	17	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	246	140	246.33	141.4	9	17	9	no	Visible	Visible	Visible	Broken	Broken Flake
2005	246	140	246.93	141.35	10	17	9	no	Visible	Not Visible	Not Visible	Intact	Debris
2005	246	140	246.76	141.43	11	17	4	yes	Visible	Visible	Visible	Intact	Flake
2005	246	140	246.64	141.25	12	17	4	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	246	140	246.8	140.9	13	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	140	246.25	141.74	14	17	13	no	Visible	Not Visible	Visible	Broken	Debris
2005	246	140	246.68	141.92	1	18	12	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	246	140	246.36	141.54	2	18	2	yes	Visible	Visible	Visible	Broken	Broken Flake
2005	246	140	246.15	141.58	3	18	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	140	246.2	140.96	4	18	28	no	Visible	Not Visible	Visible	Intact	Debris
2005	246	140	247.1	140.18	5	18	5	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2005	246	140	247.06	141.68	6	18	2	no	Visible	Not Visible	Not Visible	NA	Debris
2005	246	140	246.13	141.6	1	19	4	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	246	140	247.2	140.65	2	19	3	yes	Visible	Visible	Visible	Intact	flake
2005	246	140	247.3	141.25	3	19	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2005	246	140	247.48	141.63	4	19	0	no	Visible	Not Visible	Visible	Broken	Debris
2005	246	140	246.8	141.96	1	20	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	140	246.35	140.48	2	20	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	246	140	246.26	140.92	3	20	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	140	246.24	140.03	4	20	2	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2005	246	140	246.12	140.8	5	20	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	140	247.27	140.93	6	20	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	246	140	247.07	140.87	7	20	2	no	Not Visible	Not Visible	Visible	Broken	Debris
2005	246	140	247.03	140.25	8	20	5	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	246	140	247.81	140.09	9	20	6	no	Visible	Not Visible	Visible	NA	Debris
2005	246	140	247.23	141.23	10	20	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	140	247.31	141.44	11	20	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	246	140	247.08	141.28	12	20	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	246	140	246.18	141.33	1	21	6	yes	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2005	246	140	246.57	141.3	2	21	1	yes	Visible	Visible	Visible	Intact	flake
2005	246	140	146.95	141.28	3	21	3	no	Visible	Not Visible	Visible	Intact	Debris
2005	246	140	246.22	141.08	4	21	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2005	246	140	146.77	141.17	5	21	8	no	Visible	Not Visible	Not Visible	NA	Debris
2005	246	140	146.49	141.04	6	21	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	140	143.37	141.29	7	21	4	no	Not Visible	Not Visible	Visible	Intact	Debris
2005	246	140	246.46	141.26	8	21	7	no	Visible	Not Visible	Visible	Broken	Debris
2005	246	140	246.5	140.29	9	21	6	no	Visible	Not Visible	Visible	Broken	Debris
2005	246	140	246.38	140.33	10	21	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	140	246.28	140.07	11	21	17	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	246	140	246.36	140.41	12	21	3	no	Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2005	246	140	246.3	140.57	13	21	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	246	140	246.36	140.92	14	21	1	no	Visible	Not Visible	Visible	NA	Amorphous Debris
2005	246	140	246.92	140.53	15	21	0	no	Visible	Not Visible	Visible	Intact	Debris
2005	246	140	246.3	140.28	16	21	2	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2005	246	140	246.78	140.12	17	21	6	no	Visible	Not Visible	Visible	NA	Debris
2005	246	140	247.28	141.38	18	21	3	no	Visible	Visible	Not Visible	Intact	Flake Fragment
2005	246	140	247.66	141.79	1		2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	246	140	247.6	140.3	1		8	no	Visible	Not Visible	Visible	NA	Flake Fragment
2005	246	140	246.5	141.2	2	16	2	no	Visible	Not Visible	Visible	Broken	Flake Fragment

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2005	246	142	247.76	142.25	1	5	5	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	246	142	247.66	143.18	1	6	8	yes	Visible	Visible	Visible	Intact	flake
2005	246	142	247.5	143.5	2	6	14	no	Visible	Not Visible	Visible	Intact	Debris
2005	246	142	247.58	143.98	3	6	6	no	Visible	Visible	Visible	Broken	Broken Flake
2005	246	142	247.19	142.35	1	8	2	yes	Visible	Visible	Visible	Intact	Flake
2005	246	142	247.68	143.63	1	9	18	no	Visible	Not Visible	Visible	NA	Flake Fragment
2005	246	142	247.83	143.98	2	9	23	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	246	142	247.2	143.45	3	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	142	247.63	143.3	4	9	17	yes	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	246	142	247.72	143.16	6	9	10	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	246	142	247.63	143.86	1	10	4	yes	Visible	Visible	Visible	Intact	flake
2005	246	142	247.12	142.11	3	10	4	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	246	142	247.5	143.85	1	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	142	247.38	142.74	2	11	3	yes	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	246	142	247.91	142.83	3	11	5	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	246	142	247.96	143.15	1	12	30	no	Visible	Not Visible	Visible	NA	Flake Fragment
2005	246	142	246.84	142.12	2	12	7	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	246	142	247.3	143.25	2	13	9	no	Visible	Not Visible	Not Visible	Intact	Debris
2005	246	142	247.96	143.17	1	14	5	no	Visible	Not Visible	Not Visible	Intact	Debris
2005	246	142	247.4	143.08	2	14	6	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2005	246	142	247.28	143	3	14	6	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2005	246	142	247.66	143.64	4	14	4	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2005	246	142	247.1	143.09	5	14	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	246	142	246.96	142.25	1	15	0	no	Not Visible	Not Visible	Not Visible	NA	NA
2005	246	142	246.36	143.73	2	15	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	246	142	246.83	143.44	3	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	142	247.15	143.3	4	15	2	yes	Not Visible	Not Visible	Visible	Intact	Debris
2005	246	142	246.76	142.33	1	16	6	no	Visible	Not Visible	Visible	Intact	Amorphous Debris
2005	246	142	246.77	142.6	2	16	5	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2005	246	142	247.05	142.85	3	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	142	247.66	142.33	4	16	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	142	247.07	142.86	5	16	2	yes	Visible	Visible	Visible	Intact	flake
2005	246	142	247.64	142.78	6	16	3	yes	Not Visible	Visible	Visible	Intact	Flake Fragment
2005	246	142	247.46	142.83	7	16	0	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2005	246	142	247.13	142.74	8	16	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	246	142	247.77	142.67	9	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	142	247.49	142.66	10	16	1	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	246	142	247.38	142.66	11	16	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	246	142	247.49	142.53	12	16	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	142	247.2	142.49	13	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	142	247.1	142.28	14	16	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	246	142	247.8	142.2	15	16	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	142	247.06	142.1	16	16	0	yes	Visible	Visible	Visible	Intact	flake
2005	246	142	247.24	142.86	17	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	142	247.76	142.8	18	16	4	no	Not Visible	Not Visible	Visible	NA	Debris
2005	246	142	247.06	142.1	19	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	142	247.78	143.01	20	16	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	246	142	247.52	142.97	21	16	2	no	Not Visible	Not Visible	Visible	Intact	Debris
2005	246	142	246.64	143.05	22	16	2	yes	Visible	Visible	Visible	Intact	Flake
2005	246	142	246.21	143.39	23	16	3	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	246	142	246.21	143.26	24	16	2	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	246	142	246.48	142.66	1	17	3	yes	Visible	Visible	Visible	Intact	Broken Flake
2005	246	142	246.84	142.12	2	17	2	no	Visible	Not Visible	Visible	NA	Debris
2005	246	142	246.73	142.89	3	17	0	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	246	142	247.12	142.4	4	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	142	247.06	142.19	5	17	13	no	Visible	Not Visible	Visible	NA	Flake Fragment
2005	246	142	246.15	142.01	1	18	5	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	246	142	247.65	142.36	2	18	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	246	142	247.39	142.14	1	20	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	246	142	247.84	142.12	2	20	2	yes	Not Visible	Visible	Not Visible	Intact	Debris
2005	246	142	247.6	142.31	1	21	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	142	247.87	142.13	2	21	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	246	142	246.8	142.37	3	21	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	142	246.63	143.15	4	21	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	142	246.37	143.07	5	21	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	142	246.44	143.19	6	21	1	no	Visible	Not Visible	Visible	Intact	Debris
2005	246	142	246.64	143.88	1	22	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	142	246.67	143.02	2	22	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2005	246	142	246.66	143.01	3	22	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	246	142	246.64	143.25	4	22	1	no	Visible	Not Visible	Visible	Intact	Debris
2005	246	142	247.55	142.34	5	22	2	no	Visible	Not Visible	Visible	Intact	Debris
2005	246	142	247.91	142.25	1	23	4	no	Not Visible	Not Visible	Visible	Broken	Debris
2005	246	142	247.64	142.03	2	23	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	246	142	246.44	142.04	3	23	3	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2005	246	142	246.2	142.04	4	23	5	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	246	142	246.57	142.69	5	23	6	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2005	246	142	246.31	143.06	6	23	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	246	142	246.24	142.02	1	24	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	142	246.09	142.39	2	24	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	142	246.18	142.4	3	24	13	no	Visible	Visible	Visible	Intact	Broken Flake
2005	246	142	246.4	142.71	4	24	1	no	Visible	Visible	Visible	Intact	Flake Fragment
2005	246	142	246.34	142.72	5	24	4	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	246	142	246.20	142.45	6	24	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	142	246.28	143.37	1	25	2	yes	Visible	Not Visible	Visible	Intact	flake
2005	246	142	246.31	142.76	2	25	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	246	142	246.27	142.56	4	25	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	246	142	246.22	142.74	5	25	6	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	246	142	246.74	142.15	6	25	2	yes	Not Visible	Not Visible	Visible	Intact	flake
2005	246	142	246.85	143.15	7	25	5	no	Not Visible	Not Visible	Visible	Intact	Debris
2005	246	142	246.79	142.1	8	25	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	246	142	246.81	142.18	9	25	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	246	142	246.72	142.11	10	25	7	no	Visible	Not Visible	Visible	Intact	Debris
2005	246	142	247.04	142.29	11	25	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2005	246	142	247.1	142.33	12	25	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	142	247.15	142.34	13	25	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2005	246	142	247.2	142.42	14	25	4	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	246	142	247.01	142.39	16	25	6	no	Visible	Not Visible	Visible	Intact	Debris
2005	246	142	246.21	143.07	1	26	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	246	142	248.93	142.9	1		1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2005	246	142	247.36	142.4	2		3	yes	Visible	Visible	Visible	Broken	Broken Flake
2005	248	140	248.6	141	1	8	17	no	Visible	Not Visible	Visible	NA	Flake Fragment
2005	248	140	248.4	140.7	2	8	16	no	Visible	Not Visible	Visible	NA	Flake Fragment

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Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2005	248	140	248	140.9	3	8	2	yes	Visible	Visible	Visible	Intact	flake
2005	248	140	248.65	141.1	4	8	1	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2005	248	140	248.9	140.85	2	9	25	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	246	142	247.17	142.47	19			No	Not Visible	Not Visible	Not Visible	NA	
2005	246	142	247.66	143.68	4			No	Not Visible	Not Visible	Not Visible	Intact	
2005	246	142	247.9	142.12	1			No	Not Visible	Not Visible	Not Visible	Intact	
2005	246	142	247.16	143.16	2			no	Visible	Not Visible	Visible	NA	
2005	246	142	247.55	143.37	2			no	Not Visible	Not Visible	Not Visible	NA	
2005	248	140	248.1	141.3	1			No	Not Visible	Not Visible	Visible	NA	
2005	248	140	248.45	140.3	1			No	Not Visible	Not Visible	Not Visible	NA	
2005	248	140	248.75	140.1	1			yes	Not Visible	Not Visible	Not Visible	Intact	
2005	248	140	248.85	140.09	1			no	Visible	Visible	Visible	NA	
2005	248	140	248.38	140.24	2			No	Not Visible	Not Visible	Not Visible	Intact	
2005	248	140	248.82	141.4	2			No	Not Visible	Not Visible	Not Visible	Intact	
2005	248	140	248.25	140.3	3			No	Not Visible	Not Visible	Not Visible	NA	
2005	248	140	248.88	141.65	3			no	Not Visible	Not Visible	Not Visible	NA	
2005	248	140	248.92	140.6	3			no	Visible	Visible	Visible	Intact	Pebble
2005	248	140	248.17	140.34	4			No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2005	248	140	248.64	141.94	4			No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2005	248	140	248.31	140.25	5			yes	Not Visible	Not Visible	Not Visible	NA	Debris
2006	242	140	242.57	141.37	2	1	2	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2006	242	140	242.66	141.75	3	1	2	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2006	242	140	242.78	141.6	4	1	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.82	141.63	5	1	5	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.83	141.64	6	1	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.85	141.63	7	1	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.8	141.58	8	1	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.65	141.32	9	1	3	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.77	141.56	1	1	3	no	Visible	Not Visible	Visible	Broken	Debris
2006	242	140	242.31	141.66	2	2	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.3	141.68	3	2	1	No	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2006	242	140	242.49	141.41	1	2	7	no	Visible	Not Visible	Visible	Intact	Debris
2006	242	140	242.35	141.85	4	2	11	no	Visible	Not Visible	Visible	Broken	Debris
2006	242	140	242.35	141.63	1	3	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2006	242	140	242.15	141.6	2	3	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.33	141.7	3	3	3	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.3	141.56	4	3	5	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.11	141.89	5	3	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2006	242	140	242.75	141.8	1	4	1	Yes	Not Visible	Visible	Not Visible	Broken	Debris
2006	242	140	242.52	141.32	3	4	6	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.29	141.47	4	4	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.96	141.76	2	4	8	No	Visible	Not Visible	Visible	Intact	Flake Fragment
2006	242	140	242.82	141.73	1	5	3	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.12	141.33	1	6	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.4	141.05	3	6	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.65	141.31	4	6	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.98	141.89	5	6	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.98	141.56	6	6	0	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.49	141.2	7	6	6	yes	Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.56	141.23	8	6	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.60	141.22	9	6	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.84	141.08	1	7	3	Yes	Not Visible	Visible	Visible	Intact	Flake
2006	242	140	242.83	141.24	2	7	3	no	Visible	Not Visible	Not Visible	NA	Debris
2006	242	140	242.92	141.69	4	7	4	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.35	140.84	3	7	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2006	242	140	242.58	141.29	1	8	2	yes	Visible	Not Visible	Not Visible	Intact	Flake Fragment
2006	242	140	242.99	141.35	1	9	1	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2006	242	140	242.22	141.88	2	9	1	no	Not Visible	Visible	Not Visible	Intact	Debris
2006	242	140	242.81	141.83	3	9	6	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.48	141.25	4	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.95	141.23	5	9	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.8	141.32	7	9	2	No	Not Visible	Visible	Not Visible	NA	Debris
2006	242	140	242.19	141.21	8	9	4	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2006	242	140	242.7	141.11	9	9	4	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.86	141.07	1	10	5	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.78	141.13	2	10	1	yes	Not Visible	Visible	Not Visible	Intact	Debris
2006	242	140	242.72	141.82	4	10	5	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.98	141.13	5	10	7	No	Visible	Not Visible	Not Visible	Broken	Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2006	242	140	242.77	141.77	6	10	5	yes	Visible	Visible	Visible	Intact	Broken Flake
2006	242	140	242585	141.76	9	10	2	yes	Visible	Not Visible	Not Visible	Intact	Debris
2006	242	140	242.19	141.84	11	10	1	No	Not Visible	Not Visible	Visible	NA	Amorphous Debris
2006	242	140	242.64	141.68	12	10	1	no	Visible	Visible	Not Visible	Intact	Flake Fragment
2006	242	140	242.47	141.73	7	10	8	no	Visible	Not Visible	Visible	NA	Debris
2006	242	140	242.64	141.86	8	10	3	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2006	242	140	242.83	141.27	3	10	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2006	242	140	242.83	141.47	10	10	5	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2006	242	140	242.97	141.09	1	11	4	yes	Visible	Not Visible	Visible	Intact	Flake
2006	242	140	242.42	141.59	2	11	9	No	Visible	Not Visible	Not Visible	NA	Debris
2006	242	140	242.85	141.05	3	11	3	No	Visible	Not Visible	Visible	NA	Debris
2006	242	140	242.45	141.52	4	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.15	141.54	5	11	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.14	141.39	6	11	1	No	Visible	Not Visible	Not Visible	NA	Debris
2006	242	140	242.13	141.71	7	11	3	yes	Visible	Not Visible	Visible	Intact	Debris
2006	242	140	242.03	141.84	8	11	6	no	Visible	Not Visible	Not Visible	Intact	Debris
2006	242	140	242.31	141.79	9	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.9	141.38	1	12	2	yes	Not Visible	Not Visible	Visible	Intact	Debris
2006	242	140	242.96	141.78	2	12	6	No	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2006	242	140	242.83	141.23	3	12	0	No	Not Visible	Visible	Visible	Broken	Debris
2006	242	140	242.61	141.24	4	12	1	No	Visible	Not Visible	Visible	Intact	Amorphous Debris
2006	242	140	242.33	141.82	6	12	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.98	141.7	7	12	0	Yes	Visible	Visible	Visible	Intact	Flake
2006	242	140	242.09	141.81	8	12	4	No	Visible	Not Visible	Not Visible	NA	Debris
2006	242	140	242.15	141.43	9	12	0	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.12	141.33	11	12	4	Yes	Visible	Visible	Visible	Intact	Broken Flake
2006	242	140	242.03	141.265	12	12	2	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2006	242	140	242.31	141.47	5	12	5	no	Visible	Not Visible	Visible	Broken	Debris
2006	242	140	242.04	141.71	10	12	4	yes	Visible	Not Visible	Visible	Intact	Broken Flake
2006	242	140	242.53	141.92	1	13	3	No	Visible	Not Visible	Visible	NA	Debris
2006	242	140	242.33	141.92	2	13	2	Yes	Visible	Not Visible	Not Visible	Intact	Debris
2006	242	140	242.12	141.9	3	13	5	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.11	141.19	5	13	0	yes	Visible	Visible	Not Visible	Intact	Flake Fragment
2006	242	140	242.39	141.18	4	13	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2006	242	140	242.99	141.97	1	14	3	yes	Visible	Visible	Visible	Intact	Broken Flake
2006	242	140	242.9	141.99	2	14	0	No	Not Visible	Not Visible	Visible	Intact	Debris
2006	242	140	242.99	141.22	3	14	0	Yes	Visible	Visible	Not Visible	Intact	Chert flake
2006	242	140	242.4	141.07	5	14	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.43	141.71	6	14	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.54	141.18	7	14	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.26	141.21	8	14	6	No	Not Visible	Not Visible	Visible	NA	Debris
2006	242	140	242.68	141.35	9	14	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.4	141.46	4	14	1	no	Visible	Not Visible	Visible	Broken	Debris
2006	242	140	242.83	141	1	15	6	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.57	141.15	2	15	5	No	VISIBLE	Not Visible	Visible	Intact	Debris
2006	242	140	242.56	141.03	3	15	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.46	141.05	4	15	0	yes	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.81	141.92	5	15	0	Yes	Visible	Visible	Not Visible	Intact	Debris
2006	242	140	242.45	141.75	6	15	6	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.07	141.71	7	15	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.82	141.82	1	16	22	No	Visible	Not Visible	Visible	NA	Amorphous Debris
2006	242	140	242.9	141.82	2	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.82	141.97	3	16	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2006	242	140	242.97	141.63	4	16	3	yes	Visible	Not Visible	Visible	Intact	Broken Flake
2006	242	140	242.8	141.1	5	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.2	141.5	7	16	3	no	Not Visible	Not Visible	Visible	Intact	Debris
2006	242	140	242.28	142.18	8	16	2	yes	Visible	Visible	Not Visible	Intact	Flake
2006	242	140	242.23	141.28	6	16	4	no	Visible	Not Visible	Visible	NA	Debris
2006	242	140	242.22	140.15	1	1	5	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.54	140.18	2	1	4	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.12	140.11	3	1	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.2	140.35	4	1	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.32	140.72	1	2	4	No	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2006	242	140	242.32	140.72	1	2	6	yes	Not Visible	Visible	Not Visible	Broken	Broken Flake
2006	242	140	242.28	140.12	2	2	8	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.28	140.12	2	2	7	no	Not Visible	Not Visible	Visible	NA	Debris
2006	242	140	242.38	140.5	3	2	5	No	Visible	Not Visible	Not Visible	Intact	Debris
2006	242	140	242.22	140.97	4	2	6	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2006	242	140	242.91	140.3	5	2	4	No	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2006	242	140	242.53	140.18	6	2	3	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.12	140.2	8	2	1	Yes	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.48	140.3	9	2	2	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.07	140.51	10	2	7	Yes	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.5	140.45	7	2	4	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2006	242	140	242.13	140.28	1	3	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.37	140.2	1	4	10	No	Not Visible	Not Visible	Visible	Intact	Debris
2006	242	140	242.44	140.68	2	4	4	no	Not Visible	Visible	Visible	Intact	Debris
2006	242	140	242.09	140.27	3	4	2	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2006	242	140	242.14	140.25	4	4	6	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.24	140.68	1	5	2	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2006	242	140	242.5	140.45	2	5	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.75	140.2	1	6	5	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.46	140.68	2	6	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.42	141.24	2	6	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2006	242	140	242.86	140.93	1	7	3	No	Not Visible	Not Visible	Visible	Intact	Debris
2006	242	140	242.74	140.24	2	7	3	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.27	140.45	3	7	2	Yes	Not Visible	Visible	Not Visible	Intact	Debris
2006	242	140	242.4	140.53	4	7	4	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2006	242	140	242.04	140.29	7	7	7	No	Not Visible	Not Visible	Visible	NA	Amorphous Debris
2006	242	140	242.02	140.52	8	7	0	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.94	140.23	9	7	1	No	Visible	Not Visible	Visible	Intact	Debris
2006	242	140	242.9	140.32	10	7	4	no	Visible	Not Visible	Visible	Intact	Debris
2006	242	140	242.17	140.19	6	7	5	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2006	242	140	242.31	140.68	5	7	3	yes	Visible	Not Visible	Visible	Intact	Flake Fragment
2006	242	140	242.95	140.7	1	8	5	yes	Visible	Not Visible	Visible	NA	Debris
2006	242	140	242.95	140.7	2	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.79	140.19	3	8	3	No	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2006	242	140	242.53	140.3	4	8	3	no	Visible	Not Visible	Visible	NA	Amorphous Debris
2006	242	140	242.31	140.25	5	8	0	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.98	140.8	1	9	3	no	Visible	Not Visible	Not Visible	Intact	Debris
2006	242	140	242.66	140.18	2	9	6	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2006	242	140	242.93	140.61	3	9	2	yes	Not Visible	Not Visible	Visible	Intact	Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2006	242	140	242.68	140.66	5	9	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2006	242	140	242.7	140.68	4	9	6	no	Visible	Not Visible	Visible	Broken	Debris
2006	242	140	242.8	140.68	1	10	3	no	Not Visible	Not Visible	Visible	Intact	Debris
2006	242	140	242.92	140.6	2	10	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.82	140.72	3	10	2	No	Visible	Not Visible	Visible	Intact	Debris
2006	242	140	242.96	140.21	5	10	3	No	Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2006	242	140	242.93	140.18	6	10	4	No	Visible	Not Visible	Visible	Broken	Debris
2006	242	140	242.02	140.09	8	10	4	No	Visible	Not Visible	Visible	Intact	Debris
2006	242	140	242.76	140.88	7	10	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2006	242	140	242.99	140.39	9	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.84	140.535	1	11	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.19	140.58	2	11	2	yes	Visible	Visible	Not Visible	Intact	Broken Flake
2006	242	140	242.96	140.65	3	11	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.74	140.665	4	11	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.92	140.24	4	11	8	no	Visible	Not Visible	Not Visible	Intact	Debris
2006	242	140	242.95	140.22	5	11	2	yes	Visible	Visible	Visible	Intact	flake
2006	242	140	242.93	140.13	6	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.85	140.85	7	11	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2006	242	140	242.72	140.67	8	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.98	140.99	10	11	2	No	Visible	Not Visible	Not Visible	Intact	Debris
2006	242	140	242.63	140.7	11	11	3	No	Visible	Visible	Visible	Intact	Flake Fragment
2006	242	140	242.59	140.91	13	11	4	Yes	Visible	Not Visible	Visible	Intact	Flake Fragment
2006	242	140	242.58	140.8	14	11	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.54	140.84	15	11	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.04	140.37	16	11	6	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.13	140.9	17	11	5	no	Visible	Not Visible	Visible	NA	Debris
2006	242	140	242.12	140.41	18	11	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.04	140.55	19	11	1	no	Not Visible	Not Visible	Visible	Intact	Debris
2006	242	140	242.85	140.31	1	12	1	No	Visible	Not Visible	Visible	Intact	Debris
2006	242	140	242.79	140.29	2	12	4	No	Visible	Not Visible	Not Visible	Intact	Debris
2006	242	140	242.93	140.38	3	12	2	yes	Visible	Not Visible	Visible	Intact	Flake Fragment
2006	242	140	242.8	140.97	4	12	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.35	140.43	5	12	5	no	Visible	Not Visible	Visible	NA	Flake Fragment
2006	242	140	242.25	140.77	6	12	1	no	Visible	Not Visible	Not Visible	Intact	Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2006	242	140	242.35	140.43	7	12	2	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2006	242	140	242.22	140.62	8	12	4	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2006	242	140	242.89	140.23	1	13	6	No	Not Visible	Visible	Visible	NA	Debris
2006	242	140	242.63	140.38	2	13	4	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.38	140.63	3	13	2	yes	Not Visible	Not Visible	Visible	Intact	Debris
2006	242	140	242.47	140.79	4	13	1	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2006	242	140	242.42	140.1	5	13	2	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.7	140.88	7	13	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.4	140.44	6	13	5	no	Not Visible	Not Visible	Visible	Intact	Debris
2006	242	140	242.93	140.36	1	14	5	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2006	242	140	242.55	140.36	2	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.56	140.34	3	14	8	No	Visible	Not Visible	Visible	NA	Amorphous Debris
2006	242	140	242.32	140.32	4	14	3	no	Visible	Not Visible	Visible	Intact	Debris
2006	242	140	242.14	140	5	14	6	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2006	242	140	242.86	140.29	1	15	3	yes	Not Visible	Visible	Not Visible	Intact	Amorphous Debris
2006	242	140	242.16	140.9	2	15	6	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	140	242.7	140.17	1	16	2	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2006	242	140	242.8	140.94	3	16	3	yes	Visible	Not Visible	Visible	Intact	Debris
2006	242	140	242.73	140.36	2	16	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2006	242	140	242.33	140.8	4	16	2	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2006	242	142	242.15	142.32	5	1	1	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2006	242	142	242.28	142.14	1	1	2	no	Visible	Not Visible	Visible	Broken	Debris
2006	242	142	242.47	142.7	7	1	3	no	Visible	Not Visible	Visible	Broken	Debris
2006	242	142	242.12	142.9	8	1	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2006	242	142	242.9	142.17	1	2	1	no	Visible	Visible	Not Visible	Intact	Flake Fragment
2006	242	142	242.77	142.29	3	2	0	No	Not Visible	Not Visible	Not Visible	NA	NA
2006	242	142	242.29	142.55	5	2	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	142	242.28	142.8	8	2	3	no	Not Visible	Not Visible	Visible	NA	Amorphous Debris
2006	242	142	242.75	142.09	2	2	2	no	Visible	Not Visible	Visible	Broken	Flak fragment
2006	242	142	242.65	142.55	4	2	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2006	242	142	242.82	142.88	9	2	8	no	Not Visible	Not Visible	Visible	Broken	Debris
2006	242	142	242.43	142.95	4	3	1	yes	Not Visible	Visible	Visible	Intact	Broken Flake
2006	242	142	242.69	142.195	1	3	2	no	Not Visible	Not Visible	Visible	Intact	Debris
2006	242	142	242.86	142.16	2	3	6	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2006	242	142	242.98	142.44	3	5	2	no	Not Visible	Not Visible	Visible	Broken	Debris
2006	242	142	242.34	142.635	4	6	1	no	Visible	Visible	Visible	Broken	Broken Flake
2006	242	142	242.63	142.65	5	6	1	no	Visible	Not Visible	Visible	Broken	Debris
2006	242	142	242.07	142.49	1	7	1	no	Visible	Not Visible	Visible	Broken	Debris
2006	242	142	242.43	142.73	1	8	3	no	Visible	Not Visible	Visible	Intact	Debris
2006	242	142	242.41	142.41	1	4	0	yes	Visible	Visible	Visible	Intact	Flake
2006	242	142	242.5	142.87	1	6	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	142	242.93	142.925	6	8	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	142	242.4	142.025	2	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	142	242.54	142.95	4	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	142	242.37	142.435	6	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	140	242.48	141.77	6	9	1	no	Visible	Not Visible	Visible	Broken	Debris
2006	242	142	242.37	142.06	1	9	1	yes	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2006	242	142	242.48	142.12	6	2	2	yes	Visible	Visible	Visible	Intact	flake
2006	242	142	242.38	142.825	3	3	2	no	Not Visible	Not Visible	Not Visible	Intact	Debris
2006	242	142	242.74	142.895	2	5	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2006	242	142	242.19	142.815	3	3	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	142	242.20	142.58	2	6	3	yes	Visible	Not Visible	Visible	Intact	Broken flake
2006	242	142	242.62	142.58	6	6	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	142	242.44	142.94	2	7	3	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2006	242	142	242.26	142.68	2	1	4	no	Not Visible	Not Visible	Visible	Intact	Debris
2006	242	142	242.03	142.32	2	4	4	yes	Not Visible	Visible	Visible	Intact	Flake Fragment
2006	242	142	242.72	142.77	7	6	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	142	242.99	142.24	2	8	4	no	Visible	Not Visible	Not Visible	Intact	Debris
2006	242	142	242.71	142.99	3	9	4	yes	Visible	Not Visible	Visible	Broken	Flake Fragment
2006	242	142	242.45	142.35	5	9	4	no	Visible	Not Visible	Not Visible	Broken	Debris
2006	242	140	242.42	141.24	2	6			Not Visible	Not Visible	Not Visible		Amorphous Debris
2006	242	140	242.01	140.57	2	3			Not Visible	Not Visible	Not Visible		Amorphous Debris
2006	242	140	242.86	140.62	10	10			Not Visible	Not Visible	Not Visible		Pebble
2006	242	140	242.5	140.35	9	11			Not Visible	Not Visible	Not Visible		Amorphous Debris
2006	242	140	242.29	140.12	12	11			Not Visible	Not Visible	Not Visible		Pebble
2006	242	142	242.14	142.04	7	2			Not Visible	Not Visible	Not Visible	Intact	Pebble
2006	242	142	242.12	142.91	3	1			Not Visible	Not Visible	Not Visible	Intact	Pebble
2006	242	142	242.08	142.92	4	1			Not Visible	Not Visible	Not Visible	NA	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2006	242	142	242.46	142.94	6	1			Visible	Not Visible	Visible	NA	Debris
2006	242	142	242.23	142.77	9	1			Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	142	242.88	142.35	10	1			Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2006	242	142	242.89	142.36	11	1			Visible	Not Visible	Visible	NA	Debris
2006	242	142	242.71	142.22	12	1			Visible	Not Visible	Visible	NA	Debris
2006	242	142	242.85	142.73	13	1			Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2006	242	142	242.27	142.19	3	8			Not Visible	Not Visible	Not Visible	NA	Pebble
2006	242	142	242	142.35	4	8			Not Visible	Not Visible	Not Visible	Broken	Pebble
2006	242	142	242.76	142.67	5	8			Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2006	242	142	243.19	142.44	1	5		No	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2006	242	142	243.23	142.69	1	4		No	Not Visible	Visible	Not Visible	NA	Debris
2006	242	142	243.24	142.875	2	5		No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.97	141.94	1	17	0	no	Not Visible	Not Visible	Visible	Intact	Debris
2007	242	140	242.86	140.93	1	17	4	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.69	140.96	2	17	3	no	Visible	Not Visible	Visible	Intact	Debris
2007	242	140	242.48	140.85	3	17	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.11	140.7	4	17	1	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.08	140.26	5	17	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.32	140.12	6	17	5	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.71	140.44	7	17	8	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.77	140.4	8	17	2	yes	Visible	Visible	Visible	Intact	Broken Flake
2007	242	140	242.87	140.3	9	17	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.91	140.03	10	17	2	yes	Visible	Not Visible	Visible	Intact	Debris
2007	242	140	242.37	141.9	2	18	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	241.37	141.9	2	18	0	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.34	141.44	3	18	1	No	Not Visible	Not Visible	Visible	NA	Amorphous Debris
2007	242	140	241.34	141.44	3	18	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.5	141.5	4	18	2	Yes	Visible	Not Visible	Visible	Intact	Flake
2007	242	140	242.84	140.29	2	18	7	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.84	140.08	3	18	5	No	Visible	Not Visible	Not Visible	NA	Debris
2007	242	140	242.45	140.47	4	18	4	No	Visible	Not Visible	Not Visible	Intact	Debris
2007	242	140	242.2	140.54	5	18	1	No	Visible	Not Visible	Not Visible	Intact	Debris
2007	242	140	242.38	140.27	6	18	3	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.5	140.94	7	18	5	No	Visible	Not Visible	Not Visible	Intact	Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2007	242	140	242.44	140.75	9	18	3	Yes	Visible	Not Visible	Visible	Intact	Flake Fragment
2007	242	140	242.07	140.7	10	18	3	NO	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.76	140.6	11	18	3	No	Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.34	141.85	1	19	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.66	141.3	2	19	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.11	141.66	4	19	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.65	141.37	5	19	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.54	141.4	6	19	0	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.31	141.49	8	19	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.67	140.95	1	19	2	No	Visible	Not Visible	Visible	Intact	Debris
2007	242	140	242.64	140.78	2	19	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.99	140.76	3	19	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.47	140.72	4	19	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.44	140.48	5	19	4	Yes	Visible	Not Visible	Visible	Intact	Flake
2007	242	140	242.44	140.79	6	19	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.49	140.82	7	19	5	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.6	140.21	8	19	0	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.59	140.24	9	19	1	Yes	Visible	Not Visible	Visible	Intact	Debris
2007	242	140	242.48	140.19	10	19	0	No	Not Visible	Not Visible	Not Visible	Intact	Pebble
2007	242	140	242.05	140.62	12	19	7	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.1	140.02	13	19	1	Yes	Not Visible	Visible	Not Visible	Intact	Flake
2007	242	140	242.2	140.24	14	19	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.25	140.2	15	19	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.3	140.11	16	19	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.29	140.11	17	19	2	No	Not Visible	Not Visible	Visible	Intact	Debris
2007	242	140	242.29	140.04	18	19	3	No	Visible	Not Visible	Visible	Intact	Debris
2007	242	140	242.52	141.95	1	20	4	No	Not Visible	Not Visible	Visible	Intact	Debris
2007	242	140	242.67	141.97	2	20	2	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.84	141.42	3	20	2	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.82	141.78	4	20	3	Yes	Visible	Not Visible	Visible	Intact	Flake
2007	242	140	242.88	141.29	5	20	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.66	141.34	6	20	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.59	141.36	7	20	0	No	Not Visible	Not Visible	Not Visible	NA	Chert Pebble
2007	242	140	242.94	141.12	8	20	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2007	242	140	242.44	141.64	9	20	1	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.05	141.92	12	20	1	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.25	141.82	13	20	2	No	Visible	Not Visible	Visible	Intact	Flake Fragment
2007	242	140	242.43	141.36	14	20	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.3	141.64	15	20	7	Yes	Visible	Not Visible	Not Visible	Intact	Debris
2007	242	140	242.79	140.85	1	20	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.66	140.74	2	20	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.59	140.72	3	20	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.38	140.49	4	20	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.45	140.95	5	20	0	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.25	140.88	6	20	2	No	Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.27	140.8	7	20	5	No	Visible	Not Visible	Visible	Intact	Debris
2007	242	140	242.09	141.67	1	21	9	yes	Visible	Not Visible	Visible	NA	Debris
2007	242	140	242.99	141.95	2	21	5	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.99	141.87	2	21	4	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2007	242	140	242.81	141.8	3	21	2	yes	Not Visible	Not Visible	Visible	Intact	Debris
2007	242	140	242.82	141.52	4	21	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.75	141.44	5	21	0	yes	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.71	141.93	6	21	2	yes	Not Visible	Not Visible	Visible	Intact	Debris
2007	242	140	242.71	141.22	7	21	8	no	Visible	Not Visible	Visible	Intact	Debris
2007	242	140	242.71	141.13	8	21	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.56	141.8	9	21	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.49	141.93	10	21	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.44	141.86	11	21	0	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.38	141.67	12	21	0	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.25	141.75	14	21	2	yes	Visible	Not Visible	Visible	Intact	Debris
2007	242	140	242.24	141.32	15	21	0	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.16	141.72	16	21	3	no	Visible	Not Visible	Visible	Intact	Debris
2007	242	140	242.11	141.71	17	21	1	yes	Visible	Visible	Visible	Intact	Flake
2007	242	140	242.11	141.17	18	21	5	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.06	141.98	19	21	0	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242	141.8	20	21	1	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.61	140.96	3	21	1	no	Not Visible	Not Visible	Not Visible	Broken	Debris
2007	242	140	242.08	140.75	4	21	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2007	242	140	242.28	140.41	5	21	2	no	Not Visible	Not Visible	Not Visible	Broken	Debris
2007	242	140	242.3	140.04	6	21	2	no	Not Visible	Not Visible	Not Visible	Broken	Debris
2007	242	140	242.64	140.08	7	21	4	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2007	242	140	242.99	141.88	1	22	2	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2007	242	140	242.26	141.26	3	22	2	yes	Visible	Visible	Visible	Intact	Flake
2007	242	140	242.15	141.11	4	22	9	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.99	141.7	5	22	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.98	141.74	6	22	0	NO	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.99	141.61	7	22	0	no	Not Visible	Not Visible	Visible	Intact	Debris
2007	242	140	242.93	141.36	8	22	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.9	141.65	9	22	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.87	141.93	10	22	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.89	141.93	11	22	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.7	140.52	12	22	4	No	Visible	Not Visible	Visible	Intact	Debris
2007	242	140	242.7	141.09	13	22	4	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.56	141.32	15	22	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.4	141.35	16	22	0	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.38	141.62	17	22	0	no	Visible	Not Visible	Visible	Broken	Debris
2007	242	140	242.28	141.7	18	22	5	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.26	141.44	19	22	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.28	141.18	20	22	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.18	141.79	21	22	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.18	141.73	22	22	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.13	141.79	23	22	0	no	Visible	Not Visible	Visible	Broken	Debris
2007	242	140	242.12	141.41	24	22	5	yes	Visible	Visible	Visible	Intact	Broken Flake
2007	242	140	242.53	140.22	1	22	0	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.54	141.99	1	**23**	1	no	Visible	Not Visible	Visible	Intact	Debris
2007	242	140	242.88	141.6	2	**23**	2	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.92	141.35	3	**23**	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.87	141.29	4	**23**	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.94	141.22	5	**23**	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.78	141.28	6	**23**	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.71	141.79	7	**23**	4	Yes	Visible	Not Visible	Visible	Intact	Flake Fragment
2007	242	140	242.71	141.79	8	**23**	4	no	Visible	Not Visible	Not Visible	Intact	Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2007	242	140	242.58	141.26	9	**23**	4	no	Visible	Not Visible	Not Visible	Intact	Debris
2007	242	140	242.4	141.88	10	**23**	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.36	141.74	11	**23**	7	no	Not Visible	Not Visible	Visible	Intact	Debris
2007	242	140	242.26	141.71	12	**23**	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.28	141.63	13	**23**	2	Yes	Visible	Not Visible	Visible	Intact	Broken Flake
2007	242	140	242.13	141.91	14	**23**	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.1	141.79	15	**23**	2	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.08	141.99	16	**23**	4	Yes	Visible	Not Visible	Visible	Intact	Flake Fragment
2007	242	140	242	141.8	17	**23**	0	no	Not Visible	Visible	Visible	Intact	Flake Fragment
2007	242	140	2242.6	140.45	1	23	10	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.84	140.68	2	23	2	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.87	140.46	3	23	0	NO	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.92	140.8	4	23	2	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.83	140.74	5	23	6	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.83	140.63	6	23	0	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.74	140.67	7	23	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.75	140.76	8	23	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.5	141.13	1	24	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.5	141.84	2	24	2	No	Visible	Not Visible	Visible	Intact	Flake Fragment
2007	242	140	242.8	141.17	3	24	3	no	Visible	Not Visible	Visible	Intact	Debris
2007	242	140	242.99	141.87	4	24	0	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.465	141.52	5	24	2	yes	Visible	Visible	Visible	Intact	Flake
2007	242	140	242.73	141.99	6	24	1	Yes	Visible	Visible	Not Visible	Intact	Debris
2007	242	140	242.77	141.71	7	24	1	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.24	141.96	8	24	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.8	141.28	9	24	6	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.53	141.77	10	24	7	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.4	141.8	11	24	4	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.34	141.78	12	24	1	Yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.69	141.74	13	24	4	Yes	Visible	Not Visible	Visible	Intact	Debris
2007	242	140	242.32	141.93	14	24	0	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2007	242	140	242.94	141.8	15	24	0	Yes	Visible	Visible	Not Visible	Intact	Broken Flake
2007	242	140	242.28	141.95	16	24	0	No	Not Visible	Not Visible	Not Visible	Intact	Pebble
2007	242	140	242.93	141.81	17	24	3	No	Visible	Not Visible	Visible	Intact	Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2007	242	140	242.95	141.85	18	24	4	yes	Not Visible	Not Visible	Visible	Intact	Debris
2007	242	140	242.23	141.71	19	24	3	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.14	141.91	20	24	2	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.16	141.13	21	24	0	Yes	Not Visible	Not Visible	Visible	Intact	Debris
2007	242	140	242.13	141.46	22	24	0	No	Not Visible	Not Visible	Not Visible	Intact	
2007	242	140	242.18	141.75	23	24	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.14	141.78	24	24	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.12	141.86	25	24	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.69	141.485	25	24	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.33	141.82	26	24	3	Yes	Not Visible	Visible	Not Visible	Intact	Chert flake
2007	242	140	242.15	141.96	27	24	4	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.07	141.03	28	24	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.08	141.94	29	24	2	yes	Visible	Not Visible	Visible	Intact	Flake Fragment
2007	242	140	242.25	141.93	12	25	6	No	Not Visible	Not Visible	Visible	NA	Debris
2007	242	140	242.79	141.69	22	25	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.53	141.46	3	25	3	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.98	141.02	14	25	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.37	141.98	34	25	2	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.29	141.88	38	25	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.11	141.71	10	25	7	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.99	141.97	16	25	0	No	Not Visible	Visible	Not Visible	Intact	Debris
2007	242	140	242.98	141.54	18	25	2	No	Not Visible	Not Visible	n	Intact	Amorphous Debris
2007	242	140	242.84	141.85	20	25	5	No	Not Visible	Not Visible	Visible	NA	Debris
2007	242	140	242.82	141.96	21	25	0	No	Visible	Visible	Not Visible	Intact	Flake Fragment
2007	242	140	242.71	141.92	24	25	3	Yes	Not Visible	Visible	Not Visible	Intact	Flake Fragment
2007	242	140	242.55	141.94	33	25	2	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.35	141.85	35	25	1	Yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.33	141.83	36	25	5	No	Visible	Not Visible	Not Visible	Intact	Debris
2007	242	140	242.26	141.61	40	25	5	yes	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2007	242	140	242.07	141.71	9	25	7	No	Visible	Not Visible	Visible	Intact	Debris
2007	242	140	242.22	141.89	41	25	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.62	141.77	37	25	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.11	141	1	25	10	No	Visible	Not Visible	Visible	NA	Debris
2007	242	140	242.39	141.21	2	25	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2007	242	140	242.58	141.51	4	25	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.34	141.68	7	25	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.4	141.79	11	25	3	No	Not Visible	Not Visible	Visible	NA	Amorphous Debris
2007	242	140	242.99	141.86	15	25	5	NO	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.95	141.22	17	25	2	Yes	Visible	Not Visible	Visible	Intact	Debris
2007	242	140	242.88	141.94	19	25	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.8	141.62	23	25	5	Yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.73	141.69	25	25	0	No	Not Visible	Not Visible	Not Visible	Broken	Pebble
2007	242	140	242.77	141.62	26	25	0	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.73	141.6	27	25	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.5	141.7	30	25	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.65	141.94	28	25	5	No	Visible	Not Visible	Visible	Intact	Debris
2007	242	140	242.67	141.88	29	25	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.59	141.98	42	25	5	No	Visible	Not Visible	Visible	NA	Debris
2007	242	140	242.21	141.62	6	25	9	No	Visible	Not Visible	Visible	Broken	Flake Fragment
2007	242	140	242.99	141.68	13	25	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.27	141.6	5	25	1	No	Visible	Not Visible	Not Visible	Intact	Debris
2007	242	140	242.18	141.68	8	25	2	Yes	Visible	Not Visible	Visible	Intact	Chert Flake
2007	242	140	242.99	141.53	1	26	9	no	Not Visible	Not Visible	Visible	Intact	Debris
2007	242	140	242.93	141.48	2	26	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.98	141.96	3	26	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.94	141.81	4	26	6	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	242	140	242.76	141.82	6	26	1	yes	Visible	Visible	Visible	Intact	Flake Fragment
2007	242	140	242.62	141.43	7	26	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.57	141.34	8	26	0	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2007	242	140	242.43	141.86	9	26	4	no	Not Visible	Not Visible	Visible	Intact	Debris
2007	242	140	242.37	141.37	10	26	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	142	243.12	142.25	1	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	142	243.12	142.2	2	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	142	243.085	142.45	1	9	5	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	142	243.12	142.58	2	9	4	no	Not Visible	Not Visible	Visible	NA	Debris
2007	242	142	243.62	142.99	3	9	5	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	242	140	242.04	140.25	8	18	2	no	Visible	Not Visible	Visible	Broken	Debris
2007	242	140	242.31	140.42	11	19	6	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2007	242	140	242.29	141.42	7	19	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2007	242	140	242.46	141.92	11	20	2	yes	Visible	Not Visible	Visible	Intact	Broken Flake
2007	242	140	242.99	140.59	2	21	9	no	Visible	Not Visible	Visible	NA	Debris
2007	242	140	242.99	140.5	1	21	11	no	Not Visible	Visible	Visible	NA	Debris
2007	242	140	242.39	141.6	13	21	1	no	Not Visible	Not Visible	Visible	Broken	Debris
2007	242	140	242.54	141.77	14	22	2	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2007	242	140	242.71	141.22	32	25	5	no	Visible	Not Visible	Visible	NA	Debris
2007	242	140	242.97	141.59	31	25	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	242	140	242.26	141.66	39	25	4	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2007	242	140	242.27	141.44	11	26	8	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2007	242	140	242.89	141.72	5	26	6	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2007	244	138	244.77	139.84	1	2	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	244	138	244.5	139.05	2	2	5	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2007	244	138	244.62	139.53	3	2	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	244	138	244.97	139.32	6	2	6	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	244	138	244.52	139.54	4	2	2	no	Not Visible	Not Visible	Visible	Intact	Debris
2007	244	138	244.85	139.51	1	3	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	244	138	244.47	139.59	2	3	4	no	Not Visible	Nor Visible	Not Visible	Intact	Debris
2007	244	138	244.97	139.4	3	3	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	244	138	244.84	139.235	5	3	9	no	Visible	Not Visible	Not Visible	Intact	Debris
2007	244	138	244.26	139.145	7	3	5	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	244	138	244.89	139.29	4	4	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2007	244	138	244.09	139.49	3	4	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2007	244	138	244.89	139.27	7	4	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2007	244	138	244.67	139.41	8	4	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	244	138	244.3	139.22	6	4	2	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2007	244	138	244.84	139.85	1	4	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	244	138	244.77	139.59	2	4	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2007	244	138	244.16	139.18	5	4	2	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2007	244	138	244.67	139.37	2	5	7	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	244	138	244.76	139.31	3	5	6	no	Not Visible	Not Visible	Visible	Broken	Debris
2007	244	138	244.67	139.84	4	5	6	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	244	138	244.67	139.84	5	5	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2007	244	138	244.22	139.83	6	5	4	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2007	244	138	244.44	139.19	7	5	2	no	Not Visible	Not Visible	Visible	Intact	Debris
2007	244	138	244.92	139.22	1	5	3	no	Not Visible	Not Visible	Visible	Intact	Debris
2007	244	138	244.44	139.88	2	6	1	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2007	244	138	244.23	139.49	3	6	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	244	138	244.76	139.85	4	6	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2007	244	138	244.4	139.12	5	6	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2007	244	138	234.34	139.025	7	6	0	yes	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2007	244	138	244.20	139	8	6	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2007	244	138	244.53	139.53	9	6	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2007	244	138	244.99	139.28	10	6	3	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2007	244	138	244.29	139.48	6	6	1	yes	Visible	Visible	Visible	Intact	Flake
2007	244	138	244.6	139.7	1	6	0	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2007	244	138	244.71	139.31	1	7	3	no	Visible	Visible	Visible	Broken	Flake Fragment
2007	244	138	244.47	139.88	2	7	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	138	243.52	139.16	1	1	2	yes	Not Visible	Visible	Not Visible	Broken	Broken Flake
2008	242	138	243.81	139.56	1	2	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	138	243.01	139.16	1	3	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	138	243.76	139.335	2	3	4	no	Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	138	243.06	139.31	1	4	6	no	Not Visible	Not Visible	Visible	Intact	Debris
2008	242	138	243.29	139.395	2	4	1	yes	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	138	243.36	139.5	3	4	1	no	Visible	Not Visible	Visible	Intact	Debris
2008	242	138	243.68	139.26	4	4	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	138	243.87	139.4	5	4	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	138	243.2	139.67	1	5	2	no	Visible	Not Visible	Visible	Broken	Debris
2008	242	138	242	139.565	2	5	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	138	243	139.625	2	5	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	138	243.95	139.68	4	5	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	138	243.85	139.355	5	5	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	138	243.88	139.16	7	5	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	138	243.82	139.12	8	5	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	138	243.94	139.25	6	5	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	138	242.21	139.89	1	6	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	138	242.08	139.68	2	6	4	no	Not Visible	Not Visible	Visible	Intact	Debris
2008	242	138	242.38	139.365	4	6	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2008	242	138	242.47	139.375	5	6	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	138	242.47	139.345	6	6	10	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	138	242.05	139.63	3	6	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	138	243.95	139.49	1	7	1	yes	Visible	Visible	Visible	Broken	Broken Flake
2008	242	138	243.65	139.405	2	7	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	138	243.68	139.395	3	7	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	138	243.66	139.295	4	7	6	no	Visible	Not Visible	Visible	Broken	Debris
2008	242	138	243.02	139.665	5	7	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	138	243.22	139.085	6	7	6	No	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2008	242	138	242.85	139.17	1	8	1	yes	Visible	Visible	Visible	Complete	Flake
2008	242	138	242	139.565	2	8	2	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2008	242	138	243.10	139.595	3	9	4	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	138	243.89	139.902	1	9	1	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2008	242	138	243.86	139.37	2	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	138	243.21	139.29	4	9	1	no	Visible	Not Visible	Visible	Broken	Debris
2008	242	138	243.15	139.1	5	9	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	138	243.6	139.17	1	10	5	no	Not Visible	Not Visible	Visible	NA	Debris
2008	242	138	243.6	139.17	1	10	3	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2008	242	138	243.85	139.075	2	10	0	no	Visible	Visible	Not Visible	Broken	Flake Fragment
2008	242	138	243.13	139.295	3	10	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	138	243.79	139.35	4	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	138	243.86	139.385	5	10	2	no	Not Visible	Not Visible	Visible	Broken	Debris
2008	242	138	243.31	139.615	6	10	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	138	243.34	139.67	7	10	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	138	243.6	139.17	8	10	2	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2008	242	138	243.95	139.88	1	11	0	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2008	242	138	243.16	139.74	2	11	6	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2008	242	138	243.76	139.46	3	11	5	yes	Not Visible	Not Visible	Visible	Intact	Debris
2008	242	138	243.78	139.36	4	11	6	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	138	243.59	139.235	5	11	1	no	Not Visible	Not Visible	Visible	NA	Debris
2008	242	138	243.72	139.86	1	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	138	243.7	139.82	2	12	3	no	Visible	Not Visible	Visible	Intact	Debris
2008	242	138	243.54	139.83	3	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	138	243.57	139.7	4	12	2	yes	Not Visible	Not Visible	Visible	Intact	Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2008	242	138	243.45	139.63	5	12	6	no	Visible	Not Visible	Visible	NA	Debris
2008	242	138	243.15	139.59	6	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	138	243.72	139.25	7	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	138	243.14	139.93	1	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	138	243.15	139.905	2	13	0	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	138	243.13	139.295	3	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	138	243.17	139.86	4	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	138	243.71	139.82	5	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	138	243.94	139.81	6	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	138	243.49	139.65	7	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	138	243.89	139.56	8	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	138	243.73	139.47	9	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	138	243.48	139.5	10	13	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	138	243.41	139.46	11	13	2	yes	Visible	Visible	Visible	Intact	Flake
2008	242	138	243.55	139.325	12	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	138	243.50	139.175	13	13	3	no	Visible	Not Visible	Visible	Intact	Debris
2008	242	138	243.2	139.97	17	13	2	yes	Visible	Not Visible	Visible	Intact	Flake
2008	242	138	243.51	139.15	14	14	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	140	242.16	141.28	1	26	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	140	242.17	141.38	3	26	3	no	Visible	Not Visible	Visible	NA	Debris
2008	242	140	242.18	141.47	4	26	9	no	Visible	Not Visible	Visible	Broken	Debris
2008	242	140	242.18	141.46	6	26	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	140	242.74	141.48	8	26	3	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	140	242.76	141.46	9	26	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	140	242.88	141.49	10	26	2	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	140	242.10	141.34	11	26	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	140	242.10	141.88	12	26	3	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2008	242	140	242.05	141.31	1	27	4	No	Visible	Not Visible	Visible	NA	Debris
2008	242	140	242.04	141.74	2	27	2	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	140	242.11	141.78	3	27	0	No	Visible	Not Visible	Not Visible	Intact	Debris
2008	242	140	242.46	141.13	4	27	4	No	Not Visible	Visible	Not Visible	NA	Debris
2008	242	140	242.53	141.12	5	27	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	140	242.58	141.77	6	27	5	NO	Not Visible	Not Visible	Not Visible	BROKEN	Amorphous Debris
2008	242	140	242.88	141.69	7	27	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2008	242	140	242.95	141.51	8	27	2	yes	Not Visible	Not Visible	Visible	Intact	Debris
2008	242	140	242.93	141.62	9	27	1	No	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	140	242.83	141.52	10	27	0	Yes	Visible	Visible	Not Visible	Broken	Flake
2008	242	140	242.85	141.47	11	27	2	Yes	Not Visible	Not Visible	Visible	Intact	Broken Flake
2008	242	140	242.91	141.47	12	27	0	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	140	242.83	141.42	13	27	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	140	242.82	141.5	14	27	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	140	242.9	141.6	15	27	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	140	242.65	141.89	2	28	6	No	Not Visible	Not Visible	Visible	Broken	Debris
2008	242	140	242.56	141.78	3	28	5	No	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	140	242.95	141.73	4	28	5	No	Not Visible	Not Visible	Visible	Broken	Debris
2008	242	140	242.87	141.72	5	28	1	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2008	242	140	242.65	141.61	7	28	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	140	242.67	141.67	8	28	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	140	242.8	141.53	9	28	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	140	242.84	141.38	11	28	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	140	242.7	141.37	12	28	3	no	Visible	Not Visible	Visible	NA	Debris
2008	242	140	242.91	141.17	13	28	3	yes	Visible	Visible	Visible	Intact	Broken Flake
2008	242	140	242.76	141.13	14	28	4	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	140	242.88	141.23	15	28	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	140	242.37	141.56	16	28	0	yes	Visible	Not Visible	Visible	Intact	Debris
2008	242	140	242.31	141.24	17	28	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	140	242.65	141.82	19	28	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	140	242.96	141.64	6	28	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	140	242.76	141.45	10	28	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	140	242.76	141.34	2	29	2	No	Visible	Not Visible	Visible	Intact	Debris
2008	242	140	242.49	140.14	17	17	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	140	242.52	140.925	1	24	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	140	242.80	140.94	2	24	2	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	140	242.77	140.915	3	24	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	140	242.75	140.796	4	24	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	140	242.76	140.865	5	24	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	140	242.78	140.882	6	24	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	140	242.68	140.582	7	24	2	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2008	242	140	242.83	140.636	8	24	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	140	242.68	140.83	1	25	1	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	140	242.57	140.828	2	25	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	140	242.69	140.298	3	25	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	140	242.65	140.792	4	25	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	140	242.63	140.464	5	25	6	Yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	140	242.65	140.76	6	25	0	Yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	140	242.74	140.742	7	25	0	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	140	242.73	140.705	8	25	7	Yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	140	242.80	140.592	11	25	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	140	242.72	140.948	13	25	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	140	242.63	140.405	14	25	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	140	242.88	140.1	15	25	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	140	242.47	140.03	16	25	2	Yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	140	242.64	140.1	18	25	3	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	140	242.52	140.45	19	25	3	Yes	Not Visible	Not Visible	Visible	Intact	Debris
2008	242	140	242.66	140.57	20	25	4	No	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2008	242	140	242.65	140.585	10	25	9	no	Not Visible	Not Visible	Visible	NA	Amorphous Debris
2008	242	140	242.74	140.454	12	25	4	no	Visible	Not Visible	Visible	NA	Debris
2008	242	140	242.64	140.205	1	26	6	no	Visible	Not Visible	Visible	Intact	Debris
2008	242	140	242.35	140.416	2	26	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	140	242.75	140.416	3	26	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	140	242.54	140.529	4	26	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	140	242.59	140.762	5	26	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	140	242.66	140.862	6	26	0	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2008	242	140	243.99	140	2		6	no	Visible	Not Visible	Visible	Intact	Debris
2008	242	140	243.99	140	1		13	no	Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	243.37	142.36	1	10							
2008	242	142	243.37	142.36	2	10	7	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	243.09	142.21	3	10	4	yes	Visible	Not Visible	Not Visible	Intact	Debris
2008	242	142	243.39	142.25	4	10	5	yes	Visible	Not Visible	Visible	Intact	Debris
2008	242	142	243.38	142.22	5	10	5	No	Not Visible	Not Visible	Nott Visible	Intact	Amorphous Debris
2008	242	142	243.68	142.9	6	10	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	243.24	142.38	1	11	3	No	Not Visible	Not Visible	Visible	Intact	Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2008	242	142	243.74	142.26	2	11	2	no	Visible	Not Visible	Not Visible	NA	Debris
2008	242	142	242.77	142.355	3	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.9	142.79	4	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	243.89	142.97	1	12	3	No	Not Visible	Not Visible	Visible	NA	Debris
2008	242	142	243.28	142.7	1	13	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	243.59	142.01	2	13	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	243.12	142.325	3	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	243.21	142.2	4	13	0	no	Not Visible	Not Visible	n	NA	Pebble
2008	242	142	243.37	142.275	5	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	243.71	142.29	6	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	243.69	142.02	7	13	0	no	Not Visible	Not Visible	n	NA	Pebble
2008	242	142	243.5	142.165	8	13	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	243.05	142.04	1	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	243.9	142	2	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	243.62	142.03	3	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	243.60	142.01	4	14	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	243.11	142.24	5	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	243.93	142.44	1	15	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	243.91	142.36	2	15	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	243.86	142.28	3	15	0	no	Visible	Visible	Not Visible	Intact	Flake Fragment
2008	242	142	243.48	142.14	4	15	0	no	Not Visible	Not Visible	Not Visible	Broken	Pebble
2008	242	142	243.59	142.62	1	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	243.08	142.71	2	16	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	243.05	142.52	3	16	2	no	Visible	Not Visible	Visible	Intact	Debris
2008	242	142	243.07	142.445	4	16	4	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2008	242	142	243.07	142.42	5	16	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	243.34	142.55	6	16	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	243.6	142.135	7	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	243.43	142.79	1	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	243.47	142.79	2	17	0	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	243.27	142.265	3	17	5	yes	Visible	Visible	Visible	Broken	Flake Fragment
2008	242	142	243.1	142.93	1	18	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	243.63	142.84	2	18	0	no	Visible	Visible	Not Visible	Broken	Flake Fragment
2008	242	142	243.63	142.77	3	18	0	no	Visible	Visible	Not Visible	NA	Flake Fragment

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2008	242	142	243.1	142.94	4	18							
2008	242	142	243.66	142.955	1	19	1	yes	Visible	Visible	Visible	Intact	flake
2008	242	142	243.63	142.87	2	19	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	243.53	142.94	3	19	5	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2008	242	142	243.69	142.71	5	19	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	243.68	142.675	6	19	1	no	Not Visible	Not Visible	Visible	Intact	Debris
2008	242	142	243.44	142.725	7	19	4	no	Visible	Not Visible	Visible	Broken	Debris
2008	242	142	243.34	142.93	1	20	0	no	Visible	Visible	Not Visible	NA	Flake Fragment
2008	242	142	243.26	142.35	2	20	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	243.05	142.03	3	20	0	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	243.61	142.635	1	21	2	yes	Visible	Visible	Visible	Intact	flake
2008	242	142	243.26	142.67	2	21	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	243.27	142.69	3	21	3	no	Visible	Not Visible	Visible	Intact	Flake fragment
2008	242	142	243.03	142.07	4	21	4	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	243.02	142.79	1	22	3	no	Visible	Visible	Visible	Broken	Flake Fragment
2008	242	142	243.04	142.44	2	22	2	yes	Visible	Visible	Visible	Intact	Broken Flake
2008	242	142	243.27	142.7	3	22	5	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	243.27	142.71	4	22	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	243.99	142.87	5	22	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	243.24	142.28	2	23	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	243.32	142.42	3	23	1	no	Visible	Visible	Visible	Broken	Flake Fragment
2008	242	142	243.29	142.49	4	23	4	no	Visible	Not Visible	Visible	Broken	Debris
2008	242	142	243.1	142.61	5	23	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	243.11	142.7	6	23	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	243.29	142.76	7	23	3	no	Visible	Not Visible	Visible	NA	Debris
2008	242	142	243.34	142.7	8	23	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	243.48	142.69	9	23	1	no	Visible	Not Visible	Visible	Intact	Debris
2008	242	142	243.71	142.65	10	23	1	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	243.42	142.52	11	23	3	yes	Visible	Visible	Visible	Intact	Flake
2008	242	142	243.68	142.73	4		6	no	Not Visible	Not Visible	Visible	Broken	Debris
2008	242	142	242.37	142.38	7	7	3	yes	Visible	Not Visible	Visible	Intact	Broken Flake
2008	242	142	242.18	142.05	1	10	6	yes	Visible	Not Visible	Visible	Intact	Debris
2008	242	142	242.61	142.31	2	10	4	no	Not Visible	Not Visible	Not Visible	Intact	Debris
2008	242	142	243.05	142.99	3	10	6	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2008	242	142	242.08	142.96	4	10	6	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	243.81	139.56	1	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.6	142.4	1	11	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.55	142.41	2	11	5	no	Visible	Not Visible	Visible	Intact	Debris
2008	242	142	242.53	142.57	3	11	6	No	Visible	Not Visible	Not Visible	NA	Debris
2008	242	142	242.34	142.74	4	11	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	242.06	142.69	5	11	4	no	Visible	Not Visible	Not Visible	Intact	Debris
2008	242	142	242.29	142.94	6	11	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	242.17	142.99	7	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.65	142.91	8	11	10	no	Visible	Not Visible	Visible	Intact	Debris
2008	242	142	242.81	142.13	1	12	2	yes	Not Visible	Visible	Not Visible	Intact	Flake
2008	242	142	242.94	142.26	2	12	4	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.94	142.32	3	12	4	no	Not Visible	Not Visible	Visible	NA	Pebble
2008	242	142	242.72	142.35	4	12	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.62	142.35	5	12	2	no	Not Visible	Not Visible	Visible	Intact	Debris
2008	242	142	242.62	142.4	6	12	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.29	142.47	8	12	5	no	Visible	Not Visible	Visible	Intact	Debris
2008	242	142	242.19	142.5	9	12	1	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	242.16	142.56	10	12	0	no	Not Visible	Not Visible	Not Visible	NA	Chert Pebble
2008	242	142	242.15	142.62	11	12	0	no	Not Visible	Not Visible	Not Visible	NA	quartz Pebble
2008	242	142	242.08	142.72	12	12	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.11	142.71	13	12	1	yes	Visible	Visible	Visible	Intact	Flake
2008	242	142	242.73	142.73	14	12	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.18	142.55	16	12	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.19	142.49	17	12	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.11	142.72	18	12	2	yes	Not Visible	Not Visible	Not Visible	Intact	flake
2008	242	142	242.44	142.81	19	12	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.43	142.85	20	12	1	no	Not Visible	Not Visible	Visible	Intact	Debris
2008	242	142	242.25	142.87	21	12	1	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.66	142.99	22	12	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.38	142.99	23	12	2	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	242.22	142.96	24	12	6	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.27	142.1	25	12	2	no	Not Visible	Not Visible	Visible	Intact	Debris
2008	242	142	242.02	142.48	26	12	1	yes	Visible	Visible	Visible	Broken	Flake

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2008	242	142	242.22	142.97	27	12	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	242.25	142.54	30	13	2	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2008	242	142	242.25	142.54	32	13	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.89	142.67	37	13	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.25	142.51	71	13	3	no	Visible	Not Visible	Visible	Broken	Debris
2008	242	142	242.24	142.55	73	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.62	142.27	9	13	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.68	142.37	12	13	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.31	142.37	13	13	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.29	142.41	22	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.47	142.54	27	13	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.27	142.54	29	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.09	142.59	36	13	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.15	142.66	49	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.06	142.78	54	13	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.77	142.99	64	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.4	142.45	69	13	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.13	142.68	75	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.44	142.11	5	13	7	no	Visible	Not Visible	Visible	Broken	Debris
2008	242	142	242.75	142.11	3	13	4	no	Visible	Not Visible	Visible	Intact	Debris
2008	242	142	242.2	142.55	34	13	3	yes	Visible	Visible	Visible	Intact	Flake
2008	242	142	242.07	142.79	55	13	3	yes	Visible	Visible	Visible	Intact	flake
2008	242	142	242.22	142.87	62	13	2	yes	Visible	Visible	Visible	Intact	Broken Flake
2008	242	142	242.15	142.82	53	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.61	142.06	4	13	6	no	Not Visible	Not Visible	Visible	Broken	Debris
2008	242	142	242.09	142.35	16	13	4	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	242.07	142.57	35	13	3	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2008	242	142	242.56	142.75	41	13	5	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2008	242	142	242.18	142.67	46	13	1	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2008	242	142	242.45	142.37	68	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.14	142.64	74	13	1	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2008	242	142	242.87	142.76	77	13	0	yes	Visible	Visible	Visible	Intact	flake
2008	242	142	242.38	142.9	59	13	3	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2008	242	142	242.12	142.72	51	13	2	no	Visible	Not Visible	Visible	Intact	Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2008	242	142	242.77	142.27	8	13	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.89	142	2	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.92	142.2	6	13	0	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2008	242	142	242.3	142.5	26	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.56	142.8	1	13	0	yes	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2008	242	142	242.46	142.35	11	13	1	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2008	242	142	242.77	142.43	18	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.36	142.41	21	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.39	142.48	24	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.26	142.55	28	13	1	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.2	142.52	33	13	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	242.75	142.66	39	13	2	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.47	142.72	42	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.22	142.59	44	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.75	142.93	56	13	4	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.16	142.9	63	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.39	142.46	70	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.55	142.3	67	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.42	142.41	19	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.41	140.43	20	13	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.42	142.89	58	13	2	no	Visible	Not Visible	Not Visible	Intact	Debris
2008	242	142	243.27	142.89	60	13	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.25	142.55	31	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.05	142.77	76	13	0	yes	Visible	Visible	Not Visible	Intact	flake
2008	242	142	242.75	142.23	7	13	2	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2008	242	142	242.13	142.35	15	13	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.06	142.33	17	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.64	142.61	40	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.56	142.81	52	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.24	142.53	72	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.37	142.69	43	13	0	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	242.21	142.36	14	13	1	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.58	142.99	66	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.16	142.72	50	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2008	242	142	242.31	142.46	25	13	1	no	Visible	Not Visible	Not Visible	Broken	Debris
2008	242	142	242.67	142.99	65	13	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.82	142.69	38	13	4	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.19	142.62	45	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.56	142.3	10	13	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.48	142.72	74	13	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.54	142.93	57	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.24	142.42	23	13	12	no	Not Visible	Visible	Visible	NA	Debris
2008	242	142	242.19	142.64	47	13	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.24	142.93	61	13	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.43	142.38	78	13	1	yes	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2008	242	142	242.77	142.015	1	14	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.32	142.01	2	14	2	no	Visible	Nott Visible	Visible	NA	Amorphous Debris
2008	242	142	242.73	142.14	3	14	1	No	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.58	142.095	4	14	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.33	142.14	5	14	0	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.82	142.29	6	14	3	yes	Visible	Visible	Not Visible	Intact	Broken Flake
2008	242	142	242.65	142.31	7	14	2	yes	Visible	Visible	Not Visible	Intact	Flake
2008	242	142	242.55	142.3	8	14	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.49	142.36	9	14	2	no	Visible	Visible	Not Visible	Intact	Flake Fragment
2008	242	142	242.17	142.59	10	14	1	yes	Visible	Visible	Visible	Intact	flake
2008	242	142	242.69	142.71	11	14	3	yes	Not Visible	Not Visible	Visible	Broken	Debris
2008	242	142	242.28	142.68	12	14	1	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2008	242	142	242.17	142.67	13	14	1	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2008	242	142	242.75	142.78	14	14	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.69	142.91	15	14	4	yes	Visible	Visible	Visible	Intact	Broken Flake
2008	242	142	242.48	142.84	16	14	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.28	142.87	17	14	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.25	142.94	18	14	4	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2008	242	142	242.8	142	1	15	8	no	Visible	Visible	Visible	Broken	Flake Fragment
2008	242	142	242.79	142.02	2	15	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.3	142.11	3	15	0	yes	Visible	Not Visible	Visible	Intact	Flake Fragment
2008	242	142	242.66	142.24	4	15	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.67	142.27	5	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2008	242	142	242.15	142.43	6	15	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	242.73		7	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.1	142.625	8	15	5	no	Visible	Not Visible	Visible	NA	Debris
2008	242	142	242.82	142.89	9	15	3	no	Visible	Visible	Visible	Intact	Broken Flake
2008	242	142	242.58	142.91	10	15	1	yes	Visible	Visible	Not Visible	Intact	flake
2008	242	142	242.19	142.96	11	15	3	yes	Visible	Visible	Visible	Intact	flake
2008	242	142	242.73	142.84		15	4	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.02	142.01	1	16	0	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	242.48	142.17	2	16	0	no	Not Visible	Not Visible	Not Visible	A	Pebble
2008	242	142	242.21	142.13	3	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.74	142.29	4	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.36	142.33	5	16	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.34	142.3	6	16	0	no	Visible	Visible	Visible	Intact	Flake Fragment
2008	242	142	242.4	142.53	7	16	6	no	Visible	Not Visible	Not Visible	Intact	Debris
2008	242	142	242.12	142.55	8	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.08	142.53	9	16	0	yes	Visible	Visible	Visible	Intact	flake
2008	242	142	242.59	142.67	10	16	0	yes	Not Visible	Not Visible	Visible	Intact	Debris
2008	242	142	242.59	142.65	11	16	0	yes	Visible	Visible	Visible	Intact	flake
2008	242	142	242.29	142.65	12	16	4	no	Not Visible	Not Visible	Visible	Intact	Debris
2008	242	142	242.79	142.99	13	16	4	no	Not Visible	Not Visible	Visible	Intact	Debris
2008	242	142	242.22	142.98	15	16	4	no	Visible	Visible	Visible	Broken	Flake Fragment
2008	242	142	242.95	142.79	16	16	0	no	Visible	Visible	Not Visible	Intact	Flake Fragment
2008	242	142	242.48	142.21	17	16	5	no	Not Visible	Not Visible	Visible	Broken	Debris
2008	242	142	242.38	142.02	1	17	3	yes	Visible	Visible	Visible	Intact	flake
2008	242	142	242.76	142.46	2	17	2	yes	Visible	Not Visible	Not Visible	Intact	Flake Fragment
2008	242	142	242.3	142.5	3	17	3	yes	Visible	Visible	Not Visible	Intact	Flake
2008	242	142	242.23	142.49	4	17	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.56	142.62	5	17	0	no	Visible	Visible	Not Visible	Absent	Flake Fragment
2008	242	142	242.18	142.6	6	17	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.55	142.69	7	17	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.37	142.67	8	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.9	142.99	9	17	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.53	142.37	1	18	2	no	Visible	Visible	Not Visible	Intact	Flake Fragment
2008	242	142	242.72	142.49	2	18	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2008	242	142	242.03	142.42	4	18	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.8	142.67	5	18	1	yes	Visible	Visible	Visible	Intact	Broken Flake
2008	242	142	242.65	142.72	6	18	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.62	142.93	7	18	0	yes	Visible	Visible	Visible	Intact	flake
2008	242	142	242.37	142.99	8	18	5	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	242.32	142.99	9	18	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.17	142.49	3	18	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.67	142.05	1	19	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.75	142.36	2	19	5	no	Not Visible	Not Visible	Visible	NA	Amorphous Debris
2008	242	142	242.15	142.3	3	19	1	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2008	242	142	242.52	142.63	4	19	5	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	242.9	142.72	6	19	0	no	Visible	Not Visible	Visible	Intact	Amorphous Debris
2008	242	142	242.66	142.88	7	19	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.66	142.99	8	19	2	yes	Not Visible	Visible	Not Visible	Intact	Flake Fragment
2008	242	142	242.47	142.02	1	20	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.71	142.08	2	20	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.49	142.24	3	20	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.34	142.31	4	20	4	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.18	142.23	5	20	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.06	142.25	6	20	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.26	142.36	7	20	7	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2008	242	142	242.1	142.4	8	20	3	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2008	242	142	242.15	142.5	9	20	4	yes	Visible	Visible	Visible	Intact	flake
2008	242	142	242.22	142.55	10	20	0	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	242.9	142.8	11	20	1	yes	Visible	Visible	Not Visible		Broken Flake
2008	242	142	242.64	142.8	12	20	2	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	242.96	142.93	13	20	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.41	142.32	7	21	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.89	142.65	15	21	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.55	142.06	1	21	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.55	142.06	1	21	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.51	142.13	3	21	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	242.56	142.17	5	21	0	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.41	141.32	7	21	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2008	242	142	242.15	142.45	12	21	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.22	142.78	16	21	0	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.04	142.79	17	21	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.04	142.79	17	21	0	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.15	142.09	4	21	3	no	Not Visible	Not Visible	Not Visible	Broken	Pebble
2008	242	142	242.53	142.09	2	21	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.33	142.34	8	21	0	yes	Not Visible	Visible	Visible	Intact	Flake Fragment
2008	242	142	242.33	142.34	8	21	0	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2008	242	142	242.67	142.59	13	21	4	no	Visible	Not Visible	Visible	NA	Debris
2008	242	142	242.67	142.59	13	21	6	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.81	142.43	11	21	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.53	142.09	2	21	6	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.14	142.25	14	21	4	no	Visible	Not Visible	Visible	NA	Debris
2008	242	142	242.14	142.25	10	21	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.68	142.29	6	21	2	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2008	242	142	242.15	142.09	4	21	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.93	142.68	14	21	3	no	Visible	Not Visible	Visible	Intact	Debris
2008	242	142	242.89	142.65	15	21	0	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2008	242	142	242.27	142.34	9	21	0	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.22	142.28	16	21	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.81	142.93	11	21	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.68	142.29	6	21	2	no	Visible	Not Visible	Visible	Broken	Debris
2008	242	142	242.79	142.69	18	21	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.91	142.9	28	22	2	no	Not Visible	Not Visible	Visible	NA	Debris
2008	242	142	242.71	142.52	35	22	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.25	142.12	9	22	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.64	142.725	25	22	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.34	142.97	31	22	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.22	142.09	32	22	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.38	142.31	17	22	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	242.14	142.23	18	22	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	242.72	142.55	22	22	0	no	Not Visible	Not Visible	Visible	Intact	Debris
2008	242	142	242.44	142.98	30	22	7	no	Not Visible	Not Visible	Visible	NA	Debris
2008	242	142	242.16	142.055	12	22	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2008	242	142	242.74	142.43	20	22	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	242.22	142.59	33	22	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	242.24	142.11	34	22	2	no	Visible	Visible	Visible	Intact	Flake Fragment
2008	242	142	242.89	142.78	36	22	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.77	142.28	14	22	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	242.57	142.32	16	22	1	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2008	242	142	242.71	142.095	5	22	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	242.78	142.205	4	22	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.88	142.22	2	22	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.54	142.99	29	22	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.31	142.08	8	22	6	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	242.07	142.01	13	22	7	no	Visible	Not Visible	Visible	Intact	Debris
2008	242	142	242.72	142.52	21	22	0	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	242.14	142.53	23	22	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.82	142.72	24	22	0	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	242	142	242.63	142.81	26	22	0	yes	Visible	Visible	Not Visible	Intact	Broken Flake
2008	242	142	242.22	142.07	10	22	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	242.22	142.05	11	22	4	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	242.77	142.32	15	22	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	242	142	242.05	142.195	19	22	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	242	142	242.78	142.17	3	22	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.21	142.69	27	22	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.89	142.125	1	22	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	142	242.57	142.1	6	22	3	No	Visible	Visible	Visible	Intact	Flake Fragment
2008	242	142	242.3	142.03	7	22	2	no	Not Visible	Not Visible	Visible	Intact	Debris
2008	242	142	243.48	142.1	5		0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	140	242.77	140.77	9	25	5	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2008	242	140	242.27	141.26	2	26	0	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2008	242	140	242.23	141.42	5	26	7	no	Not Visible	Not Visible	Visible	Intact	Debris
2008	242	140	242.32	141.71	7	26	6	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2008	242	140	242.64	141.86	1	28	11	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2008	242	140	242.72	141.26	1	29	8	no	Not Visible	Not Visible	Visible	Intact	Debris
2008	242	142	243.18	142.61	8	19	8	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2008	244	138	244.45	139.425	2	12	4	no	Not Visible	Not Visible	Visible	Broken	Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2008	244	138	244.63	139.235	3	12	11	no	Not Visible	Not Visible	Visible	NA	Amorphous Debris
2008	244	138	244.46	139.655	4	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.58	139.49	5	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.53	139.37	6	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.18	139.32	7	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.11	139.245	8	12	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.05	139.2	9	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.97	139.42	10	12	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.77	139.545	11	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.79	139.5	12	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.59	139.27	13	12	0	no	Not Visible	Not Visible	Not Visible	Broken	Pebble
2008	244	138	244.62	139.265	14	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.66	139.26	15	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.53	139.24	16	12	2	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	244	138	244.36	139.095	17	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.60	139.21	18	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.63	139.225	19	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.77	139.245	20	12	6	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.77	139.205	21	12	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.92	139.185	22	12	10	no	Visible	Not Visible	Visible	Broken	Debris
2008	244	138	244.29	139.035	23	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.64	139.22	24	12	1	no	Not Visible	Not Visible	Visible	NA	Amorphous Debris
2008	244	138	244.36	139.1	26	12	3	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2008	244	138	244.44	139.7	2	13	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	244	138	244.56	139.585	3	13	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.69	139.44	4	13	5	no	Visible	Not Visible	Visible	feather	Debris
2008	244	138	244.46	139.34	5	13	1	No	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.61	139.25	6	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.52	139.21	7	13	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.61	139.19	8	13	2	no	Visible	Not Visible	Visible	Intact	Debris
2008	244	138	244.67	139.2	9	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.29	139.12	10	13	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	244	138	244.4	139.09	12	13	2	No	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.62	139.2	13	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2008	244	138	244.26	139.12	11	13	7	no	Visible	Not Visible	Visible	Intact	Debris
2008	244	138	244.46	139.63	1	14	15	no	Visible	Not Visible	Visible	Broken	Debris
2008	244	138	244.73	139.635	2	14	3	yes	Not Visible	Visible	Visible	Intact	Broken Flake
2008	244	138	244.86	139.55	3	14	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.73	139.44	4	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.4	139.16	5	14	4	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.37	139.15	6	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.35	139.14	7	14	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.31	139.12	8	14	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.38	139.11	9	14	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.34	139.06	10	14	0	no	Not Visible	Not Visible	Not Visible	NA	Not Visible
2008	244	138	244.31	139.03	11	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.29	139.055	12	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.7	139.44	1	15	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.54	139.31	2	15	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.49	139.24	3	15	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	244	138	244.42	139.19	4	15	10	no	Visible	Not Visible	Visible	Broken	Debris
2008	244	138	244.12	139.31	5	15	8	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2008	244	138	244.40	139.22	6	15	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.22	139.13	7	15	11	no	Visible	Not Visible	Visible	NA	Debris
2008	244	138	244.5	139.19	8	15	8	no	Visible	Not Visible	Visible	Intact	Debris
2008	244	138	244.36	139.13	9	15	4	no	Visible	Not Visible	Visible	Broken	Debris
2008	244	138	244.53	139.66	10	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.54	139.695	11	15	5	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.66	139.78	12	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.78	139.805	14	15	6	no	Not Visible	Not Visible	Visible	Intact	Debris
2008	244	138	244.11	139.63	15	15	3	no	Visible	Not Visible	Not Visible	Broken	Debris
2008	244	138	244.83	139.33	16	15	5	no	Visible	Not Visible	Visible	NA	Flake Fragment
2008	244	138	244.32	139.11	17	15	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.17	139.75	18	15	0	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2008	244	138	244.18	139.25	19	15	5	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.38	139.097	20	15	3	no	Visible	Not Visible	Visible	Intact	Amorphous Debris
2008	244	138	244.15	139.047	21	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.26	139.03	22	15	10	no	Visible	Not Visible	Visible	Intact	Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2008	244	138	244.40	139.08	23	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.6	139.38	13	15	7	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2008	244	138	244.35	139.44	1	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.37	139.12	2	16	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.14	139.02	3	16	3	no	Visible	Visible	Visible	Intact	Flake Fragment
2008	244	138	244.83	139.365	4	16	3	no	Not Visible	Not Visible	Visible	Broken	Debris
2008	244	138	244.9	139.51	1	17	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	244	138	244.97	139.26	2	17	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.21	139.64	1	18	4	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.3	139.33	2	18	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	244	138	244.37	139.35	3	18	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.36	139.3	4	18	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.03	139.255	5	18	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.16	139.125	6	18	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	244	138	244.2	139.11	7	18	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.17	139.055	8	18	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.18	139.41	9	18	3	no	Visible	Not Visible	Not Visible	Intact	Debris
2008	244	138	244.4	139.325	1	20	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.3	139.3	2	20	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.04	139.455	3	20	6	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.61	139	4	20	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.35	139.145	5	20	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	244	138	244.20	139.65	6	20	1	yes	Visible	Not Visible	Visible	Broken	Broken Flake
2008	244	138	244.02	139.765	1	21	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	244	138	244.14	139.665	2	21	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	244	138	244.03	139.625	3	21	0	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	244	138	244.54	139.125	1	22	5	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2008	244	138	244.05	139.225	2	22	4	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.03	139.56	3	22	2	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2008	244	138	244.15	139.655	4	22	4	yes	Visible	Not Visible	Visible	Intact	Debris
2008	244	138	244.45	139.845	1	24	6	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2008	244	138	244.58	139.815	1	25	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.62	139.725	2	25	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	244	138	244.1	139.635	5	25	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2008	244	138	244.58	139.63	3	25	6	no	Not Visible	Not Visible	Visible	Broken	Debris
2008	244	138	244.32	139.775	1	26	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.25	139.24	2	26	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	244	138	244.24	139.35	3	26	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.09	139.655	1	27	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.73	139.795	1	28	9	no	Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.46	139.615	1	30	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.49	139.19	2	30	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	244.43	139.735	1	31	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2008	244	138	24.32	139.3	2	31	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2008	244	138	244.01	139.14	3	31	4	yes	Visible	Visible	Visible	Intact	Flake
2008	244	138	244.01	139.16	4	31	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2008	242	138	243.9	139.6	8								Broken Flake
2008	242	138	243.25	139.9	15								Amorphous Debris
2008	242	138	243.67	139.47	16							Broken	Pebble
2008	242	138	243.69	143.99	1							Broken	Amorphous Debris
2009	242	138	243.03	139.77	1							NA	Debris
2008	242	138	243.26	139.565	3							Broken	Amorphous Debris
2008	242	138	243.13	139.905	3							Intact	Debris
2008	242	140	242.1	141.84	18	28						Broken	Amorphous Debris
2008	242	142	243.24	142.8	1							Intact	Amorphous Debris
2008	242	142	243.55	142.57	2							NA	Debris
2008	242	142	242.09	142.99	3							Broken	Pebble
2008	242	142	242.24	142.64	5							Broken	Amorphous Debris
2008	242	142	242.21	142.93	14							NA	Pebble
2008	242	142	242.79	142.69	18							Broken	Amorphous Debris
2008	242	142	242.14	142.64	48							NA	Amorphous Debris
2008	244	138	244.66	139.72	1							NA	Amorphous Debris
2008	244	138	244.70	139.49	4							NA	Amorphous Debris
2008	244	138	244.66	139.27	25							Broken	Pebble
2009	242	138	242.03	139.77	1	1	3	no	Not Visible	Visible	Visible	Intact	Debris
2009	242	138	243.53	139.56	6	6	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	138	243.69	139.68	2	14	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2009	242	138	243.45	139.78	1	14	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	138	243.84	139.53	4	14	5	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	138	243.44	139.55	3	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	138	243.23	139.15	3	15	6	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	138	243.73	139.17	2	15	5	yes	Visible	Not Visible	Visible	Intact	Debris
2009	242	138	243.85	1339.43	1	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	138	243.85	139.035	4	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	138	243.59	139.825	6	16	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	138	243.7	139.37	4	16	4	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2009	242	138	243.03	139.03	5	16	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	138	243.41	139.775	7	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	138	243.75	139.66	2	16	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	138	243.78	139.64	3	16	5	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	138	243.69	139.91	1	16	4	no	Visible	Not Visible	Visible	Intact	Debris
2009	242	138	243.72	139.36	1	22	6	yes	Visible	Visible	Visible	Intact	Flake
2009	242	138	243.14	139.08	2	22	2	no	Visible	Not Visible	Visible	Intact	Debris
2009	242	138	243.08	139.56	22	23	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	138	243.36	139.59	4	23	5	no	Visible	Not Visible	Visible	NA	Debris
2009	242	138	243.64	139.78	2	23	3	no	Visible	Not Visible	Visible	Broken	Debris
2009	242	138	243.25	139.87	1	23	1	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	138	243.01	139.16	5	23	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	138	243.11	139.01	6	23	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	138	243.64	139.79	2	24	3	yes	Not Visible	Not Visible	Visible	Intact	Debris
2009	242	138	243.11	139.08	3	24	2	yes	Not Visible	Visible	Visible	Intact	flake
2009	242	138	243.91	139.81	1	24	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	138	243.42	139.87	4	25	10	yes	Visible	Not Visible	Visible	Intact	Debris
2009	242	138	243.38	139.73	3	25	11	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2009	242	138	243.61	139.77	5	25	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	138	243.73	139.13	7	25	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	138	243.3	139.73	2	25	5	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2009	242	138	243.21	139.79	1	25	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	138	243.61	139.76	1	26	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	138	243.86	139.52	2	26	2	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2009	242	138	243.58	139.77	2	27	2	yes	Visible	Visible	Visible	Intact	Flake
2009	242	138	243.6	139.58	3	27	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	138	243.1	139.6	2	28	2	yes	Not Visible	Visible	Visible	Intact	flake
2009	242	138	243.27	139.375	4	28	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	138	243.17	139.5	3	28	2	no	Visible	Not Visible	Visible	NA	Debris
2009	242	138	243.21	139.27	5	28	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	138	243.6	139.76	1	28	4	no	Not Visible	Not Visible	Visible	NA	Debris
2009	242	138	243.39	139.77	4	29	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	138	243.62	139.67	7	29	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	138	243.42	139.72	5	29	6	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	138	243.9	139.31	20	29	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	138	243.57	139.65	6	29	4	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	138	243.26	139.56	10	29	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	138	243.3	139.23	17	29	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	138	243.65	139.74	1	29	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	138	243.33	139.52	11	29	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	138	243.2	139.6	9	29	2	no	Not Visible	Not Visible	Visible	NA	Amorphous Debris
2009	242	138	243.96	139.3	16	29	4	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2009	242	138	243.65	139.67	8	29	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	138	243.69	139.56	13	29	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	138	243.94	139.14	18	29	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2009	242	138	243.9	139.58	14	29	2	yes	Visible	Visible	Visible	Intact	Flake
2009	242	138	243.21	139.91	2	29	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	138	243.66	139.53	12	29	4	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	138	243.93	139.38	15	29	6	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	138	243.96	139.17	19	29	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	138	243.11	139.58	21	30	2	no	Visible	Not Visible	Visible	Intact	Debris
2009	242	138	243.46	139.66	4	30	5	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	138	243.25	139.84	10	30	6	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	138	243.25	139.66	2	30	6	yes	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2009	242	138	243.22	139.79	11	30	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	138	243.18	139.08	27	30	4	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	138	243.78	139.47	17	30	6	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	138	243.23	139.11	26	30	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	138	243.46	139.63	14	30	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	138	243.56	139.63	13	30	4	no	Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	138	243.11	139.71	16	30	2	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2009	242	138	243.75	139.16	23	30	4	yes	Visible	Not Visible	Visible	Intact	Debris
2009	242	138	243.32	139.59	20	30	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	138	243.28	139.68	15	30	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	138	243.93	139.86	6	30	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	138	243.44	139.55	19	30	2	yes	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2009	242	138	243.6	139.105	25	30	1	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	138	243.76	139.62	12	30	0	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	138	243.77	139.75	9	30	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	138	243.55	139.53	18	30	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	138	243.99	139.735	5	30	4	yes	Visible	Not Visible	Not Visible	Intact	Debris
2009	242	138	243.39	139.73	3	30	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2009	242	138	243.92	139.8	7	30	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	138	243.21	139	28	30	5	no	Visible	Not Visible	Visible	Intact	Debris
2009	242	138	243.23	139.56	24	30	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	138	243.79	139.72	8	30	0	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2009	242	138	243.41	139.79	1	30	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	138	243.9	139.2	31	31	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	138	243.54	139.61	14	31	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	138	243.015	139.47	30	31	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	138	243.58	139.62	15	31	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	138	243.22	139.12	37	31	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	138	243.89	139.78	4	31	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	138	243.79	139.5	20	31	4	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	138	243.04	139.93	8	31	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	138	243.2	139.48	28	31	6	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	138	243.1	139.37	29	31	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	138	243.7	139.53	18	31	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	138	243.95	139.85	3	31	6	no	Visible	Not Visible	Visible	NA	Debris
2009	242	138	243.3	139.34	26	31	5	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2009	242	138	243.52	139.33	25	31	5	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	138	243.34	139.72	9	31	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	138	243.25	139.55	12	31	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	138	243.15	139.82	7	31	7	yes	Visible	Not Visible	Visible	Intact	Flake Fragment
2009	242	138	243.1	139.62	11	31	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	138	243.3	139.64	10	31	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	138	243.6	139.03	35	31	2	yes	Visible	Not Visible	Visible	Intact	Flake Fragment
2009	242	138	243.14	139.9	6	31	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	138	243.85	139.22	39	31	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2009	242	138	243.32	139.01	36	31	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	138	243.86	139.84	5	31	5	no	Not Visible	Not Visible	Visible	Broken	Debris
2009	242	138	243.52	139.49	17	31	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	138	243.74	139.49	19	31	4	no	Visible	Not Visible	Visible	Intact	Debris
2009	242	138	243.6	139.61	23	31	1	no	Not Visible	Visible	Visible	Broken	Debris
2009	242	138	243.23	139.56	24	31	2	no	Not Visible	Not Visible	Visible	NA	Amorphous Debris
2009	242	138	243.92	139.79	38	31	1	no	Visible	Not Visible	Visible	Intact	Debris
2009	242	138	243.68	139.36	21	31	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	138	243.6	139.38	22	31	0	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2009	242	138	243.25	139.43	27	31	0	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2009	242	138	243.69	139.05	34	31	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	138	243.61	139.01	40	31	8	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2009	242	138	243.62	139.56	16	31	4	yes	Visible	Not Visible	Visible	Intact	Debris
2009	242	138	243.5	139.62	13	31	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	138	243.57	139.03	41	31	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	138	243.92	139.04	33	31	2	yes	Not Visible	Visible	Visible	Intact	Broken Flake
2009	242	138	243.86	139.18	32	32	4	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	138	243.63	139.14	24								
2009	242	138	243.21	139.82	3								
2009	242	142	243.08	139.56	22	30	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	243.77	142.7	1	24	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	243.18	142.06	2	24	4	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	142	243.22	142.33	3	25	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.44	142.31	4	25	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.58	142.08	2	25	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	243.85	142	1	25	2	yes	Visible	Visible	Visible	Intact	Broken Flake
2009	242	142	243.57	142.56	5	25	7	no	Visible	Not Visible	Visible	NA	Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2009	242	142	243.675	142.725	6	25	0	yes	Visible	Visible	Visible	Broken	Broken Flake
2009	242	142	243.39	142.39	7	25	5	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	243.445	142.14	2	26	6	No	Not Visible	Not Visible	Visible	NA	Amorphous Debris
2009	242	142	243.22	142.62	4	26	4	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	142	243.09	142.82	6	26	2	No	Visible	Not Visible	Visible	NA	Debris
2009	242	142	243.28	142.22	3	26	0	No	Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	142	243.37	142.82	5	26	1	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	142	243.36	142.15	1	26	4	No	Visible	Not Visible	Visible	NA	Debris
2009	242	142	243.33	142.23	2	27	1	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	243.825	142.43	3	27	2	Yes	Not Visible	Not Visible	Visible	Intact	Debris
2009	242	142	243.61	142.15	1	27	3	No	Visible	Visible	Not Visible	Intact	Debris
2009	242	142	243.84	142.87	5	27	0	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2009	242	142	243.8	142.39	4	27	3	Yes	Visible	Visible	Visible	Intact	flake fragment
2009	242	142	243.51	142.23	6	27	15	No	Visible	Not Visible	Visible	NA	Debris
2009	242	142	243.69	142.1	3	28	3	no	Not Visible	Not Visible	Visible	NA	Amorphous Debris
2009	242	142	243.83	242.34	1	28	4	no	Visible	Visible	Visible	NA	Debris
2009	242	142	243.38	142.34	7	28	2	yes	Not Visible	Visible	Visible	Intact	Flake Fragment
2009	242	142	243.17	142.32	5	28	7	no	Visible	Not Visible	Visible	Intact	Debris
2009	242	142	243.3	142.37	6	28	3	no	Visible	Not Visible	Visible	Intact	Debris
2009	242	142	243.56	142.14	4	28	5	no	Visible	Not Visible	Visible	Intact	Debris
2009	242	142	243.875	142.1	2	28	3	no	Visible	Visible	Visible	Intact	Flake Fragment
2009	242	142	243.25	142.125	3	29	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	243.85	142.65	5	29	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	243.05	142.89	4	29	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	243.82	242.12	1	29	27	no	Visible	Not Visible	Visible	NA	Debris
2009	242	142	243.04	142.27	2	29	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	243.45	142.92	11	30	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2009	242	142	243.42	142.07	10	30	5	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	243.43	142.68	12	30	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.76	142.76	14	30	8	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	243.27	142.655	7	30	4	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.19	142.69	8	30	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	142	243.87	142.95	13	30	3	yes	Not Visible	Not Visible	Visible	Intact	Debris
2009	242	142	243.71	142.63	15	30	2	no	Visible	Visible	Not Visible	Intact	Debris
2009	242	142	243.09	142.16	18	30	2	no	Not Visible	Not Visible	Visible	Broken	Debris
2009	242	142	243.05	142.76	6	30	6	no	Visible	Not Visible	Visible	Intact	Debris
2009	242	142	243.64	142.47	17	30	5	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.34	142.8	9	30	5	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	243.62	142.52	16	30	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.01	142.145	1	30	7	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.32	142.29	3	30	0	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	142	243.53	142.37	5	30	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	243.49	142.37	4	30	7	no	Visible	Not Visible	Visible	Intact	Debris
2009	242	142	243.4	142.05	2	30	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	243.11	142.82	19	30	7	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	142	243.72	142.69	14	31	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.34	142.81	16	31	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	243.47	142.915	11	31	4	no	Visible	Not Visible	Visible	Intact	Debris
2009	242	142	243.46	142.98	12	31	6	no	Visible	Not Visible	Visible	Intact	Debris
2009	242	142	243.79	142.08	1	31	5	no	Visible	Not Visible	Visible	Intact	Debris
2009	242	142	243.5	142.87	10	31	0	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2009	242	142	243.54	142.75	15	31	5	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2009	242	142	243.71	142.44	13	31	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.83	142.67	16	31	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2009	242	142	243.13	142.66	7	31	1	yes	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2009	242	142	243.27	142.85	8	31	2	no	Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.05	142.09	2	31	4	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	142	243.12	142.32	5	31	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.295	142.12	4	31	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	243.08	142.395	6	31	0	no	Not Visible	Not Visible	Visible	NA	Amorphous Debris
2009	242	142	243.22	142.1	3	31	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.38	142.89	9	31	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	243.06	142.75	25	32	1	no	Visible	Not Visible	Visible	Intact	Debris
2009	242	142	243.33	142.18	4	32	0	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2009	242	142	243.15	142.15	3	32	4	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	142	243.32	142.54	13	32	5	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.06	142.96	18	32	6	no	Visible	Not Visible	Visible	Intact	Debris
2009	242	142	243.49	142.56	15	32	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	243.03	142.48	16	32	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	243.71	142.69	21	32	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	243.09	142.035	1	32	6	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2009	242	142	243.21	142.5	12	32	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.64	142.945	22	32	2	yes	Visible	Not Visible	Visible	Intact	Flake Fragment
2009	242	142	243.19	142.71	24	32	2	no	Not Visible	Not Visible	Visible	Intact	Debris
2009	242	142	243.51	142.1	2	32	3	no	Not Visible	Not Visible	Visible	Intact	Debris
2009	242	142	243.63	142.89	23	32	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	243.29	142.34	8	32	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	142	243.32	142.27	7	32	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	243.09	142.38	9	32	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.255	142.48	11	32	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.39	142.19	10	32	0	yes	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2009	242	142	243.21	142.79	17	32	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.27	142.28	6	32	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.33	142.225	5	32	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.36	142.575	14	32	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.16	142.92	19	32	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.49	142.79	20	32	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	243.42	142.95	28	33	0	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.16	142.93	40	33	4	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	243.06	142.36	8	33	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	243.03	142.455	10	33	2	no	Not Visible	Visible	Not Visible	Intact	Debris
2009	242	142	243.12	142.88	26	33	6	no	Visible	Not Visible	Visible	Intact	Debris
2009	242	142	243.13	142.96	27	33	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	243.35	142.75	34	33	4	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.05	142.43	7	33	4	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.1	142.33	6	33	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.38	142.65	31	33	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.01	142.92	25	33	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.13	142.75	35	33	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.18	142.73	29	33	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.24	142.27	12	33	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	243.17	142.185	1	33	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	243.44	142.44	18	33	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	243.07	142.9	38	33	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	243.285	142.38	14	33	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	142	243.6	142.48	19	33	7	no	Not Visible	Not Visible	Visible	NA	Debris
2009	242	142	243.17	142.64	22	33	0	no	Visible	Visible	Visible	Intact	Flake Fragment
2009	242	142	243.02	142.6	17	33	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2009	242	142	243.14	142.64	21	33	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	243.06	142.8	24	33	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	243.28	142.71	33	33	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	243.65	142.52	20	33	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	243.22	142.33	15	33	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	142	243.36	142.175	2	33	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	243.52	142.17	3	33	2	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2009	242	142	243.035	142.32	5	33	0	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2009	242	142	243.22	142.71	30	33	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	243.27	142.68	32	33	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	142	243.02	142.74	36	33	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.21	142.39	13	33	2	no	Not Visible	Not Visible	Visible	NA	Amorphous Debris
2009	242	142	243.22	142.28	11	33	3	no	Visible	Not Visible	Not Visible	Intact	Debris
2009	242	142	243.1	142,35	16	33	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.1	142.74	23	33	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	243.03	142.27	4	33	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.82	142.625	12	34	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	243.59	142.235	4	34	3	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2009	242	142	243.54	142.52	9	34	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	243.79	142.92	13	34	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	243.3	142.08	2	34	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	243.41	142.145	3	34	1	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	142	243.3	142.5	7	34	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	142	243.54	142.44	8	34	0	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2009	242	142	243.52	142.59	10	34	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	142	243.462	142.71	11	34	5	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	243.21	142.1	1	34	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2009	242	142	243.05	142.57	5	34	4	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	142	243.01	142.49	6	34	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.64	142.31	12	35	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	243.29	142.165	2	35	4	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.155	142.22	6	35	1	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	142	243.67	142.32	13	35	5	no	Not Visible	Not Visible	Visible	Broken	Debris
2009	242	142	243.62	142.46	16	35	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	243.69	142.455	17	35	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	243.275	142.17	1	35	8	no	Visible	Not Visible	Visible	Broken	Debris
2009	242	142	243.55	142.36	10	35	1	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	142	243.73	142.3	14	35	4	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2009	242	142	243.825	142.34	15	35	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	243.34	142.12	3	35	4	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	142	243.75	142.06	7	35	8	no	Not Visible	Not Visible	Visible	Intact	Debris
2009	242	142	243.59	142.275	9	35	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	243.56	142.4	11	35	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	142	243.41	142.16	5	35	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	243.37	142.1	4	35	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	243.43	142.095	8	35	1	yes	Not Visible	Not Visible	Visible	Intact	Debris
2009	242	142	243.02	142.92	37	37	0	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2009	242	142	243.11	142.88	39	39	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	242.54	142.42	10	23	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	242.92	142.52	7	23	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	142	242.12	142.24	5	23	6	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	242.64	142.41	6	23	4	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	242.105	142.17	4	23	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	242.33	142.86	12	23	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2009	242	142	242.07	142.74	14	23	0	no	Visible	Visible	Not Visible	Intact	Amorphous Debris
2009	242	142	242.1	142.075	3	23	1	no	Visible	Not Visible	Not Visible	Intact	Debris
2009	242	142	242.55	142.49	8	23	4	no	Visible	Not Visible	Visible	Intact	Debris
2009	242	142	242.39	142.52	9	23	2	yes	Visible	Visible	Visible	Intact	flake
2009	242	142	242.49	142.65	11	23	4	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2009	242	142	242.38	142.35	13	23	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	242.35	142.12	2	23	2	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	142	242.88	142.13	1	23	4	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	142	242.85	142.11	2	24	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	242.39	142.11	4	24	2	no	Visible	Not Visible	Visible	Intact	Debris
2009	242	142	242.32	142.04	5	24	2	no	Visible	Not Visible	Not Visible	NA	Debris
2009	242	142	242.23	142.05	6	24	2	yes	Visible	Visible	Visible	Intact	Broken Flake
2009	242	142	242.62	142.95	9	24	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	242.47	142.43	10	24	5	no	Not Visible	Not Visible	Not Visible	NA	Debris
2009	242	142	242.34	142.62	15	24	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	242.74	142.86	18	24	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	242.86	142.15	3	24	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	242.56	142.29	8	24	6	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	242.26	142.5	11	24	2	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2009	242	142	242.11	142.54	16	24	0	no	Not Visible	Not Visible	Not Visible	Broken	Pebble
2009	242	142	242.87	142	1	24	4	no	Visible	Not Visible	Visible	NA	Debris
2009	242	142	242.77	142.36	7	24	6	no	Visible	Not Visible	Visible	NA	Debris
2009	242	142	242.9	142.57	12	24	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	242.58	142.31	14	24	5	no	Visible	Not Visible	Visible	NA	Debris
2009	242	142	242.85	142.72	17	24	2	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	142	242.29	142.99	19	24	2	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2009	242	142	242.79	142.01	3	25	6	no	Visible	Not Visible	Visible	Intact	Broken Flake

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2009	242	142	242.77	142.02	5	25	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	242.7	142.01	6	25	5	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	242.2	142.41	19	25	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	242.86	142.58	24	25	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	242.85	142.23	8	25	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	242.71	142.61	26	25	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	242.69	142.8	32	25	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	242.7	142.01	6	25	5	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	242.63	142.65		25	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	242.28	142.38	17	25	5	no	Visible	Not Visible	Visible	NA	Debris
2009	242	142	242.58	142.19	10	25	0	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	242.23	142.26	13	25	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	142	242.85	142.75	30	25	4	no	Visible	Not Visible	Visible	NA	Debris
2009	242	142	242.86	142.78	31	25	2	yes	Not Visible	Visible	Visible	Broken	Broken Flake
2009	242	142	242.59	142.34	14	25	5	no	Visible	Not Visible	Visible	NA	Debris
2009	242	142	242.4	142.75	34	25	2	no	Visible	Not Visible	Visible	Intact	Debris
2009	242	142	242.04	142.97	36	25	3	no	Visible	Not Visible	Visible	NA	Debris
2009	242	142	242.88	142.55	23	25	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	242.65	142.59	27	25	5	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	242.63	142.59	25	25	1	yes	Visible	Not Visible	Visible	Intact	Flake Fragment
2009	242	142	242.23	142.51	22	25	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	242.41	142.31	16	25	5	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	242.45	142.53	21	25	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	142	242.66	142.87		25	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	242.79	142.06	4	25	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	242.64	142.14	9	25	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	242.18	142.2	11	25	5	no	Visible	Not Visible	Visible	NA	Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2009	242	142	242.54	142.07	7	25	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	242.09	142.7	33	25	4	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2009	242	142	242.78	142.01	2	25	3	no	Visible	Not Visible	Visible	NA	Debris
2009	242	142	242.48	142.37	15	25	2	no	Visible	Visible	Visible	NA	Flake Fragment
2009	242	142	242.87	142.05	1	25	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	242.54	142.51	20	25	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	242.35	142.14	12	25	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	242.77	142.43	18	25	4	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	242	142	242.59	142.6	29	25	3	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2009	242	142	242.49	142.23	3	26	4	yes	Visible	Not Visible	Visible	Intact	Flake Fragment
2009	242	142	242.5	142.52	5	26	0	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2009	242	142	242.57	142.39	4	26	5	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2009	242	142	242.69	142.51	7	26	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	242.62	142.72	11	26	2	no	Visible	Not Visible	Visible	Intact	Debris
2009	242	142	242.49	142.11	2	26	1	no	Not Visible	Not Visible	Visible	Intact	Debris
2009	242	142	242.3	142.67	6	26	2	no	Not Visible	Not Visible	Visible	Intact	Debris
2009	242	142	242.56	142.72	12	26	4	no	Visible	Not Visible	Not Visible	Intact	Debris
2009	242	142	242.7	142.8	14	26	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	142	242.83	142.91	17	26	1	yes	Visible	Visible	Visible	Intact	flake
2009	242	142	242.82	142.2	1	26	2	no	Visible	Not Visible	Not Visible	Intact	Debris
2009	242	142	242.84	142.71	9	26	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	242.67	142.76	10	26	4	no	Visible	Visible	Not Visible	NA	Debris
2009	242	142	242.68	142.81	13	26	5	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	242.79	142.83	15	26	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	242	142	242.85	142.81	16	26	4	no	Visible	Visible	Visible	Intact	Flake Fragment
2009	242	142	242.72	142.62	8	26	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	242	142	242.53	142.65	2	27	5	no	Visible	Not Visible	Not Visible	NA	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2009	242	142	242.77	142.07	4	27	4	yes	Visible	Visible	Visible	Intact	Flake
2009	242	142	242.68	142.8	1	27	4	yes	Not Visible	Visible	Visible	Intact	Broken Flake
2009	242	142	242.56	142.81	3	27	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	242	142	242.85	143.36	2	29	5	no	Visible	Not Visible	Visible	Intact	Debris
2009	242	142	242.86	142.8	4	29	6	no	Visible	Not Visible	Visible	Intact	Debris
2009	242	142	243.01	142.45	9								
2009			242.65	142.67			2	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2009	246	138	246.54	138.86	1	10	2	yes	Visible	Visible	Visible	Intact	Flake
2009	246	138	246.91	138.99	1	11	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	138	246.58	138.68	1	11	1	No	Visible	Not Visible	Not Visible	Intact	Debris
2009	246	138	246.4	138.7	2	11	2	No	Visible	Visible	Not Visible	Intact	Flake Fragment
2009	246	138	246.39	138.87	1	12	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	138	246.7	138.92	1	12	5	No	Visible	Not Visible	Visible	Intact	Flake Fragment
2009	246	138	246.37	138.82	2	12	4	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2009	246	138	246.4	138.55	2	12	5	Yes	Visible	Not Visible	Visible	Intact	Flake
2009	246	138	246.42	138.5	3	12	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	138	246.39	138.34	3	12	2	yes	Visible	Visible	Visible	Intact	Flake
2009	246	138	246.95	138.9	4	12	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	138	246.39	138.1	4	12	1	Yes	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	138	246.71	138.16	5	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	138	246.94	138.1	6	12	10	Yes	Visible	Not Visible	Visible	NA	Debris
2009	246	138	246.82	138.36	7	12	11	yes	Visible	Visible	Visible	NA	Debris
2009	246	138	246.96	138.77	1	13	3	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	138	246.97	139.05	1	13	2	No	Visible	Not Visible	Not Visible	Intact	Flake Fragment
2009	246	138	246.34	138.55	1	13	2	yes	Visible	Visible	Visible	Intact	flake
2009	246	138	246.47	139.53	1	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	138	246.54	139.53	2	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2009	246	138	246.26	139.13	1	15	41	Yes	Visible	Visible	Visible	NA	Debris
2009	246	138	246.7	138.28	1	15	7	No	Visible	Not Visible	Not Visible	NA	Debris
2009	246	138	246.6	139.38	2	15	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	138	246.9	138.76	2	15	3	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	138	246.67	139.62	1	16	1	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	138	246.97	139.36	2	16	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	138	246.92	139.55	1	17	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	138	246.45	138.83	1	17	3	yes	Visible	Not Visible	Visible	Intact	Flake
2009	246	138	246.83	139.36	2	17	16	No	Not Visible	Visible	Visible	NA	Debris
2009	246	138	246.37	138.47	2	17	4	yes	Visible	Visible	Not Visible	Intact	Flake
2009	246	138	246.83	139.36	1	18	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	138	246.79	139.1	2	18	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	138	246.13	139.88	1	19	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	138	247	139.86	1	20	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	138	246.16	138.52	1	20	2	yes	Visible	Visible	Visible	Broken	Flake
2009	246	138	246.89	138.14	1	21	0	no	Visible	Visible	Not Visible	Broken	Flake Fragment
2009	246	140	247.55	141.66	1	23	7	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	247.65	141.5	2	23	15	No	Visible	Not Visible	Visible	NA	Debris
2009	246	140	247.67	141.76	3	23	2	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	247.36	141.1	4	23	6	yes	Not Visible	Visible	Not Visible	Intact	Flake Fragment
2009	246	140	247.9	141.65	5	23	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	247.95	141.63	6	23	28	No	Visible	Not Visible	Not Visible	NA	Debris
2009	246	140	247.96	141.76	7	23	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	247.98	141.74	8	23	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	140	247.55	140.4	1	23	10	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	247.12	140.58	2	23	2	yes	Visible	Not Visible	Not Visible	Intact	Debris
2009	246	140	247.12	140.76	3	23	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2009	246	140	247.52	140.99	4	23	10	Yes	Visible	Not Visible	Visible	NA	Debris
2009	246	140	247.9	140.68	5	23	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	140	247.74	141.98	1	24	7	Yes	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	247.88	141.8	2	24	2	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	247.61	141.79	3	24	4	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	247.37	141.81	4	24	2	No	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2009	246	140	247.22	141.69	5	24	2	no	Not Visible	Not Visible	Visible	Intact	Debris
2009	246	140	247.17	141.08	6	24	15	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.68	141.24	1	24	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	246	140	246.8	141.05	2	24	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	140	246.63	141.16	3	24	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.42	141.31	4	24	3	yes	Visible	Visible	Not Visible	Intact	Broken Flake
2009	246	140	246.24	141.64	5	24	3	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.33	141.61	6	24	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	246	140	246.36	141.61	7	24	6	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	247.27	141.77	1	25	5	No	Visible	Not Visible	Not Visible	NA	Debris
2009	246	140	246.7	140.77	1	25	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	245.43	140.97	2	25	1	yes	Not Visible	Not Visible	Visible	Intact	Debris
2009	246	140	246.3	142.6	3	25	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.42	140.64	1	26	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.56	141.34	1	107	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	140	246.79	141.46	2	107	1	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	246	140	246.65	141.645	3	107	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	140	246.58	141.68	4	107	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	140	246.38	141.52	5	107	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	140	246.27	141.64	6	107	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	140	246.3	141.56	7	107	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2009	246	140	246.53	141.745	8	107	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	140	246.92	141.505	9	107	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	140	246.455	141.4	10	107	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	140	246.625	141.48	11	107	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	140	246.33	141.31	1	F94	4	NO	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.31	141.41	2	F94	3	Yes	Not Visible	Not Visible	Not Visible	Intact	Flake
2009	246	140	246.27	141.24	3	F94	7	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.92	141.06	4	F94	0	NO	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.66	141.43	5	F94	5	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.2	141.3	6	F94	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	140	246.2	141.45	7	F94	1	Yes	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	244.406	141.31	8	F94	2	yes	Visible	Not Visible	Not Visible	Intact	Debris
2009	246	140	246.56	141.1	9	F94	2	No	Not Visible	Not Visible	Visible	Intact	Debris
2009	246	140	246.45	141.45	10	F94	13	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.2	141.57	11	F94	4	NO	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.48	141.18	12	F94	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	140	246.405	141.14	13	F94	5	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.48	141.3	14	F94	4	NO	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.295	141.29	15	F94	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.445	141.245	16	F94	2	No	Visible	Not Visible	Not Visible	Intact	Flake Fragment
2009	246	140	246.4	141.3	17	F94	1	yes	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.33	141.33	18	F94	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	140	246.58	141.235	19	F94	0	Yes	Not Visible	Not Visible	Not Visible	Intact	Broken Flake
2009	246	140	246.65	141.305	20	F94	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	140	246.68	141.27	21	F94	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	140	246.xx	140.xx			1	Yes	Visible	Not Visible	Not Visible	Intact	Debris
2009	246	142	246.2	142.97	1	27	2	Yes	Visible	Visible	Visible	Intact	flake

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2009	246	142	246.55	142.91	2	27	1	Yes	Visible	Visible	Visible	Intact	flake
2009	248	140	248.16	141.35	1	3	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	248	140	248.56	140.8	1	20	18	no	Visible	Not Visible	Visible	Intact	Debris
2009	248	140	248.73	140.88	1	21	3	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	248	140	248.3	140.82	2	21	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	248	140	248.55	140.26	3	21	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	248	140	248.35	140.24	4	21	4	Yes	Not Visible	Not Visible	Visible	Intact	Flake
2009	248	140	248.27	140.78	5	21	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	248	140	248.34	140.64	6	21	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	248	140	248.93	140.8	7	21	3	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	248	140	248.17	140.34	8	21	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	248	140	248.18	141.13	1	22	11	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	248	140	248.45	141.01	2	22	5	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	248	140	248.27	141.7	2	22	13	no	Visible	Not Visible	Visible	Intact	Debris
2009	248	140	248.62	141.02	3	22	25	yes	Visible	Not Visible	Visible	NA	Debris
2009	248	140	248.87	141.01	4	22	14	Yes	Visible	Not Visible	Visible	NA	Debris
2009	248	140	248.38	141.75	5	22	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	248	140	248.71	141.59	5	22	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	248	140	248.44	141.59	6	22	2	Yes	Visible	Not Visible	Visible	Intact	flake
2009	248	140	248.88	141.6	6	22	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	248	140	248.44	141.77	7	22	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	248	140	248.12	141.68	8	22	2	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	248	140	248.1	141.74	9	22	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	248	140	248.17	141.99	10	22	10	no	Visible	Not Visible	Visible	Intact	Debris
2009	248	140	248.57	141.6	12	22	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	248	140	248.07	140.78	1	22	6	Yes	Visible	Visible	Visible	Intact	Flake
2009	248	140	248.55	140.09	1	22	1	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2009	248	140	248.82	140.06	2	22	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	248	140	248.89	140.22	3	22	5	No	Not Visible	Not Visible	Visible	NA	Debris
2009	248	140	248.01	141.86	1	23	2	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	248	140	248.05	140.47	1	23	NA	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	248	140	248.49	140.84	2	23	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	248	140	248.81	140.84	3	23	1	No	Not Visible	Not Visible	Visible	NA	Debris
2009	248	140	248.6	141.38	1	24	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	248	140	248.98	141.41	2	24	2	No	Visible	Not Visible	Not Visible	NA	Debris
2009	248	140	248.57	140.92	1	24	6	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	248	140	248.3	140.24	2	24	7	no	Visible	Not Visible	Visible	Intact	Debris
2009	248	140	248.77	140.89	3	24	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	248	140	248.58	140.63	4	24	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	248	140	248.91	140.28	5	24	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	248	140	248.12	140.57	6	24	7	Yes	Visible	Visible	Not Visible	NA	Debris
2009	248	140	248.39	140.41	7	24	6	Yes	Visible	Visible	Not Visible	NA	Debris
2009	248	140	248.06	141.67	3	105	20	No	Visible	Visible	Visible	NA	Debris
2009	248	140	248.58	141.6	11	105	11	No	Visible	Not Visible	Visible	NA	Debris
2009	246	140	247.32	141.875	1	1	0	No	Not Visible	Not Visible	Not Visible	Intact	Debris
2009	246	140	247.1	141.42	2	3	3	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	247.54	141.71	1	3	6	No	Visible	Not Visible	Not Visible	NA	Debris
2009	246	140	247.02	141.48	3	3	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	140	246.18	141.18	1	3	8	No	Visible	Not Visible	Not Visible	Intact	Flake Fragment
2009	246	140	246.18	141.18	1	3	6	no	Visible	Not Visible	Not Visible	NA	Debris
2009	246	140	246.35	141.19	2	3	7	No	Visible	Visible	Not Visible	NA	Debris
2009	246	140	247.06	141.12	1	4	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	140	247	141.47	1	4	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	140	246.465	141.43	6	4	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2009	246	140	246.15	141.43	3	4	2	no	Not Visible	Not Visible	Visible	Intact	Flake
2009	246	140	246.978	141.27	9	4	2	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	246	140	246.505	141.855	1	4	4	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	246	140	246.235	141.05	5	4	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.13	141.42	4	4	6	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.05	141.55	2	4	2	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	246	140	246.935	141.35	8	4	2	yes	Visible	Visible	Visible	Intact	Flake
2009	246	140	246.4	141.31	7	4	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	140	246.19	141.38	1	5	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.07	141.26	2	5	4	No	Visible	Visible	Visible	NA	Debris
2009	246	140	246.92	141.8	9	5	2	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.532	141.12	4	5	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	140	246.37	141.39	5	5	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	246	140	246.06	141.8	7	5	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.995	141.86	10	5	2	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.4	141.63	8	5	0	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.15	141.665	6	5	6	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	246	140	246.515	141.03	1	5	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	140	246.673	141.12	3	5	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	140	246.655	141.032	2	5	2	No	Visible	Not Visible	Visible	Intact	Debris
2009	246	140	246.28	141.86	3	6	2	no	Not Visible	Not Visible	Visible	Intact	Flake Fragment
2009	246	140	246.11	141.83	2	6	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	246	140	246.85	141.27	5	6	6	no	Visible	Not Visible	Not Visible	NA	Debris
2009	246	140	246.82	141.15	6	6	3	no	Visible	Not Visible	Not Visible	Intact	Flake Fragment
2009	246	140	246.77	141.43	4	6	1	yes	Visible	Visible	Visible	Intact	Flake Fragment
2009	246	140	247.92	141.26	2	7	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	247.88	141.73	3	7	2	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2009	246	140	247.73	141.73	1	7	2	Yes	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	247.07	141.205	4	7	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	140	246.835	141.44	9	7	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	246	140	246.05	141.16	1	7	3	no	Visible	Visible	Not Visible	NA	Debris
2009	246	140	246.27	141.8	11	7	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.37	141.19	4	7	6	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.63	141.13	6	7	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.8	141.43	10	7	10	no	Visible	Visible	Not Visible	Intact	Debris
2009	246	140	246.67	141.4	8	7	2	no	Visible	Not Visible	Visible	NA	Debris
2009	246	140	246.5	141.33	5	7	4	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	246	140	246.7	141.235	7	7	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.14	141.22	2	7	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.2	141.74	12	7	0	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	246	140	246.34	141.06	3	7	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.87	141.05	6	8	3	no	Not Visible	Visible	Not Visible	Intact	Debris
2009	246	140	246.74	141.58	10	8	10	no	Visible	Visible	Visible	NA	Debris
2009	246	140	246.91	141.35	9	8	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.26	141.02	1	8	7	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.88	141.06	5	8	4	no	Not Visible	Visible	Visible	Intact	Debris
2009	246	140	246.59	141.91	11	8	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.13	141.87	7	8	6	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.13	141.28	3	8	2	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	140	246.21	141.17	2	8	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.83	141.37	8	8	4	yes	Visible	Visible	Visible	Intact	Flake
2009	246	140	246.59	141.27	9	9	3	Yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	246	140	246.05	141.91	1	9	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.88	141.38	10	9	1	no	Visible	Not Visible	Not Visible	NA	Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2009	246	140	246.15	141.71	4	9	2	Yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	246	140	246.15	141.39	4	9	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.4	141.91	2	9	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	246	140	246.31	141.6	5	9	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.35	141.4	7	9	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.72	141.75	6	9	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.15	141.76	3	9	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.63	141.1	11	9	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.07	141.45	8	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	140	246.34	141.01	1	10	1	no	Visible	Not Visible	Not Visible	NA	Debris
2009	246	140	246.56	141.14	2	10	NA	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	246	140	246.48	141.2	3	10	0	Yes	Visible	Visible	Visible	Intact	Flake
2009	246	140	246.64	141.385	5	10	7	No	Visible	Not Visible	Visible	NA	Debris
2009	246	140	246.52	141.48	6	10	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	246	140	246.46	141.36	4	10	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	246	140	246.11	141.69	8	10	10	no	Visible	Visible	Visible	NA	Debris
2009	246	140	246.68	141.58	7	11	1	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	246	142	246.74	142	1	1	2	yes	Visible	Visible	Visible	Intact	Flake
2009	246	142	246.37	142.1	1	1	15	No	Visible	Not Visible	Visible	NA	Debris
2009	246	142	246.717	142.76	6	2	3	no	Visible	Not Visible	Visible	step	Flake Fragment
2009	246	142	246.21	142.59	3	2	3	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2009	246	142	246.27	142.9	4	2	5	yes	Visible	Not Visible	Visible	Intact	Debris
2009	246	142	246.045	142.19	1	2	0	**no**	Not Visible	Not Visible	Not Visible	**NA**	Pebble
2009	246	142	246.58	142.45	5	2	0	**no**	Not Visible	Not Visible	Not Visible	**NA**	Pebble
2009	246	142	246.19	142.4	2	2	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	246	142	246.83	142.2	7	2	3	yes	Visible	Visible	Visible	Broken	Broken Flake
2009	246	142	246.59	142.215	5	3	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2009	246	142	246.288	142.93	9	3	1	no	Visible	Not Visible	Visible	Broken	Amorphous Debris
2009	246	142	246.305	142.9	8	3	1	yes	Visible	Visible	Visible	Broken	Broken Flake
2009	246	142	246.26	142.92	10	3	1	no	Visible	Not Visible	Visible	Broken	Debris
2009	246	142	246.457	142.18	1	3	5	no	Visible	Not Visible	Visible	Broken	Debris
2009	246	142	246.79	142.46	3	3	6	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	246	142	246.1	142.63	7	3	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2009	246	142	246.142	142.6	6	3	4	no	Visible	Not Visible	Visible	Intact	Amorphous Debris
2009	246	142	246.8	142.392	4	3	1	**no**	Not Visible	Not Visible	Visible	**Broken**	Amorphous Debris
2009	246	142	246.427	142.573	3	3	1	no	Not Visible	Visible	Not Visible	Intact	Amorphous Debris
2009	248	140	248.32	140.76	1	2	7	No	Visible	Not Visible	Visible	NA	Debris
2009	248	140	248.39	140.1	2	2	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	248	140	248.2	140.26	1	3	4	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	248	140	248.65	140.89	4	3	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	248	140	248.94	140.13	3	3	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	248	140	248.28	140.14	2	3	8	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	248	140	248.48	140.82	2	4	7	No	Visible	Not Visible	Visible	Intact	Debris
2009	248	140	248.46	140.82	1	4	3	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	248	140	246.45	141.08	1	5	12	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2009	248	140	248.24	140.4	1	5	3	yes	Visible	Not Visible	Visible	Intact	Flake
2009	248	140	248.1	140.12	2	5	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	248	140	248.03	141.08	1	6	5	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	248	140	248.68	141.88	2	6	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	248	140	248.565	140.36	1	6	0	No	Visible	Not Visible	Visible	Intact	Debris
2009	248	140	248.74	140.235	2	6	2	NO	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	248	140	248.835	141.8	2	7	6	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	248	140	248.83	141.18	1	7	0	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	248	140	248.67	140.335	1	7	4	No	Visible	Visible	Visible	NA	Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2009	248	140	248.92	141.11	2	8	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	248	140	248.233	141.255	1	8	4	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	248	140	248.945	141.13	3	8	4	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	248	140	248.67	141.555	4	8	3	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	248	140	248.615	141.615	5	8	3	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	248	140	248.42	140.75	1	8	2	No	Visible	Not Visible	Visible	Intact	Flake Fragment
2009	248	140	248.46	141.44	2	9	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	248	140	248.215	141.11	1	9	1	No	Not Visible	Visible	Not Visible	NA	Debris
2009	248	140	248.67	141.67	4	9	10	No	Visible	Not Visible	Not Visible	Intact	Debris
2009	248	140	248.75	141.57	3	9	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	248	140	248.18	140.05	1	9	4	No	Not Visible	Not Visible	Visible	NA	Debris
2009	248	140	248.41	140.08	7	9	2	No	Visible	Visible	Not Visible	NA	Debris
2009	248	140	248.49	140.3	4	9	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	248	140	248.26	140.36	6	9	5	No	Visible	Not Visible	Visible	NA	Debris
2009	248	140	248.175	140.235	3	9	7	No	Not Visible	Not Visible	Not Visible	NA	Debris
2009	248	140	248.41	140.19	2	9	6	No	Not Visible	Not Visible	Not Visible	NA	Debris
2009	248	140	248.665	141.13	4	10	2	No	Not Visible	Visible	Not Visible	Intact	Flake Fragment
2009	248	140	248.55	141.645	5	10	3	Yes	Not Visible	Not Visible	Not Visible	Intact	Flake
2009	248	140	248.86	141.22	3	10	3	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	248	140	248.95	141.21	2	10	12	Yes	Visible	Visible	Visible	NA	Debris
2009	248	140	248.435	141.29	1	10	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	248	140	248.3	140.11	2	10	2	Yes	Visible	Visible	Visible	Intact	Flake
2009	248	140	248.15	140.245	4	10	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	248	140	248.54	140.19	3	10	3	No	Not Visible	Not Visible	Visible	Intact	Debris
2009	248	140	248.23	140.3	5	10	2	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	248	140	248.26	140.05	6	10	2	No	Visible	Not Visible	Not Visible	Intact	Debris
2009	248	140	24826	140.33	1	10	3	No	Visible	Not Visible	Visible	Intact	Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2009	248	140	248.5	141.115	1	11	0	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2009	248	140	248.89	141.3	3	11	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	248	140	248.69	141.23	2	11	0	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	248	140	248.46	141.545	4	11	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2009	248	140	248.19	141.735	3	12	8	Yes	Visible	Visible	Visible	Intact	Flake
2009	248	140	248.27	141.1	2	12	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2009	248	140	248.26	141.16	1	12	37	Yes	Visible	Not Visible	Visible	NA	Debris
2009	246	142	246.57	142.43	2	3							
2009	248	140	248.115	140.32	5	9							
2009	242	138	243.08	139.71	3								
2009	242	138	243.78	139.27	1								
2009	242	138	243.54	139.08	2								
2009	244	138	244.9	138.7			4	no	Visible	Not Visible	Visible	Broken	Debris
2010	246	140	246.52	140.55	6	1	7	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2010	246	140	246.36	140.635	4	1	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2010	246	140	247.01	140.955	1	1	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	140	246.5	140.44	3	1	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	140	247.945	140.81	2	1	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	140	246.94	140.63	2	1	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	140	247.745	140.55	3	1	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	140	246.91	140.98	5	1	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	140	246.66	140.925	1	1	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	140	247.45	140.78	1	2	5	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	140	246.66	140.8	1	2	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	140	247.18	140.87	2	2	2	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2010	246	140	246.6	140.61	3	3	6	no	Not Visible	Not Visible	Visible	Intact	Debris
2010	246	140	246.21	140.915	1	3	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2010	246	140	247.69	140.77	1	3	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	140	246.46	140.92	2	3	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	140	246.42	140.62	9	4	2	no	Not Visible	Not Visible	Visible	Broken	Debris
2010	246	140	246.76	140.18	14	4	5	no	Visible	Not Visible	Visible	Broken	Flake Fragment

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2010	246	140	246.17	140.95	3	4	2	yes	Not Visible	Not Visible	Visible	NA	Debris
2010	246	140	247.63	140.97	2	4	3	no	Not Visible	Not Visible	Visible	Broken	Amorphous Debris
2010	246	140	247.07	140.95	5	4	2	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2010	246	140	247.65	140.54	7	4	7	no	Visible	Not Visible	Visible	Broken	Amorphous Debris
2010	246	140	247.90	140.965	1	4	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	140	247.13	140.72	6	4	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	140	247.05	140.97	3	4	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	140	247.08	140.88	4	4	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	140	247.11	140.12	9	4	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	140	247.87	140.57	8	4	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	140	246.5	140.94	5	4	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	140	246.16	140.73	7	4	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	140	246.93	140.56	12	4	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	140	246.63	140.28	13	4	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	140	246.15	140.99	1	4	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2010	246	140	246.22	140.99	2	4	6	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	140	246.47	140.99	4	4	3	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2010	246	140	246.83	140.88	6	4	11	no	Visible	Not Visible	Visible	NA	Flake Fragment
2010	246	140	246.29	140.72	8	4	4	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	140	246.13	140.51	10	4	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	140	246.56	140.5	11	4	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	140	246.6	140.13	15	4	2	No	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	140	247.41	140.75	2	5	7	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2010	246	140	247.56	140.785	1	5	22	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2010	246	140	247.18	140.75	13	5	4	no	Not Visible	Not Visible	Visible	Intact	Debris
2010	246	140	247.42	140.93	7	5	2	no	Not Visible	Not Visible	Visible	Broken	Debris
2010	246	140	247.48	140.61	14	5	2	no	Not Visible	Not Visible	Visible	Intact	Debris
2010	246	140	247.08	140.73	12	5	4	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	140	247.12	140.48	15	5	1	no	Not Visible	Not Visible	Visible	Intact	Debris
2010	246	140	247.395	140.59	17	5	3	no	Not Visible	Not Visible	Visible	Broken	Debris
2010	246	140	247.13	140.64	16	5	0	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2010	246	140	247.55	140.95	6	5	6	yes	Visible	Visible	Visible	Intact	flake
2010	246	140	247.65	140.78	10	5	3	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2010	246	140	247.33	140.86	8	5	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2010	246	140	247.19	140.1	18	5	3	no	Not Visible	Not Visible	Visible	Intact	Debris
2010	246	140	247.98	140.5	11	5	4	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	140	247.52	140.8	19	5	7	no	Visible	Not Visible	Visible	NA	Flake Fragment
2010	246	140	247.81	140.97	5	5	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	140	247.38	140.85	9	5	4	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2010	246	140	247.31	140.81	3	5	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	140	247.04	140.94	4	5	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	140	247.04	141.42	4	8	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2010	246	140	247.56	141.935	3	8	0	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2010	246	140	247.75	141.6	2	8	0	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2010	246	140	247.52	141.065	1	8	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2010	246	140	247.4	141.15	6	9	1	no	Not Visible	Not Visible	Visible	Intact	Debris
2010	246	140	247.52	141.32	5	9	4	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2010	246	140	247.71	141.14	4	9	6	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2010	246	140	247.71	141.3	3	9	7	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2010	246	140	247.98	141.88	2	9	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	140	247.26	141.15	8	9	12	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2010	246	140	247.08	141.37	9	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	140	247.3	141.46	7	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	140	247.64	141.47	1	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	140	247.66	141.68	17	10	2	yes	Visible	Visible	Visible	Intact	flake
2010	246	140	247.8	141.74	18	10	3	no	Not Visible	Not Visible	Visible	Intact	Debris
2010	246	140	247.8	141.31	5	10	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2010	246	140	247.54	141.3	8	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	140	247.36	141.62	15	10	2	no	Not Visible	Not Visible	Visible	Intact	Debris
2010	246	140	247.65	141.09	4	10	7	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	140	247.57	141.33	7	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	140	247.12	141.31	12	10	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2010	246	140	247.99	141.88	25	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	140	247.99	141.09	1	10	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	140	247.89	141.08	2	10	1	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2010	246	140	247.84	141.05	3	10	0	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2010	246	140	247.65	141.35	6	10	0	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2010	246	140	247.32	141.22	10	10	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2010	246	140	247.25	141.47	14	10	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	140	247.42	141.59	16	10	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	140	247.88	141.68	19	10	0	no	Not Visible	Not Visible	Not Visible	Broken	Pebble
2010	246	140	247.79	141.91	20	10	5	yes	Visible	Visible	Visible	Intact	flake
2010	246	140	247.43	141.76	21	10	1	no	Not Visible	Not Visible	Visible	Broken	Debris
2010	246	140	247.25	141.76	22	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	140	248	141.6	26	10	1	No	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	140	247.43	141.3	9	10	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	140	247.08	141.1	11	10	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2010	246	140	247.14	141.36	13	10	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	140	247.2	141.78	23	10	1	No	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	140	247.07	141.65	24	10	1	No	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	142	246.225	142.13	2	4	2	yes	Visible	Visible	Visible	Broken	Broken Flake
2010	246	142	246.045	142.32	4	4	5	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	142	246.92	142.85	6	4	0	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2010	246	142	246.87	142.1	3	4	8	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2010	246	142	246.65	142.78	5	4	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	142	246.52	142.36	1	4	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2010	246	142	246.67	142.92	7	4	3	no	Not Visible	Not Visible	Visible	Intact	Debris
2010	246	142	246.61	142.77	7	5	11	no	Not Visible	Not Visible	Visible	Intact	Debris
2010	246	142	246.28	142.04	1	5	1	yes	Visible	Visible	Visible	Intact	Flake Fragment
2010	246	142	246.59	142.14	3	5	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2010	246	142	246.07	142.38	2	5	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2010	246	142	246.71	142.31	5	5	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	142	246.49	142.72	8	5	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	142	246.2	142.89	9	5	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	142	246.1	142.84	10	5	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	142	246.89	142.27	6	5	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	142	246.64	142.22	4	5	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	142	246.28	142.825	9	6	4	no	Not Visible	Not Visible	Visible	Intact	Debris
2010	246	142	246.94	142.165	1	6	6	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2010	246	142	246.17	142.11	4	6	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2010	246	142	246.77	142.81	10	6	6	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2010	246	142	246.27	142.4	5	6	3	no	Not Visible	Not Visible	Visible	Intact	Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2010	246	142	246.53	142.17	3	6	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	142	246.84	142.44	7	6	0	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2010	246	142	246.57	142.24	2	6	0	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2010	246	142	246.61	142.42	6	6	4	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	142	246.57	142.51	8	6	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	142	246.19	142.54	8	7	5	no	Not Visible	Not Visible	Visible	Intact	Debris
2010	246	142	246.68	142.325	2	7	2	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2010	246	142	246.45	142.22	4	7	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	142	246.75	142.725	9	7	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	142	246.17	142.87	15	7	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2010	246	142	246.73	142.892	12	7	5	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	142	246.37	142.23	16	7	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2010	246	142	246.74	142.645	5	7	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	142	246.62	142.265	3	7	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	142	246.71	142.62	6	7	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	142	246.77	142.135	1	7	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	142	246.32	142.82	11	7	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	142	246.5	142.95	14	7	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	142	246.58	142.93	13	7	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	142	246.29	142.605	7	7	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	142	246.15	142.7	10	7	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	142	246.41	142.675	9	8	6	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2010	246	142	246.07	142.29	3	8	0	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2010	246	142	246.79	142.43	5	8	0	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2010	246	142	246.71	142.715	8	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	142	246.245	142.35	4	8	3	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	142	246.225	142.63	10	8	10	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2010	246	142	246.735	142.725	7	8	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	246	142	246.635	142.2	1	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	246	142	246.49	142.18	2	8	0	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2010	246	142	246.71	142.51	6	8	0	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2010	248	140	248.09	141.05	9	12	5	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2010	248	140	248.015	141.58	12	12	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2010	248	140	248.09	141.33	14	13	9	no	Not Visible	Not Visible	Visible	Broken	Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2010	248	140	248.27	141.04	10	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	248	140	248.04	141.84	2	13	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2010	248	140	248.02	141.31	13	13	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2010	248	140	248.63	141.155	8	13	4	no	No Visible	Not Visible	Not Visible	NA	Amorphous Debris
2010	248	140	248.76	141.64	4	13	1	yes	Visible	Visible	Visible	Intact	flake
2010	248	140	248.76	141.11	7	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	248	140	248.15	141.505	6	13	0	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2010	248	140	248.14	141.6	5	13	5	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2010	248	140	248.015	141.23	11	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	248	140	248.13	141.73	3	13	0	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2010	248	140	248.24	141.64	9	14	45	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2010	248	140	248.45	141.69	6	14	4	no	Not Visible	Not Visible	Visible	Intact	Debris
2010	248	140	248.84	141.85	7	14	2	yes	Not Visible	Not Visible	Visible	Intact	Debris
2010	248	140	248.11	141.65	5	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	248	140	248.06	141.05	2	14	2	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	248	140	248.01	141.44	1	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	248	140	248.35	141.11	3	14	1	no	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2010	248	140	248.24	141.72	8	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	248	140	248.82	141.04	4	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	248	140	248.07	141.9	1	15	7	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2010	248	140	248.54	141.8	10	15	4	no	Visible	Not Visible	Visible	Broken	Flake Fragment
2010	248	140	248.12	141.92	2	15	4	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2010	248	140	248.71	141.94	9	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	248	140	248.43	141.58	7	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	248	140	248.46	141.16	4	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	248	140	248.53	141.66	8	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	248	140	248.37	141.55	6	15	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2010	248	140	248.14	141.91	1	15	2	no	Visible	Not Visible	Visible	Intact	Flake Fragment
2010	248	140	248.24	141.61	3	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	248	140	248.59	141.18	5	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2010	263	145	263.86	146.63	1	1	3	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2010	263	145	263.96	146.49	2	3	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2010	263	145	264.03	146.87	3	3	5	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2010	263	145	263.76	146.93	1	3	6	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2010	263	145	263.51	146.6	4	3	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2010	263	145	263.62	145.12	1	7	9	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2010	263	145	263.12	145.1	3	8	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2010	263	145	263.24	145.38	2	8	0	no	Visible	Not Visible	Visible	Intact	Amorphous Debris
2010	263	145	263.93	145.41	1	8	4	Yes	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2010	263	145	264.81	146.6	1	9	6	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2010	263	145	263.99	146.21	1	10	9	No	Not Visible	Visible	Not Visible	Intact	Amorphous Debris
2010	263	145	263.21	146.24	1	11	2	Yes	Not Visible	Visible	Not Visible	Intact	Broken Flake
2011		140	246.26	140.105	9	**11**	2	yes	Not Visible	Visible	Visible	Intact	Broken Flake
2011	246	140	246.62	140.095	5	**11**	7	yes	Visible	Visible	Not Visible	NA	Debris
2011	246	140	246.26	140.09	8	**11**	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2011	246	140	246.43	140.745	14	**11**	2	no	Visible	Visible	Not Visible	NA	Debris
2011	246	140	246.18	140.01	10	**11**	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.38	140.08	7	**11**	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.70	140.63	4	**11**	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.79	140.62	3	**11**	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.9	140.08	2	**11**	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.41	140.575	13	**11**	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.52	1440.1	6	**11**	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.13	140.28	12	**11**	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.96	140.43	1	**11**	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.1	140.275	11	**11**	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.39	140.88	15	**11**	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.37	140.47	11	12	4	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2011	246	140	246.62	140.653	2	12	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.59	140.095	5	12	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.61	140.352	4	12	6	no	Not Visible	Not Visible	Visible	NA	Debris
2011	246	140	246.13	140.676	7	12	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.04	140.315	10	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.54	140.45	3	12	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.92	140.83	1	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.13	140.562	8	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.03	140.518	9	12	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2011	246	140	246.35	140.88	6	12	7	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.7	140.35	1	13	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.38	140.28	5	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.62	140.745	2	13	8	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.36	140.345	3	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.38	140.27	6	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.31	140.485	4	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.08	140.665	7	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	247.1	140.88	4	6	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2011	246	140	247.42	140.76	2	6	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	247.32	140.6	5	6	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	247.43	140.86	3	6	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	247.22	140.19	1	6	5	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	247.07	140.51	4	7	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	247.44	140.72	6	7	4	yes	Visible	Not Visible	Visible	Intact	flake
2011	246	140	247.35	140.39	2	7	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	247.05	140.52	5	7	5	yes	Visible	Not Visible	Visible	NA	Debris
2011	246	140	247.04	140.47	3	7	3	no	Visible	Not Visible	Visible	NA	Debris
2011	246	140	247.18	140.24	1	7	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	247.19	140.83	3	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	247.3	140.89	4	8	1	no	Visible	Not Visible	Not Visible	NA	Debris
2011	246	140	247.87	140.68	2	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	247.06	140.59	1	8	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.38	140.34	6	9	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2011	246	140	246.16	140.89	3	9	2	no	Not Visible	Visible	Not Visible	Intact	Amorphous Debris
2011	246	140	246.57	140.975	2	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.33	141.01	1	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.05	140.8	4	9	4	yes	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.45	140.59	5	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.64	140.27	6	5	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2011	246	140	246.64	140.28	7	5	3	no	Not Visible	Not Visible	Visible	Intact	Debris
2011	246	140	246.61	140.92	2	5							

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2011	246	140	246.02	140.88	4	5	NA	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.45	140.37	5	5	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.54	140.71	3	5	12	no	Visible	Not Visible	Visible	Intact	Debris
2011	246	140	246.77	140.88	1	5	0	no	Not Visible	Not Visible	Not Visible	NA	PEBBLE
2011	246	140	246.59	140.98	1	6	2	no	Not Visible	Not Visible	Not Visible	Intact	Flake Fragment
2011	246	140	246.28	140.49	7	6	0	no	Not Visible	Not Visible	Visible	Intact	Debris
2011	246	140	246.09	140.33	9	6	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.06	140.36	8	6	5	yes	Visible	Not Visible	Not Visible	Intact	Debris
2011	246	140	246.53	140.95	2	6	2	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2011	246	140	246.24	140.49	6	6	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.85	140.65	4	6	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.23	140.54	5	6	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.7	140.87	3	6	1	yes	Visible	Not Visible	Visible	Intact	Flake
2011	246	140	246.69	140.61	8	7	3	Yes	Visible	Visible	Visible	Intact	Flake
2011	246	140	246.68	140.07	23	7	9	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.11	140.33	14	7	2	No	Visible	Not Visible	Visible	NA	Debris
2011	246	140	246.31	140.41	13	7	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.26	140.72	6	7	2	No	Visible	Not Visible	Not Visible	NA	Debris
2011	246	140	246.49	140.52	11	7	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.62	140.83	3	7	3	no	Not Visible	Not Visible	Visible	Intact	Amorphous Debris
2011	246	140	246.79	140.65	22	7	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.70	140.09	19	7	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.97	140.93	2	7	7	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.2	140.69	7	7	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.57	140.11	17	7	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.33	140.47	12	7	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.88	140.655	10	7	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.28	140.18	15	7	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.82	140.375	16	7	5	no	Visible	Not Visible	Not Visible	NA	Debris
2011	246	140	246.69	140.93	21	7	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.82	140.65	9	7	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.03	140.72	20	7	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2011	246	140	246.43	140.02	18	7	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.71	140.93	1	7	0	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.57	140	1	7	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.98	140.75	4	7	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	247.04	141...	5	7	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.45	140.72	12	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.3	140.14	23	8	3	no	Not Visible	Visible	Not Visible	Broken	Flake Fragment
2011	246	140	246.54	140.96	3	8	0	no	Not Visible	n	Not Visible	NA	Pebble
2011	246	140	246.82	140.17	25	8	5	yes	Not Visible	Not Visible	Not Visible	Broken	Amorphous Debris
2011	246	140	246.91	140.54	18	8	1	yes	Not Visible	Visible	Not Visible	Intact	flake
2011	246	140	246.84	140.8	13	8	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.62	140.815	7	8	2	yes	Not Visible	Not Visible	Visible	Intact	Debris
2011	246	140	246.99	140.76	14	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.25	140.595	17	8	1	yes	Not Visible	Visible	Not Visible	Intact	Amorphous Debris
2011	246	140	246.16	140.72	11	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	247.01	140.36	24	8	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.52	140.325	20	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.52	140.84	5	8	3	no	Visible	Visible	Not Visible	NA	Debris
2011	246	140	247	140.65	16	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.69	140.98	6	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.58	140.76	8	8	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.12	140.36	19	8	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.7	140.29	21	8	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.21	140.9	2	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.96	141.05	15	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	247.04	141.07	1	8	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.07	140.08	22	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.68	140.76	9	8	0	no	Not Visible	Visible	Visible	Broken	Debris
2011	246	140	246.63	140.75	10	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.51	140.9	4	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.74	140.58	6	9	0	yes	Not Visible	Not Visible	Not Visible	Intact	Broken Flake
2011	246	140	246.32	140.855	1	9	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2011	246	140	246.31	140.62	5	9	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.73	140.4	7	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.38	140.19	12	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.94	140.11	13	9	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.09	140.09	15	9	6	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.45	140.78	2	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.23	140.64	4	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.09	140.1	11	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.88	140.46	8	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.91	140.465	9	9	0	no	Not Visible	Not Visible	Visible	NA	Debris
2011	246	140	246.9	140.08	16	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.95	140.28	10	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.01	140.9	14	9	7	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2011	246	140	247	140.65	3	9	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2011	246	140	246.87	140.34	17	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.34	140.37	14	10	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.97	140.42	18	10	6	yes	Visible	Not Visible	Not Visible	Broken	flake
2011	246	140	246.18	140.03	23	10	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.54	140.19	26	10	1	yes	Not Visible	Visible	Not Visible	Intact	flake
2011	246	140	246.93	140.82	9	10	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.85	140.37	16	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.71	140.95	3	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.62	140.42	15	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.49	140.62	11	10	5	no	Not Visible	Not Visible	Not Visible	NS	Amorphous Debris
2011	246	140	246.15	140.15	21	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.87	140.82	8	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.69	140.84	6	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.45	140.57	10	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.46	140.105	24	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.53	140.455	13	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.77	140.06	27	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.15	140.08	22	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2011	246	140	246.69	140.98	2	10	6	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.26	140.86	1	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.46	140.19	25	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.01	140.23	19	10	2	yes	Visible	Visible	Not Visible	Intact	flake
2011	246	140	246.65	140.54	12	10	6	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.93	141.03	4	10	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.27	140.22	20	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.77	140.8	7	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.58	140.795	3	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.28	140.38	10	11	2	yes	Not Visible	Not Visible	Visible	Intact	Flake
2011	246	140	246.32	140.47	8	11	0	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2011	246	140	246.48	140.38	12	11	2	no	Visible	Not Visible	Not Visible	NA	Debris
2011	246	140	246.89	140.98	1	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.93	140.315	15	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.24	140.31	11	11	6	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.05	140.54	6	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.87	140.41	13	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.04	140.77	2	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.18	140.47	7	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.74	140.04	17	11	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.47	140.6	5	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.69	140.05	16	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.92	140.85	4	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.71	140.59	9	11	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.93	140.4	14	11	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.26	140.18	18	11	7	yes	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.25	140.4	10	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.71	140.58	8	12	8	no	Not Visible	Not Visible	Visible	Intact	Debris
2011	246	140	246.43	140.3	15	12	0	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2011	246	140	246.42	140.1	17	12	4	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2011	246	140	246.53	140.35	11	12	0	no	Not Visible	Not Visible	Visible	Intact	Debris
2011	246	140	246.61	140.99	1	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2011	246	140	246.72	140.27	13	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.69	140.35	12	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.85	140.56	9	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.28	140.31	14	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.86	140.65	5	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.22	140.7	2	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.92	140.78	6	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.9	140.33	16	12	7	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	140	246.98	140.75	7	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.59	140.77	4	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	140	246.47	140.73	3	13	1	no	Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2011	246	140	246.67	140.76	5								
2011	246	142	246.84	142.595	16	9	1	yes	Not Visible	Not Visible	Visible	Intact	Debris
2011	246	142	246.15	142.4	2	9	1	yes	Visible	Not Visible	Not Visible	Intact	Debris
2011	246	142	246.43	142.77	11	9	7	no	Visible	Not Visible	Not Visible	NA	Debris
2011	246	142	246.05	142.615	4	9	0	Yes	Not Visible	Not Visible	Not Visible	Intact	Flake
2011	246	142	246.07	142.11	1	9	3	no	Not Visible	Visible	Not Visible	NA	Debris
2011	246	142	246.22	142.57	6	9	3	yes	Visible	Visible	Visible	NA	Flake Fragment
2011	246	142	246.82	142.85	17	9	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.72	142.51	15	9	4	no	Not Visible	Visible	Visible	Intact	Debris
2011	246	142	246.53	142.482	13	9	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.62	142.93	14	9	2	no	Visible	Not Visible	Not Visible	Intact	Debris
2011	246	142	246.34	142.51	9	9	1	no	Not Visible	Not Visible	Visible	NA	Debris
2011	246	142	246.42	142.53	12	9	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.24	142.41	3	9	2	yes	Not Visible	Not Visible	Visible	Intact	flake
2011	246	142	246.17	142.75	8	9	6	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.19	142.69	7	9	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2011	246	142	246.09	142.59	5	9	1	no	Not Visible	Visible	Visible	Intact	Debris
2011	246	142	246.38	142.655	10	9	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.87	142.4	15	10	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.32	142.54	11	10	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.71	142.59	18	10	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2011	246	142	246.09	142.78	25	10	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.64	142.02	1	10	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.01	142.85	29	10	0	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.36	142.66	16	10	5	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.72	142.38	13	10	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.72	142.38	13	10	5	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2011	246	142	246.58	142.73	23	10	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.31	142.53	12	10	1	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2011	246	142	246.63	142.67	19	10	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.72	142.11	3	10	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.5	142.45	9	10	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.06	142.24	6	10	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.03	142.35	8	10	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.55	142.75	22	10	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.4	142.69	17	10	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.8	142.35	14	10	4	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2011	246	142	246.6	142.09	2	10	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.6	142.09	2	10	0	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2011	246	142	246.03	142.3	7	10	4	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.86	142.08	4	10	2	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2011	246	142	246.86	142.08	4	10	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.69	142.84	27	10	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.64	142.88	26	10	3	yes	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.46	142.5	10	10	5	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.75	142.67	20	10	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.53	142.71	21	10	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.48	142.29	5	10	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2011	246	142	246.58	142.78	24	10	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.2	142.91	28	10	7	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.14	142.58	10	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.63	142.72	20	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.34	142.47	7	11	1	no	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2011	246	142	246.82	142.52	9	11	5	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.19	142.67	11	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.63	142.72	21	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.33	142.77	22	11	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.48	142.73	17	11	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.02	142.96	24	11	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.45	142.35	5	11	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.51	142.73	18	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.85	142.17	4	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.26	142.68	12	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.73	142.16	3	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.44	142.69	16	11	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	246	142	246.2	142.45	6	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.55	142.12	2	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.42	142.61	15	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.34	142.97	25	11	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.36	142.67	14	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.35	142.81	23	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.44	142.97	26	11	0	no	Not Visible	Not Visible	Not Visible	Intact	Pebble
2011	246	142	246.27	142.62	13	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.57	142.74	19	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.72	142.42	8	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.61	142.01	1	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.38	142.92	29	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.2	142.39	8	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.43	142.34	6	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.72	142.77	24	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.69	142.65	19	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.2	142.96	30	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.02	142.75	23	12	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.78	142.68	20	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.75	142.98	31	12	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2011	246	142	246.86	142.03	2	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.61	142.12	5	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.58	142.63	18	12	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.44	142.44	12	12	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.6	142.74	21	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.16	142.44	13	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.18	142.47	14	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.65	142.43	10	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.16	142.04	1	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.49	142.4	9	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.58	142.8	25	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.12	142.4	11	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.35	142.9	28	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.68	142.81	27	12	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.87	142.33	7	12	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.74	142.73	22	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.13	142.18	3	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.57	142.19	4	12	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.77	142.59	17	12	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.71	142.59	16	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.91	142.57	15	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.61	142.83	26	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.41	142.925	21	13	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.63	142.67	19	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.49	142.58	16	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.31	142.265	6	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.86	142.91	23	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.72	142.75	18	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.74	142.58	14	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.77	142.625	15	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.66	142.12	2	13	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.69	142.38	11	13	1	no	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2011	246	142	246.38	142.1	3	13	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.17	142.97	22	13	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.74	142.51	13	13	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.63	142.45	10	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.38	142.38	9	13	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.76	142.42	12	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.82	142.705	17	13	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.11	142.095	5	13	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.69	142.785	19	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.77	142.875	20	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.22	142.325	8	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.39	142.18	4	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.79	142.02	1	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	246	142	246.17	142.295	7	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	248	140	248.29	140.88	6	16	4	no	Visible	Not Visible	Visible	NA	Debris
2011	248	140	248.14	140.83	7	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	248	140	248.49	140.76	4	16	2	yes	Visible	Visible	Visible	Intact	flake
2011	248	140	248.79	140.66	3	16	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2011	248	140	248.74	140.39	2	16	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	248	140	248.75	140.35	1	16	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2011	248	140	248.37	140.82	5	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	248	140	248.62	140.01	6	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	248	140	248.21	140.11	3	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	248	140	248.15	140.09	2	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	248	140	248.16	140.17	1	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	248	140	248.52	140.32	7	17	1	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	248	140	248.35	140.205	4	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2011	248	140	248.44	140.14	5	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.92	139.57	3	3	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.44	139.46	1	3	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.89	139.09	2	3	4	no	Visible	Not Visible	Not Visible	Intact	Debris
2012	246	138	246.2	138.05	1	3	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.2	138.05	1	3							

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2012	246	138	246.23	139.92	4	4	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.32	139.24	2	4	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.33	139.55	11	4	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.12	139.07	1	4	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.12	139.84	6	4	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.38	139.52	8	4	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.04	139.88	7	4	1	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.18	139.94	5	4	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.31	139.81	3	4	2	yes	Not Visible	Visible	Not Visible	Intact	Debris
2012	246	138	246.32	139.45	9	4	5	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	138	246.29	139.5	10	4	0	no	Not Visible	Not Visible	Not Visible	NA	Boulder
2012	246	138	246.61	139.81	4	5	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.22	139.71	3	5	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.2	139.63	2	5	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.13	139.23	1	5	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.23	138.13	1	5	1	yes	Visible	Not Visible	Not Visible	Intact	Debris
2012	246	138	246.25	138.05	2	5	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.68	138.78	5	5	2	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.5	138.19	3	5	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.63	138.6	4	5	2	no	Visible	Not Visible	Not Visible	Intact	Debris
2012	246	138	246.03	138.77	6	5							
2012	246	138	246.6	139.23	5	6	3	Yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	138	246.35	138.36	4	6	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.23	138.65	2	6	6	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.04	138.37	1	6	6	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.48	139.63	8	6	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.3	139.59	7	6	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.68	139.49	6	6	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.18	138.97	3	6	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.17	138.54	5	6	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.21	138.45	3	6	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.35	138.45	4	6	3	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	138	246.68	138.13	2	6	1	no	Not Visible	Not Visible	Not Visible	Intact	Debris
2012	246	138	246.05	138.38	1	6	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2012	246	138	246.48	139.175	3	7	3	no	Not Visible	Not Visible	Not Visible	Intact	flake
2012	246	138	246.71	139.44	6	7	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.99	139.9	2	7	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.925	139.68	8	7	7	no	Visible	Not Visible	Visible	NA	Debris
2012	246	138	246.11	139.99	1	7	37	yes	Visible	Visible	Visible	NA	Debris
2012	246	138	246.88	139.885	9	7	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.55	139.99	14	7	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.99	139.21	5	7	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.94	139.7	10	7	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.85	139.79	13	7	2	no	Visible	Visible	Not Visible	Intact	Debris
2012	246	138	246.95	139.87	12	7	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.685	139.5	7	7	10	no	Visible	Not Visible	Visible	NA	Debris
2012	246	138	246.96	139.85	11	7	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246	139	4	7	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.11	138.09	11	7	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.15	138.7	2	7	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.18	138.1	10	7	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.21	138.115	1	7	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.66	138.82	6	7	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.82	138.45	8	7	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.67	138.75	7	7	4	no	Visible	Not Visible	Not Visible	Intact	Debris
2012	246	138	246.72	138.09	9	7	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.51	138.87	5	7	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.09	138.9	3	7							
2012	246	138	246.22	138.89	4	7							
2012	246	138	246.17	139.13	5	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246	139.04	6	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.86	139.98	12	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.64	139.1	2	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.98	139.41	7	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.98	139.64	10	8	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.98	139.7	11	8	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.78	139.71	9	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.19	139.05	4	8	6	no	Not Visible	Not Visible	Visible	NA	Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2012	246	138	246.3	139.18	3	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.55	139.68	8	8	1	yes	Visible	Visible	Not Visible	Intact	Debris
2012	246	138	246.99	139.08	1	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.46	138.87	10	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.03	138.38	5	8	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.34	138.21	1	8	3	no	Visible	Not Visible	Visible	NA	Debris
2012	246	138	246.16	138.7	7	8	7	yes	Visible	Visible	Visible	Intact	Debris
2012	246	138	246.04	138.4	6	8	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.11	138.84	8	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.41	138.58	11	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.29	138.27	2	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.17	188.43	4	8	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.28	138.85	9	8	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.97	138.92	12	8	8	no	Visible	Not Visible	Visible	NA	Debris
2012	246	138	246.25	138.3	3	8	5	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.04	139.42	5	9	0	no	Not Visible	Not Visible	Not Visible	no	Pebble
2012	246	138	246.42	139.33	6	9	3	yes	Not Visible	Not Visible	Not Visible	no	Amorphous Debris
2012	246	138	246.28	139.74	8	9	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.08	139.07	1	9	0	no	Not Visible	Not Visible	Not Visible	n	Pebble
2012	246	138	246.912	139.11	4	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246..15	139.76	7	9	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.79	139.97	13	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.79	139.2	14	9	4	no	Not Visible	Not Visible	Not Visible	NA	cobble
2012	246	138	246.39	139.56	15	9	0	yes	Not Visible	Not Visible	Not Visible	Intact	cobble
2012	246	138	246.58	139.94	12	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
	246	138	246.39	138.15	16	9	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.981	139.65	9	9	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	139.97	96.9	10	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	139.91	96.87	11	9	1	yes	Not Visible	Visible	Not Visible	Intact	flake
2012	246	138	246.42	139.2	2	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.66	139.055	3	9	2	yes	Not Visible	Visible	Not Visible	Intact	flake
2012	246	138	246.99	138.78	14	9	5	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.41	138.56	8	9	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.09	138.21	1	9	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2012	246	138	246.13	138.61	5	9	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.88	138.65	13	9	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.73	138.75	11	9	1	No	Not Visible	Not Visible	Not Visible		Amorphous Debris
2012	246	138	246.24	138.33	2	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.86	138.69	12	9	1	no	Visible	Not Visible	Not Visible	Intact	Flake Fragment
2012	246	138	246.4	138.62	7	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.84	138.87	10	9	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.18	138.57	4	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.41	138.7	20	9	10	yes	Visible	Visible	Visible	Intact	Debris
2012	246	138	246.2	138.5	3	9	4	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	138	246.8	138.64	6	9	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.37	138.15	19	9	3	yes	Visible	Not Visible	Not Visible	Intact	Debris
2012	246	138	246.83	138.28	18	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.52	138.32	17	9	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.64	138.94	9	9	5	yes	Visible	Visible	Not Visible	Intact	Flake
2012	246	138	246.58	138.47	16	9	1	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	138	246.5	138.55	15	9	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.97	139.44	10	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.46	139.37	5	10	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.16	139.99	17	10	0	NO	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.95	139.92	19	10	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.83	139.37	9	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.04	139.85	16	10	1	No	Visible	Visible	Not Visible	Intact	Debris
2012	246	138	246.76	139.55	15	10	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.99	139.79	20	10	1	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.43	139.07	2	10	9	No	Not Visible	Not Visible	Visible	Intact	Debris
2012	246	138	246.44	139.5	12	10	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.59	139.37	6	10	1	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.66	139.36	8	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.62	139.4	7	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.16	139.57	11	10	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.61	139.08	3	10	5	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.7	139.47	13	10	9	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	138	246.7	139.55	14	10	1	No	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2012	246	138	246.47	139.8	18	10	4	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	138	246.12	139.25	1	10	2	yes	Not Visible	Visible	Not Visible	Intact	Debris
2012	246	138	246.48	139.34	4	10	0	yes	Not Visible	Visible	Not Visible	Intact	Flake
2012	246	138	246.52	138.35	8	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.55	138.27	7	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.07	138.22	4	10	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.8	138.29	12	10	5	no	Visible	Visible	Not Visible	NA	Debris
2012	246	138	246.66	138.44	9	10	3	no	Visible	Not Visible	Not Visible	NA	Debris
2012	246	138	246.29	138.62	3	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.27	138.11	5	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.09	138.51	2	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.42	138.79	1	10	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.26	138.17	6	10	0	no	Not Visible	Visible	Not Visible	Intact	Debris
2012	246	138	246.34	138.48	13	10	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.78	138.13	11	10	5	no	Visible	Not Visible	Not Visible	NA	Debris
2012	246	138	246.47	138.38	10	10	0	yes	Not Visible	Visible	Not Visible	Intact	flake
2012	246	138	246.86	139.86	15	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.77	139.9	14	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.78	139.25	20	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.37	139.98	18	11	1	yes	Not Visible	Not Visible	Visible	Intact	Debris
2012	246	138	246.15	139.68	7	11	2	No	Visible	Not Visible	Visible	Intact	Debris
2012	246	138	246.92	139.88	16	11	1	yes	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.59	139.46	3	11	2	No	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	138	246.03	139.36	1	11	6	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.57	139.37	2	11	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.23	138.69	8	11	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.07	139.88	11	11	2	yes	Not Visible	Not Visible	Visible	Intact	Debris
2012	246	138	246.52	139.83	13	11	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	138	246.97	139.67	9	11	3	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	138	246.4	139.57	4	11	1	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	138	246.05	139.92	12	11	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.77	139.51	6	11	3	no	Not Visible	Not Visible	Visible	Intact	Debris
2012	246	138	246.52	139.59	5	11	3	no	Not Visible	Visible	Not Visible	NA	Debris
2012	246	138	246.8	139.26	21	11	2	no	Not Visible	Visible	Not Visible	NA	Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2012	246	138	246.99	139.77	10	11	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.98	139.86	17	11	1	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138			19	11							
2012	246	138	246.45	138.76	13	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.18	138.71	5	11	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.31	138.72	8	11	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	138	246.82	138.79	21	11	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	138	246.3	138.98	4	11	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.29	138.91	24	11	1	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.5	138.52	25	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.03	138.27	1	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.7	138.7	18	11	0	No	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.17	138.44	19	11	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.39	138.49	9	11	4	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	138	246.4	138.65	10	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.49	138.85	14	11	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.12	138.4	6	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.25	138.86	3	11	0	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	138	246.78	138.87	22	11	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.48	138.13	17	11	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.52	138.48	16	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.22	138.37	7	11	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.41	138.68	11	11	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.84	138.88	23	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.45	138.71	12	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.78	138.77	20	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.45	138.8	15	11	1	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	138	246.01	138.38	2	11	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138			9	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.3	139.58	20	12	1	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.26	139.48	17	12	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	138	246.295	139.34	6	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.24	139.25	5	12	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.09	139.55	19	12	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2012	246	138			15	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.62	138.2	10	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.28	139.12	4	12	4	no	Not Visible	Not Visible	Visible	NA	Debris
2012	246	138	246.445	139.68	23	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.555	139.31	14	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.95	139.29	12	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.7	139.79	30	12	4	yes	Not Visible	Visible	Not Visible	Intact	Flake
2012	246	138	246.205	139.15	3	12	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	256.56	139.15	16	12	1	yes	Visible	Visible	Visible	Intact	Flake
2012	246	138	246.64	139.95	31	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.41	139.21	7	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.2	139.78	27	12	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.98	139.25	11	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.28	139.75	28	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.23	139.64	21	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.49	139.17	8	12	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.045	139.39	13	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.25	139.1	32	12	0	no	Not Visible	Not Visible	Not Visible	NA	cobble
2012	246	138	241.92	139.6	22	12	2	yes	Not Visible	Visible	Not Visible	Intact	Flake
2012	246	138	246.565	139.79	29	12	1	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.23	139.78	33	12	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.18	139.76	26	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.71	139.56	18	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.07	139.71	1	12	1	yes	Visible	Visible	Visible	Intact	Debris
2012	246	138	246	139.76	24	12	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.06	139.76	25	12	3	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	138	246.07	139.79	2	12	3	no	Visible	Visible	Visible	NA	Debris
2012	246	138	246.44	139.23	34	12							
2012	246	138	246.17	139.45	12	13	5	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.52	139.23	4	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.2	139.75	17	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.17	139.94	18	13	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.79	139.06	9	13	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.28	139.62	16	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2012	246	138	246.27	139.09	1	13	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.36	139.41	13	13	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.57	139.06	7	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.65	139.04	14	13	1	yes	Not Visible	Visible	Not Visible	Intact	Broken Flake
2012	246	138	246.68	139.17	10	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.56	139.04	5	13	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.55	139.1	8	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.22	139.16	2	13	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.94	139.37	15	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.93	139.25	11	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	2446.66	139.43	21	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	138	246.41	139.22	3	13	0	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	138	246.58	139.02	6	13	6	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.99	139.94	20	13	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	138	246.09	139.91	19	13	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.55	141.04	5	11	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.96	141.9	11	11	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.7	141.45	7	11	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.33	141.35	4	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.13	141.58	1	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.28	141.63	3	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.6	141.54	6	11	2	yes	Visible	Visible	Not Visible	Intact	Broken Flake
2012	246	140	246.84	141.65	9	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.2	141.48	2	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.79	141.15	8	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.95	141.63	10	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.64	141.25	13	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.32	141.19	3	12	1	yes	Visible	Visible	Visible	Intact	Broken Flake
2012	246	140	246.81	141.6	9	12	0	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	140	246.1	141.49	1	12	5	no	Visible	Not Visible	Not Visible	NA	Debris
2012	246	140	246.95	141.54	12	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.95	141.81	10	12	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.13	141.3	2	12	4	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	140	246.53	141.11	4	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2012	246	140	246.81	141.02	14	12	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.8	141.8	8	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.58	141.83	6	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.71	141.95	7	12	1	no	Not Visible	Not Visible	Visible	Intact	Debris
2012	246	140	246.52	141.45	5	12	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.93	141.84	11	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.87	141.67	13	13	2	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.36	141.41	4	13	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.61	141.955	7	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.36	141.98	5	13	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.84	141.62	15	13	2	yes	Not Visible	Visible	Not Visible	Intact	Flake Fragment
2012	246	140	246.8	141.85	16	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.79	141.07	19	13	2	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.85	141.8	12	13	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.83	141.13	18	13	3	yes	Not Visible	Visible	Not Visible	Intact	Broken Flake
2012	246	140	246.53	141.17	9	13	1	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.44	141.88	6	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.96	141.9	20	13	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.56	141.17	10	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.18	141.14	1	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.55	141.51	8	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.84	141.66	14	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.03	141.65	2	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.67	141.72	11	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.92	141.36	17	13	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.18	141.72	3	13	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.035	140.1	2	13	0	NA	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.03	140.17	3	13	0	NA	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.65	140.35	6	13	0	NA	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.06	140.58	10	13	0	NA	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.18	140.69	11	13	0	NA	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.58	140.55	12	13	0	NA	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.87	140.64	18	13	0	NA	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.66	140.73	20	13	0	NA	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2012	246	140	246.66	140.96	22	13	3	Yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	140	246.72	140.56	16	13	1	yes	Not Visible	Visible	Not Visible	Broken	Debris
2012	246	140	246.61	140.8	19	13	2	yes	Visible	Visible	Not Visible	no	Broken Flake
2012	246	140	246.76	141.74	23	13	0	NA	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.03	140.05	1	13	2	NA	Not Visible	Not Visible	Visible	Broken	Debris
2012	246	140	246.54	140.295	4	13	3	yes	Visible	Visible	Not Visible	Intact	Complete Flake
2012	246	140	246.7	140.485	9	13	2	Yes	Visible	Visible	Visible	Intact	Complete Flake
2012	246	140	246.92	140.81	24	13	1	yes	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.46	140.64	13	13	1	yes	Visible	Not Visible	Not Visible	Intact	Debris
2012	246	140	246.94	140.51	17	13	2	Yes	Not Visible	Visible	Not Visible	Intact	Debris
2012	246	140	246.36	140.55	7	13	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.61	140.99	21	13	1	NA	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.59	140.43	8	13	0	NA	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.44	140.71	14	13	1	NA	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.65	140.29	5	13	0	NA	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.58	140.55	15	13	0	NA	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.98	140.72	25	13	2	NA	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246	140.06	26	13	3	yes	Not Visible	Not Visible	Visible	Intact	Debris
2012	246	140	247.06	141.21	3	14	3	yes	Visible	Not Visible	Not Visible	Intact	Debris
2012	246	140	247.29	141.93	4	14	0	NA	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	247.27	141.21	5	14	1	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	247.86	141.85	8	14	2	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	247.02	141.92	1	14	0	NA	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	247.04	141.36	2	14	0	no	Visible	Visible	Not Visible	Intact	Debris
2012	246	140	247.81	141.66	7	14	1	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	247.5	141.14	6	14	1	yes	Visible	Visible	Not Visible	Intact	Complete flake
2012	246	140	246.52	141.42	2	14	0	NA	NA	NA	NA	NA	Pebble
2012	246	140	246.59	141.8	3	14	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	140	246.7	141.71	4	14	1	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	140	246.75	141.92	6	14	0	NA	NA	NA	NA	NA	Pebble
2012	246	140	246.86	141.81	8	14	0	NA	NA	NA	NA	NA	Pebble
2012	246	140	246.1	141.36	11	14	4	yes	Not Visible	Visible	Visible	Intact	Broken Flake
2012	246	140	246.13	141.54	16	14	3	yes	Visible	Visible	Not Visible	Intact	Broken Flake
2012	246	140	246.4	141.18	25	14	4	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2012	246	140	246.02	141.46	37	14	0	NA	NA	NA	NA	NA	Pebble
2012	246	140	246.66	141.8	5	14	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	140	246.39	141.15	26	14	3	yes	Visible	Not Visible	Visible	Intact	flake
2012	246	140	246.8	141.49	35	14	0	no	NA	NA	NA	NA	Pebble
2012	246	140	246.14	141.59	14	14	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.04	141.52	19	14	1	no	Visible	Not Visible	Not Visible	NA	Debris
2012	246	140	246.18	141.34	23	14	2	no	Not Visible	Not Visible	Not Visible		Amorphous Debris
2012	246	140	246.16	141.19	24	14	2	yes	Visible	Visible	Not Visible	Intact	Broken Flake
2012	246	140	246.54	141.21	27	14	5	yes	Visible	Not Visible	Visible	Intact	Broken Flake
2012	246	140	246.6	141.53	29	14	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.2	141.52	34	14	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	140	246.15	141.34	22	14	3	no	Visible	Not Visible	Not Visible	NA	Debris
2012	246	140	246.84	141.51	9	14	2	yes	Not Visible	Visible	Not Visible	Intact	Debris
2012	246	140	246.21	141.52	17	14	0	NA	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.64	141.19	28	14	0	NA	NA	NA	NA	NA	Pebble
2012	246	140	246.18	141.32	32	14	3	no	Visible	Not Visible	Not Visible	NA	Debris
2012	246	140	246.07	141.74	12	14	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.08	141.64	13	14	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.12	141.31	31	14	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.31	141.995	1	14	0	yes	Visible	Visible	Not Visible	Intact	flake
2012	246	140	246.77	141.85	7	14	0	NA	NA	NA	NA	NA	Pebble
2012	246	140	246.04	141.54	33	14	0	NA	NA	NA	NA	NA	Pebble
2012	246	140	246.76	141.44	10	14	0	NA	NA	NA	NA	NA	Pebble
2012	246	140	246.02	141.59	15	14	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.24	141.49	18	14	2	NA	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.03	141.48	20	14	6	no	Visible	Not Visible	Not Visible	NA	Debris
2012	246	140	246.12	141.3	36	14	1	NA	NA	NA	NA	NA	Pebble
2012	246	140	246.06	141.28	30	14	9	yes	Visible	Not Visible	Not Visible	Intact	Broken Flake
2012	246	140	246.02	141.38	21	14	0	NA	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.16	140.76	22	14	5	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.67	140.35	12	14	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	140	246.33	140.07	3	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.35	140.45	11	14	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	140	246.05	140.95	26	14	1	no	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2012	246	140	246.29	140.65	19	14	2	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.18	140.99	30	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.61	140.42	13	14	5	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.82	140.22	6	14	2	no	Visible	Visible	Not Visible	NA	Debris
2012	246	140	246.64	140.64	20	14	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.44	140.61	18	14	4	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	140	246.04	140.38	7	14	4	no	Visible	Visible	Visible	NA	Debris
2012	246	140	246.74	140.57	14	14	2	yes	Visible	Visible	Visible	Intact	flake
2012	246	140	246.99	140.72	24	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.04	140.55	15	14	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.04	140.02	1	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.23	140.99	28	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.35	140.91	25	14	4	no	Not Visible	Not Visible	Not Visible	N	Amorphous Debris
2012	246	140	246.39	140.03	2	14	0	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	140	246.32	140.29	5	14	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.89	140.38	8	14	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.25	140.63	17	14	1	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.34	140.52	16	14	3	yes	Not Visible	Visible	Not Visible	Intact	Broken Flake
2012	246	140	246.86	140.65	21	14	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.54	140.295	4	14	0	no	Visible	Visible	Visible	Intact	flake
2012	246	140	246.34	140.72	29	14	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.15	140.95	27	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.48	140.36	9	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.11	140.41	10	14	2	yes	Not Visible	Not Visible	Visible	Intact	flake
2012	246	140	246.33	140.71	23	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	247.43	141.58	5	15	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	247.73	141.46	6	15	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	247.26	141.97	4	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	247.84	141.89	7	15	4	yes	Not Visible	Visible	Not Visible	Intact	Complete flake
2012	246	140	247.94	141.16	8	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	247.26	141.3	3	15	2	yes	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	247.03	141.54	1	15	5	yes	Visible	Not Visible	Not Visible	Intact	Debris
2012	246	140	247.06	141.45	2	15	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.65	141.93	5	15	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2012	246	140	246.12	141.66	2	15	1	no	none Visible	none Visible	none Visible	NA	Amorphous Debris
2012	246	140	246.14	141.71	1	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.84	141.74	4	15	3	no	Visible	none Visible	none Visible	NA	Debris
2012	246	140	246.64	141.81	3	15	1	no	none Visible	none Visible	none Visible	Intact	Amorphous Debris
2012	246	140	247.23	140.48	2	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	247.16	140.9	3	16	5	yes	Visible	Not Visible	Not Visible	NA	Debris
2012	246	140	247.77	140.44	1	16	1	yes	Visible	Visible	Not Visible	Intact	Debris
2012	246	140	247.11	140.94	4	16	1	yes	Not Visible	Visible	Not Visible	Intact	flake
2012	246	140	247.32	140.98	5	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.51	141.76	18	16	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.1	141.86	16	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.34	141.26	5	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.3	141.37	7	16	0	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	140	246.16	141.15	2	16	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.12	141.04	1	16	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.58	141.68	17	16	1	no	Not Visible	Visible	Not Visible	Intact	Broken Flake
2012	246	140	246.76	141.22	12	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.61	141.14	8	16	11	no	Visible	Not Visible	Visible	Intact	Debris
2012	246	140	246.95	141.27	13	16	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.3	141.12	3	16	2	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.97	141.56	15	16	0	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	140	246.92	141.31	14	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.36	141.25	6	16	12	no	Not Visible	Not Visible	Visible	NA	Debris
2012	246	140	246.65	141.12	10	16	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.56	141.82	19	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.42	141.15	4	16	0	yes	Not Visible	Not Visible	Not Visible	Intact	Debris
2012	246	140	246.76	141.07	11	16	0	yes	Visible	Visible	Not Visible	Intact	Debris
2012	246	140	246.61	141.02	9	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.55	140.49	15	16	2	yes	Not Visible	Visible	Not Visible	Intact	flake
2012	246	140	246.43	140.59	13	16	4	no	Visible	Not Visible	Visible	Intact	Debris
2012	246	140	246.38	140.54	10	16	0	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	140	246.61	140.96	23	16	7	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	140	246.39	140.88	19	16	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.33	140.55	9	16	3	yes	Not Visible	Visible	Visible	Intact	flake

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2012	246	140	246.29	140.09	1	16	6	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.62	140.67	29	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.61	140.66	17	16	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.31	140.67	1	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.82	140.65	27	16	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.04	140.55	7	16	1	no	Not Visible	Not Visible	Visible	NA	Debris
2012	246	140	246.55	140.71	16	16	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.59	140.88	25	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.61	140.86	24	16	11	no	Visible	Not Visible	Visible	NA	Debris
2012	246	140	246.5	140.24	2	16	1	yes	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.15	140.15	6	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.36	140.62	12	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.03	140.46	4	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.45	140.41	3	16	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.76	140.69	26	16	4	yes	Visible	Not Visible	Visible	Intact	Broken Flake
2012	246	140	246.63	140.73	18	16	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.14	140.66	14	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	140	246.58	140.96	22	16		no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.5	140.99	21	16	1	no	Not Visible	Not Visible	Visible	Intact	Debris
2012	246	140	246.4	140.94	20	16	5	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.78	140.62	28	16	2	no	Not Visible	Not Visible	Visible	NA	Debris
2012	246	140	246.04	140.63	8	16	6	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	140	246.13	140.51	5	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	142	246.51	142.05	2	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	142	246.3	142.3	9	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	142	246.4	142.7	26	14	3	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	142	246.89	142.29	15	14	0	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	142	246.59	142.28	11	14	2	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	142	246.46	142.2	7	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	142	246.31	142.72	25	14	1	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	142	246.91	142.22	14	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	142	246.44	142.3	10	14	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	142	246.36	142.41	18	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	142	246.63	142.9	27	14	3	yes	Not Visible	Visible	Not Visible	Intact	flake

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2012	246	142	246.48	142.43	20	14	4	no	Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	142	246.48	142.09	3	14	1	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	142	246.27	142.41	17	14	5	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	142			28	14	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	142	246.7	142.07	4	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	142	246.3	142.15	6	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	142	246.3	142.23	8	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	142	246.92	142.45	22	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	142	246.31	142.64	24	14	0	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	142	246.89	142.29	16	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	142	246.87	142.21	13	14	2	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	142	246.91	142	5	14	2	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	142	246.64	142.94	29	14	2	no	none Visible	none Visible	none Visible	Intact	Amorphous Debris
2012	246	142	246.49	142	1	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	142	246.54	142.44	21	14	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	142	246.43	142.42	19	14	4	no	Not Visible	Not Visible	Visible	NA	Amorphous Debris
2012	246	142	246.63	142.27	12	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	142	246.22	142.63	23	14	4	no				Intact	
2012	246	142	246.08	142.06	1	15	0	no	none Visible	none Visible	none Visible	NA	Pebble
2012	246	142	246.52	142.16	15	15	2	no	none Visible	none Visible	Visible	Intact	Debris
2012	246	142	246.93	142.27	19	15	5	no	none Visible	none Visible	none Visible	NA	Amorphous Debris
2012	246	142	246.58	142.22	16	15	1	no	none Visible	none Visible	none Visible	NA	Amorphous Debris
2012	246	142	246.58	142.22	17	15	3	yes	none Visible	Visible	none Visible	Intact	Complete flake
2012	246	142	246.63	142.78	6	15	1	no	none Visible	none Visible	none Visible	NA	Amorphous Debris
2012	246	142	246.28	142.28	3	15	0	no	none Visible	none Visible	none Visible	NA	Pebble
2012	246	142	246.59	142.04	14	15	0	no	none Visible	none Visible	none Visible	NA	Pebble
2012	246	142	246.41	142.07	12	15	0	no	none Visible	none Visible	none Visible	NA	Pebble
2012	246	142	246.66	142.36	13	15	0	no	none Visible	none Visible	none Visible	NA	Pebble
2012	246	142	246.14	142.93	2	15	0	no	none Visible	none Visible	none Visible	NA	Pebble
2012	246	142	246.82	142.89	7	15	0	no	none Visible	none Visible	none Visible	NA	Pebble
2012	246	142	246.74	142.7	9	15	0	no	none Visible	none Visible	none Visible	NA	Pebble
2012	246	142	246.42	142.8	4	15	2	no	none Visible	none Visible	none Visible	NA	Amorphous Debris
2012	246	142	246.89	142.34	11	15	1	no	none Visible	none Visible	none Visible	NA	Amorphous Debris
2012	246	142	246.76	142.15	21	15	0	no	none Visible	none Visible	none Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2012	246	142	246.81	142.16	20	15	0	no	none Visible	none Visible	none Visible	NA	Pebble
2012	246	142	246.63	142.26	18	15	0	no	none Visible	none Visible	none Visible	NA	Pebble
2012	246	142	246.73	142.11	23	15	2	no	none Visible	none Visible	none Visible	Intact	Amorphous Debris
2012	246	142	246.92	142.87	8	15	9	no	Visible	none Visible	none Visible	NA	Debris
2012	246	142	246.68	142.6	10	15	0	no	none Visible	none Visible	none Visible	NA	Pebble
2012	246	142	246.58	142.88	5	15	0	no	none Visible	none Visible	none Visible	NA	Pebble
2012	246	142	246.81	142.14	22	15	1	no	none Visible	none Visible	none Visible	NA	Amorphous Debris
2012	246	142	246.89	142.77	4	16	1	no	none Visible	none Visible	none Visible	NA	Amorphous Debris
2012	246	142	246.89	142.37	6	16	0	no	none Visible	none Visible	none Visible	NA	Pebble
2012	246	142	246.27	142.09	7	16	0	no	none Visible	none Visible	none Visible	NA	Pebble
2012	246	142	246.92	142.19	9	16	0	no	none Visible	none Visible	none Visible	NA	Amorphous Debris
2012	246	142	246.49	142.89	2	16	2	no	none Visible	none Visible	none Visible	NA	Amorphous Debris
2012	246	142	246.81	142.15	8	16	2	no	none Visible	none Visible	Visible	yes	Flake Fragment
2012	246	142	246.37	142.97	1	16	0	no	none Visible	none Visible	none Visible	NA	Amorphous Debris
2012	246	142	246.8	142.58	5	16	1	no	none Visible	none Visible	none Visible	NA	Pebble
2012	246	142	246.57	142.84	3	16	1	no	none Visible	none Visible	none Visible	NA	Amorphous Debris
2012	246	142	246.31	142.81	1	17	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	142	246.72	142.02	5	17	2	yes	none Visible	Visible	none Visible	Intact	Complete flake
2012	246	142	246.73	142.66	9	17	1	no	none Visible	none Visible	none Visible	NA	Pebble
2012	246	142	246.76	142.49	12	17	1	no	Visible	Visible	none Visible	NA	Debris
2012	246	142	246.92	142.67	13	17	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	246	142	246.8	142.55	14	17	1	no	Visible	Not Visible	Visible	Intact	Debris
2012	246	142	246.65	142.51	16	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	246	142	246.83	142.55	17	17	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	142	246.57	142.12	4	17	2	yes	Not Visible	Not Visible	Visible	Intact	Debris
2012	246	142	246.62	142.51	11	17	1	no	none Visible	none Visible	none Visible	Intact	Amorphous Debris
2012	246	142	246.63	142.18	6	17	2	no	none Visible	none Visible	none Visible	Intact	Amorphous Debris
2012	246	142	246.58	142.52	10	17	4	no	none Visible	none Visible	none Visible	Intact	Amorphous Debris
2012	246	142	246.03	142.02	3	17	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	246	142	246.88	142.98	15	17	3	no	Visible	none Visible	none Visible	NA	Debris
2012	246	142	246.13	142.32	2	17	3	no	none Visible	none Visible	none Visible	Intact	Amorphous Debris
2012	246	142	246.84	142.26	7	17	2	no	none Visible	none Visible	none Visible	Intact	Amorphous Debris
2012	246	142	246.55	142.64	8	17	2	no	none Visible	none Visible	none Visible	NA	Amorphous Debris
2012	248	140	248.2	141.5	1	18	1	no	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2012	248	140	248.51	141.98	8	18	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.6	141.44	9	18	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.83	141.08	14	18	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.5	141.86	7	18	0	yes	Not Visible	Visible	Not Visible	Intact	Broken Flake
2012	248	140	248.52	141.65	6	18	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.81	141.47	13	18	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	248	140	248.43	141.49	4	18	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.63	141.42	10	18	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.36	141.75	15	18	2	no	Visible	Not Visible	Visible	Intact	Debris
2012	248	140	248.63	141.34	11	18	1	no	Visible	Not Visible	Not Visible	Intact	Debris
2012	248	140	248.48	141.59	5	18	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.74	141.26	12	18	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.28	141.46	2	18	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.35	141.74	3	18	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.25	141.57	4	19	5	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	248	140	248.74	141.7	15	19	2	yes	Visible	Visible	Not Visible	Intact	Debris
2012	248	140	248.6	141.07	11	19	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.4	141.75	8	19	0	no	Not Visible	Not Visible	Not Visible	yes	Pebble
2012	248	140	248.64	141.23	12	19	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.53	141.82	10	19	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.77	141.94	14	19	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.41	141.66	7	19	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.05	141.42	3	19	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.31	141.48	5	19	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.53	141.19	9	19	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.92	141.2	1	19	0	yes	Not Visible	Not Visible	Not Visible	Intact	Debris
2012	248	140	248.09	141.17	2	19	1	yes	Visible	Visible	Not Visible	Intact	flake
2012	248	140	248.38	141.17	6	19	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.7	141.36	13	19	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.31	141.77	2	20	0	yes	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.77	141.52	12	20	2	no	Visible	Not Visible	Not Visible	Intact	Flake Fragment
2012	248	140	248.89	141.12	16	20	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.9	141.07	17	20	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.09	141.53	1	20	2	yes	Not Visible	Visible	Not Visible	Intact	Broken Flake

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2012	248	140	248.37	141.18	5	20	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.57	141.4	9	20	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.73	141.31	10	20	1	yes	Not Visible	Visible	Not Visible	NA	Debris
2012	248	140	248.79	141.38	11	20	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.96	141.13	20	20	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.92	141.04	21	20	1	no	Visible	Not Visible	Not Visible	Not Intact	Debris
2012	248	140	248.9	141.83	14	20	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.9	141.17	15	20	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.55	141.12	6	20	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.17	141.96	19	20	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.6	141.15	7	20	0	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	248	140	248.3	141.99	3	20	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.88	141.82	13	20	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.41	141.92	4	20	1	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.67	141.15	8	20	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.89	141.05	18	20	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.44	141.16	8	21	0	no	Visible	Not Visible	Not Visible	NA	Debris
2012	248	140	248.31	141.74	4	21	3	no	Not Visible	Not Visible	Visible	Intact	Debris
2012	248	140	248.55	141.45	17	21	12	no	Visible	Not Visible	Visible	NA	Debris
2012	248	140	248.14	141.97	2	21	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.95	141.09	15	21	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.53	141.79	7	21	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.55	141.28	10	21	0	no	Not Visible	Not Visible	Not Visible	not Intact	Amorphous Debris
2012	248	140	248.22	141.99	3	21	1	yes	Not Visible	Visible	Visible	Intact	flake
2012	248	140	248.68	141.03	12	21	1	yes	Visible	Not Visible	Not Visible	Intact	flake
2012	248	140	248.49	141.82	6	21	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.58	141.28	9	21	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.75	141	13	21	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.7	141.66	16	21	4	no	Not Visible	Not Visible	Visible	Intact	Debris
2012	248	140	248.89	141.1	14	21	0	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	248	140	248.65	141.1	18	21	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.05	141.83	1	21	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.58	141.07	11	21	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.4	141.85	5	21	3	yes	Not Visible	Not Visible	Not Visible	Intact	Flake Fragment

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2012	248	140	248.14	141.29	7	21	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	248	140	248.27	141.39	3	21	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.22	141.34	8	21	1	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.26	141.44	2	21	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.2	141.33	4	21	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.27	141.86	6	21	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140			1	21							
2012	248	140	248.2	141.26	5	21	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.22	140.4	1	11	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.1	140.4	2	11	0	yes	Visible	Visible	Not Visible	step	Broken Flake
2012	248	140	248.27	140.38	11	12	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.24	140.93	2	12	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.34	140.79	3	12	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.1	140.42	9	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.34	140.74	4	12	2	no	Not Visible	Visible	Visible	Intact	Broken Flake
2012	248	140	248.16	140.16	12	12	0	NA	NA	NA	NA	NA	Pebble
2012	248	140	248.51	140.76	6	12	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.49	140.1	15	12	0	NA	NA	NA	NA	NA	Pebble
2012	248	140	248.37	140.19	14	12	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	248	140	248.06	140.42	8	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.04	140.89	1	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.15	140.11	13	12	0	No	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.48	140.77	5	12	4	no	Visible	Not Visible	Visible	NA	Debris
2012	248	140	248.12	140.4	10	12	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.57	140.71	7	12	2	no	Not Visible	Not Visible	Visible	Intact	Debris
2012	248	140	248.19	140.93	1	13	0	NA	NA	NA	NA	NA	Pebble
2012	248	140	248.91	140.79	2	13	0	NA	NA	NA	NA	NA	Pebble
2012	248	140	248.47	140.55	4	13	2	yes	no	yes	yes	yes	flake
2012	248	140	248.13	140.25	6	13	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.23	140.1	7	13	0	NA	NA	NA	NA	NA	Pebble
2012	248	140	248.57	140.1	9	13	1	no	Not Visible	Visible	Visible	yes	Debris
2012	248	140	248.12	140.48	3	13	0	NA	NA	NA	NA	NA	Pebble
2012	248	140	248.94	140.31	10	13	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	248	140	248.59	140.16	8	13	0	NA	NA	NA	NA	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2012	248	140	248.52	140.5	5	13	0	NA	NA	NA	NA	NA	Pebble
2012	248	140	248.61	140.88	2	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.15	140.73	3	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.24	140.68	4	14	3	no	Visible	Not Visible	Not Visible	NA	Debris
2012	248	140	248.63	140.71	5	14	0	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	248	140	248.93	140.58	6	14	2	yes	Not Visible	Visible	Not Visible	Intact	Complete flake
2012	248	140	248.94	140.55	7	14	2	no	Visible	Not Visible	Not Visible		Debris
2012	248	140	248.78	140.51	8	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.22	140.23	11	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.42	140.29	12	14	1	no	Visible	Not Visible	Not Visible	Intact	Debris
2012	248	140	248.17	140.22	14	14	3	no	Visible	Not Visible	Not Visible	NA	Debris
2012	248	140	248.15	140.28	10	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.45	140.2	13	14	2	yes	Visible	Visible	Not Visible	Intact	Complete flake
2012	248	140	248.07	140.91	1	14	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.89	140.4	9	14	4	yes	Visible	Visible	Not Visible	Intact	Complete flake
2012	248	140	248.83	140.86	4	15	0	no	Not Visible	Not Visible	Not Visible	NA	Debris
2012	248	140	248.93	140.9	6	15	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	248	140	248.3	140.7	8	15	4	no	Not Visible	Not Visible	Not Visible		Amorphous Debris
2012	248	140	248.4	140.59	9	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.1	140.41	12	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.28	140.14	16	15	1	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.75	140.3	13	15	3	yes	Not Visible	Not Visible	Visible	Intact	Debris
2012	248	140	248.04	140.2	14	15	4	yes	Visible	Visible	Visible	Intact	Complete flake
2012	248	140	248.37	140.94	2	15	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	248	140	248.02	140.76	7	15	3	no	Not Visible	Not Visible	Visible	Intact	Debris
2012	248	140	248.37	140.99	1	15	5	yes	Visible	Not Visible	Not Visible	NA	Debris
2012	248	140	248.83	140.85	5	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.58?	140.8	3	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.28	140.22	15	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.2	140.46	11	15	4	yes	Visible	Visible	Not Visible	Intact	Broken Flake
2012	248	140	248.06	140.5	10	15	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.87	140.54	7	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.2	140.55	10	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.13	140.44	14	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2012	248	140	248.05	140.07	21	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.33	140.55	9	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.12	140.03	22	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.91	140.39	16	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.82	140.62	6	16	0	yes	Not Visible	Visible	Not Visible	Intact	flake
2012	248	140	248.12	140.2	20	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.67	140.85	4	16	2	yes	Not Visible	Not Visible	Visible	Intact	flake
2012	248	140	248	140.53	12	16	3	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	248	140	248.12	140.81	3	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.63	140.7	5	16	2	yes	Not Visible	Not Visible	Not Visible	Intact	Debris
2012	248	140	248.48	140.57	8	16	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.12	140.95	2	16	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.03	140.59	11	16	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.19	140.19	19	16	4	yes	Not Visible	Visible	Not Visible	Intact	Debris
2012	248	140	248.43	140.25	17	16	1	no	Visible	Not Visible	Not Visible	Intact	Debris
2012	248	140	248.34	140.22	18	16	3	no	Visible	Not Visible	Visible	NA	Debris
2012	248	140	248.13	140.51	13	16	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.35	140	23	16	2	no	Not Visible	Not Visible	Not Visible	Intact	Debris
2012	248	140	248.18	140.32	15	16	2	yes	Not Visible	Not Visible	Not Visible	Intact	Debris
2012	248	140	248.34	140.71?	1	16							
2012	248	140	248.47	140.75	13	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.11	140.58	8	17	2	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.41	140.06	36	17	1	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.77	140.67	17	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.31	140.12	37	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.49	140.3	29	17	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.72	140.45	31	17	4	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.8	140.52	32	17	3	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.83	140.39	33	17	1	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.88	140.47	34	17	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.87	140.2	35	17	4	yes	Visible	Visible	Not Visible	NA	Debris
2012	248	140	248.51	140.71	12	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.76	140.81	2	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.01	140.49	21	17	1	yes	Not Visible	Visible	Not Visible	Intact	flake

Table A31-1continued

Year	N	E	N	E	Art	Lev	Scr	Plat	Cmpr. rng	Bulb	Ripple	Margins	Classification
2012	248	140	248.25	140.62	7	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.88	140.61	19	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.47	140.32	28	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.91	140.63	20	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.56	140.57	16	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.8	140.44	23	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.6	140.44	22	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.81	140.64	18	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.11	140.4	24	17	8	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	248	140	248.43	140.67	10	17	1	no	Not Visible	Not Visible	Visible	NA	Debris
2012	248	140	248.39	140.6	9	17	1	no	Visible	Not Visible	Visible	Intact	Amorphous Debris
2012	248	140	248.62	140.3	30	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.22	140.29	26	17	5	no	Visible	Not Visible	Not Visible	NA	Debris
2012	248	140	248.68	140.92	1	17	2	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	248	140	248.53	140.78	14	17	1	no	Not Visible	Visible	Visible	NA	Amorphous Debris
2012	248	140	248.45	140.71	11	17	2	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	248	140	248.21	140.68	5	17	0	yes	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	248	140	248.33	140.3	27	17	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.24	140.69	4	17	1	no	Not Visible	Not Visible	Not Visible	Intact	Amorphous Debris
2012	248	140	248.22	140.47	25	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble
2012	248	140	248.18	140.79	3	17	0	no	Not Visible	Not Visible	Not Visible	NA	Amorphous Debris
2012	248	140	248.12	139.99	38	17	11	no	Visible	Visible	Visible	Intact	Debris
2012	248	140	248.24	140.65	6	17	3	yes	Not Visible	Visible	Visible	Intact	flake
2012	248	140	248.42	140.66	15	17	0	no	Not Visible	Not Visible	Not Visible	NA	Pebble

APPENDIX 32

CONDITIONAL ATTRIBUTES OF MAPPED ARTIFACTS FROM THE TOPPER SITE (38AL23)

Appendix 32 presents the conditional attributes of mapped items from the study sample at the Topper Site. Conditional attributes are used to distinguish specific characteristics about the form or appearance of an artifact or lithic item. Categories of conditional attributes used in this study include thermal alteration (thermally altered, crazing, pot-lidding), presence, absence and amount of cortex, and completedness (proximal, medial distal, or complete). Table A32-1 presents the conditional attributes of artifacts from the study sample. Individual examples of artifacts that retain specific conditional attributes are presented in Figures A32-1 through A32-.

Table A32-1
Conditional Attributes of Mapped Artifacts from the Topper Site (38AL23)

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
1999	242.31	130.76	97.51	242	130	1	11			x	Medial	Absent	Absent	Absent
1999	243.01	130.95	97.63	242	130	2	10		x		Complete	Absent	Absent	Absent
1999	242.94	130.85	97.677	242	130	1	9			x	NA	Absent	Absent	Present
1999	243.78	131.56	97.41	242	130	3	12			x	Distal	Absent	Absent	Absent
1999	243.75	131.93	97.407	242	130	1	12			x	NA	Absent	Absent	Absent
1999	243.61	131.68	97.41	242	130	2	12			x	Complete	Absent	Absent	Absent
1999	243.4	131.2	97.187	242	130	1	14							
1999	242.8	131.46	96.95	242	130		16	x			NA	Absent	Absent	Absent
1999	243.84	131.49	96.95	242	130		16		x		NA	Absent	Absent	Absent
1999	243.725	130.86	96.9	242	130	1	17	x			NA	Absent	Absent	Absent
1999	243.61	130.485	96.845	242	130	6	17	x			NA	Absent	Absent	Absent
1999	243.565	130.535	96.89	242	130	18	17	x			NA	Absent	Absent	Absent
1999	243.775	130.695	96.87	242	130	24	17	x			NA	Absent	Absent	Absent
1999	243.89	130.82	96.875	242	130	30	17	x			NA	Absent	Absent	Absent
1999	243.81	131.045	96.9	242	130	35	17	x			NA	Absent	Absent	Absent
1999	243.86	131.035	96.9	242	130	36	17	x			NA	Absent	Absent	Absent
1999	243.76	131.8	96.91	242	130	41	17	x			NA	Absent	Absent	Absent
1999	243.54	131.23	96.86	242	130	40	17		x		Distal	Absent	Absent	Absent
1999	243.885	130.49	96.885	242	130	19	17		x		NA	Absent	Absent	Absent
1999	242.52	130.97		242	130	1			x		NA	Absent	Absent	Absent
1999	143.85	130.95	96.9	242	130		17		x		NA	Absent	Absent	Absent
1999	243.88	131.285	96.91	242	130	30	17		x		NA	Absent	Absent	Absent
1999	243.86	131.275	96.92	242	130	26	17	x			NA	Absent	Absent	Absent
1999	243.88	130.865	96.9	242	130	31	17		x		NA	Absent	Absent	Absent
1999	243.88	130.865	96.9	242	130	31	17		x		NA	Absent	Absent	Absent
1999	243.85	131.155	96.9	242	130	39	17		x		NA	Absent	Absent	Absent
1999	243.625	130.685	96.865	242	130		17	x			NA	Absent	Absent	Absent
1999	243.825	131.02	96.9	242	130		17	x			NA	Absent	Absent	Absent
1999	243.83	130.69	96.89	242	130	25	17		x		NA	Absent	Absent	Absent
1999	243.88	130.52	96.955	242	130			x			NA	Absent	Absent	Absent
1999	243.88	130.52	96.905	242	130		17	x			NA	Absent	Absent	Absent
1999	243.8	131.05	96.9	242	130		17		x		NA	Absent	Absent	Absent
1999	243.84	131.065	96.9	242	130		17	x			NA	Absent	Absent	Absent
1999	243.715	130.745	96.87	242	130		17	x			NA	Absent	Absent	Absent
1999	243.925	130.63	96.9	242	130		17	x			NA	Absent	Absent	Absent
1999	243.86	130.72	96.89	242	130		17	x			NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
1999	243.74	130.47	96.86	242	130		17	x			NA	Absent	Absent	Absent
1999	243.745	130.29	96.86	242	130		17	x			NA	Absent	Absent	Absent
1999	243.85	131.11	96.9	242	130		17	x			NA	Absent	Absent	Absent
1999	243.67	130.34	96.875	242	130		17	x			NA	Absent	Absent	Absent
1999	243.72	130.51	96.89	242	130		17	x			NA	Absent	Absent	Absent
1999	243.9	130.765	96.86	242	130		17	x			NA	Absent	Absent	Absent
1999	243.7	130.385	96.88	242	130		17	x			NA	Absent	Absent	Absent
1999	243.655	130.485	96.86	242	130		17	x			NA	Absent	Absent	Absent
1999	243.92	130.97	96.88	242	130		17	x			NA	Absent	Absent	Absent
1999	243.695	130.275	96.895	242	130		17	x			NA	Absent	Absent	Absent
1999	243.95	130.68	96.925	242	130		17	x			NA	Absent	Absent	Absent
1999	243.88	130.99	96.9	242	130		17	x			NA	Absent	Absent	Absent
1999	243.85	130.89	96.9	242	130		17	x			NA	Absent	Absent	Absent
1999	243.84	130.47	96.89	242	130		17	x			NA	Absent	Absent	Absent
1999	243.65	130.03	96.87	242	130		17	x			NA	Absent	Absent	Absent
1999	243.62	130.915	96.9	242	130		17	x			NA	Absent	Absent	Absent
1999	243.755	130.745	96.865	242	130		17	x			NA	Absent	Absent	Absent
1999	243.86	130.96	96.895	242	130		17		x		NA	Absent	Absent	Absent
1998	245.92	131.36	96.74	244	130	1	19			x	NA	Absent	Absent	Absent
1998	244.17	131.64	96.84	244	130	1			x		NA	Absent	Absent	Absent
1998	245.33	131.13	96.915	244	130	2				x	NA	Absent	Absent	Absent
1998	245.22	131.37	97.065	244	130	2			x		NA	Absent	Absent	Absent
1998	245.36	130.92	97.075	244	130	1			x		Distal	Absent	Absent	Absent
1999	243.58	133.35	97	242	132	6	15		x		NA	Present	Present	Absent
1999	243.87	133.18	97.05	242	132	7	15		x		NA	Absent	Absent	Absent
1999	242.88	133.45	96.96	242	132	9	16		x		NA	Absent	Absent	Absent
2000	243.56	131.01	96.67	242	130	2	2		x		Distal	Absent	Absent	Absent
2000	243.33	131.63	96.71	242	130	2			x		NA	Absent	Absent	Absent
2000	242.02	129.59	96.74	242	128	6				x	NA	Absent	Absent	Absent
2000	245.84	147.22	97.6	244	146	8				x	NA	Absent	Absent	Absent
2000	242.15	131.05	96.71	242	130	5			x		NA	Absent	Absent	Absent
2000	243.23	131.85	96.75	242	130	1			x		Na	Absent	present	Absent
2000	242.27	130.7	96.71	242	130	4			x		NA	Absent	Present	Absent
2001	240.45	130.56	98.34	240	130	18				x	NA	Present	Absent	Absent
2001	241.12	132.58	97.22	240	132	1	18		x		NA	Absent	Absent	Absent
2001	241.3	132.6	97.17	240	132	1	18		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2001	240.3	132.76	98.25	240	132	19	2			x	NA	Absent	Absent	Absent
2001	241.27	132.62	97.15	240	132	8	18		x		Distal	Absent	Absent	Absent
2001	241.3	132.54	97.12	240	132	5	18			x	NA	Present	Absent	Absent
2001	241.17	132.47	97.16	240	132	2	18		x		NA	Absent	Present	Absent
2001	241.20	132.56	97.14	240	132	7	18		x		NA	Present	present	Absent
2001	241.29	132.47	97.16	240	132	4	18		x		NA	Present	Absent	Absent
2001	241.2	132.53	97.15	240	132	3	18		x		NA	Absent	present	Absent
2001	241.36	131.42	96.79	240	132									
2001	240.67	132.43	97.15	240	132	2	18		x		Medial	Absent	Absent	Absent
2001	240.87	132.45	97.17	240	132	3	18		x		Complete	Absent	Absent	Absent
2001	240.85	132.6	97.15	240	132	4	18		x		NA	Absent	Absent	Absent
2002	243.65	141.42	97.48	242	140	PP3	16		x		Medial	Absent	Absent	Absent
2002	244.35	138.47	97.3	244	138	1	17		x		Distal	Absent	Absent	Absent
2002	243.77	140.79	97.67	242	140	1	12			x	Proximal	Absent	Absent	Absent
2002	243.97	138.64	97.605	242	138	1	11		x		Distal	Absent	Absent	Absent
2002	243.22	139.965	97.445	242	138	PP7	14			x	NA	Absent	Absent	Absent
2002	246	138.42	97.72	244	138	1	9		x		Complete	Absent	Absent	Absent
2002	243.74	139.09	97.265	242	138	1	18			x	Distal	Absent	Absent	Absent
2002	245.54	138.69	97.375	244	138	2	16			x	Medial	Absent	Absent	Absent
2002	245.43	138.23	97.6	244	138	1	12			x	Distal	Absent	Absent	Absent
2002	244.66	142.25	98.15	244	142	5	4		x		NA	Absent	Absent	Absent
2002	245.61	138.12	97.58	244	138	2	12			x	Complete	Absent	Absent	Absent
2002	244.14	138.63	97.475	244	138	44	F87		x		NA	Absent	Absent	Absent
2002	244.19	137.9	97.425	244	138	51	F87		x		NA	Absent	Absent	Absent
2002	244.9	142.18	98.175	244	142	1	4		x		NA	Absent	Absent	Absent
2002	244.47	139.13	97.51	244	138	6	15			x	NA	Absent	Absent	Absent
2002	244.7	143.05	98.235	244	142	1	3		x		Complete	Absent	Absent	Absent
2002	244.83	138.76	98.33	244	138	7	D2			x	Complete	Present	Absent	Absent
2002	244.35	138.51	97.48	244	138	62	F87		x		NA	Absent	Absent	Absent
2002	244.23	138.38	97.45	244	138	57	F87	x			NA	Absent	Absent	Absent
2002	242.96	138.57	98.01	242	138	1	4			x	NA	Absent	Absent	Absent
2002	244.36	138.58	97.51	244	138	41	F87	x			NA	Absent	Absent	Absent
2002	244.27	138.63	97.425	244	138	64	F87		x		NA	Absent	Absent	Absent
2002	242.05	139.5	97.415	242	138	3	15		x		Complete	Absent	Absent	Absent
2002	242.64	142	97.46	242	140	4	17		x		Medial	Absent	Absent	Absent
2002	243.28	142.98	97.525	242	142	3	15		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2002	243.26	139.97	97.45	242	138	PP6	14		x		NA	Absent	Absent	Absent
2002	246.8	139.65	98.265	246	138	9	D12			x	proximal	Absent	Absent	Absent
2002	246.55	142.27	98.24	246	142	1	3		x		NA	Absent	Absent	Absent
2002	243.75	139.89	97.45	242	138	PP11	14		x		NA	Absent	Absent	Absent
2002	243.16	139	97.435	242	138	1	15		x		NA	Absent	Absent	Absent
2002		141.8	98.52		140	2	C2			x	Distal	Absent	Absent	Absent
2002	245.58	143.39	97.65	244	142	3	12		x		Medial	Absent	Absent	Absent
2002		141.6	98.405	242	140	3	C2			x	Distal	Absent	Absent	Absent
2002	243.85	139.9	97.44	242	138	PP12	14	x			NA	Absent	Absent	Absent
2002	244.3	138.11	97.44	244	138	54	F87	x			NA	Absent	Absent	Absent
2002	246.3	139.6	98.13	246	138	1	3			x	NA	Absent	Absent	Absent
2002	245.65	143.88	97.65	244	142	2	13		x		NA	Absent	Absent	Absent
2002		141.9	98.48		140	4	C2			x	Distal	Absent	Absent	Absent
2002	242.81	143.9	97.5	242	142	10	15			x	NA	Present	Absent	Present
2002	243.03	138.62	97.41	242	138	5	15		x		NA	Absent	Absent	Absent
2002	243.65	143.06	97.72	242	142	2	11			x	Complete	Absent	Absent	Absent
2002	246.8	138.78	98.01	246	138	2	4			x	NA	Absent	Absent	Absent
2002	244.13	138.57	97.48	244	138	65	F87	x			NA	Absent	Absent	Absent
2002	242.92	140.66	98.365	242	140	6	C2			x	Distal	Present	Absent	Absent
2002	244.4	138.53	97.5	244	138	40	F87		x		NA	Absent	Absent	Absent
2002	243.68	143.74	97.53	242	142	9	15		x		Complete	Absent	Absent	Absent
2002	244.2	138.53	97.49	244	138	38	F87	x			NA	Absent	Absent	Absent
2002	246.97	143.26	98.22	246	142	4	3			x	NA	Absent	Absent	Absent
2002		141.85	98.55		140	2	C4			x	proximal	Present	Absent	Absent
2002	244	139.8	97.49	244	138	12	14		x		NA	Absent	Absent	Absent
2002	242.84	141.82	97.44	242	140	3	17		x		NA	Absent	Absent	Absent
2002	243.26	138.57	98.01	242	138	2	4			x	NA	Absent	Absent	Absent
2002	244.23	138.46	97.475	244	138	36	F87	x			NA	Absent	Absent	Absent
2002	245.01	143.8	98.315	244	242	7	B2		x		NA	Absent	Absent	Absent
2002	244.34	138.42	97.45	244	138	58	F87		x		NA	Absent	Absent	Absent
2002	244.35	143.77	98.025	244	142	1	5		x		Complete	Absent	Absent	Absent
2002	242.3	139.97	97.425	242	138	4	15		x		NA	Absent	Absent	Absent
2002	243.49	139.965	97.445	242	138	PP8	14	x			NA	Absent	Absent	Absent
2002	244.46	138.38	97.45	244	138	56	F87		x		NA	Absent	Absent	Absent
2002				244	138	9	F87							
2002	244.26	138.41	97.45	244	138	59	F87	x			NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2002	243.33	142.72	97.5	242	142	4	15	x			NA	Absent	Absent	Absent
2002	245.78	138.2	97.765	244	138	1	8			x	NA	Absent	Absent	Absent
2002	244.19	138.62	97.49	244	138	42	F87	x			NA	Absent	Absent	Absent
2002	243.5	139.9	97.48	242	138	PP9	14		x		NA	Absent	Absent	Absent
2002	242.58	141.64	97.425	242	140	1	17		x		NA	Absent	Absent	Absent
2002	243.4	139.855	97.44	242	138	PP10	14	x			NA	Absent	Absent	Absent
2002	244.27	138.51	97.44	244	138	66	F87	x			NA	Absent	Absent	Absent
2002	244.31	139.22	97.52	244	138	5	15		x		NA	Absent	Absent	Absent
2002	244.24	139.1	97.18	244	138	1	20		x		NA	Absent	Absent	Absent
2002	245.48	143.29	97.65	244	142	5	12	x			NA	Absent	Absent	Absent
2002	244.13	139.71	97.51	244	138	3	13		x		NA	Absent	Absent	Absent
2002	243.94	137.45	97.45	244	138	49	F87		x		NA	Absent	Absent	Absent
2002	243.03	138.87	97.29	242	138	2	18			x	Distal	Absent	Absent	Absent
2002	243.29	139.15	97.445	242	138	PP4	14		x		NA	Absent	Absent	Absent
2002	243.7	142.91	97.535	242	142	2	15		x		Proximal	Absent	Absent	Absent
2002	242.77	139.2	97.45	242	138	1	14			x	Distal	Absent	Absent	Absent
2002				244	138	6	F87	x			NA	Absent	Absent	Absent
2002				244	138	8	F87		x		NA	Absent	Absent	Absent
2002	244.74	143.8	98.175	244	142	1	4		x		NA	Absent	Absent	Absent
2002	244.75	140.04	98.36	242	140	5	C2		x		NA	Absent	Absent	Absent
2002	243.05	143.75	97.52	242	142	12	15		x		NA	Absent	Absent	Absent
2002	242.56	141.85	97.44	242	140	5	17		x		NA	Absent	Absent	Absent
2002	242.64	139.33	97.445	242	138	2	14	x			NA	Absent	Absent	Absent
2002	245.56	139.62	97.475	244	138	6	14		x		NA	Absent	Absent	Absent
2002	243.72	139.82	97.445	242	138	4	14		x		NA	Absent	Absent	Absent
2002	245.11	139.82	97.46	244	138	10	14		x		NA	Absent	Absent	Absent
2002	245.6	143.45	97.65	244	142	4	12		x		NA	Absent	Absent	Absent
2002	244.87	142.1	98.73	244	142	2	B2		x		NA	Absent	Absent	Absent
2002	244.87	142.1	98.73	244	142	2	B2		x		NA	Absent	Absent	Absent
2002	244.53	138.49	97.43	244	138	63	F87	x			NA	Absent	Absent	Absent
2002	244.76	139.93	97.5	244	138	2	14		x		Medial	Absent	Absent	Absent
				244	138	3	F87		x		NA	Absent	Absent	Absent
2002	244.43	140.44	97.53	244	140	2	16		x		NA	Absent	Absent	Absent
2002	243	142.09	97.52	242	142	6	15	x			NA	Absent	Absent	Absent
2002	244.35	143.52	98.14	244	142	4	4		x		NA	Absent	Absent	Absent
2002	244.12	139.63	97.515	244	138	4	15		x		NA	Present	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2002				244	138	10	F87	x			NA	Absent	Absent	Absent
2002	244.55	138.23	97.445	244	138	55	F87		x		NA	Absent	Absent	Absent
2002	245.01	139.95	97.39	244	138	3	16		x		NA	Absent	Absent	Absent
2002	244.11	138.62	97.485	244	138	43	F87		x		NA	Absent	Absent	Absent
2002	245.2	139.52	97.48	244	138	8	14	x			NA	Absent	Absent	Absent
2002	243.55	141.57	97.49	242	140	PP5	16		x		NA	Absent	Absent	Absent
2002	243.34	143.59	97.5	242	142	11	15	x			NA	Absent	Absent	Absent
2002	243.32	138.98	97.41	242	138	6	15		x		NA	Absent	Absent	Absent
2002	244.46	143.5	97.5	244	142	5	15		x		NA	Absent	Absent	Absent
2002	244.1	141.81	97.45	244	140	15	16	x			NA	Absent	Absent	Absent
2002	245.57	139.56	97.48	244	138	5	14		x		NA	Absent	Absent	Absent
2002	244.34	138.47	97.47	244	138	61	F87	x			NA	Absent	Absent	Absent
2002	242.34	139.78	97.535	242	138	3	12		x		NA	Absent	Absent	Absent
2002	245.22	141.47	97.56	244	140	2	14	x			NA	Absent	Absent	Absent
2002				244	138	4	F87	x			NA	Absent	Absent	Absent
2002	245.03	139.84	97.47	244	138	11	14	x			NA	Absent	Absent	Absent
2002	244.6	140.35	97.495	244	140	4	16		x		NA	Absent	Absent	Absent
2002	244.15	137.35	97.45	244	138	50	F87	x			NA	Absent	Absent	Absent
2002	243.975	142.4	97.55	242	142	1	15	x			NA	Absent	Absent	Absent
2002	243.14	139.87	97.2	242	138	PP7	19	x			NA	Absent	Absent	Absent
2002	243.09	139.64	97.2	242	138	PP6	19	x			NA	Absent	Absent	Absent
2002	243.6	141.4	97.485	242	140	PP2	16	x			NA	Absent	Absent	Absent
2002	245.65	142.53	98.15	244	142	3	4		x		NA	Present	Absent	Absent
2002	243.5	141.57	97.475	242	140	PP6	16		x		NA	Absent	Absent	Absent
2002	245.94	139.18	97.49	244	138	3	14	x			NA	Absent	Absent	Absent
2002	243.3	139.97	97.2	242	138	PP9	19		x		NA	Absent	Absent	Absent
2002				244	138	11	F87	x			NA	Absent	Absent	Absent
2002	246.91	142.3	98.2	246	142	3	3		x		NA	Absent	Absent	Absent
2002	245.38	141.38	97.6	244	140	1	13		x		NA	Absent	Absent	Absent
2002	243.21	143.23	97.52	242	142	5	16		x		NA	Absent	Absent	Absent
2002	242.74	139.5	97.2	242	138	PP4	19	x			NA	Absent	Absent	Absent
2002	245.96	143.43	97.51	244	142	4	15	x			NA	Absent	Absent	Absent
2002	246.93	142.94	98.22	246	142	2	3		x		Medial	Absent	Absent	Absent
2002	245.4	143.8	97.686	244	142	1	12	x			NA	Absent	Absent	Absent
2002	245.2	143.4	97.63	244	142	1	13	x			NA	Absent	Absent	Absent
2002	245.2	141.2	97.485	244	140	13	16	x			NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2002	244.36	138.09	97.435	244	138	53	F87	x			NA	Absent	Absent	Absent
2002	245.51	141.58	97.5	244	140	8	16	x			NA	Absent	Absent	Absent
2002	245.93	141.15	97.505	244	140	10	16		x		NA	Absent	Absent	Absent
2002	244.15	138.53	97.48	244	138	37	F87		x		NA	Absent	Absent	Absent
2002	244.62	143.78	97.71	244	142	1	15	x			NA	Absent	Absent	Absent
2002	243.87	139.7	97.44	242	138	5	14		x		NA	Absent	Absent	Absent
2002	243.75	139.99	97.2	242	138	PP8	19		x		Complete	Absent	Absent	Absent
2002				244	138	2	F87	x			NA	Absent	Absent	Absent
2002	242.95	142.38	97.51	242	142	7	15		x		NA	Absent	Absent	Absent
2002	242.95	138.92	97.2	242	138	PP2	19	x			NA	Absent	Absent	Absent
2002	242.8	141.65	97.44	242	140	2	17	x			NA	Absent	Absent	Absent
2002	244.19	140.56	97.425	244	140	9			x		NA	Absent	Absent	Absent
2002	242.61	139.3	97.45	242	138	PP1	14	x			NA	Absent	Absent	Absent
2002	245.5	138.85	97.34	244	138	2	17		x		NA	Absent	Absent	Absent
2002	245.6	142.95	97.56	244	142	4	14	x			NA	Absent	Absent	Absent
2002	245.94	139.61	97.49	244	138	4	14		x		NA	Absent	Absent	Absent
2002	244.15	138.45	97.46	244	138	60	F87	x			NA	Absent	Absent	Absent
2002	245.92	138.35	97.45	244	138	46			x		NA	Absent	Absent	Absent
2002	243.3	139.215	97.445	242	138	PP5	14	x			NA	Absent	Absent	Absent
2002	244.82	139.91	97.505	244	138	7	13		x		NA	Absent	Absent	Absent
2002	245.68	143.92	97.625	244	142	3	13	x			NA	Absent	Absent	Absent
2002	242.75	139.86	97.465	242	138	PP3	14		x		NA	Absent	Absent	Absent
2002	245.73	141.88	97.49	244	140	12	16	x			NA	Absent	Absent	Absent
2002	245.55	142.94	97.5	244	142	2	15	x			NA	Absent	Absent	Absent
2002	244.91	140.8	97.4	244	140	7			x		NA	Absent	Absent	Absent
2002	243.12	141.28	97.49	242	140	PP1	16		x		NA	Absent	Absent	Absent
2002	244.4	140.96	97.45	244	140	14	16	x			NA	Absent	Absent	Absent
2002	242.95	139.34	97.535	242	138	2	12		x		NA	Absent	Absent	Absent
2002	244.54	139.05	97.39	244	138	1	16		x		NA	Absent	Absent	Absent
2002	243.74	141.44	97.47	242	140	PP4	16	x			NA	Absent	Absent	Absent
2002	245.7	138.72	97.31	244	138	3	17		x		NA	Absent	Absent	Absent
2002	244.58	142.51	97.505	244	142	6	15	x			NA	Absent	Absent	Absent
2002	243.53	140.09	97.6	242	140	1			x		NA	Present	Absent	Absent
2002	245.16	143.3	97.73	244	142	1	10	x			NA	Absent	Absent	Absent
2002	242.26	139.59	97.59	242	138	1			x		NA	Absent	Absent	Absent
2002	245.21	139.89	97.46	244	138	9	14	x			NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2002	245.89	143.14	97.5	244	142	3	15	x			NA	Absent	Absent	Absent
2002				244	138	5	F87	x			NA	Absent	Absent	Absent
2002	243.54	141.95	97.38	242	140	PP2	17	x			NA	Absent	Absent	Absent
2002	244.31	138.53	97.49	244	138	39	F87	x			NA	Absent	Absent	Absent
2002	245.21	141.15	97.5	244	140	6	16	x			NA	Absent	Absent	Absent
2002	243.85	139.98	97.495	242	138	3	14		x		NA	Absent	Absent	Absent
2002	246.18	138.9	98.06	246	138	1	4		x		NA	Absent	Absent	Absent
2002	244.3	140.46	97.515	244	140	1	16	x			NA	Absent	Absent	Absent
2002	243.82	137.7	97.41	244	138	48			x		NA	Absent	Absent	Absent
2002	245.58	139.93	97.46	244	138	7	14	x			NA	Absent	Absent	Absent
2002	244.34	138.13	97.43	244	138	27	F87		x		NA	Absent	Absent	Absent
2002	246.9	139.75	98.09	246	138	5	4	x			NA	Absent	Absent	Absent
2002	244.1	140.82	97.435	244	140	8			x		NA	Absent	Absent	Absent
2002	246.14	142	98.2	246	140	1	3		x		NA	Absent	Absent	Absent
2002	245.52	138.74	97.31	244	138	4	17		x		NA	Absent	Absent	Absent
2002	243.64	139.21	97.51	242	138	1	13			x	NA	Absent	Absent	Absent
2002	245.43	142.08	97.6	244	142	2	14	x			NA	Absent	Absent	Absent
2002	245.93	141.38	97.54	244	140	1	15		x		Complete	Absent	Absent	Absent
2002	246.6	139.2	98.055	246	138	3	4	x			NA	Absent	Absent	Absent
2002	242	138.78	97.215	242	138	PP1	19		x		NA	Absent	Absent	Absent
2002	245.66	141.84	97.5	244	140	11	16	x			NA	Absent	Absent	Absent
2002	244.17	140.86	97.46	244	140	5			x		NA	Absent	Absent	Absent
2002	244.32	140.6	97.51	244	140	5	16	x			NA	Absent	Absent	Absent
2002	245.13	141.16	97.505	244	140	7	16		x		NA	Absent	Absent	Absent
2002	243.21	141.08	97.51	242	140	7			x		NA	Absent	Absent	Absent
2002	245.7	139.68	97.49	244	138	1	14		x		NA	Absent	Absent	Absent
2002	244.83	142.25	97.505	244	142	7	15	x			NA	Absent	Absent	Absent
2002	243.45	141.69	97.48	242	140	PP&	16	x			NA	Absent	Absent	Absent
2002	244.87	141.08	97.42	244	140	6			x		NA	Absent	Absent	Absent
2002	243.06	140.05	97.405	242	140	7	17		x		NA	Absent	Absent	Absent
2002	242.75	139.74	97.45	242	138	PP2	14		x		Complete	Absent	Absent	Absent
2002	243.85	141.9	97.445	242	140	PP3	17		x		NA	Absent	Absent	Absent
2002	242.1	139.34	97.215	242	138	PP3	19		x		Complete	Absent	Absent	Absent
2002	245.08	143.74	97.48	244	142	9			x		NA	Absent	Absent	Absent
2002	244.51	141.54	97.365	244	140	1	18		x		NA	Absent	Absent	Absent
2002	242.54	139.09	97.21	242	138	2	19		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2002	245.58	141.08	97.49	244	140	3			x		NA	Absent	Absent	Absent
2002	242.6	141.89	97.4	242	140	6	17		x		NA	Present	Absent	Absent
2002	242.46	139.08	97.23	242	138	PP5	19	x			NA	Absent	Absent	Absent
2002	244.47	138.51	97.65	244	138	1	10		x		NA	Absent	Absent	Absent
2002	243.88	138.86	97.42	244	138	47	F87		x		NA	Present	Present	Absent
2002	244.7	140.7	97.47	244	140	1			x		NA	Absent	Present	Absent
2002	244.37	139.59	97.53	244	138	2	15		x		NA	Absent	Absent	Absent
2002	244.19	138.21	97.36	244	138	25	16		x		NA	Absent	Absent	Absent
2002	245.06	142.05	97.51	244	142	8	15		x		NA	Absent	Absent	Absent
2002	246.85	139.65	98.06	246	138	4	4	x			NA	Absent	Absent	Absent
2002	243.12	141.12	97.435	242	140	PP4	17		x		NA	Absent	Absent	Absent
2002	245.3	142.81	97.44	244	142	25	F87		x		Complete	Absent	Absent	Absent
2002	245.27	142.57	97.545	244	142	3	3		x		NA	Absent	Absent	Absent
2002	245	143.9	97.69	244	142	12	F87		x		NA	Present	Absent	Absent
2002	242.32	138.8	97.25	242	138	1	19		x		NA	Absent	Absent	Absent
2002	244.6	143.33	97.475	244	142	7	F87		x		NA	Absent	Absent	Absent
2002	242.67	141.86	97.44	242	140	PP1	17	x			NA	Absent	Absent	Absent
2002	243.17	141.87	97.535	242	140	1	19		x					
2002	243.48	138.34	97.55	242	138	4	15	x			NA	Absent	Absent	Absent
2002	243.93	138.32	97.46	242	138	7			x		NA	Absent	Absent	Absent
2002	240.36	135.45	98.37	240	134	11	5X10			x	NA	Present	Absent	Absent
2002	244.15	138.73	97.48	244	138	45		x			NA	Absent	Absent	Absent
2002	245.18	142.89	97.605	244	142	4		x			NA	Absent	Absent	Absent
2002	246	137.6	98.25	246	136		E7			x	NA	Present	Absent	Absent
2002	245.37	138.73	97.455	244	138	13			x		Complete	Absent	Absent	Absent
2002	242.63	141.88	98.85	242	140	2	4		x		Distal	Absent	Absent	Absent
2002	243.39	139.02	98.19	242	140	1	4		x		Complete	Absent	Absent	Absent
2002	243.71	142.21	97.915	242	142	1	7			x	Complete	Absent	Absent	Absent
2002	242.75	141.75	98.13	242	140	4	4			x	proximal	Absent	Absent	Absent
2002	242.75	141.97	98.115	242	140	5	4		x		Medial	Absent	Absent	Absent
2002	243.1	140.31	98.125	242	140	3	4			x	Complete	Absent	Absent	Absent
2002	244.81	142.42	97.49	244	142	23	F87		x		NA	Absent	Absent	Absent
2002	243.9	138.02	98.205	242	138	12	2	x			Distal	Present	Absent	Absent
2002	243.5	141.04	97.51	242	140	6	15	x			NA	Absent	Absent	Absent
2002	243.53	141.02	97.51	242	140	5	15	x			NA	Absent	Absent	Absent
2002	243.6	141.4	97.51	242	140	12	15	x			NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2002	243.23	141.323	97.52	242	140	10	15	x			NA	Absent	Absent	Absent
2002	243.18	141.14	97.55	242	140	8	15	x			NA	Absent	Absent	Absent
2002	243.39	144	97.495	242	142	1	16			x	Proximal	Absent	Absent	Absent
2002	243.1	143.77	97.495	242	142	2	16		x		Proximal	Absent	Absent	Absent
2002	243.36	142.31	97.45	242	142	5	16		x		NA	Absent	Absent	Absent
2002	243.4	142.54	97.445	242	142	3	16		x		NA	Absent	Absent	Absent
2002	243.61	142.72	97.44	242	142	6	16			x	Distal	Absent	Absent	Absent
2002	243.57	142.72	97.44	242	142	7	16			x	proximal	Absent	Absent	Absent
2002	243.1	142.46	97.495	242	142	4	16		x		NA	Absent	Absent	Absent
2002	242.23	138.63	97.3	242	138	5	17		x		NA	Absent	Absent	Absent
2002	243.14	138.64	97.34	242	138	1	17		x		NA	Absent	Absent	Absent
2002	242.96	139.14	97.3	242	138	3	17	x			NA	Absent	Absent	Absent
2002	242.09	139.3	97.31	242	138	2	17	x			NA	Absent	Absent	Absent
2002	242.27	139.94	97.35	242	138	1	17	x			NA	Absent	Absent	Absent
2002	242.9	139.51	97.34	242	138	3	17		x		NA	Absent	Absent	Absent
2002	242.85	139.95	97.345	242	138	2	17		x		Complete	Absent	Absent	Absent
2002	242.14	139.39	97.3	242	138	4	17		x		Complete	Absent	Absent	Absent
2002	242.87	138.93	97.32	242	138	7	17		x		NA	Absent	Absent	Absent
2002	242.7	138.43	97.31	242	138	8	17		x		NA	Absent	Absent	Absent
2002	242.8	138.3	97.32	242	138	6	17		x		Complete	Absent	Absent	Absent
2002	243.09	139.2	97.32	242	138	3	18	x			NA	Absent	Absent	Absent
2002	243.45	138.98	97.285	242	138	5	18	x			NA	Absent	Absent	Absent
2002	243.08	138.13	97.295	242	138	4	18	x			NA	Absent	Absent	Absent
2002	242.96	139.11	97.29	242	138	2	18	x			NA	Absent	Absent	Absent
2002	242.5	139.09	97.28	242	138	1	18		x		NA	Absent	Absent	Absent
2002	243.12	141.12	97.525	242	140	9			x		NA	Absent	Absent	Absent
2002	243.29	141.02	97.525	242	140	2			x		NA	Absent	Absent	Absent
2002	243.56	141.64	97.505	242	140	11			x		Proximal	Absent	Absent	Absent
2002	245.54	140.7	97.55	244	140	1	14		x		NA	Absent	Absent	Absent
2002	245.47	142.33	97.57	244	142	1	14		x		NA	Absent	Absent	Absent
2002	244.68	139.93	97.5	244	138	2	15		x		NA	Absent	Absent	Absent
2002	245.7	139.68	97.49	244	138	1	15		x		NA	Absent	Absent	Absent
2002	244.73	138.01	97.485	244	138	20	16			x	proximal	Absent	Absent	Absent
2002	244.37	137.93	97.47	244	138	21	16		x		NA	Absent	Absent	Absent
2002	245.93	141.08	97.5	244	140		16	x			NA	Absent	Absent	Absent
2002	244.14	138.04	97.46	244	138	23	16		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2002	244.3	138	97.48	244	138	22	16		x		NA	Absent	Absent	Absent
2002	244.16	138.1	97.47	244	138	24	16		x		NA	Absent	Absent	Absent
2002	244.28	138.1	97.46	244	138	26	16			x	Complete	Absent	Absent	Absent
2002	244.52	140.6	97.51	244	140	5	16	x			NA	Absent	Absent	Absent
2002	244.16	140.63	97.41	244	140	9	17	x			NA	Absent	Absent	Absent
2002	244.9	141.2	97.43	244	140	5	17	x			NA	Absent	Absent	Absent
2002	244.09	141.5	97.435	244	140	1	17	x			NA	Absent	Absent	Absent
2002	244.7	141.23	97.44	244	140	3	17	x			NA	Absent	Absent	Absent
2002	244.69	141.06	97.455	244	140	7	17	x			NA	Absent	Absent	Absent
2002	244.29	140.85	97.415	244	140	8	17		x		NA	Absent	Absent	Absent
2002	244.25	140.62	97.42	244	140	10	17		x		NA	Absent	Absent	Absent
2002	244.8	141.11	97.44	244	140	11	17		x		NA	Absent	Absent	Absent
2002	244.19	141.29	97.445	244	140	4	17		x		NA	Absent	Absent	Absent
2002	244.27	141.07	97.45	244	140	6	17		x		NA	Absent	Absent	Absent
2002	244.45	141.33	97.36	244	140	2	17		x		NA	Absent	Absent	Absent
2002				244	138	1	19	x			NA	Absent	Absent	Absent
2002	245.59	139.46	98.05	244	138	3	F87		x		NA	Absent	Absent	Absent
2002	243.95	137.46	97.47	244	138	9		x			NA	Absent	Absent	Absent
2002	245.1	143.85	98.42	244	142	4				x	Distal	Absent	Absent	Absent
2002	242.5	137.55	97.32	SE	17	4			x		NA	Absent	Absent	Absent
2002	244.24	143.07	97.49	244	142	1	16		x		Complete	Absent	Absent	Absent
2002	244.75	141.2	97.445	244	140	11	17		x		NA	Absent	Absent	Absent
2002	244.68	141.18	97.44	244	140	12	17			x	NA	Absent	Absent	Absent
2002	242.84	141.76	97.47	242	140	1	16		x		NA	Absent	Absent	Absent
2002	243.63	140.09	97.45	242	140	4	16		x		NA	Absent	Absent	Absent
2002	242.84	141.7	97.46	242	140	2	16		x		NA	Absent	Absent	Absent
2002	244	140.12	97.49	242	140	3	16			x	NA	Absent	Absent	Absent
2002	244.08	140.8	97.455	244	140	4	16		x		NA	Absent	Absent	Absent
2002	244.72	140.9	97.465	244	140	5	16		x		NA	Absent	Absent	Absent
2002	243.88	140.37	98.005	242	140	1	6		x		NA	Absent	Absent	Absent
2002	243.65	141.37	98.09	242	140	1								
2002	243.55	140.58	97.98	242	140	2	6		x		NA	Absent	Absent	Absent
2003	243.28	141.03	97.335	242	140	11	Feature 90	x			NA	Absent	Absent	Absent
2003	245.75	142.7	97.395	244	142	1	18	x			NA	Absent	Absent	Absent
2003	245.62	142.78	97.395	244	142	2	18	x			NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2003	242.86	140.18	97.275	242	140	10	20	x			NA	Absent	Absent	Absent
2003	245.35	142.82	97.26	244	142	10	19	x			NA	Absent	Absent	Absent
2003	245.76	140.65	97.37	244	140	2	18	x			NA	Absent	Absent	Absent
2003	244.89	142.29	97.395	244	142	4	18	x			NA	Absent	Absent	Absent
2003	244.21	143.68	97.22	244	142	20	19	x			NA	Absent	Absent	Absent
2003	245.78	142.55	97.265	244	142	8	19	x			NA	Absent	Absent	Absent
2003	245.8	142.54	97.245	244	142	9	19	x			NA	Absent	Absent	Absent
2003	245.8	140.44	97.27	244	140	1	20	x			NA	Absent	Absent	Absent
2003	245.4	143.75	97.355	244	142	21	19	x			NA	Absent	Absent	Absent
2003	243.1	141.03	97.355	242	140	10	F90	x			NA	Absent	Absent	Absent
2003	243.04	141.06	97.355	242	140	6	F 90	x			NA	Absent	Absent	Absent
2003	243.13	141.03	97.32	242	140	13	F 90	x			NA	Absent	Absent	Absent
2003	244.24	143.43	97.32	244	142	19	19	x			NA	Absent	Absent	Absent
2003	245.8	143.19	97.395	244	142	6	18	x			NA	Absent	Absent	Absent
2003	244.16	142.69	97.375	244	142	5	18	x			NA	Absent	Absent	Absent
2003	245.18	142.83	97.37	244	142	3	18		x		NA	Absent	Absent	Absent
2003	242.98	141.05	97.35	242	140	12	F90			x	NA	Absent	Absent	Absent
2003	245.06	143.97	97.36	244	142	9	18		x		NA	Absent	Absent	Absent
2003	245.35	143.37	97.385	244	142	7	18		x		NA	Absent	Absent	Absent
2003	245.26	143.94	97.365	244	142	11	18		x		NA	Absent	Absent	Absent
2003	245.07	143.73	97.315	244	142	3	19		x		Complete	Absent	Absent	Absent
2003	245.54	143.94	97.36	244	142	13	18		x		NA	Absent	Present	Absent
2003	245.16	143.89	97.355	244	142	10	18		x		NA	Present	Absent	Absent
2003	242.95	140.93	97.345	242	140	1	F 90		x		NA	Absent	Absent	Absent
2003	242.4	143.57	97.3	242	142	2	19		x		NA	Absent	Present	Absent
2003	242.6	140.13	97.295	242	140	1	20		x		NA	Absent	Absent	Absent
2003	242.84	140.3	97.28	242	140	8	20		x		NA	Absent	Absent	Absent
2003	244.92	142.66	97.35	244	142	23	19		x		NA	Absent	Absent	Absent
2003	244.2	143.42	97.29	244	142	18	19		x		Complete	Absent	Absent	Absent
2003	242.88	140.38	97.26	242	140	9	20		x		NA	Absent	Absent	Absent
2003	244.2	143.3	97.295	244	142	15	19		x		NA	Absent	Absent	Absent
2003	242.89	143.57	97.335	242	142	12	19		x		NA	Absent	Absent	Absent
2003	244	142.58	97.275	244	142	17			x		NA	Absent	Absent	Absent
2003	245.32	143.3	97.255	244	142	22	19		x		NA	Absent	Absent	Absent
2003	243.06	140.97	97.365	242	140	7	F 90		x		NA	Absent	Absent	Absent
2003	245.35	143.91	97.36	244	142	12	18		x		Distal	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2003	243.3	140.73	97.3	242	140	10	19	x			NA	Absent	Absent	Absent
2003	242.6	141.73	97.325	242	140	12	19	x			NA	Absent	Absent	Absent
2003	242.58	140.22	97.29	242	140	2	20		x		NA	Absent	Absent	Absent
2003	243.19	141	97.36	242	140	4	F 90		x		NA	Absent	Absent	Absent
2003	243.2	143.92	97.22	242	142	22	19	x			NA	Absent	Absent	Absent
2003	242.8	140.07	97.29	242	140	5	20		x		NA	Absent	Absent	Absent
2003	243.76	141.95	97.3	242	140	6	19		x		NA	Absent	Absent	Absent
2003	244.8	143.63	97.315	244	142	12	19		x		NA	Absent	Absent	Absent
2003	244.03	143.41	97.275	244	142	14			x		proximal	present	Absent	Absent
2003	242.98	141.01	97.36	242	140	5	F 90		x		NA	Absent	Absent	Absent
2003	242.97	141.97	97.36	242	140	5	18		x		NA	Absent	Absent	Absent
2003	242.6	143.78	97.33	242	142	11	19		x		NA	Absent	Absent	Absent
2003	242.9	143.07	97.335	242	142	13	19			x	NA	Absent	Absent	Absent
2003	242.97	141.12	97.32	242	140	8	F 90		x		NA	Absent	Absent	Absent
2003	243.23	140.9	97.32	242	140	3	F 90		x		NA	Absent	Absent	Absent
2003	245.48	143.74	97.37	244	142	14	18		x		NA	Absent	Absent	Absent
2003	245.9	142.6	97.27	244	142	7	19	x	x		NA	Absent	Absent	Absent
2003	243.65	140.79	97.215	242	140	6	20	x			NA	Absent	Absent	Absent
2003	242.3	142.27	97.155	242	142	26	19		x		NA	Absent	Absent	Absent
2003	243.65	143.85	97.22	242	142	23	19	x			NA	Absent	Absent	Absent
2003	242.07	140.6	97.235	242	140	7	20		x		NA	Absent	Absent	Absent
2003	242.65	140.35	97.23	242	140	3	20	x			NA	Absent	Absent	Absent
2003	243	140.23	97.23	242	140	11	20		x		NA	Absent	Absent	Absent
2003	243.35	141.21	97.285	242	140	2	F 90		x		NA	Absent	Absent	Absent
2003	244.5	143.87	97.29	244	142	13			x		NA	Present	Present	Absent
2003	243.12	141.15	97.315	242	140	9	F90		x		NA	Absent	Absent	Absent
2003	245.42	142.85	97.315	244	142	5	19		x		NA	Absent	Absent	Absent
2003	245.03	143.14	97.3	244	142	1	19			x	Proximal	Absent	Absent	Absent
2003	243.27	140.43	97.305	242	140	7				x	NA	Absent	Absent	Absent
2003	243.42	141.32	97.315	242	140	5	19	x			NA	Absent	Absent	Absent
2003	242.9	143	97.4	242	142	5	18	x			NA	Absent	Absent	Absent
2003	243.16	143.45	97.2	242	142	21	19	x			NA	Absent	Absent	Absent
2003	243.28	143.51	97.255	242	142	15	19	x			NA	Absent	Absent	Absent
2003	242.6	143.96	97.275	242	142	19	19	x			NA	Absent	Absent	Absent
2003	242.6	143.35	97.295	242	142	3	19	x			NA	Absent	Absent	Absent
2003	242.42	143.29	97.305	242	142	4	19	x			NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2003	243.64	143.07	97.33	242	142	16	19	x			NA	Absent	Absent	Absent
2003	243.54	143.89	97.34	242	142	7	19	x			NA	Absent	Absent	Absent
2003	243.6	143.86	97.34	242	142	8	19	x			NA	Absent	Absent	Absent
2003	242.54	143.9	97.355	242	142	10	19	x			NA	Absent	Absent	Absent
2003	242.3	141.16	97.3	242	140	13	19	x			NA	Absent	Absent	Absent
2003	242.8	142.72	97.365	242	142	2	18		x		NA	Absent	Absent	Absent
2003	243	143.25	97.37	242	142	3	18		x		NA	Absent	Absent	Absent
2003	243.17	143.98	97.37	242	142	4	18		x		NA	Absent	Absent	Absent
2003	243.48	143.89	97.315	242	142	5	19		x		NA	Absent	Absent	Absent
2003	243.37	140.44	97.32	242	140	8	19		x		NA	Absent	Absent	Absent
2003	242.73	143.03	97.325	242	142	1	19		x		NA	Absent	Absent	Absent
2003	243.54	143.26	97.21			20	19		x		Distal	Absent	Absent	Absent
2003	243.49	140.8	97.32	242	140	9	19		x		NA	Absent	Absent	Absent
2003	243.07	143.04	97.26	242	142	14	19		x		NA	Absent	Absent	Absent
2003	243.66	143.99	97.27	242	142	18	19		x		Distal	Absent	Absent	Absent
2003	243.79	143.84	97.355	242	142	6	19		x		Distal	Absent	Absent	Absent
2003	243.67	143.79	97.36	242	142	9	19		x		NA	Absent	Absent	Absent
2003	242.63	140.29	97.34	242	140	3	19			x	NA	Absent	Absent	Absent
2003	243.08	141.59	97.345	242	140	1	19			x	Medial	Absent	Absent	Absent
2003	243.08	141.59	97.345	242	140	1	19			x	Medial	Absent	Absent	Absent
2003	245.71	143.63	97.42	244	142	6	17		x		Complete	Absent	Absent	Absent
2004	242.75	142.75	96.975	242	142	5	4			x	proximal	Absent	Absent	Absent
2004	242.59	142.64	96.8	242	142	6	7		x		Complete	Absent	Absent	Absent
2004	242.61	140.17	96.64	242	140	1	11			x	Distal	Absent	Absent	Absent
2004	242.54	141.28	96.955	242	140	2	4		x		NA	Absent	Absent	Absent
2004	242.18	140.41	97.005	242	140	2	4		x		NA	Absent	Absent	Absent
2004	242.39	142.8	96.81	242	142	3	7			x	NA	Absent	Absent	Absent
2004	242.38	142.84	96.825	242	142	2	7		x		Distal	Absent	Absent	Absent
2004	242.24	142.69	96.83	242	142	1	1		x		Medial	Absent	Absent	Absent
2004	243.34	141.27	96.54	242	140	1	2		x		NA	Absent	Absent	Absent
2004	242.35	141.25	96.825	242	140	5	6		x		NA	Absent	Absent	Absent
2004	242.15	142.24	97.01	242	142	4	3		x		NA	Absent	Absent	Absent
2004	242.93	141.77	96.8	242	140	5	7		x		Complete	Absent	Absent	Absent
2004	242.66	142.01	97	242	142	2	3			x	NA	Absent	Absent	Absent
2004	243.56	141.61	96.29	242	140	1	5			x	NA	Absent	Absent	Absent
2004	242.11	140.42	97.005	242	140	1	4			x	NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2004	242.92	143	96.85	242	142	6	6			x	Distal	Present	Absent	Absent
2004	242.33	140.2	96.69	242	140	1	10			x	NA	present	present	present
2004	242.19	140.06	96.87	242	140	1	6			x	NA	Absent	Absent	Absent
2004	242.3	140.31	96.725	242	140	3	9			x	NA	Absent	Absent	Absent
2004	242.64	142.77	96.82	242	142	5	7	x			Proximal	Absent	Absent	Absent
2004	243.595	141.425	96.345	242	140	1	4		x		Medial	Absent	Absent	Absent
2004	242.31	140.21	96.67	242	140	3	10			x	proximal	present	Absent	Absent
2004	242.39	142.08	97.01	242	142	3	3		x		Complete	Absent	Absent	Absent
2004	242.87	141.57	96.805	242	140	2	7		x		Na	Absent	Absent	Absent
2004	242.84	142.13	96.92	242	142	1	5		x		Distal	Absent	Absent	Absent
2004	242.41	140.5	96.85	242	140	11	7		x		Na	Absent	Absent	Absent
2004	242.12	140.21	96.75	242	140	1	9			x	NA	Absent	Absent	Absent
2004	242.18	142.46	96.86	242	142	4	6		x		NA	Absent	Absent	Absent
2004	242.63	140.56	96.945	242	140	1	5		x		NA	Absent	Absent	Absent
2004	242.55	140.82	97.025	242	140	5	3		x		Distal	Absent	Absent	Absent
2004	242.78	142.79	96.815	242	142	9	7		x		NA	Absent	Absent	Absent
2004	242.76	141.15	96.85	242	140	10	6		x		NA	Absent	Absent	Absent
2004	242.41	142.64	96.955	242	142	2	4		x		NA	Absent	Absent	Absent
2004	242.3	140.66	97.005	242	140	2	3		x		NA	Absent	Absent	Absent
2004	242.32	140.35	96.67	242	140	4	10		x		NA	Absent	Absent	Absent
2004	242.17	142.01	96.795	242	142	11	7		x		NA	Absent	Absent	Absent
2004	242.22	141.75	96.8	242	140	10	7		x		NA	Absent	Absent	Absent
2004	242.92	141.71	96.82	242	140	4	7		x		Na	Absent	Absent	Absent
2004	242.14	142.62	96.86	242	142	3	6		x		NA	Absent	Absent	Absent
2004	242.78	141.18	96.87	242	140	3	6		x		NA	Absent	Absent	Absent
2004	242.4	142.28	96.885	242	140	7	6		x		NA	Absent	Absent	Absent
2004	242.67	142.77	96.9	242	142	2	6		x		NA	Absent	Absent	Absent
2004	242.17	142.54	96.975	242	142	3	4		x		NA	Absent	Absent	Absent
2004	242.37	140.56	97.03	242	140	4	3		x		NA	Absent	Absent	Absent
2004	242.16	140.36	97.043	242	140	6	3		x		NA	Absent	Absent	Absent
2004	242.91	142.86	96.84	242	142	10	7		x		Distal	Absent	Absent	Absent
2004	242.67	142.11	96.96	242	142	1	4		x		NA	Absent	Absent	Absent
2004	242.33	140.73	96.845	242	140	2	7		x		NA	Absent	Absent	Absent
2004	242.6	140.35	96.7	242	140	4	9			x	NA	Absent	Absent	Absent
2004	242.73	140.82	96.84	242	140	1	7		x		NA	Absent	Absent	Absent
2004	242.64	142.8	96.82	242	142	12	7		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2004	242.36	141.22	96.825	242	140	7	7		x		Complete	Absent	Absent	Absent
2004	242.28	140.78	97.12	242	140	1	1			x	NA	Absent	Absent	Absent
2004	242.15	140.09	96.785	242	140	1	8	x			NA	Absent	Absent	Absent
2004	242.36	140.18	96.61	242	140	3	11	x			NA	Absent	Absent	Absent
2004	242.37	140.21	96.63	242	140	2	11	x			NA	Absent	Absent	Absent
2004	242.27	140.3	96.68	242	140	2	10	x			NA	Absent	Absent	Absent
2004	242.14	140.25	96.705	242	140	2	9	x			NA	Absent	Absent	Absent
2004	242.54	141.16	96.8	242	140	9	7	x			NA	Absent	Absent	Absent
2004	242.79	142.94	96.8	242	142	8	7	x			NA	Absent	Absent	Absent
2004	242.07	140.82	96.805	242	140	3	7	x			NA	Absent	Absent	Absent
2004	242.51	141.33	96.815	242	140	6	7	x			NA	Absent	Absent	Absent
2004	242.78	141.64	96.83	242	140	1	7	x			NA	Absent	Absent	Absent
2004	242.93	141.65	96.83	242	140	3	7	x			NA	Absent	Absent	Absent
2004	242.49	142.93	96.83	242	142	4	7	x			NA	Absent	Absent	Absent
2004	242.7	142.92	96.835	242	142	7	7	x			NA	Absent	Absent	Absent
2004	242.56	141.15	96.85	242	140	9	6	x			NA	Absent	Absent	Absent
2004	242.11	141.78	96.86	242	140	8	6	x			NA	Absent	Absent	Absent
2004	242.31	141.12	96.87	242	140	8	7		x		Complete	Absent	Absent	Absent
2004	242.65	141.67	96.87	242	140	2	6	x			NA	Absent	Absent	Absent
2004	242.92	142.88	96.87	242	142	5	6	x			NA	Absent	Absent	Absent
2004	242.69	141.12	96.88	242	140	4	6	x			NA	Absent	Absent	Absent
2004	242.74	141.02	96.885	242	140	6	6	x			NA	Absent	Absent	Absent
2004	242.12	141.88	96.885	242	140	1	6	x			NA	Absent	Absent	Absent
2004	242.52	142.81	96.885	242	142	1	6	x			NA	Absent	Absent	Absent
2004	242.04	140.34	96.925	242	140	2	5	x			NA	Absent	Absent	Absent
2004	242.24	140.74	96.95	242	140	3	4	x			NA	Absent	Absent	Absent
2004	242.51	142.08	96.98	242	142	4	4	x			NA	Absent	Absent	Absent
2004	242.92	141.9	96.99	242	140	1	4	x			NA	Absent	Absent	Absent
2004	242.3	140.78	97	242	140	3	3	x			NA	Absent	Absent	Absent
2004	242.26	140.83	97.025	242	140	1	3	x			NA	Absent	Absent	Absent
2004	242.52	141.5	97.025	242	140	2	3	x			NA	Absent	Absent	Absent
2004	242.71	142.06	97.03	242	142	1	3	x			NA	Absent	Absent	Absent
2004	242.54	142.64	97.06	242	140	1	2	x			NA	Absent	Absent	Absent
2004	243.39	141.73	96.415	242	140	2	3	x			NA	Absent	Absent	Absent
2005	243.095	140.58	96.06	242	140	8	7	x			NA	Absent	Absent	Absent
2005	247.96	141	98.15	246	140	1	9	x			NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2005	247.95	140.25	97.99	246	140	1	12		x		Complete	Absent	Absent	Absent
2005	247.49	141.69	98.08	246	140	2	10		x		NA	Absent	Absent	Absent
2005	246.5	141.76	97.89	246	140	4	14		x		Proximal	Absent	Absent	Absent
2005	246.69	141.73	97.89	246	140	3	14		x		proximal	Absent	Absent	Absent
2005	246.8	141.42	97.81	246	140	4	15		x		Complete	Absent	Absent	Absent
2005	248.6	141	98.15	248	140	1	8		x		NA	Absent	Absent	Absent
2005	247.38	142.74	98.19	246	142	2	11		x		proximal	Present	Absent	Present
2005	243.71	140.08	96.1	242	140	11	6			x	Complete	Absent	Absent	Absent
2005	244.21	140.05	96.65	244	140	2	5		x		NA	Absent	Absent	Absent
2005	246.3	140.28	97.53	246	140	16	21		x		Proximal	Absent	Absent	Absent
2005	247.83	143.98	98.25	246	142	4	9		x		Medial	Absent	Absent	Absent
2005	243.23	141.92	95.9	242	140	4	1		x		NA	Absent	Absent	Absent
2005	243.27	141.92	95.91	242	140	3	1		x		NA	Absent	Absent	Absent
2005	243.08	141.87	95.95	242	140	2	1		x		Complete	Absent	Absent	Absent
2005	243.08	141.84	95.95	242	140	1	1	x			NA	Absent	Absent	Absent
2005	243.18	141.42	95.8	242	140	7	2	x			NA	Absent	Absent	Absent
2005	243.03	141.27	95.8	242	140	6	2	x			NA	Absent	Absent	Absent
2005	243.22	141.49	95.8	242	140	11	2	x			NA	Absent	Absent	Absent
2005	243.1	142	95.82	242	140	18	2		x		NA	Absent	Absent	Absent
2005	243.09	141.57	95.83	242	140	16	2	x			Complete	Absent	Absent	Absent
2005	243.38	141.65	95.83	242	140	5	2	x			NA	Absent	Absent	Absent
2005	243.29	141.74	95.84	242	140	14	2	x			NA	Absent	Absent	Absent
2005	243.47	141.74	95.85	242	140	12	2	x			NA	Absent	Absent	Absent
2005	243.1	141.61	95.86	242	140	10	2	x			NA	Absent	Absent	Absent
2005	243.34	141.84	95.86	242	140	2	2		x		Complete	Absent	Absent	Absent
2005	243.39	141.73	95.861	242	140	8	2	x			NA	Absent	Absent	Absent
2005	243.31	141.745	95.87	242	140	3	2		x		Complete	Absent	Absent	Absent
2005	243.1	141.96	95.89	242	140	1	2	x			NA	Absent	Absent	Absent
2005	243.16	141.17	95.7	242	140	12	3		x		NA	Absent	Absent	Absent
2005	243.23	141.4	95.7	242	140	9	3		x		NA	Absent	Absent	Absent
2005	243.49	141.95	95.71	242	140	6	3		x		NA	Absent	Absent	Absent
2005	243.22	140.28	95.74	242	140	8	3	x			Proximal	Absent	Absent	Absent
2005	243.12	141.77	95.75	242	140	3	3	x			NA	Absent	Absent	Absent
2005	243.22	141.1	95.77	242	140	10	3		x		NA	Absent	Absent	Absent
2005	243.13	141.74	95.79	242	140	1	3	x			NA	Absent	Absent	Absent
2005	243.41	141.75	95.79	242	140	2	3	x			Absent	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2005	243.25	141.35	95.6	242	140	14	4		x		NA	Absent	Absent	Absent
2005	243.37	141.64	95.61	242	140	11	4			x	NA	Absent	Absent	Absent
2005	243.47	141.84	95.61	242	140	10	4		x		Complete	Absent	Absent	Absent
2005	243.42	141.82	95.62	242	140	9	4		x		NA	Absent	Absent	Absent
2005	243.57	141.8	95.63	242	140	6	4		x		NA	Absent	Absent	Absent
2005	243.48	141.57	95.64	242	140	7	4	x			NA	Absent	Absent	Absent
2005	243.15	141.92	95.65	242	140	5	4		x		NA	Absent	Absent	Absent
2005	243.05	141.94	95.66	242	140	3	4	x			NA	Absent	Absent	Absent
2005	243.17	141.35	95.68	242	140	4	4		x		Complete	Absent	Absent	Absent
2005	243.5	141.7	95.69	242	140	1	4		x		Complete	Absent	Absent	Absent
2005	243.3	141.19	95.695	242	140	12	4		x		NA	Absent	Absent	Absent
2005	243.38	141.72	95.48	242	140	1	5		x		NA	Absent	Absent	Absent
2005	243.18	140.18	96.21	242	140	2	2		x		NA	Absent	Absent	Absent
2005	243.75	140.1	96	242	140	2	3		x		Medial	Absent	Absent	Absent
2005	243.66	140.28	96.3	242	140	6	3	x			NA	Absent	Absent	Absent
2005	243.91	140	96.3	242	140	13	3		x		NA	Absent	Present	Absent
2005	243.89	140.12	96.31	242	140	9	3	x			NA	Absent	Absent	Absent
2005	243.78	140.07	96.35	242	140	12	3	x			NA	Absent	Absent	Absent
2005	243.43	140.21	96.49	242	140	1	3	x			NA	Absent	Absent	Absent
2005	243.93	140.05	96	242	140	14	4		x		Proximal	Absent	Absent	Absent
2005	243.78	140.36	96.3	242	140	5	4		x		NA	Absent	Absent	Absent
2005	243.82	140.335	96.3	242	140	3	4		x		NA	Present	Absent	Absent
2005	243.77	140.33	96.3	242	140	8	4		x		NA	Absent	Absent	Absent
2005	243.88	140.2	96.3	242	140	10	4		x		NA	Absent	Absent	Absent
2005	243.74	140.37	96.3	242	140	4	4	x			NA	Absent	Absent	Absent
2005	243.77	140.365	96.3	242	140	1	4	x			Distal	Absent	Absent	Absent
2005	243.79	140.2	96.3	242	140	7	4	x			NA	Absent	Absent	Absent
2005	243.79	140.33	96.31	242	140	2	4	x			NA	Absent	Absent	Absent
2005	243.67	140.05	96.35	242	140	11	4	x			NA	Absent	Absent	Absent
2005	243.77	140.145	96.2	242	140	6	5		x		NA	Absent	Absent	Absent
2005	243.66	140.18	96.21	242	140	3	5	x			NA	Absent	Absent	Absent
2005	243.84	140.23	96.21	242	140	8	5	x			NA	Absent	Absent	Absent
2005	243.52	140.275	96.215	242	140	4	5		x		NA	Absent	Absent	Absent
2005	243.8	140.16	96.22	242	140	7	5	x			NA	Absent	Absent	Absent
2005	243.85	140.125	96.22	242	140	9	5		x		NA	Absent	Absent	Absent
2005	243.94	140.14	96.23	242	140	10	5	x			NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2005	243.89	140.21	96.24	242	140	5	5		x		NA	Absent	Absent	Absent
2005	243.345	140.15	95.19	242	140	33	6	x			NA	Absent	Absent	Absent
2005	243.55	141.72	95.5	242	140	6	6		x		NA	Absent	Absent	Absent
2005	243.755	140.21	96.1	242	140	18	6		x		NA	Absent	Absent	Absent
2005	243.06	140.69	96.1	242	140	38	6		x		NA	Absent	Absent	Absent
2005	243.6	140.255	96.11	242	140	7	6		x		Complete	Absent	Absent	Absent
2005	243.56	140.04	96.11	242	140	36	6		x		Complete	Absent	Absent	Absent
2005	243.15	140.88	96.115	242	140	40	6	x			NA	Absent	Absent	Absent
2005	243.38	140.12	96.115	242	140	26	6		x		NA	Absent	Absent	Absent
2005	243.52	140.08	96.125	242	140	35	6	x			NA	Absent	Absent	Absent
2005	243.53	140.23	96.13	242	140	9	6		x		Complete	Absent	Absent	Absent
2005	243.725	140	96.14	242	140	17	6	x			NA	Present	Absent	Absent
2005	243	140.64	96.14	242	140	39	6	x			NA	Absent	Absent	Absent
2005	243.52	140.08	96.145	242	140	37	6	x			NA	Absent	Absent	Absent
2005	243.92	140.15	96.15	242	140	15	6		x		NA	Absent	Absent	Absent
2005	243.54	140.13	96.15	242	140	28	6	x			NA	Absent	Absent	Absent
2005	243.41	140.22	96.15	242	140	4	6	x			NA	Absent	Absent	Absent
2005	243.52	140.2	96.15	242	140	10	6	x			NA	Absent	Absent	Absent
2005	243.54	140.13	96.16	242	140	29	6		x		NA	Absent	Absent	Absent
2005	243.75	140.14	96.16	242	140	13	6	x			NA	Absent	Absent	Absent
2005	243.79	140.02	96.16	242	140	5	6		x		NA	Absent	Absent	Absent
2005	243.54	140.07	96.16	242	140	32	6		x		NA	Absent	Absent	Absent
2005	243.29	140.34	96.16	242	140	25	6	x			NA	Absent	Absent	Absent
2005	243.38	140.15	96.17	242	140	27	6		x		NA	Absent	Absent	Absent
2005	243.55	140.19	96.17	242	140	1	6			x	Complete	Absent	Absent	Absent
2005	243.37	140.2	96.17	242	140	2	6	x			NA	Absent	Absent	Absent
2005	243.3	140.37	96.17	242	140	22	6	x			NA	Absent	Absent	Absent
2005	243.51	140.08	96.175	242	140	31	6		x		NA	Absent	Absent	Absent
2005	243.53	140.24	96.18	242	140	8	6		x		NA	Absent	Absent	Absent
2005	243.77	140.175	96.18	242	140	12	6		x		NA	Absent	Absent	Absent
2005	243.5	140.1	96.18	242	140	24	6	x			NA	Absent	Absent	Absent
2005	243.515	140.15	96.18	242	140	19	6	x			NA	Absent	Absent	Absent
2005	243.325	140.29	96.19	242	140	21	6	x			NA	Absent	Absent	Absent
2005	243.54	140.04	96.19	242	140	34	6	x			NA	Absent	Absent	Absent
2005	243.825	140.02	96.19	242	140	16	6		x		NA	Absent	Absent	Absent
2005	243.52	140.06	96.19	242	140	30	6		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2005	243.53	140.11	96.195	242	140	23	6	x			NA	Absent	Absent	Absent
2005	243.82	140.35	96.25	242	140	1	6		x		NA	Absent	Absent	Absent
2005	243.15	140.88	96	242	140	14	7		x		NA	Absent	Absent	Absent
2005	243.08	140.55	96	242	140	11	7	x			NA	Absent	Absent	Absent
2005	243.18	140.425	96.01	242	140	22	7			x	Complete	Absent	Absent	Absent
2005	243.18	140.89	96.015	242	140	13	7		x		NA	Absent	Absent	Absent
2005	243.65	140.15	96.02	242	140	21	7		x		NA	Absent	Absent	Absent
2005	243.58	140.23	96.025	242	140	16	7		x		NA	Absent	Absent	Absent
2005	243.69	140.22	96.04	242	140	20	7	2.2	x		NA	Distal	Absent	Absent
2005	243.56	140.18	96.04	242	140	17	7			x	Proximal	Absent	Absent	Absent
2005	243.585	140.15	96.05	242	140	18	7		x		NA	Absent	Absent	Absent
2005	243.585	140.12	96.05	242	140	19	7	x			NA	Absent	Absent	Absent
2005	243.08	140.83	96.055	242	140	12	7	x			NA	Absent	Absent	Absent
2005	243.2	140.605	96.06	242	140	4	7		x		NA	Possible	Absent	Absent
2005	243.22	140.69	96.06	242	140	5	7	x			NA	Absent	Absent	Absent
2005	243.195	140.67	96.07	242	140	6	7	x			NA	Absent	Absent	Absent
2005	243.08	140.71	96.075	242	140	9	7	x			NA	Absent	Absent	Absent
2005	243.17	140.71	96.08	242	140	7	7		x		NA	Absent	Absent	Absent
2005	243.11	140.485	96.08	242	140	3	7		x		NA	Absent	Absent	Absent
2005	243.735	140.41	96.08	242	140	1	7	x			NA	Absent	Absent	Absent
2005	243.16	140.255	96.085	242	140	2	7		x		Complete	Absent	Absent	Absent
2005	243.22	140.875	96.09	242	140	10	7	x			NA	Absent	Absent	Absent
2005	243.07	140.26	96.09	242	140	15	7	x			NA	Absent	Absent	Absent
2005	243.34	140.24	95.71	242	140	2	10		x		NA	Absent	Absent	Absent
2005	243.09	144.54	97.57	242	144	1	10		x		NA	Absent	Absent	Absent
2005	244.31	140.02	96.74	244	140	1	4	x			NA	Absent	Absent	Absent
2005	244.64	140.07	96.75	244	140	2	4			x	Complete	Absent	Absent	Absent
2005	244.44	140.3	96.6	244	140	1	5			x	Complete	Present	Absent	Absent
2005	244.51	140.08	96.55	244	140	5	6		x		NA	Absent	Absent	Absent
2005	244.87	140.87	96.55	244	140	1	6			x	Distal	Absent	Absent	Absent
2005	244.48	140.08	96.41	244	140	2	7			x	NA	Absent	Absent	Absent
2005	244.46	140.37	96.46	244	140	1	7		x		NA	Absent	Absent	Absent
2005	244.9	140.17	97.065	244	140	1	10		x		NA	Absent	Absent	Absent
2005	244.84	140.16	95.74	244	140	3	14		x		Complete	Absent	Absent	Absent
2005	244.35	140.41	95.6	244	140	2	15	x			NA	Absent	Absent	Absent
2005	244.42	140.49	95.64	244	140	1	15			x	NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2005	244.11	140.1	95.57	244	140	1	16		x		NA	Absent	Absent	Absent
2005	244.5	140.17	95.58	244	140	2	16		x		NA	Absent	Absent	Absent
2005	244.3	144.8	97.93	244	144					x	NA	Absent	Absent	Absent
2005	247.92	140.32	98.1	246	140	6	9		x		NA	Absent	Absent	Absent
2005	247.89	140.93	98.1	246	140	3	9		x		NA	Absent	Absent	Absent
2005	247.77	140.82	98.13	246	140	5	9			x	NA	Absent	Absent	Absent
2005	247.3	140.32	98.09	246	140	1	10			x	NA	Absent	Absent	Absent
2005	247.1	141.85	97.92	246	140	1	13		x		NA	Absent	Absent	Absent
2005	247.65	141.97	97.84	246	140	1	17			x	NA	Absent	Absent	Absent
2005	247.06	141.68	141.68	246	140	6	18		x		NA	Absent	Absent	Absent
2005	247.3	141.25	97.62	246	140	3	19	x			NA	Absent	Absent	Absent
2005	247.71	140.88	97.81	246	140	1	15	x			NA	Absent	Absent	Absent
2005	247.1	140.18	140.18	246	140	5	18			x	Medial	Absent	Absent	Absent
2005	246.46	141.25	97.87	246	140	5	14		x		Complete	Absent	Absent	Absent
2005	246.84	141.67	97.87	246	140	2	14		x		Complete	Absent	Absent	Absent
2005	246.85	141.56	97.88	246	140	1	14			x	proximal	Absent	Absent	Absent
2005	246.37	141.46	97.8	246	140	5	15			x	Complete	Absent	Absent	Absent
2005	246.28	141.46	97.8	246	140	6	15		x		Complete	Present	Absent	Absent
2005	246.28	141.4	97.83	246	140	2	15		x		NA	Absent	Absent	Absent
2005	246.3	141.3	97.83	246	140	3	15		x		NA	Absent	Absent	Absent
2005	246.8	140.9	97.7	246	140	13	17	x			NA	Absent	Absent	Absent
2005	246.62	141.53	97.84	246	140	2	17	x			Complete	Absent	Absent	Absent
2005	246.15	141.58	97.66	246	140	3	18	x			NA	Absent	Absent	Absent
2005	246.22	141.08	97.5	246	140	4	21		x		NA	Absent	Absent	Absent
2005	246.46	141.26	97.5	246	140	8	21		x		Medial	Absent	Absent	Absent
2005	146.77	141.17	97.51	246	140	5	21			x	NA	Absent	Absent	Absent
2005	146.95	141.28	97.52	246	140	3	21		x		NA	Absent	Absent	Absent
2005	143.37	141.29	97.52	246	140	7	21		x		Medial	Absent	Absent	Absent
2005	246.18	141.33	97.52	246	140	1	21		x		NA	Absent	Absent	Absent
2005	146.49	141.04	97.53	246	140	6	21	x			NA	Absent	Absent	Absent
2005	246.57	141.3	97.54	246	140	2	21		x		Complete	Absent	Absent	Absent
2005	246.78	140.12	97.5	246	140	17	21		x		Medial	Absent	Absent	Absent
2005	246.36	140.92	97.52	246	140	14	21		x		NA	Absent	Absent	Absent
2005	246.36	140.41	97.52	246	140	12	21		x		Distal	Absent	Absent	Absent
2005	246.38	140.33	97.52	246	140	10	21	x			NA	Absent	Absent	Absent
2005	246.5	140.295	97.53	246	140	9	21		x		Medial	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2005	246.3	140.57	97.53	246	140	13	21		x		NA	Absent	Absent	Absent
2005	246.92	140.53	97.53	246	140	15	21	x			NA	Absent	Absent	Absent
2005	247.19	142.35	98.31	246	142	1	8			x	Complete	Absent	Absent	Absent
2005	247.2	143.45	98.24	246	142	3	9	x			NA	Absent	Absent	Absent
2005	247.63	143.3	98.25	246	142	5	9		x		NA	Absent	Absent	Absent
2005	247.72	143.16	98.27	246	142	6	9			x	NA	Present	Absent	Absent
2005	247.68	143.63	98.27	246	142	1	9			x	NA	Absent	Absent	Absent
2005	247.12	142.11	98.23	246	142	3	10			x	Distal	Absent	Absent	Absent
2005	247.91	142.83	98.17	246	142	3	11		x		Distal	Absent	Absent	Absent
2005	247.5	143.85	98.205	246	142	1	11			x	NA	Absent	Absent	Absent
2005	247.3	143.25	98.05	246	142	2	13			x	NA	Absent	Absent	Absent
2005	247.66	143.64	98	246	142	4	14			x	NA	Absent	Absent	Absent
2005	247.4	143.08	98.02	246	142	2	14		x		NA	Absent	Absent	Absent
2005	247.28	143	98.03	246	142	3	14		x		NA	Absent	Absent	Absent
2005	247.1	143.09	98.04	246	142	5	14		x		NA	Absent	Absent	Absent
2005	247.96	143.17	98.05	246	142	1	14		x		NA	Absent	Absent	Absent
2005	247.15	143.3	97.99	246	142	4	15		x		proximal	Absent	Absent	Absent
2005	247.52	142.97	97.95	246	142	21	16		x		NA	Absent	Absent	Absent
2005	247.06	142.1	97.95	246	142	16	6	x			Complete	Absent	Absent	Absent
2005	247.46	142.83	97.95	246	142	7	7	x			NA	Absent	Absent	Absent
2005	247.06	142.1	97.91	246	142	19	16	x			NA	Absent	Absent	Absent
2005	247.05	142.85	97.92	246	142	3	16	x			NA	Absent	Absent	Absent
2005	247.77	142.67	97.92	246	142	9	16	x			NA	Absent	Absent	Absent
2005	247.49	142.53	97.92	246	142	12	16	x			NA	Absent	Absent	Absent
2005	247.24	142.86	97.93	246	142	17	16	x			NA	Absent	Absent	Absent
2005	247.64	142.78	97.93	246	142	6	16			x	proximal	Absent	Absent	Absent
2005	247.76	142.8	97.93	246	142	18	16		x		NA	Absent	Absent	Absent
2005	247.66	142.33	97.94	246	142	4	16	x			NA	Absent	Absent	Absent
2005	247.8	142.2	97.95	246	142	15	16	x			NA	Absent	Absent	Absent
2005	247.2	142.49	97.95	246	142	13	16	x			NA	Absent	Absent	Absent
2005	247.49	142.66	97.95	246	142	10	16		x		Medial	Absent	Absent	Absent
2005	247.38	142.66	97.95	246	142	11	16		x		NA	Absent	Absent	Absent
2005	247.13	142.74	97.95	246	142	8	16		x		NA	Absent	Absent	Absent
2005	247.1	142.28	97.95	246	142	14	16		x		NA	Absent	Absent	Absent
2005	247.78	143.01	97.965	246	142	20	16		x		NA	Absent	Absent	Absent
2005	247.65	142.36	97.81	246	142	2	18			x	NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2005	247.84	142.12	97.72	246	142	2	20		x		proximal	Absent	Absent	Absent
2005	247.39	142.14	97.72	246	142	1	20		x		NA	Absent	Absent	Absent
2005	247.64	142.03	97.57	246	142	2	23	x			NA	Absent	Absent	Absent
2005	247.91	142.25	97.57	246	142	1	23		x		NA	Absent	Absent	Absent
2005	246.36	143.73	97.95	246	142	2	15		x		NA	Absent	Absent	Absent
2005	246.83	143.44	97.96	246	142	3	15	x			NA	Absent	Absent	Absent
2005	246.21	143.39	97.95	246	142	23	16			x	Medial	Absent	Absent	Absent
2005	246.76	142.33	97.95	246	142	1	16		x		NA	Absent	Absent	Absent
2005	247.6	142.31	97.65	246	142	1	21	x			NA	Absent	Absent	Absent
2005	246.37	143.07	97.65	246	142	5	21	x			NA	Absent	Absent	Absent
2005	246.63	143.15	97.66	246	142	4	21	x			NA	Absent	Absent	Absent
2005	247.87	142.13	97.68	246	142	2	21		x		NA	Absent	Absent	Absent
2005	246.31	143.06	97.57	246	142	6	23		x		NA	Absent	Absent	Absent
2005	246.21	143.07	97.4	246	142	1	26		x		NA	Absent	Absent	Absent
2005	246.96	142.25	97.95	246	142	1	15	x			Absent	Absent	Absent	Absent
2005	246.64	143.05	97.95	246	142	22	16			x	Complete	Absent	Absent	Absent
2005	246.77	142.6	97.95	246	142	2	16		x		NA	Absent	Absent	Absent
2005	246.15	142.01	97.85	246	142	1	18			x	NA	Absent	Absent	Absent
2005	246.8	142.375	97.67	246	142	3	21	x			NA	Absent	Absent	Absent
2005	246.64	143.88	97.6	246	142	1	22	x			NA	Absent	Absent	Absent
2005	246.67	143.02	97.62	246	142	2	22	x			NA	Absent	Absent	Absent
2005	246.66	143.01	97.62	246	142	3	22	x			NA	Absent	Absent	Absent
2005	246.44	142.04	97.55	246	142	3	23		x		NA	Absent	Absent	Absent
2005	246.2	142.04	97.55	246	142	4	23			x	NA	Absent	Absent	Absent
2005	246.57	142.69	97.55	246	142	5	23		x		NA	Absent	Absent	Absent
2005	246.4	142.71	97.51	246	142	4	24		x		Medial	Absent	Absent	Absent
2005	246.24	142.02	97.52	246	142	1	24	x			NA	Absent	Absent	Absent
2005	246.09	142.39	97.52	246	142	2	24			x	NA	Absent	Absent	Absent
2005	248.65	141.1	98.17	248	140	4	8		x		Distal	Absent	Absent	Absent
2005	248	140.9	98.15	248	140	3	8			x	Complete	Absent	Absent	Absent
2005	246.73	142.89	97.88	246	142	3	17	x			NA	Absent	Absent	Absent
2005	247.12	142.4	97.88	246	142	4	17	x			NA	Absent	Absent	Absent
2005	246.5	141.2	97.75	246	140	2			x		Medial	Absent	Absent	Absent
2005	246.84	142.12	97.86	246	142	2	17		x		NA	Absent	Absent	Absent
2005	246.48	142.66	97.9	246	142	1	17			x	proximal	Absent	Absent	Absent
2005	246.84	142.12	97.86	246	142	2	12			x	Medial	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2005	247.06	142.19	97.88	246	142	5	17		x		NA	Present	Absent	Absent
2005	247.96	143.15	98.09	246	142	1	12		x		NA	Absent	Absent	Absent
2005	247.285	141.38	97.51	246	140	18	21		x		Medial	Absent	Absent	Absent
2005	248.4	140.7	98.15	248	140	2	8		x		Medial	Absent	Absent	Absent
2005	247.6	140.3	97.85	246	140	1			x		NA	Present	Absent	Present
2005	243.5	141.54	95.72	242	140	7	3		x		Proximal	Absent	Absent	Yes
2005	243.38	141.55	95.47	242	140	1	6		x		NA	Present	Absent	Absent
2005	246.7	141.3	97.73	246	140	3	17	x			Medial	Absent	Absent	Absent
2005	246.16	141.96	97.74	246	140	8	17		x		NA	Absent	Absent	Absent
2005	246.76	141.43	97.73	246	140	11	17		x		Complete	Absent	Absent	Absent
2005	246.64	141.25	97.73	246	140	12	17		x		Medial	Absent	Absent	Absent
2005	246.46	141.26	97.73	246	140	6	17		x		NA	Absent	Absent	Absent
2005	246.25	141.4	97.75	246	140	7	17		x		Medial	Absent	Absent	Absent
2005	246.5	141.41	97.75	246	140	5	17		x		NA	Absent	Absent	Absent
2005	246.33	141.4	97.73	246	140	9	17		x		Distal	Absent	Absent	A Absent
2005	246.93	141.35	97.72	246	140	10	17			x	Medial	Absent	Absent	Absent
2005	246.25	141.74	97.71	246	140	14	17			x	NA	Absent	Absent	Absent
2005	246.8	141.96	97.56	246	140	1	20	x			NA	Absent	Absent	Absent
2005	246.26	140.92	97.6	246	140	3	20	x			NA	Absent	Absent	Absent
2005	246.12	140.8	97.58	246	140	5	20	x			NA	Absent	Absent	Absent
2005	247.23	141.23	97.55	246	140	10	20	x			NA	Absent	Absent	Absent
2005	246.24	140.03	97.55	246	140	4	20		x		Distal	Absent	Absent	Absent
2005	247.07	140.87	97.55	246	140	7	20			x	Medial	Absent	Absent	Absent
2005	247.08	141.28	97.57	246	140	12	20		x		NA	Absent	Absent	Absent
2005	246.35	140.48	97.55	246	140	2	20		x		NA	Absent	Absent	Absent
2005	247.03	140.25	97.55	246	140	8	20		x		NA	Absent	Absent	Absent
2005	247.81	140.09	97.5	246	140	9	20		x		NA	Absent	Absent	Absent
2005	243.01	141.1	95.43	242	140	3	6		x		NA	Present	Present	Absent
2005	246.2	140.96	97.65	246	140	4	18		x		NA	Absent	Present	Absent
2006	242.57	141.37	96.77	242	140	2	1		x		Medial	Absent	Absent	Absent
2006	242.66	141.75	96.755	242	140	3	1		x		NA	Absent	Absent	Absent
2006	242.78	141.6	96.75	242	140	4	1	x			NA	Absent	Absent	Absent
2006	242.82	141.63	96.78	242	140	5	1		x		NA	Absent	Absent	Absent
2006	242.83	141.64	96.745	242	140	6	1	x			NA	Absent	Absent	Absent
2006	242.855	141.635	96.78	242	140	7	1	x			NA	Absent	Absent	Absent
2006	242.8	141.58	96.745	242	140	8	1		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2006	242.655	141.325	96.75	242	140	9	1		x		NA	Absent	Absent	Absent
2006	242.31	141.66	96.71	242	140	2	2		x		NA	Absent	Absent	Absent
2006	242.3	141.68	96.71	242	140	3	2		x		NA	Absent	Absent	Absent
2006	242.35	141.63	96.7	242	140	1	3		x		NA	Absent	Absent	Absent
2006	242.15	141.6	96.7	242	140	2	3	x			NA	Absent	Absent	Absent
2006	242.33	141.7	96.7	242	140	3	3		x		NA	Absent	Absent	Absent
2006	242.3	141.56	96.63	242	140	4	3		x		NA	Absent	Absent	Absent
2006	242.75	141.8	96.65	242	140	1	4	x			Complete	Absent	Absent	Absent
2006	242.52	141.32	96.61	242	140	3	4		x		NA	Absent	Absent	Absent
2006	242.29	141.47	96.65	242	140	4	4	x			NA	Absent	Absent	Absent
2006	242.82	141.73	96.56	242	140	1	5		x		NA	Absent	Absent	Absent
2006	242.12	141.33	96.5	242	140	1	6	x			NA	Absent	Absent	Absent
2006	242.4	141.05	96.5	242	140	3	6		x		Na	Absent	Absent	Absent
2006	242.65	141.31	96.5	242	140	4	6		x		NA	Absent	Absent	Absent
2006	242.98	141.89	96.5	242	140	5	6	x			NA	Absent	Absent	Absent
2006	242.98	141.56	96.5	242	140	6	6	x			NA	Absent	Absent	Absent
2006	242.49	141.2	96.502	242	140	7	6		x		NA	Absent	Absent	Absent
2006	242.562	141.23	96.55	242	140	8	6	x			NA	Absent	Absent	Absent
2006	242.602	141.22	96.5	242	140	9	6	x			NA	Absent	Absent	Absent
2006	242.84	141.08	96.45	242	140	1	7		x		Complete	Absent	Absent	Absent
2006	242.83	141.24	96.45	242	140	2	7		x		NA	Absent	Absent	Absent
2006	242.92	141.69	96.45	242	140	4	7		x		NA	Absent	Absent	Absent
2006	242.58	141.29	96.43	242	140	1	8		x		Proximal	Absent	Absent	Absent
2006	242.99	141.35	96.4	242	140	1	9		x		Distal	Absent	Absent	Absent
2006	242.22	141.88	96.37	242	140	2	9		x		Distal	Absent	Absent	Absent
2006	242.81	141.83	96.35	242	140	3	9	x			NA	Absent	Absent	Absent
2006	242.48	141.25	96.375	242	140	4	9	x			NA	Absent	Absent	Absent
2006	242.95	141.23	96.39	242	140	5	9			x	NA	Absent	Absent	Absent
2006	242.8	141.32	96.4	242	140	7	9		x		NA	Absent	Absent	Absent
2006	242.19	141.21	96.37	242	140	8	9			x	NA	Absent	Absent	Absent
2006	242.7	141.11	96.35	242	140	9	9		x		NA	Absent	Absent	Absent
2006	242.86	141.07	96.35	242	140	1	10			x	NA	Absent	Absent	Absent
2006	242.78	141.13	96.35	242	140	2	10			x	proximal	Absent	Absent	Absent
2006	242.72	141.82	96.35	242	140	4	10			x	NA	Absent	Absent	Absent
2006	242.98	141.13	96.32	242	140	5	10		x		NA	Absent	Absent	Absent
2006	242.775	141.77	96.33	242	140	6	10		x		proximal	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2006	242585	141.76	96.335	242	140	9	10			x	Complete	Absent	Absent	Absent
2006	242.19	141.84	96.31	242	140	11	10		x		NA	Absent	Absent	Absent
2006	242.64	141.68	96.31	242	140	12	10		x		Medial	Absent	Absent	Absent
2006	242.97	141.09	96.29	242	140	1	11			x	Complete	yes	no	yes
2006	242.42	141.59	96.29	242	140	2	11		x		NA	Absent	Absent	Absent
2006	242.85	141.05	96.29	242	140	3	11		x		NA	Absent	Absent	Absent
2006	242.45	141.52	96.27	242	140	4	11	x			NA	Absent	Absent	Absent
2006	242.15	141.54	96.28	242	140	5	11		x		NA	Absent	Absent	Absent
2006	242.14	141.39	96.255	242	140	6	11		x		NA	Absent	Absent	Absent
2006	242.13	141.71	96.275	242	140	7	11		x		NA	Absent	Absent	Absent
2006	242.03	141.84	96.25	242	140	8	11		x		NA	Absent	Absent	Absent
2006	242.315	141.79	96.255	242	140	9	11	x			NA	Absent	Absent	Absent
2006	242.9	141.38	96.24	242	140	1	12			x	Complete	Absent	Absent	Absent
2006	242.96	141.78	96.23	242	140	2	12		x		NA	Absent	Absent	Absent
2006	242.83	141.23	96.21	242	140	3	12		x		NA	Absent	Absent	Absent
2006	242.61	141.24	96.22	242	140	4	12	x			NA	Absent	Absent	Absent
2006	242.33	141.82	96.21	242	140	6	12		x		NA	Absent	Absent	Absent
2006	242.98	141.7	96.2	242	140	7	12	x			Complete	Absent	Absent	Absent
2006	242.09	141.81	96.22	242	140	8	12		x		NA	Absent	Absent	Absent
2006	242.15	141.43	96.24	242	140	9	12		x		NA	Absent	Absent	Absent
2006	242.12	141.33	96.22	242	140	11	12		x		Proximal	Absent	Absent	Absent
2006	242.03	141.265	96.22	242	140	12	12		x		NA	Absent	Absent	Absent
2006	242.53	141.92	96.185	242	140	1	13		x		NA	Absent	Absent	Absent
2006	242.33	141.92	96.15	242	140	2	13		x		Distal	Absent	Absent	Absent
2006	242.12	141.9	96.15	242	140	3	13		x		NA	Absent	Absent	Absent
2006	242.11	141.19	96.15	242	140	5	13	x			proximal	Absent	Absent	Absent
2006	242.99	141.97	96.1	242	140	1	14		x		proximal	Absent	Absent	Absent
2006	242.9	141.99	96.13	242	140	2	14	x			Distal	Absent	Absent	Absent
2006	242.99	141.22	96.145	242	140	3	14	x			Complete	Absent	Absent	Absent
2006	242.4	141.07	96.14	242	140	5	14		x		NA	Absent	Absent	Absent
2006	242.43	141.71	96.14	242	140	6	14	x			NA	Absent	Absent	Absent
2006	242.54	141.18	96	242	140	7	14	x			NA	Absent	Absent	Absent
2006	242.26	141.21	96.14	242	140	8	14		x		NA	Absent	Absent	Absent
2006	242.68	141.35	96.1	242	140	9	14		x		NA	Absent	Absent	Absent
2006	242.83	141	96.05	242	140	1	15		x		NA	Absent	Absent	Absent
2006	242.57	141.15	96.05	242	140	2	15	x			Distal	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2006	242.56	141.03	96.09	242	140	3	15		x		NA	Absent	Absent	Absent
2006	242.46	141.05	96.09	242	140	4	15			x	NA	Absent	Absent	Absent
2006	242.81	141.92	96.08	242	140	5	15	x			Proximal	Absent	Absent	Absent
2006	242.45	141.75	96.07	242	140	6	15			x	NA	Absent	Absent	Absent
2006	242.07	141.71	96.06	242	140	7	15	x			NA	Absent	Absent	Absent
2006	242.82	141.82	96	242	140	1	16		x		NA	Absent	Absent	Absent
2006	242.9	141.82	96.04	242	140	2	16	x			NA	Absent	Absent	Absent
2006	242.82	141.97	96.04	242	140	3	16		x		NA	Absent	Absent	Absent
2006	242.97	141.63	96.03	242	140	4	16			x	proximal	Absent	Absent	Absent
2006	242.8	141.1	96.03	242	140	5	16	x			NA	Absent	Absent	Absent
2006	242.2	141.5	96.02	242	140	7	16		x		NA	Absent	Absent	Absent
2006	242.28	142.185	96.02	242	140	8	16		x		Complete	Absent	Absent	Absent
2006	242.22	140.15	96.55	242	140	1	1	x			NA	Absent	Absent	Absent
2006	242.54	140.18	96.55	242	140	2	1		x		NA	Absent	Absent	Absent
2006	242.12	140.11	96.55	242	140	3	1		x		NA	Absent	Absent	Absent
2006	242.2	140.35	96.55	242	140	4	1	x			NA	Absent	Absent	Absent
2006	242.32	140.72	96.52	242	140	1	2		x		NA	Absent	Absent	Absent
2006	242.32	140.72	96.52	242	140	1	2		x		Proximal	Absent	Absent	Absent
2006	242.28	140.12	96.53	242	140	2	2		x		NA	Absent	Absent	Absent
2006	242.28	140.12	96.53	242	140	2	2		x		NA	Absent	Absent	Absent
2006	242.38	140.5	96.54	242	140	3	2			x	Distal	Absent	Absent	Absent
2006	242.22	140.97	96.51	242	140	4	2		x		NA	Absent	Absent	Absent
2006	242.91	140.3	96.53	242	140	5	2		x		NA	Absent	Absent	Absent
2006	242.53	140.18	96.53	242	140	6	2	x			NA	Absent	Absent	Absent
2006	242.12	140.2	96.54	242	140	8	2		x		Complete	Absent	Absent	Absent
2006	242.48	140.3	96.54	242	140	9	2		x		NA	Absent	Absent	Absent
2006	242.07	140.51	96.5	242	140	10	2		x		NA	Absent	Absent	Absent
2006	242.13	140.28	96.49	242	140	1	3	x			NA	Absent	Absent	Absent
2006	242.37	140.2	96.42	242	140	1	4			x	l	Present	Present	Present
2006	242.44	140.68	96.4	242	140	2	4		x		NA	Present	Absent	Present
2006	242.09	140.27	96.45	242	140	3	4		x		Medial	Absent	Absent	Absent
2006	242.14	140.25	96.45	242	140	4	4		x		NA	Absent	Absent	Absent
2006	242.75	140.2	96.33	242	140	1	6		x		NA	Absent	Absent	Absent
2006	242.46	140.68	96.33	242	140	2	6	x			NA	Absent	Absent	Absent
2006	242.86	140.93	96.27	242	140	1	7		x		Distal	Absent	Absent	Absent
2006	242.74	140.24	96.28	242	140	2	7		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2006	242.27	140.45	96.27	242	140	3	7		x		Complete	Absent	Absent	Absent
2006	242.4	140.53	96.28	242	140	4	7			x	Distal	Absent	Absent	Absent
2006	242.04	140.29	96.29	242	140	7	7		x		NA	Absent	Absent	Absent
2006	242.02	140.52	96.28	242	140	8	7	x			NA	Absent	Absent	Absent
2006	242.94	140.23	96.3	242	140	9	7		x		Distal	Absent	Absent	Absent
2006	242.9	140.32	96.295	242	140	10	7		x		NA	Absent	Absent	Absent
2006	242.95	140.7	96.22	242	140	1	8		x		NA	Absent	Absent	Absent
2006	242.95	140.7	96.22	242	140	2	8		x		NA	Absent	Absent	Absent
2006	242.79	140.19	96.285	242	140	3	8			x	NA	Present	Present	Absent
2006	242.53	140.3	96.24	242	140	4	8		x		NA	Absent	Absent	Absent
2006	242.31	140.225	96.235	242	140	5	8	x			NA	Absent	Absent	Absent
2006	242.98	140.8	96.19	242	140	1	9			x	NA	Absent	Absent	Absent
2006	242.665	140.185	96.17	242	140	2	9			x	NA	Absent	Absent	Absent
2006	242.93	140.61	96.19	242	140	3	9			x	NA	Absent	Absent	Absent
2006	242.68	140.66	96.13	242	140	5	9		x		NA	Absent	Absent	Absent
2006	242.8	140.68	96.14	242	140	1	10		x		NA	Absent	Absent	Absent
2006	242.92	140.6	96.15	242	140	2	10		x		NA	Absent	Absent	Absent
2006	242.82	140.72	96.1	242	140	3	10			x	Distal	Absent	Absent	Absent
2006	242.96	140.21	96.12	242	140	5	10		x		NA	Absent	Absent	Absent
2006	242.93	140.18	96.115	242	140	6	10		x		NA	Absent	Absent	Absent
2006	242.025	140.09	96.11	242	140	8	10			x	NA	Absent	Absent	Absent
2006	242.84	140.535	96.085	242	140	1	11			x	NA	Absent	Absent	Absent
2006	242.19	140.58	96.085	242	140	2	11			x	proximal	Absent	Absent	Absent
2006	242.96	140.65	96.07	242	140	3	11		x		NA	Absent	Absent	Absent
2006	242.74	140.665	96.06	242	140	4	11		x		NA	Absent	Absent	Absent
2006	242.92	140.24	96.105	242	140	4	11		x		NA	Absent	Absent	Absent
2006	242.95	140.22	96.07	242	140	5	11			x	Complete	Absent	Absent	Absent
2006	242.93	140.13	96.06	242	140	6	11	x			NA	Absent	Absent	Absent
2006	242.85	140.85	96.06	242	140	7	11			x	NA	Absent	Absent	Absent
2006	242.72	140.67	96.05	242	140	8	11	x			NA	Absent	Absent	Absent
2006	242.98	140.99	96.06	242	140	10	11		x		Distal	Absent	Absent	Absent
2006	242.63	140.7	96.06	242	140	11	11		X		Distal	Absent	Absent	Absent
2006	242.59	140.91	96.075	242	140	13	11		x		Proximal	Absent	Absent	Absent
2006	242.58	140.8	96.055	242	140	14	11		x		NA	Absent	Absent	Absent
2006	242.54	140.84	96.06	242	140	15	11	x			Na	Absent	Absent	Absent
2006	242.04	140.37	96.085	242	140	16	11			x	Na	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2006	242.13	140.9	96.07	242	140	17	11		x		NA	Absent	Absent	Absent
2006	242.12	140.41	96.005	242	140	18	11		x		NA	Absent	Absent	Absent
2006	242.85	140.31	96.03	242	140	1	12		x		Distal	Present	Present	Present
2006	242.79	140.29	96.01	242	140	2	12			x	NA	Absent	Absent	Absent
2006	242.93	140.38	96	242	140	3	12		x		Distal	Absent	Absent	Absent
2006	242.8	140.97	96	242	140	4	12	x			NA	Absent	Absent	Absent
2006	242.35	140.43	96	242	140	5	12		x		Distal	Absent	Absent	Absent
2006	242.25	140.77	96	242	140	6	12	x			NA	Absent	Absent	Absent
2006	242.35	140.43	96	242	140	7	12			x	NA	Absent	Absent	Absent
2006	242.89	140.23	95.95	242	140	1	13			x	NA	Absent	Absent	Absent
2006	242.63	140.38	95.95	242	140	2	13			x	NA	Absent	Absent	Absent
2006	242.38	140.63	95.95	242	140	3	13			x	Complete	Absent	Absent	Absent
2006	242.47	140.79	95.96	242	140	4	13		x		NA	Absent	Absent	Absent
2006	242.42	140.1	95.95	242	140	5	13		x		NA	Absent	Absent	Absent
2006	242.7	140.88	95.95	242	140	7	13	x			NA	Absent	Absent	Absent
2006	242.93	140.36	95.9	242	140	1	14		x		NA	Absent	Absent	Absent
2006	242.55	140.36	95.9	242	140	2	14	x			NA	Absent	Absent	Absent
2006	242.56	140.34	95.9	242	140	3	14			x	NA	Absent	Absent	Absent
2006	242.86	140.29	95.87	242	140	1	15			x	NA	Absent	Absent	Absent
2006	242.16	140.9	95.85	242	140	2	15			x	NA	Absent	Absent	Absent
2006	242.7	140.17	95.82	242	140	1	16		x		NA	Absent	Absent	Absent
2006	242.8	140.94	95.81	242	140	3	16		x		NA	Absent	Absent	Absent
2006	242.47	141.73	96.34	242	140	7	10		x		NA	Present	Present	Absent
2006	242.49	141.41	96.72	242	140	1	2		x		Complete	Absent	Absent	Absent
2006	242.43	142.95	96.67	242	142	4	3			x	proximal	Absent	Absent	Absent
2006	242.69	142.195	96.67	242	142	1	3			x	Distal	Absent	Absent	Absent
2006	242.86	142.16	96.68	242	142	2	3		x		Distal	Absent	Absent	Absent
2006	242.9	142.17	96.73	242	142	1	2		x		Distal	Absent	Absent	Absent
2006	242.77	142.29	96.71	242	142	3	2	x			NA	Absent	Absent	Absent
2006	242.29	142.55	96.72	242	142	5	2	x			NA	Absent	Absent	Absent
2006	242.28	142.8	96.7	242	142	8	2		x		NA	Absent	Absent	Absent
2006	242.64	141.865	96.34	242	140	8	10		x		NA	Absent	Absent	Absent
2006	242.77	141.56	96.77	242	140	1	1			x	Medial	Absent	Absent	Absent
2006	242.75	142.09	96.71	242	142	2	2			x	Distal	Absent	Absent	Absent
2006	242.4	141.46	96.145	242	140	4	14		x		NA	Absent	Absent	Absent
2006	242.15	142.32	96.77	242	142	5	1			x	NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2006	242.43	142.73	96.43	242	142	1	8		x		NA	Absent	Absent	Absent
2006	242.34	142.635	96.51	242	142	4	6			x	Medial	Absent	Absent	Absent
2006	242.7	140.68	96.155	242	140	4	9			x	Media	Absent	Absent	Absent
2006	242.31	141.47	96.22	242	140	5	12		x		NA	Absent	Absent	Absent
2006	242.35	141.85	96.73	242	140	4	2		x		NA	Absent	Absent	Absent
2006	242.73	140.36	95.8	242	140	2	16			x	NA	Absent	Absent	Absent
2006	242.22	140.62	96.01	242	140	8	12			x	NA	Absent	Absent	Absent
2006	242.33	140.8	95.8	242	140	4	16			x	NA	Absent	Absent	Absent
2006	242.28	142.14	96.755	242	142	1	1		x		NA	Absent	Absent	Absent
2006	242.47	142.7	96.77	242	142	7	1		x		NA	Absent	Absent	Absent
2006	242.63	142.65	96.51	242	142	5	6			x	NA	Absent	Absent	Absent
2006	242.07	142.49	96.45	242	142	1	7		x		NA	Absent	Absent	Absent
2006	242.24	140.68	96.36	242	140	1	5			x	NA	Absent	Absent	Absent
2006	242.17	140.19	96.255	242	140	6	7		x		NA	Absent	Absent	Absent
2006	242.23	141.28	96.02	242	140	6	16		x		NA	Absent	Absent	Absent
2006	242.32	140.32	95.91	242	140	4	14		x		NA	Absent	Absent	Absent
2006	242.41	142.41	96.625	242	142	1	4	x			Complete	Absent	Absent	Absent
2006	242.5	142.87	96.52	242	142	1	6	x			NA	Absent	Absent	Absent
2006	242.93	142.925	96.42	242	142	6	8	x			NA	Absent	Absent	Absent
2006	242.4	142.025	96.35	242	142	2	9	x			NA	Absent	Absent	Absent
2006	242.54	142.95	96.39	242	142	4	9	x			NA	Absent	Absent	Absent
2006	242.37	142.435	96.36	242	142	6	9	x			NA	Absent	Absent	Absent
2006	242.48	141.77	96.35	242	140	6	9			x	NA	Absent	Absent	Absent
2006	242.37	142.06	96.355	242	142	1	9		x		Complete	Absent	Absent	Absent
2006	242.48	142.12	96.7	242	142	6	2		x		Complete	Absent	Absent	Absent
2006	242.38	142.825	96.66	242	142	3	3			x	Distal	Absent	Absent	Absent
2006	242.745	142.895	96.58	242	142	2	5		x		NA	Absent	Absent	Absent
2006	242.19	142.815	96.53	242	142	3	3		x		NA	Absent	Absent	Absent
2006	242.205	142.58	96.5	242	142	2	6		x		proximal	Absent	Absent	Absent
2006	242.62	142.58	96.52	242	142	6	6		x		NA	Absent	Absent	Absent
2006	242.44	142.94	96.45	242	142	2	7			x	Distal	Absent	Absent	Absent
2006	242.26	142.68	96.78	242	142	2	1		x		Complete	Absent	Absent	Absent
2006	242.03	142.32	96.605	242	142	2	4		x		proximal	Absent	Absent	Absent
2006	242.72	142.77	96.31	242	142	7	6		x		NA	Absent	Absent	Absent
2006	242.99	142.24	96.41	242	142	2	8		x		Distal	Absent	Absent	Absent
2006	242.71	142.99	96.39	242	142	3	9		x		proximal	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2006	242.45	142.35	96.38	242	142	5	9		x		NA	Absent	Absent	Absent
2007	242.97	141.94	95.97	242	140	1	17		x					
2007	242.37	141.9	95.93	242	140	2	18	x			NA	Absent	Absent	Absent
2007	241.37	141.9	95.93	242	140	2	18		x		NA	Absent	Absent	Absent
2007	242.34	141.44	95.93	242	140	3	18	x			NA	Absent	Absent	Absent
2007	241.34	141.44	95.93	242	140	3	18	x			NA	Absent	Absent	Absent
2007	242.5	141.5	95.96	242	140	4	18			x	NA	Absent	Absent	Absent
2007	242.34	141.85	95.87	242	140	1	19	x			Complete	Absent	Absent	Absent
2007	242.66	141.3	95.9	242	140	2	19	x			NA	Absent	Absent	Absent
2007	242.11	141.66	95.88	242	140	4	19		x		NA	Absent	Absent	Absent
2007	242.65	141.37	95.86	242	140	5	19	x			NA	Absent	Absent	Absent
2007	242.54	141.4	95.88	242	140	6	19	x			NA	Absent	Absent	Absent
2007	242.31	141.49	95.89	242	140	8	19	x			NA	Absent	Absent	Absent
2007	242.52	141.95	95.83	242	140	1	20			x	NA	Absent	Absent	Absent
2007	242.67	141.97	95.83	242	140	2	20		x		Distal	Absent	Absent	Absent
2007	242.84	141.42	95.82	242	140	3	20		x		NA	Absent	Absent	Absent
2007	242.82	141.78	95.81	242	140	4	20			x	NA	Absent	Absent	Absent
2007	242.88	141.29	95.82	242	140	5	20	x			Complete	Absent	Absent	Absent
2007	242.66	141.34	95.83	242	140	6	20	x			NA	Absent	Absent	Absent
2007	242.59	141.36	95.82	242	140	7	20	x			NA	Absent	Absent	Absent
2007	242.94	141.12	95.82	242	140	8	20			x	NA	Absent	Absent	Absent
2007	242.44	141.64	95.8	242	140	9	20		x		NA	Absent	Absent	Absent
2007	242.05	141.92	95.83	242	140	12	20		x		NA	Absent	Absent	Absent
2007	242.25	141.82	95.81	242	140	13	20		x		NA	Absent	Absent	Absent
2007	242.43	141.36	95.81	242	140	14	20	x			Distal	Absent	Absent	Absent
2007	242.3	141.64	95.8	242	140	15	20		x		NA	Absent	Absent	Absent
2007	242.09	141.67	95.79	242	140	1	21		x		NA	Absent	Absent	Absent
2007	242.99	141.95	95	242	140	2	21		x		NA	Absent	Absent	Absent
2007	242.99	141.87	95.77	242	140	2	21		x		NA	Absent	Absent	Absent
2007	242.81	141.8	95.75	242	140	3	21		x		NA	Absent	Absent	Absent
2007	242.82	141.52	95.77	242	140	4	21	x			Complete	Absent	Absent	Absent
2007	242.75	141.44	95.79	242	140	5	21	x			NA	Absent	Absent	Absent
2007	242.71	141.93	95.8	242	140	6	21			x	Complete	Absent	Absent	Absent
2007	242.71	141.22	95.76	242	140	7	21		x		Complete	Absent	Absent	Absent
2007	242.71	141.13	95.77	242	140	8	21		x		NA	Absent	Absent	Absent
2007	242.56	141.8	95.77	242	140	9	21		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2007	242.49	141.93	95.77	242	140	10	21		x		NA	Absent	Absent	Absent
2007	242.44	141.86	95.76	242	140	11	21	x			Medial	Absent	Absent	Absent
2007	242.38	141.67	95.7	242	140	12	21		x		Complete	Absent	present	Absent
2007	242.25	141.75	95.79	242	140	14	21		x		NA	Absent	Absent	Absent
2007	242.24	141.32	95.76	242	140	15	21	x			Complete	Absent	Absent	Absent
2007	242.16	141.72	95.77	242	140	16	21		x		NA	Absent	Absent	Absent
2007	242.11	141.71	95.75	242	140	17	21			x	NA	Absent	Absent	Absent
2007	242.11	141.17	95.78	242	140	18	21		x		Complete	Absent	Absent	Absent
2007	242.06	141.98	95.78	242	140	19	21	x			NA	Absent	Absent	Absent
2007	242	141.8	95.75	242	140	20	21			x	Medial	Absent	Absent	Absent
2007	242.99	141.88	95.72	242	140	1	22			x	proximal	Absent	Absent	Absent
2007	242.26	141.26	95.7	242	140	3	22			x	Distal	Absent	Absent	Absent
2007	242.15	141.11	95.74	242	140	4	22	x			Complete	Absent	Absent	Absent
2007	242.99	141.7	95.7	242	140	5	22	x			NA	Absent	Absent	Absent
2007	242.98	141.74	95.71	242	140	6	22	x			NA	Absent	Absent	Absent
2007	242.99	141.61	95.74	242	140	7	22	x			NA	Absent	Absent	Absent
2007	242.93	141.36	95.7	242	140	8	22			x	Distal	Absent	Absent	Absent
2007	242.9	141.65	95.73	242	140	9	22	x			NA	Absent	Absent	Absent
2007	242.87	141.93	95.72	242	140	10	22	x			NA	Absent	Absent	Absent
2007	242.89	141.93	95.7	242	140	11	22		x		Distal	Absent	Absent	Absent
2007	242.7	140.52	95.705	242	140	12	22		x		NA	Possible	Absent	Absent
2007	242.7	141.09	95.73	242	140	13	22		x		Distal	Absent	Absent	Absent
2007	242.56	141.32	95.71	242	140	15	22		x		NA	Absent	Absent	Absent
2007	242.4	141.35	95.72	242	140	16	22		x		NA	Absent	Absent	Absent
2007	242.38	141.62	95.72	242	140	17	22		x		NA	Absent	Absent	Absent
2007	242.28	141.7	95.72	242	140	18	22			x	NA	Absent	Absent	Absent
2007	242.26	141.44	95.7	242	140	19	22	x			NA	Absent	Absent	Absent
2007	242.28	141.18	95.72	242	140	20	22		x		NA	Absent	Absent	Absent
2007	242.18	141.79	95.7	242	140	21	22		x		NA	Absent	Absent	Absent
2007	242.18	141.73	95.71	242	140	22	22	x			NA	Absent	Absent	Absent
2007	242.13	141.79	95.7	242	140	23	22		x		NA	Absent	Absent	Absent
2007	242.12	141.41	95.71	242	140	24	22		x		Broken	Absent	Absent	Absent
2007	242.54	141.99	95.67	242	140	1	23		x		PROXIMAL	Absent	Absent	Absent
2007	242.88	141.6	95.65	242	140	2	23		x		Complete	Absent	Absent	Absent
2007	242.92	141.35	95.68	242	140	3	23	x			Distal	Absent	Absent	Absent
2007	242.875	141.29	95.65	242	140	4	23		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2007	242.945	141.22	95.69	242	140	5	23		x		NA	Absent	Absent	Absent
2007	242.785	141.28	95.67	242	140	6	23		x		NA	Absent	Absent	Absent
2007	242.71	141.79	95.65	242	140	7	23			x	NA	Absent	Absent	Absent
2007	242.71	141.79	95.65	242	140	8	23			x	Proximal	Absent	Absent	Absent
2007	242.58	141.26	95.67	242	140	9	23			x	NA	Absent	Absent	Absent
2007	242.4	141.88	95.66	242	140	10	23			x	Medial	Absent	Absent	Absent
2007	242.36	141.74	95.65	242	140	11	23		x		NA	Absent	Absent	Absent
2007	242.26	141.71	95.65	242	140	12	23		x		NA	Absent	Absent	Absent
2007	242.28	141.63	95.65	242	140	13	23			x	NA	Absent	Absent	Absent
2007	242.13	141.91	95.66	242	140	14	23		x		Proximal	Absent	Absent	Absent
2007	242.1	141.79	95.66	242	140	15	23		x		NA	Absent	Absent	Absent
2007	242.08	141.99	95.655	242	140	16	23		x		NA	Absent	Absent	Absent
2007	242	141.8	95.69	242	140	17	23	x			proximal	Absent	Absent	Absent
2007	242.5	141.13	95.64	242	140	1	24			x	Distal	Absent	Absent	Absent
2007	242.5	141.84	95.61	242	140	2	24			x	NA	Absent	Absent	Absent
2007	242.8	141.17	95.61	242	140	3	24		x		Distal	Absent	Absent	Absent
2007	242.99	141.87	95.62	242	140	4	24	x			Proximal	Absent	Absent	Absent
2007	242.465	141.52	95.63	242	140	5	24			x	NA	Absent	Absent	Absent
2007	242.73	141.99	95.62	242	140	6	24		x		Complete	Absent	Absent	Absent
2007	242.77	141.71	95.64	242	140	7	24		x		NA	Absent	Absent	Absent
2007	242.24	141.96	95.61	242	140	8	24	x			NA	Absent	Absent	Absent
2007	242.8	141.28	95.6	242	140	9	24		x		NA	Absent	Absent	Absent
2007	242.535	141.77	95	242	140	10	24			x	NA	Absent	Absent	Absent
2007	242.4	141.8	95.63	242	140	11	24		x		NA	Absent	Absent	Absent
2007	242.34	141.78	95.65	242	140	12	24		x		NA	Absent	Absent	Absent
2007	242.69	141.74	95.63	242	140	13	24		x		NA	Absent	Absent	Absent
2007	242.32	141.93	95.6	242	140	14	24		x		Proximal	Absent	Absent	Absent
2007	242.94	141.8	95.63	242	140	15	24	x			NA	Absent	Absent	Absent
2007	242.28	141.95	95.6	242	140	16	24	x			Proximal	Absent	Absent	Absent
2007	242.93	141.81	95.6	242	140	17	24		x		NA	Absent	Absent	Absent
2007	242.95	141.85	95.62	242	140	18	24		x		Distal	Absent	Absent	Absent
2007	242.23	141.71	95.64	242	140	19	24		x		Complete	Absent	Absent	Absent
2007	242.14	141.91	95.63	242	140	20	24		x		NA	Absent	Absent	Absent
2007	242.16	141.13	95.64	242	140	21	24	x			NA	Absent	Absent	Absent
2007	242.13	141.46	95.64	242	140	22	24		x		Complete	Absent	Absent	Absent
2007	242.18	141.75	95.64	242	140	23	24	x			NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2007	242.14	141.78	95.65	242	140	24	24	x			NA	Absent	Absent	Absent
2007	242.12	141.86	95.64	242	140	25	24	x			NA	Absent	Absent	Absent
2007	242.695	141.485	95.71	242	140	25	24	x			NA	Absent	Absent	Absent
2007	242.33	141.82	95.6	242	140	26	24		x		NA	Absent	Absent	Absent
2007	242.15	141.96	95.6	242	140	27	24		x		Complete	Absent	Absent	Absent
2007	242.07	141.03	95.6	242	140	28	24		x		NA	Absent	Absent	Absent
2007	242.08	141.94	95.6	242	140	29	24		x		NA	Absent	Absent	Absent
2007	242.11	141	95.6	242	140	1	25		x		proximal	Absent	Absent	Absent
2007	242.39	141.21	95.59	242	140	2	25	x			NA	Absent	Absent	Absent
2007	242.53	141.46	95.55	242	140	3	25		x		NA	Absent	Absent	Absent
2007	242.58	141.51	95.57	242	140	4	25	x			NA	Absent	Absent	Absent
2007	242.27	141.6	95.58	242	140	5	25		x		NA	Absent	Absent	Absent
2007	242.21	141.62	95.56	242	140	6	25			x	Medial	Absent	Absent	Absent
2007	242.34	141.68	95.58	242	140	7	25	x			NA	Absent	Absent	Absent
2007	242.18	141.68	95.57	242	140	8	25		x		NA	Absent	Absent	Absent
2007	242.07	141.71	95.57	242	140	9	25		x		Complete	Absent	Absent	Absent
2007	242.11	141.71	95.56	242	140	10	25			x	NA	Absent	Absent	Absent
2007	242.4	141.79	95.56	242	140	11	25		x		NA	Absent	Absent	Absent
2007	242.25	141.93	95.59	242	140	12	25			x	NA	Absent	Absent	Absent
2007	242.99	141.68	95.55	242	140	13	25	x			NA	Absent	Absent	Absent
2007	242.98	141.02	95.55	242	140	14	25		x		NA	Absent	Absent	Absent
2007	242.99	141.86	95.57	242	140	15	25		x		NA	Absent	Absent	Absent
2007	242.99	141.97	95.6	242	140	16	25	x			NA	Absent	Absent	Absent
2007	242.95	141.22	95.57	242	140	17	25		x		NA	Absent	Absent	Absent
2007	242.98	141.54	95.59	242	140	18	25		x		NA	Absent	Absent	Absent
2007	242.88	141.94	95.55	242	140	19	25	x			fragment	Absent	Absent	Absent
2007	242.84	141.85	95.55	242	140	20	25		x		NA	Absent	Absent	Absent
2007	242.82	141.96	95.58	242	140	21	25	x			NA	Absent	Absent	Absent
2007	242.79	141.69	95.59	242	140	22	25	x			Distal	Absent	Absent	Absent
2007	242.8	141.62	95.55	242	140	23	25		x		NA	Absent	Absent	Absent
2007	242.71	141.92	95.56	242	140	24	25		x		Complete	Absent	Absent	Absent
2007	242.73	141.69	95.59	242	140	25	25	x			Distal	Absent	Absent	Absent
2007	242.77	141.62	95.55	242	140	26	25	x			NA	Absent	Absent	Absent
2007	242.73	141.6	95.55	242	140	27	25	x			NA	Absent	Absent	Absent
2007	242.65	141.94	95.56	242	140	28	25		x		NA	Absent	Absent	Absent
2007	242.67	141.88	95.56	242	140	29	25		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2007	242.5	141.7	95.58	242	140	30	25	x			NA	Absent	Absent	Absent
2007	242.55	141.94	95.56	242	140	33	25		x		NA	Absent	Absent	Absent
2007	242.37	141.98	95.585	242	140	34	25		x		NA	Absent	Absent	Absent
2007	242.35	141.85	95.555	242	140	35	25		x		NA	Absent	Absent	Absent
2007	242.33	141.83	95.55	242	140	36	25		x		Complete	Absent	Absent	Absent
2007	242.62	141.77	95.59	242	140	37	25	x			NA	Absent	Absent	Absent
2007	242.29	141.88	95.55	242	140	38	25		x		NA	Absent	Absent	Absent
2007	242.26	141.61	95.56	242	140	40	25		x		NA	Absent	Absent	Absent
2007	242.22	141.89	95.55	242	140	41	25	x			Complete	Absent	Absent	Absent
2007	242.59	141.98	95.55	242	140	42	25		x		NA	Absent	Absent	Absent
2007	242.99	141.53	95.55	242	140	1	26		x		NA	Absent	Absent	Absent
2007	242.93	141.48	95	242	140	2	26	x			Complete	Absent	Absent	Absent
2007	242.98	141.96	95.52	242	140	3	26		x		NA	Absent	Absent	Absent
2007	242.94	141.81	95.52	242	140	4	26		x		NA	Absent	Absent	Absent
2007	242.76	141.82	95.51	242	140	6	26		x		NA	Absent	Absent	Absent
2007	242.62	141.43	95.5	242	140	7	26		x		proximal	Absent	Absent	Absent
2007	242.57	141.34	95.5	242	140	8	26	x			NA	Absent	Absent	Absent
2007	242.43	141.86	95.51	242	140	9	26		x		NA	Absent	Absent	Absent
2007	242.37	141.37	95.49	242	140	10	26	x			NA	Absent	Absent	Absent
2007	242.86	140.93	95.8	242	140	1	17		x		NA	Absent	Absent	Absent
2007	242.69	140.96	95.8	242	140	2	17		x		NA	Absent	Absent	Absent
2007	242.48	140.85	95.8	242	140	3	17		x		proximal	Absent	Absent	Absent
2007	242.11	140.7	95.76	242	140	4	17		x		NA	Absent	Absent	Absent
2007	242.08	140.26	95.8	242	140	5	17		x		Distal	Absent	Absent	Absent
2007	242.32	140.12	95.8	242	140	6	17		x		NA	Absent	Absent	Absent
2007	242.71	140.44	95.75	242	140	7	17		x		NA	Absent	Absent	Absent
2007	242.77	140.4	95.8	242	140	8	17		x		NA	Absent	Absent	Absent
2007	242.87	140.3	95.79	242	140	9	17		x		proximal	Absent	Absent	Absent
2007	242.91	140.03	95.8	242	140	10	17			x	NA	Absent	Absent	Absent
2007	242.84	140.29	95.74	242	140	2	18			x	Complete	Absent	Absent	Absent
2007	242.84	140.08	95.71	242	140	3	18		x		NA	Absent	Absent	Absent
2007	242.45	140.47	95.73	242	140	4	18			x	NA	Absent	Absent	Absent
2007	242.2	140.54	95.74	242	140	5	18			x	NA	Absent	Absent	Absent
2007	242.38	140.27	95.73	242	140	6	18	x			NA	Absent	Absent	Absent
2007	242.5	140.94	95.73	242	140	7	18			x	NA	Absent	Absent	Absent
2007	242.44	140.75	95.75	242	140	9	18		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2007	242.07	140.7	95.73	242	140	10	18		x		Proximal	Absent	Absent	Absent
2007	242.76	140.6	95.74	242	140	11	18		x		NA	Absent	Absent	Absent
2007	242.67	140.95	95.67	242	140	1	19		x		NA	Absent	Absent	Absent
2007	242.64	140.78	95.69	242	140	2	19			x	Distal	Absent	Absent	Absent
2007	242.99	140.76	95.69	242	140	3	19	x			NA	Absent	Absent	Absent
2007	242.47	140.72	95.67	242	140	4	19		x		NA	Absent	Absent	Absent
2007	242.44	140.48	95.7	242	140	5	19			x	NA	Absent	Absent	Absent
2007	242.44	140.79	95.67	242	140	6	19		x		Complete	Absent	Absent	Absent
2007	242.49	140.82	95.69	242	140	7	19			x	NA	Absent	Absent	Absent
2007	242.6	140.21	95.7	242	140	8	19		x		NA	Absent	Absent	Absent
2007	242.59	140.24	95.7	242	140	9	19		x		NA	Absent	Absent	Absent
2007	242.48	140.19	95.68	242	140	10	19	x			Complete	Absent	Absent	Absent
2007	242.05	140.62	95.67	242	140	12	19		x		NA	Absent	Absent	Absent
2007	242.1	140.02	95.68	242	140	13	19			x	NA	Absent	Absent	Absent
2007	242.2	140.24	95.69	242	140	14	19		x		Complete	Absent	Absent	Absent
2007	242.25	140.2	95.67	242	140	15	19		x		NA	Absent	Absent	Absent
2007	242.3	140.11	95	242	140	16	19		x		NA	Absent	Absent	ABSENT
2007	242.29	140.11	95.69	242	140	17	19		x		NA	Absent	Absent	Absent
2007	242.29	140.04	95.69	242	140	18	19		x		NA	Absent	Absent	Absent
2007	242.79	140.85	95.6	242	140	1	20	x			NA	Absent	Absent	Absent
2007	242.66	140.74	95.64	242	140	2	20	x			NA	Absent	Absent	Absent
2007	242.59	140.72	95.62	242	140	3	20		x		NA	Absent	Absent	Absent
2007	242.38	140.49	95.64	242	140	4	20	x			NA	Absent	Absent	Absent
2007	242.45	140.95	95.61	242	140	5	20	x			NA	Absent	Absent	Absent
2007	242.25	140.88	95.65	242	140	6	20		x		NA	Absent	Absent	Absent
2007	242.27	140.8	95.65	242	140	7	20		x		NA	Absent	Absent	Absent
2007	242.61	140.96	95.59	242	140	3	21		x		NA	Absent	Absent	Absent
2007	242.08	140.75	95.59	242	140	4	21	x			NA	Absent	Absent	Absent
2007	242.28	140.41	95.59	242	140	5	21		x		NA	Absent	Absent	Absent
2007	242.3	140.04	95.59	242	140	6	21		x		NA	Absent	Absent	Absent
2007	242.64	140.08	95.6	242	140	7	21		x		NA	Absent	Absent	Absent
2007	242.53	140.22	95.52	242	140	1	22		x		NA	Absent	Absent	Absent
2007	2242.67	140.45	95.45	242	140	1	23		x		NA	Absent	Absent	Absent
2007	242.84	140.68	95.46	242	140	2	23		x		NA	Absent	Absent	Absent
2007	242.87	140.46	95.4	242	140	3	23	x			Distal	Absent	Absent	Absent
2007	242.92	140.8	95.48	242	140	4	23		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2007	242.83	140.74	95.46	242	140	5	23		x		NA	Absent	Absent	Absent
2007	242.83	140.63	95.45	242	140	6	23	x			NA	Absent	Absent	Absent
2007	242.74	140.67	95.48	242	140	7	23		x		NA	Absent	Absent	Absent
2007	242.75	140.76	95.48	242	140	8	23	x			NA	Absent	Absent	Absent
2007	243.12	142.25	96.81	242	142	1	8	x			NA	Absent	Absent	Absent
2007	243.12	142.2	96.81	242	142	2	8	x			NA	Absent	Absent	Absent
2007	243.085	142.45	96.74	242	142	1	9		x		NA	Absent	Absent	Absent
2007	243.12	142.58	96.75	242	142	2	9		x		NA	Absent	Absent	Absent
2007	243.62	142.99	96.74	242	142	3	9		x		NA	Absent	Absent	Absent
2007	244.77	139.84	97.05	244	138	1	2	x			Medial	Absent	Absent	Absent
2007	244.5	139.05	97.01	244	138	2	2		x		NA	Absent	Absent	Absent
2007	244.62	139.53	97.005	244	138	3	2		x		Medial	Absent	Absent	Absent
2007	244.97	139.32	97.06	244	138	6	2			x	NA	Present	Absent	Absent
2007	244.85	139.51	96.97	244	138	1	3	x			NA	Present	Absent	Absent
2007	244.47	139.59	97	244	138	2	3			x	NA	Absent	Absent	Absent
2007	244.97	139.4	96.995	244	138	3	3	x			NA	Absent	Absent	Absent
2007	244.845	139.235	96.965	244	138	5	3			x	NA	Absent	Absent	Absent
2007	244.265	139.145	96.97	244	138	7	3			x	NA	Absent	Absent	Absent
2007	244.84	139.85	96.905	244	138	1	4		x		Distal	Absent	Absent	Absent
2007	244.77	139.59	95.92	244	138	2	4		x		Complete	Absent	Absent	Absent
2007	244.09	139.49	96.93	244	138	3	4		x		NA	Absent	Absent	Absent
2007	244.89	139.29	96.9	244	138	4	4		x		NA	Absent	Absent	Absent
2007	244.3	139.22	96.9	244	138	6	4		x		NA	Absent	Absent	Absent
2007	244.89	139.27	96.9	244	138	7	4		x		NA	Absent	Absent	Absent
2007	244.67	139.41	96.91	244	138	8	4	x			NA	Absent	Absent	Absent
2007	244.67	139.37	96.88	244	138	2	5		x		NA	Absent	Absent	Absent
2007	244.76	139.31	96.865	244	138	3	5			x	NA	Absent	Absent	Absent
2007	244.67	139.84	96.87	244	138	4	5		x		Medial	Absent	Absent	Absent
2007	244.67	139.84	96.86	244	138	5	5	x			NA	Absent	Absent	Absent
2007	244.225	139.83	96.87	244	138	6	5		x		NA	Absent	Absent	Absent
2007	244.44	139.19	96.86	244	138	7	5			x	Complete	Absent	Absent	Absent
2007	244.44	139.88	96.83	244	138	2	6		x		Medial	Absent	Absent	Absent
2007	244.23	139.49	96.82	244	138	3	6		x		Distal	Absent	Possible	Absent
2007	244.76	139.85	96.815	244	138	4	6		x		Distal	Absent	Absent	Absent
2007	244.4	139.12	96.84	244	138	5	6		x		NA	Absent	Absent	Absent
2007	234.34	139.025	96.82	244	138	7	6	x			Medial	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2007	244.205	139	96.81	244	138	8	6			x	Complete	Absent	Absent	Absent
2007	244.53	139.53	96.8	244	138	9	6	x			Medial	Absent	Present	Absent
2007	244.99	139.28	96.8	244	138	10	6			x	NA	Absent	Absent	Absent
2007	244.71	139.31	96.785	244	138	1	7			x	Medial	Absent	Absent	Absent
2007	244.47	139.88	96.76	244	138	2	7			x	Distal	Absent	Absent	Absent
2007	244.32	139.48	96.79	244	138	3	7			x	NA	Absent	Absent	Absent
2007	244.58	139.43	96.785	244	138	4	7		x		Distal	Absent	Absent	Absent
2007	244.3	139.355	96.74	244	138	1	8		x		NA	Absent	Absent	Absent
2007	244.765	139.66	96.72	244	138	2	8			x	NA	Absent	Absent	Absent
2007	244.39	139.55	96.74	244	138	3	8		x		NA	Absent	Absent	Absent
2007	244.39	139.76	96.7	244	138	4	8			x	Medial			
2007	244.46	139.905	96.715	244	138	5	8			x	NA	Absent	Absent	Absent
2007	244.64	139.22	96.66	244	138	1	9			x	Distal	Present	Absent	Absent
2007	244.48	139.26	96.7	244	138	2	9		x		proximal	Absent	Present	Absent
2007	244.54	139.76	96.66	244	138	3	9		x		Distal	Present	Absent	Present
2007	244.3	139.66	96.68	244	138	4	9		x		Distal	Absent	Absent	Absent
2007	244.15	139.63	96.665	244	138	5	9			x	NA	Absent	Absent	Absent
2007	244.17	139.93	96	244	138	6	9		x		Distal	Absent	Absent	Absent
2007	244.15	139.95	96.66	244	138	7	9			x	Distal	Absent	Absent	Absent
2007	244.29	139.91	96.62	244	138	3	10		x		NA	Absent	Absent	Absent
2007	244.32	139.46		244	138	4	10			x	Distal	Present	Absent	Present
2007	244.42	139.42	96.63	244	138	5	10		x		NA	Present	Absent	Absent
2007	244.51	139.58	96.56	244	138	1	11		x		NA	Possible	Absent	Absent
2007	244.69	139.31	96.58	244	138	2	11		x		Distal	Absent	Absent	Absent
2007	244.7	139.34	96.58	244	138	3	11		x		Distal	Present	Present	Present
2007	244.2	139.74	96.62	244	138	2	10				NA	Absent	Absent	Absent
2007	244	139	95.62	244	138	2	10		x					
2007	244.71	139.42	96.55	244	138	4	11		x		NA	Present	Present	Absent
2007	244.29	139.99	96.67	244	138	8			x		NA	Absent	Absent	Absent
2007	244.29	139.82	96.62	244	138	1	10			x	NA	Present	Absent	Present
2007	244.21	139.93	96.6	244	138	9	9		x		NA	Present	Absent	Absent
2007	242.71	141.22	95.57	242	140	32	25		x		NA	Present	Absent	Absent
2007	242.97	141.59	95.55	242	140	31	25	x			NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2008	243.52	139.16	96.97	242	138	1	1		x		Proximal	Absent	Absent	Absent
2008	243.81	139.56	96.92	242	138	1	2		x		NA	Absent	Absent	Absent
2008	243.01	139.16	96.92	242	138	1	3	x			NA	Absent	Absent	Absent
2008	243.76	139.335	96.865	242	138	2	3			x	NA	Absent	Absent	Absent
2008	243.06	139.31	96.81	242	138	1	4		x		NA	Absent	Absent	Absent
2008	243.29	139.395	96.82	242	138	2	4		x		Distal	Absent	Absent	Absent
2008	243.36	139.5	96.8	242	138	3	4		x		Complete	Present	Absent	Absent
2008	243.68	139.26	96.8	242	138	4	4		x		NA	Absent	Absent	Absent
2008	243.87	139.4	96.815	242	138	5	4		x		NA	Absent	Absent	Absent
2008	243.2	139.67	96.765	242	138	1	5		x		NA	Absent	Absent	Absent
2008	242	139.565	96.65	242	138	2	5	x			NA	Absent	Absent	Absent
2008	243	139.625	96.825	242	138	2	5		x		NA	Absent	Absent	Absent
2008	243.95	139.68	96.74	242	138	4	5	x			NA	Absent	Absent	Absent
2008	243.85	139.355	96.78	242	138	5	5		x		NA	Absent	Absent	Absent
2008	243.885	139.16	96.775	242	138	7	5		x		NA	Absent	Absent	Absent
2008	243.825	139.12	96.75	242	138	8	5		x		NA	Absent	Absent	Absent
2008	243.94	139.25	96.78	242	138	6	5			x	NA	Absent	Absent	Absent
2008	242.215	139.89	96.705	242	138	1	6	x			NA	Absent	Absent	Absent
2008	242.085	139.68	96.695	242	138	2	6			x	NA	Present	Present	Present
2008	243.105	139.595	96.562	242	138	3	9			x	NA	Absent	Absent	Absent
2008	242.38	139.365	96.735	242	138	4	6		x		NA	Possible	Absent	Possible
2008	242.47	139.375	96.725	242	138	5	6		x		NA	Absent	Absent	Absent
2008	242.475	139.345	96.71	242	138	6	6			x	NA	Present	Absent	Present
2008	243.95	139.49	96.65	242	138	1	7		x		Proximal	Absent	Absent	Absent
2008	243.655	139.405	96.65	242	138	2	7		x		NA	Absent	Absent	Absent
2008	243.685	139.395	96.68	242	138	3	7	x			NA	Absent	Absent	Absent
2008	243.66	139.295	96.65	242	138	4	7		x		NA	Present	Absent	Absent
2008	243.025	139.665	96.685	242	138	5	7	x			NA	Absent	Absent	Absent
2008	243.225	139.085	96.657	242	138	6	7		x		NA	Absent	Absent	Present
2008	242.85	139.17	96.61	242	138	1	8		x		Complete	Possible	Absent	Absent
2008	242	139.565	96.65	242	138	2	8			x	Medial	Absent	Absent	Absent
2008	243.895	139.902	96.59	242	138	1	9			x	NA	Absent	Absent	Absent
2008	243.865	139.37	96.56	242	138	2	9	x			NA	Absent	Absent	Absent
2008	243.215	139.29	96.54	242	138	4	9		x		Distal	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2008	243.6	139.17	96.55	242	138	1	10		x		NA	Absent	Absent	Absent
2008	243.6	139.17	96.55	242	138	1	10		x		NA	Absent	Absent	Absent
2008	243.855	139.075	96.535	242	138	2	10	x			Distal	Absent	Absent	Absent
2008	243.13	139.295	96.505	242	138	3	10		x		NA	Absent	Absent	Absent
2008	243.79	139.35	96.515	242	138	4	10	x			NA	Absent	Absent	Absent
2008	243.86	139.385	96.515	242	138	5	10		x		NA	Absent	Absent	Absent
2008	243.315	139.615	96.53	242	138	6	10		x		NA	Absent	Absent	Absent
2008	243.345	139.67	96.53	242	138	7	10		x		NA	Absent	Absent	Absent
2008	243.95	139.88	96.47	242	138	1	11	x			NA	Absent	Absent	Absent
2008	243.16	139.74	96.48	242	138	2	11		x		NA	Absent	Absent	Absent
2008	243.76	139.46	96.465	242	138	3	11		x		Complete	Absent	Absent	Absent
2008	243.78	139.36	96.48	242	138	4	11			x	NA	Absent	Absent	Absent
2008	243.59	139.235	96.455	242	138	5	11			x	NA	Absent	Absent	Absent
2008	243.725	139.86	96.4	242	138	1	12	x			NA	Absent	Absent	Absent
2008	243.7	139.82	96.4	242	138	2	12		x		NA	Absent	Absent	Absent
2008	243.545	139.83	96.4	242	138	3	12	x			NA	Absent	Absent	Absent
2008	243.57	139.7	96.37	242	138	4	12			x	Proximal	Absent	Absent	Absent
2008	243.45	139.63	96.4	242	138	5	12			x	NA	Absent	Absent	Absent
2008	243.15	139.59	96.41	242	138	6	12	x			NA	Absent	Absent	Absent
2008	243.72	139.25	96.42	242	138	7	12	x			NA	Absent	Absent	Absent
2008	243.145	139.93	96.36	242	138	1	13	x			NA	Absent	Absent	Absent
2008	243.15	139.905	96.385	242	138	2	13	x			NA	Absent	Absent	Absent
2008	243.13	139.295	96.505	242	138	3	13	x			NA	Absent	Absent	Absent
2008	243.17	139.86	96.355	242	138	4	13	x			NA	Absent	Absent	Absent
2008	243.71	139.82	96.42	242	138	5	13	x			NA	Absent	Absent	Absent
2008	243.945	139.81	96.365	242	138	6	13	x			NA	Absent	Absent	Absent
2008	243.49	139.65	96.355	242	138	7	13	x			NA	Absent	Absent	Absent
2008	243.89	139.56	96.35	242	138	8	13	x			NA	Absent	Absent	Absent
2008	243.73	139.47	96.355	242	138	9	13	x			NA	Absent	Absent	Absent
2008	243.485	139.5	96.36	242	138	10	13		x		NA	Absent	Absent	Absent
2008	243.41	139.46	96.41	242	138	11	13		x		Complete	Absent	Absent	Absent
2008	243.55	139.325	96.385	242	138	12	13	x			NA	Absent	Absent	Absent
2008	243.505	139.175	96.35	242	138	13	13		x		NA	Absent	Absent	Absent
2008	243.2	139.97	96.4	242	138	17	13		x		Complete	Absent	Absent	Absent
2008	243.51	139.15	96.36	242	138	14	14		x		NA	Absent	Absent	Absent
2008	242.16	141.28	95.48	242	140	1	26		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2008	242.17	141.38	95.46	242	140	3	26	x			NA	Absent	Absent	Absent
2008	242.18	141.47	95.45	242	140	4	26		x		NA	Absent	Absent	Absent
2008	242.18	141.46	95.45	242	140	6	26	x			NA	Absent	Absent	Absent
2008	242.74	141.48	95.455	242	140	8	26		x		NA	Absent	Absent	Absent
2008	242.76	141.46	95.44	242	140	9	26	x			NA	Absent	Absent	Absent
2008	242.88	141.49	95.47	242	140	10	26		x		NA	Absent	Absent	Absent
2008	242.104	141.34	95.475	242	140	11	26	x			NA	Absent	Absent	Absent
2008	242.105	141.88	95.485	242	140	12	26		x		NA	Absent	Absent	Absent
2008	242.05	141.31	95.4	242	140	1	27		x		Na	Absent	Absent	Absent
2008	242.04	141.74	95.402	242	140	2	27		x		Na	Absent	Absent	Absent
2008	242.115	141.78	95.43	242	140	3	27	x			Na	Absent	Absent	Absent
2008	242.46	141.13	95.42	242	140	4	27		x		NA	Absent	Absent	Absent
2008	242.53	141.12	95.4	242	140	5	27		x		NA	Absent	Absent	Absent
2008	242.58	141.77	95.43	242	140	6	27		x		NA	Absent	Absent	Absent
2008	242.88	141.69	95.41	242	140	7	27	x			Distal	Absent	Absent	Absent
2008	242.95	141.51	95.43	242	140	8	27		x		Proximal	Absent	Absent	Absent
2008	242.93	141.62	95.41	242	140	9	27		x		NA	Absent	Absent	Absent
2008	242.83	141.52	95.995	242	140	10	27	x			Proximal	Absent	Absent	Absent
2008	242.85	141.47	95.42	242	140	11	27		x		Proximal	Absent	Absent	Absent
2008	242.91	141.47	95.425	242	140	12	27	x			NA	Absent	Absent	Absent
2008	242.83	141.42	95.415	242	140	13	27	x			NA	Absent	Absent	Absent
2008	242.82	141.5	95.405	242	140	14	27		x		NA	Absent	Absent	Absent
2008	242.9	141.6	95.41	242	140	15	27	x			NA	Absent	Absent	Absent
2008	242.65	141.89	95.405	242	140	2	28		x		NA	Absent	Present	Absent
2008	242.56	141.78	95.36	242	140	3	28	x			NA	Absent	Absent	Absent
2008	242.95	141.73	95.38	242	140	4	28		x		NA	Absent	Absent	Absent
2008	242.87	141.72	95.4	242	140	5	28	x			NA	Absent	Absent	Absent
2008	242.65	141.61	95.395	242	140	7	28	x			NA	Absent	Absent	Absent
2008	242.67	141.67	95.38	242	140	8	28		x		NA	Absent	Absent	Absent
2008	242.8	141.53	95.37	242	140	9	28	x			NA	Absent	Absent	Absent
2008	242.84	141.38	95.36	242	140	11	28		x		NA	Absent	Absent	Absent
2008	242.7	141.37	95.365	242	140	12	28		x		NA	Absent	Absent	Absent
2008	242.91	141.17	95.36	242	140	13	28		x		Proximal	Absent	Absent	Absent
2008	242.76	141.13	95.39	242	140	14	28		x		NA	Absent	Absent	Absent
2008	242.88	141.23	95.38	242	140	15	28	x			NA	Absent	Absent	Absent
2008	242.37	141.56	95.37	242	140	16	28	x			Complete	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2008	242.31	141.24	95.35	242	140	17	28			x	NA	Absent	Absent	Absent
2008	242.65	141.82	95.35	242	140	19	28	x			NA	Absent	Absent	Absent
2008	242.76	141.34	95.34	242	140	2	29		x		NA	Absent	Absent	Absent
2008	242.49	140.14	95.365	242	140	17	17	x			NA	Absent	Absent	Absent
2008	242.527	140.925	95.404	242	140	1	24		x		NA	Absent	Absent	Absent
2008	242.808	140.94	95.41	242	140	2	24		x		NA	Absent	Absent	Absent
2008	242.779	140.915	95.412	242	140	3	24	x			NA	Absent	Absent	Absent
2008	242.752	140.796	95.417	242	140	4	24	x			NA	Absent	Absent	Absent
2008	242.766	140.865	95.417	242	140	5	24		x		NA	Absent	Absent	Absent
2008	242.78	140.882	95.406	242	140	6	24		x		NA	Absent	Absent	Absent
2008	242.688	140.582	95.406	242	140	7	24		x		NA	Absent	Absent	Absent
2008	242.834	140.636	95.404	242	140	8	24		x		NA	Absent	Absent	Absent
2008	242.68	140.83	95.38	242	140	1	25		x		Distal	Absent	Absent	Absent
2008	242.576	140.828	95.382	242	140	2	25		x		NA	Absent	Absent	Absent
2008	242.692	140.298	95.388	242	140	3	25		x		NA	Absent	Absent	Absent
2008	242.654	140.792	95.394	242	140	4	25	x			NA	Absent	Absent	Absent
2008	242.637	140.464	95.378	242	140	5	25		x		Complete	Absent	Absent	Absent
2008	242.656	140.76	95.365	242	140	6	25		x		Complete	Absent	Absent	Absent
2008	242.748	140.742	95.39	242	140	7	25	x			NA	Absent	Absent	Absent
2008	242.732	140.705	95.39	242	140	8	25		x		NA	Absent	Absent	Absent
2008	242.806	140.592	95.39	242	140	11	25	x			NA	Absent	Absent	Absent
2008	242.726	140.948	95.382	242	140	13	25	x			NA	Absent	Absent	Absent
2008	242.632	140.405	95.354	242	140	14	25	x			NA	Absent	Absent	Absent
2008	242.882	140.1	95.384	242	140	15	25	x			NA	Absent	Absent	Absent
2008	242.47	140.03	95.375	242	140	16	25		x		Proximal	Absent	Absent	Absent
2008	242.64	140.1	95.37	242	140	18	25	x			NA	Absent	Absent	Absent
2008	242.52	140.45	95.35	242	140	19	25		x		Complete	Absent	Absent	Absent
2008	242.66	140.57	95.35	242	140	20	25		x		NA	Absent	Absent	Absent
2008	242.646	140.205	95.351	242	140	1	26		x		NA	Absent	Absent	Absent
2008	242.35	140.416	95.341	242	140	2	26	x			NA	Absent	Absent	Absent
2008	242.754	140.416	95.33	242	140	3	26		x		NA	Absent	Absent	Absent
2008	242.542	140.529	95.342	242	140	4	26		x		NA	Absent	Absent	Absent
2008	242.593	140.762	95.338	242	140	5	26	x			NA	Absent	Absent	Absent
2008	243.37	142.36	96.71	242	142	1	10							
2008	243.37	142.36	96.71	242	142	2	10			x	NA	Absent	Absent	Absent
2008	243.09	142.21	96.72	242	142	3	10			x	Complete	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2008	243.395	142.25	96.7	242	142	4	10		x		Complete	Absent	Absent	Absent
2008	243.38	142.22	96.7	242	142	5	10		x		NA	Absent	Absent	Absent
2008	243.68	142.9	96.7	242	142	6	10	x			NA	Absent	Absent	Absent
2008	243.245	142.38	96.67	242	142	1	11		x		NA	Absent	Absent	Absent
2008	243.74	142.26	96.63	242	142	2	11		x		NA	Absent	Absent	Absent
2008	242.77	142.355	96.63	242	142	3	11	x			NA	Absent	Absent	Absent
2008	242.9	142.79	96.63	242	142	4	11		x		NA	Absent	Absent	Absent
2008	243.89	142.97	96.6	242	142	1	12		x		NA	Absent	Absent	Absent
2008	243.28	142.7	96.54	242	142	1	13	x			NA	Absent	Absent	Absent
2008	243.59	142.01	96.54	242	142	2	13		x		Na	Absent	Absent	Absent
2008	243.12	142.325	96.57	242	142	3	13	x			NA	Absent	Absent	Absent
2008	243.21	142.2	96.57	242	142	4	13	x			NA	Absent	Absent	Absent
2008	243.37	142.275	96.555	242	142	5	13	x			NA	Absent	Absent	Absent
2008	243.71	142.29	96.555	242	142	6	13	x			NA	Absent	Absent	Absent
2008	243.69	142.02	96.53	242	142	7	13	x			NA	Absent	Absent	Absent
2008	243.5	142.165	96.54	242	142	8	13		x		NA	Absent	Absent	Absent
2008	243.05	142.04	96.51	242	142	1	14	x			NA	Absent	Absent	Absent
2008	243.9	142	96.5	242	142	2	14	x			NA	Absent	Absent	Absent
2008	243.62	142.03	96.53	242	142	3	14	x			NA	Absent	Absent	Absent
2008	243.605	142.01	96.52	242	142	4	14		x		Distal	Absent	Absent	Absent
2008	243.11	142.24	96.5	242	142	5	14	x			NA	Absent	Absent	Absent
2008	243.93	142.44	96.47	242	142	1	15		x		NA	Absent	Absent	Absent
2008	243.91	142.36	96.435	242	142	2	15		x		NA	Absent	Absent	Absent
2008	243.86	142.28	96.455	242	142	3	15	x			NA	Absent	Absent	Absent
2008	243.48	142.14	96.46	242	142	4	15	x			NA	Absent	Absent	Absent
2008	243.59	142.62	96.38	242	142	1	16	x			NA	Absent	Absent	Absent
2008	243.085	142.71	96.39	242	142	2	16		x		NA	Absent	Absent	Absent
2008	243.05	142.52	96.4	242	142	3	16		x		NA	Absent	Absent	Absent
2008	243.07	142.445	96.42	242	142	4	16		x		NA	Absent	Absent	Absent
2008	243.07	142.42	96.425	242	142	5	16		x		NA	Absent	Absent	Absent
2008	243.345	142.55	96.41	242	142	6	16		x		Distal	Absent	Absent	Absent
2008	243.6	142.135	96.39	242	142	7	16	x			NA	Absent	Absent	Absent
2008	243.43	142.79	96.33	242	142	1	17	x			NA	Absent	Absent	Absent
2008	243.47	142.79	96.35	242	142	2	17		x		NA	Absent	Absent	Absent
2008	243.27	142.265	96.34	242	142	3	17		x		NA	Absent	Absent	Absent
2008	243.1	142.93	96.32	242	142	1	18		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2008	243.63	142.84	96.29	242	142	2	18	x			NA	Absent	Absent	Absent
2008	243.635	142.77	96.28	242	142	3	18	x			NA	Absent	Absent	Absent
2008	243.1	142.94	96.32	242	142	4	18							
2008	243.66	142.955	96.26	242	142	1	19		x		Complete	Absent	Absent	Absent
2008	243.63	142.87	96.26	242	142	2	19		x		NA	Absent	Absent	Absent
2008	243.53	142.94	96.25	242	142	3	19			x	NA	Absent	Absent	Absent
2008	243.69	142.71	96.25	242	142	5	19	x			NA	Absent	Absent	Absent
2008	243.68	142.675	96.24	242	142	6	19		x		NA	Absent	Absent	Absent
2008	243.44	142.725	96.25	242	142	7	19		x		NA	Absent	Absent	Absent
2008	243.345	142.93	96.18	242	142	1	20	x			NA	Absent	Absent	Absent
2008	243.26	142.35	96.19	242	142	2	20		x		NA	Absent	Absent	Absent
2008	243.05	142.03	96.225	242	142	3	20	x			NA	Absent	Absent	Absent
2008	243.61	142.635	96.13	242	142	1	21		x		Complete	Absent	Absent	Absent
2008	243.26	142.67	96.13	242	142	2	21	x			NA	Absent	Absent	Absent
2008	243.27	142.69	96.13	242	142	3	21		x		NA	Absent	Absent	Absent
2008	243.03	142.07	96.13	242	142	4	21		x		NA	Absent	Absent	Absent
2008	243.02	142.79	95.085	242	142	1	22		x		Medial	a	Absent	Absent
2008	243.04	142.44	95.1	242	142	2	22		x		proximal	Present	Absent	Absent
2008	243.27	142.7	95.11	242	142	3	22		x		NA	Absent	Present	Absent
2008	243.27	142.71	95.085	242	142	4	22	x			NA	Absent	Absent	Absent
2008	243.99	142.87	95.2	242	142	5	22	x			NA	Absent	Absent	Absent
2008	243.24	142.28	96.04	242	142	2	23		x		NA	Absent	Absent	Absent
2008	243.32	142.42	96.05	242	142	3	23		x		Medial	Absent	Present	Absent
2008	243.29	142.49	96.045	242	142	4	23	x			NA	Absent	Absent	Absent
2008	243.1	142.61	96.035	242	142	5	23		x		NA	Absent	Absent	Absent
2008	243.11	142.7	96.03	242	142	6	23		x		NA	Absent	Absent	Absent
2008	243.29	142.76	96.025	242	142	7	23	x			NA	Absent	Absent	Absent
2008	243.34	142.7	96.04	242	142	8	23	x			NA	Absent	Absent	Absent
2008	243.48	142.69	96.02	242	142	9	23	x			NA	Absent	Absent	Absent
2008	243.71	142.65	96.04	242	142	10	23		x		NA	Absent	Absent	Absent
2008	243.42	142.52	96.05	242	142	11	23			x	Complete	Absent	Absent	Absent
2008	243.68	142.73	96.245	242	142	4			x		NA	Absent	Absent	Absent
2008	242.37	142.38	96.23	242	142	7	7			x	Proximal	Absent	Absent	Absent
2008	242.18	142.05	96.3	242	142	1	10		x		NA	Absent	Absent	Absent
2008	242.61	142.31	96.34	242	142	2	10		x		NA	Absent	Absent	Absent
2008	243.05	142.99	96.345	242	142	3	10			x	NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2008	242.08	142.96	96.32	242	142	4	10	x			proximal	Absent	Absent	Absent
2008	243.81	139.56	96.96	242	142	1	11	x			NA	Absent	Absent	Absent
2008	242.6	142.4	96.265	242	142	1	11			x	NA	Absent	Absent	Absent
2008	242.55	142.41	96.255	242	142	2	11		x		NA	Absent	Absent	Absent
2008	242.53	142.57	96.265	242	142	3	11			x	NA	Absent	Absent	Absent
2008	242.34	142.74	96.285	242	142	4	11		x		Distal	Absent	Absent	Absent
2008	242.06	142.69	96.26	242	142	5	11		x		NA	Absent	Absent	Absent
2008	242.29	142.94	96.29	242	142	6	11		x		Distal	Absent	Absent	Absent
2008	242.17	142.99	96.29	242	142	7	11	x			NA	Absent	Absent	Absent
2008	242.65	142.91	96.27	242	142	8	11		x		Distal	Absent	Absent	Absent
2008	242.81	142.13	96.23	242	142	1	12		x		Complete	Absent	Absent	Absent
2008	242.94	142.26	96.24	242	142	2	12		x		NA	Absent	Absent	Absent
2008	242.94	142.32	96.21	242	142	3	12		x		NA	Absent	Absent	Absent
2008	242.72	142.35	96.23	242	142	4	12	x			NA	Absent	Absent	Absent
2008	242.62	142.35	96.22	242	142	5	12			x	Distal	Absent	Absent	Absent
2008	242.62	142.4	96.21	242	142	6	12	x			NA	Absent	Absent	Absent
2008	242.29	142.47	96.2	242	142	8	12		x		Distal	Absent	Absent	Absent
2008	242.19	142.5	96.21	242	142	9	12		x		NA	Absent	Absent	Absent
2008	242.16	142.56	96.225	242	142	10	12	x			NA	Absent	Absent	Absent
2008	242.15	142.62	96.235	242	142	11	12	x			NA	Absent	Absent	Absent
2008	242.08	142.72	96.23	242	142	12	12		x		NA	Absent	Absent	Absent
2008	242.11	142.71	96.2	242	142	13	12	x			Complete	Absent	Absent	Absent
2008	242.73	142.73	96.24	242	142	14	12		x		NA	Absent	Absent	Absent
2008	242.18	142.55	96.205	242	142	16	12		x		NA	Absent	Absent	Absent
2008	242.19	142.49	96.2	242	142	17	12		x		NA	Absent	Absent	Absent
2008	242.11	142.72	96.2	242	142	18	12	x			Complete	Absent	Absent	Absent
2008	242.44	142.81	96.235	242	142	19	12		x		NA	Absent	Absent	Absent
2008	242.43	142.85	96.21	242	142	20	12		x		NA	Absent	Absent	Absent
2008	242.25	142.87	96.235	242	142	21	12		x		NA	Absent	Absent	Absent
2008	242.662	142.99	96.21	242	142	22	12		x		NA	Absent	Absent	Absent
2008	242.38	142.99	96.245	242	142	23	12	x			NA	Absent	Absent	Absent
2008	242.22	142.96	96.23	242	142	24	12		x		NA	Absent	Absent	Absent
2008	242.27	142.1	96.2	242	142	25	12		x		Distal	Absent	Absent	Absent
2008	242.02	142.48	96.21	242	142	26	12		x		Complete	Absent	Absent	Absent
2008	242.22	142.97	96.23	242	142	27	12		x		NA	Absent	Absent	Absent
2008	242.56	142.8	96.15	242	142	1	13	x			Complete	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2008	242.89	142	96.2	242	142	2	13	x			NA	Absent	Absent	Absent
2008	242.75	142.11	96.15	242	142	3	13			x	Distal	Absent	Absent	Absent
2008	242.61	142.06	96.15	242	142	4	13		x		NA	Absent	Absent	Absent
2008	242.44	142.11	96.14	242	142	5	13		x		NA	Absent	Absent	Absent
2008	242.92	142.2	96.15	242	142	6	13	x			NA	Absent	Absent	Absent
2008	242.75	142.23	96.18	242	142	7	13		x		Medial	Absent	Absent	Absent
2008	242.77	142.27	96.18	242	142	8	13	x			NA	Absent	Absent	Absent
2008	242.62	142.27	96.15	242	142	9	13		x		NA	Absent	Absent	Absent
2008	242.56	142.3	96.18	242	142	10	13		x		NA	Absent	Absent	Absent
2008	242.46	142.35	96.18	242	142	11	13		x		Medial	Absent	Absent	Absent
2008	242.68	142.37	96.155	242	142	12	13		x		NA	Absent	Absent	Absent
2008	242.31	142.37	96.115	242	142	13	13		x		NA	Absent	Absent	Absent
2008	242.21	142.36	96.175	242	142	14	13		x		NA	Absent	Absent	Absent
2008	242.13	142.35	96.15	242	142	15	13		x		NA	Absent	Absent	Absent
2008	242.09	142.35	96.165	242	142	16	13		x		Medial	Absent	Absent	Absent
2008	242.06	142.33	96.18	242	142	17	13	x			NA	Absent	Absent	Absent
2008	242.77	142.43	96.15	242	142	18	13	x			NA	Absent	Absent	Absent
2008	242.42	142.41	96.19	242	142	19	13	x			NA	Absent	Absent	Absent
2008	242.41	140.43	96.155	242	142	20	13	x			NA	Absent	Absent	Absent
2008	242.36	142.41	96.15	242	142	21	13	x			NA	Absent	Absent	Absent
2008	242.29	142.41	96.17	242	142	22	13	x			NA	Absent	Absent	Absent
2008	242.24	142.42	96.17	242	142	23	13		x		NA	Absent	Absent	Absent
2008	242.39	142.48	96.19	242	142	24	13	x			NA	Absent	Absent	Absent
2008	242.31	142.46	96.17	242	142	25	13		x		NA	Absent	Absent	Absent
2008	242.3	142.5	96.15	242	142	26	13	x			NA	Absent	Absent	Absent
2008	242.47	142.54	96.15	242	142	27	13		x		NA	Absent	Absent	Absent
2008	242.26	142.55	96.18	242	142	28	13	x			NA	Absent	Absent	Absent
2008	242.27	142.54	96.169	242	142	29	13	x			NA	Absent	Absent	Absent
2008	242.25	142.54	96.169	242	142	30	13	x			NA	Absent	Absent	Absent
2008	242.25	142.55	96.17	242	142	31	13	x			NA	Absent	Absent	Absent
2008	242.25	142.54	96.15	242	142	32	13		x		NA	Absent	Absent	Absent
2008	242.2	142.52	96.15	242	142	33	13		x		NA	Absent	Absent	Absent
2008	242.2	142.55	96.15	242	142	34	13		x		Complete	Absent	Absent	Absent
2008	242.07	142.57	96.15	242	142	35	13		x		NA	Absent	Absent	Absent
2008	242.09	142.59	96.15	242	142	36	13		x		NA	Absent	Absent	Absent
2008	242.89	142.67	96.17	242	142	37	13		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2008	242.82	142.69	96.15	242	142	38	13		x		NA	Absent	Absent	Absent
2008	242.75	142.66	96.155	242	142	39	13	x			NA	Absent	Absent	Absent
2008	242.64	142.61	96.19	242	142	40	13	x			NA	Absent	Absent	Absent
2008	242.56	142.75	96.14	242	142	41	13		X		NA	Absent	Absent	Absent
2008	242.47	142.72	96.18	242	142	42	13	x			NA	Absent	Absent	Absent
2008	242.37	142.69	96.15	242	142	43	13	x			NA	Absent	Absent	Absent
2008	242.22	142.59	96.18	242	142	44	13	x			NA	Absent	Absent	Absent
2008	242.19	142.62	96.165	242	142	45	13	x			NA	Absent	Absent	Absent
2008	242.18	142.67	96.17	242	142	46	13		x		NA	Absent	Absent	Absent
2008	242.19	142.64	96.17	242	142	47	13		x		Medial	Absent	Absent	Absent
2008	242.15	142.66	96.15	242	142	49	13	x			NA	Absent	Absent	Absent
2008	242.16	142.72	96.16	242	142	50	13	x			NA	Absent	Absent	Absent
2008	242.12	142.72	96.15	242	142	51	13		x		NA	Absent	Absent	Absent
2008	242.56	142.81	96.15	242	142	52	13	x			NA	Absent	Absent	Absent
2008	242.15	142.82	96.15	242	142	53	13	x			NA	Absent	Absent	Absent
2008	242.06	142.78	96.19	242	142	54	13		x		NA	Absent	Absent	Absent
2008	242.07	142.79	96.17	242	142	55	13			x	Complete	Absent	Absent	Absent
2008	242.75	142.93	96.18	242	142	56	13	x			NA	Absent	Absent	Absent
2008	242.54	142.93	96.185	242	142	57	13	x			NA	Absent	Absent	Absent
2008	242.42	142.89	96.19	242	142	58	13		x		Medial	Absent	Absent	Absent
2008	242.38	142.9	96.17	242	142	59	13		x		NA	Absent	Absent	Absent
2008	243.27	142.89	96.15	242	142	60	13	x			NA	Absent	Absent	Absent
2008	242.24	142.93	96.15	242	142	61	13		x		NA	Absent	Absent	Absent
2008	242.22	142.87	96.14	242	142	62	13			x	proximal	Absent	Absent	Absent
2008	242.16	142.9	96.17	242	142	63	13	x			NA	Absent	Absent	Absent
2008	242.77	142.99	96.16	242	142	64	13	x			NA	Absent	Absent	Absent
2008	242.67	142.99	96.19	242	142	65	13		x		NA	Absent	Absent	Absent
2008	242.58	142.99	96.19	242	142	66	13	x			NA	Absent	Absent	Absent
2008	242.55	142.3	96.15	242	142	67	13	x			NA	Absent	Absent	Absent
2008	242.45	142.37	96.16	242	142	68	13	x			NA	Absent	Absent	Absent
2008	242.4	142.45	96.16	242	142	69	13		x		NA	Absent	Absent	Absent
2008	242.39	142.46	96.17	242	142	70	13	x			NA	Absent	Absent	Absent
2008	242.25	142.51	96.15	242	142	71	13		x		NA	Absent	Absent	Absent
2008	242.24	142.53	96.16	242	142	72	13	x			NA	Absent	Absent	Absent
2008	242.24	142.55	96.15	242	142	73	13	x			NA	Absent	Absent	Absent
2008	242.14	142.64	96.15	242	142	74	13		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2008	242.48	142.72	96.165	242	142	74	13		x		NA	Absent	Absent	Absent
2008	242.13	142.68	96.175	242	142	75	13	x			NA	Absent	Absent	Absent
2008	242.05	142.77	96.16	242	142	76	13	x			Complete	Absent	Absent	Absent
2008	242.87	142.76	96.15	242	142	77	13		x		Complete	Absent	Absent	Absent
2008	242.43	142.38	96.15	242	142	78	13			x	proximal	Absent	Absent	Absent
2008	242.77	142.015	96.14	242	142	1	14		x		NA	Absent	Absent	Absent
2008	242.32	142.01	96.1	242	142	2	14		x		NA	Absent	Absent	Absent
2008	242.73	142.14	96.11	242	142	3	14		x		NA	Absent	Absent	Absent
2008	242.58	142.095	96.12	242	142	4	14		x		NA	Absent	Absent	Absent
2008	242.33	142.14	96.13	242	142	5	14	x			NA	Absent	Absent	Absent
2008	242.82	142.29	96.11	242	142	6	14		x		NA	Absent	Absent	Absent
2008	242.65	142.31	96.13	242	142	7	14			x	Complete	Absent	Absent	Absent
2008	242.55	142.3	96.165	242	142	8	14		x		NA	Absent	Absent	Absent
2008	242.49	142.36	96.13	242	142	9	14		x		Distal	Absent	Absent	Absent
2008	242.17	142.59	96.11	242	142	10	14		x		Complete	Absent	Absent	Absent
2008	242.69	142.71	96.115	242	142	11	14		x		proximal	Absent	Absent	Absent
2008	242.28	142.68	96.1	242	142	12	14		x		NA	Absent	Absent	Absent
2008	242.17	142.67	96.13	242	142	13	14		x		Distal	Absent	Absent	Absent
2008	242.75	142.78	96.13	242	142	14	14		x		NA	Absent	Absent	Absent
2008	242.69	142.91	96.13	242	142	15	14			x	proximal	Absent	Absent	Absent
2008	242.48	142.84	96.1	242	142	16	14		x		NA	Absent	Absent	Absent
2008	242.28	142.87	96.11	242	142	17	14		x		NA	Absent	Absent	Absent
2008	242.25	142.94	96.13	242	142	18	14			x	NA	Absent	Absent	Absent
2008	242.8	142	96.08	242	142	1	15		x		NA	Absent	Absent	Absent
2008	242.79	142.02	96.09	242	142	2	15		x		NA	Absent	Absent	Absent
2008	242.3	142.11	96.055	242	142	3	15	x			NA	Absent	Absent	Absent
2008	242.66	142.24	96.085	242	142	4	15		x		NA	Absent	Absent	Absent
2008	242.67	142.27	96.05	242	142	5	15	x			NA	Absent	Absent	Absent
2008	242.15	142.43	96.08	242	142	6	15		x		NA	Absent	Absent	Absent
2008	242.73		96.08	242	142	7	15	x			NA	Absent	Absent	Absent
2008	242.1	142.625	96.05	242	142	8	15	x			NA	Absent	Absent	Absent
2008	242.82	142.89	96.08	242	142	9	15			x	Distal	Absent	Absent	Present
2008	242.58	142.91	96.06	242	142	10	15			x	Complete	Absent	Absent	Absent
2008	242.19	142.96	96.08	242	142	11	15		x		Complete	Absent	Absent	Absent
2008	242.73	142.84	96.22	242	142		15	x			NA	Absent	Absent	Absent
2008	242.02	142.01	96.05	242	142	1	16		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2008	242.48	142.17	96.035	242	142	2	16	x			NA	Absent	Absent	Absent
2008	242.21	142.13	96.01	242	142	3	16	x			NA	Absent	Absent	Absent
2008	242.74	142.29	96.02	242	142	4	16	x			NA	Absent	Absent	Absent
2008	242.36	142.33	96.025	242	142	5	16		x		NA	Absent	Absent	Absent
2008	242.34	142.3	96.03	242	142	6	16	x			NA	Absent	Absent	Absent
2008	242.4	142.53	96.025	242	142	7	16			x	NA	present	Absent	Absent
2008	242.12	142.55	96.035	242	142	8	16	x			NA	Absent	Absent	Absent
2008	242.08	142.53	96	242	142	9	16	x			Complete	Absent	Absent	Absent
2008	242.59	142.67	96.02	242	142	10	16			x	NA	Absent	Absent	Absent
2008	242.59	142.65	96.02	242	142	11	16	x			Complete	Absent	Absent	Absent
2008	242.29	142.65	96.045	242	142	12	16			x	NA	Absent	Absent	Absent
2008	242.79	142.99	96	242	142	13	16		x		NA	Absent	Absent	Absent
2008	242.22	142.98	96.065	242	142	15	16		x		NA	Absent	Absent	Absent
2008	242.95	142.79	96.04	242	142	16	16	x			NA	Absent	Absent	Absent
2008	242.48	142.21	96.025	242	142	17	16			x	NA	Absent	Absent	Absent
2008	242.38	142.02	95.95	242	142	1	17		x		Complete	Absent	Absent	Absent
2008	242.76	142.46	95.965	242	142	2	17			x	proximal	Absent	Absent	Absent
2008	242.3	142.5	95.965	242	142	3	17		x		Complete	Absent	Absent	Absent
2008	242.23	142.49	95.97	242	142	4	17		x		NA	Absent	Absent	Absent
2008	242.56	142.62	95.97	242	142	5	17	x			Distal	Absent	Absent	Absent
2008	242.18	142.6	95.97	242	142	6	17		x		NA	Absent	Absent	Absent
2008	242.55	142.69	95.95	242	142	7	17		x		NA	Absent	Absent	Absent
2008	242.37	142.67	95.96	242	142	8	17	x			NA	Absent	Absent	Absent
2008	242.9	142.99	95.975	242	142	9	17		x		NA	Absent	Absent	Absent
2008	242.53	142.37	95.91	242	142	1	18		x		NA	Absent	Absent	Absent
2008	242.72	142.49	95.925	242	142	2	18		x		NA	Absent	Absent	Absent
2008	242.03	142.42	95.91	242	142	4	18		x		NA	Absent	Absent	Absent
2008	242.8	142.67	95.92	242	142	5	18		x		proximal	Absent	Absent	Absent
2008	242.65	142.72	95.94	242	142	6	18		x		NA	Absent	Absent	Absent
2008	242.62	142.93	95.94	242	142	7	18	x			Complete	Absent	Absent	Absent
2008	242.37	142.99	95.93	242	142	8	18		x		NA	Absent	Absent	Absent
2008	242.32	142.99	95.9	242	142	9	18	x			NA	Absent	Absent	Absent
2008	242.67	142.05	95.85	242	142	1	19		x		NA	Absent	Absent	Absent
2008	242.75	142.36	95.85	242	142	2	19		x		NA	Absent	Absent	Absent
2008	242.15	142.3	95.885	242	142	3	19		x		Medial	Absent	Absent	Absent
2008	242.52	142.63	95.865	242	142	4	19		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2008	242.9	142.72	95.88	242	142	6	19	x			NA	Absent	Absent	Absent
2008	242.66	142.88	95.87	242	142	7	19		x		NA	Absent	Absent	Absent
2008	242.66	142.99	95.85	242	142	8	19		x		NA	Absent	Absent	Absent
2008	242.47	142.02	95.83	242	142	1	20		x		NA	Absent	Absent	Absent
2008	242.71	142.08	95.8	242	142	2	20	x			NA	Absent	Absent	Absent
2008	242.49	142.24	95.8	242	142	3	20		x		NA	Absent	Absent	Absent
2008	242.34	142.31	95.825	242	142	4	20		x		NA	Absent	Absent	Absent
2008	242.18	142.23	95.82	242	142	5	20		x		NA	Absent	Absent	Absent
2008	242.06	142.25	95.81	242	142	6	20		x		NA	Absent	Absent	Absent
2008	242.26	142.36	95.81	242	142	7	20		x		NA	Absent	Absent	Absent
2008	242.1	142.4	95.8	242	142	8	20		x		NA	Absent	Absent	Absent
2008	242.15	142.5	95.83	242	142	9	20	x			Complete	Absent	Absent	Absent
2008	242.22	142.55	95.83	242	142	10	20	x			NA	Absent	Absent	Absent
2008	242.9	142.8	95.8	242	142	11	20		x		proximal	Absent	Absent	Absent
2008	242.64	142.8	95.805	242	142	12	20	x			NA	Absent	Absent	Absent
2008	242.96	142.93	95.84	242	142	13	20	x			NA	Absent	Absent	Absent
2008	242.55	142.06	95.77	242	142	1	21		x		NA	Absent	Absent	Absent
2008	242.55	142.06	95.77	242	142	1	21		x		NA	Absent	Absent	Absent
2008	242.53	142.09	95.75	242	142	2	21		x		NA	Absent	Absent	Absent
2008	242.53	142.09	95.75	242	142	2	21		x		NA	Absent	Absent	Absent
2008	242.51	142.13	95.77	242	142	3	21		x		Distal	Absent	Absent	Absent
2008	242.15	142.09	95.775	242	142	4	21	x			NA	Absent	Absent	Absent
2008	242.15	142.09	95.775	242	142	4	21		x		NA	Absent	Absent	Absent
2008	242.56	142.17	95.17	242	142	5	21		x		NA	Absent	Absent	Absent
2008	242.68	142.29	95.75	242	142	6	21	x			NA	Absent	Absent	Absent
2008	242.68	142.29	95.75	242	142	6	21		x		Distal	Absent	Absent	Absent
2008	242.41	142.32	95.75	242	142	7	21		x		NA	Absent	Absent	Absent
2008	242.41	141.32	95.75	242	142	7	21		x		NA	Absent	Absent	Absent
2008	242.33	142.34	95.75	242	142	8	21	x			NA	Absent	Absent	Absent
2008	242.33	142.34	95.75	242	142	8	21	x			NA	Absent	Absent	Absent
2008	242.27	142.34	95.75	242	142	9	21	x			NA	Absent	Absent	Absent
2008	242.14	142.25	95.75	242	142	10	21		x		NA	Absent	Absent	Absent
2008	242.81	142.43	95.785	242	142	11	21		x		NA	Absent	Absent	Absent
2008	242.81	142.93	95.785	242	142	11	21		x		NA	Absent	Absent	Absent
2008	242.15	142.45	95.75	242	142	12	21		x		NA	Absent	Absent	Absent
2008	242.67	142.59	95.76	242	142	13	21			x	NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2008	242.67	142.59	95.76	242	142	13	21			x	NA	Absent	Absent	Absent
2008	242.93	142.68	95.77	242	142	14	21		x		NA	Absent	Absent	Absent
2008	242.14	142.25	95.75	242	142	14	21		x		NA	Absent	Absent	Absent
2008	242.89	142.65	95.76	242	142	15	21	x			NA	Absent	Absent	Absent
2008	242.89	142.65	95.76	242	142	15	21		x		NA	Absent	Absent	Absent
2008	242.22	142.78	95.75	242	142	16	21		x		NA	Absent	Absent	Absent
2008	242.22	142.28	95.75	242	142	16	21		x		NA	Absent	Absent	Absent
2008	242.04	142.79	95.78	242	142	17	21		x		NA	Absent	Absent	Absent
2008	242.04	142.79	95.78	242	142	17	21		x		NA	Absent	Absent	Absent
2008	242.79	142.69	96.69	242	142	18	21	x			NA	Absent	Absent	Absent
2008	242.89	142.125	95.75	242	142	1	22	x			NA	Absent	Absent	Absent
2008	242.88	142.22	95.71	242	142	2	22	x			NA	Absent	Absent	Absent
2008	242.78	142.17	95.7	242	142	3	22		x		NA	Absent	Absent	Absent
2008	242.78	142.205	95.7	242	142	4	22		x		NA	Absent	Absent	Absent
2008	242.71	142.095	95.715	242	142	5	22		x		NA	Absent	Absent	Absent
2008	242.57	142.1	95.71	242	142	6	22		x		NA	Absent	Absent	Absent
2008	242.3	142.03	95.75	242	142	7	22		x		Distal	Absent	Absent	Absent
2008	242.31	142.08	95.73	242	142	8	22		x		NA	Absent	Absent	Absent
2008	242.25	142.12	95.72	242	142	9	22	x			NA	Absent	Absent	Absent
2008	242.22	142.07	95.72	242	142	10	22		x		NA	Absent	Absent	Absent
2008	242.22	142.05	95.71	242	142	11	22		x		NA	Absent	Absent	Absent
2008	242.16	142.055	95.705	242	142	12	22		x		NA	Absent	Absent	Absent
2008	242.07	142.01	95.705	242	142	13	22		x		Distal	Absent	Absent	Absent
2008	242.77	142.28	95.73	242	142	14	22		x		Distal	Absent	Absent	Absent
2008	242.77	142.32	95.725	242	142	15	22	x			NA	Absent	Absent	Absent
2008	242.57	142.32	95.73	242	142	16	22		x		Medial	Absent	Absent	Absent
2008	242.38	142.31	95.74	242	142	17	22		x		NA	Absent	Absent	Absent
2008	242.14	142.23	95.705	242	142	18	22		x		NA	Absent	Absent	Absent
2008	242.05	142.195	95.7	242	142	19	22		x		NA	Absent	Absent	Absent
2008	242.74	142.43	95.72	242	142	20	22		x		Distal	Absent	Absent	Absent
2008	242.72	142.52	95.72	242	142	21	22	x			NA	Absent	Absent	Absent
2008	242.72	142.55	95.7	242	142	22	22		x		NA	Absent	Absent	Absent
2008	242.14	142.53	95.7	242	142	23	22	x			NA	Absent	Absent	Absent
2008	242.82	142.72	95.7	242	142	24	22	x			NA	Absent	Absent	Absent
2008	242.64	142.725	95.71	242	142	25	22	x			NA	Absent	Absent	Absent
2008	242.63	142.81	95.72	242	142	26	22	x			proximal	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2008	242.21	142.69	95.72	242	142	27	22	x			NA	Absent	Absent	Absent
2008	242.91	142.9	95.71	242	142	28	22			x	NA	Absent	Absent	Absent
2008	242.54	142.99	95.73	242	142	29	22	x			NA	Absent	Absent	Absent
2008	242.44	142.98	95.705	242	142	30	22		x		NA	Absent	Absent	Absent
2008	242.34	142.97	95.7	242	142	31	22		x		NA	Absent	Absent	Absent
2008	242.22	142.09	95.71	242	142	32	22		x		NA	Absent	Absent	Absent
2008	242.22	142.59	95.7	242	142	33	22		x		Distal	Absent	Absent	Absent
2008	242.24	142.11	95.71	242	142	34	22		x		Medial	Absent	Absent	Absent
2008	242.71	142.52	95.7	242	142	35	22		x		NA	Absent	Absent	Absent
2008	242.89	142.78	95.7	242	142	36	22		x		NA	Absent	Absent	Absent
2008	243.48	142.1	96.46	242	142	5		x			NA	Absent	Absent	Absent
2008	244.45	139.425	96.575	244	138	2	12		x		NA	Absent	Absent	Absent
2008	244.63	139.235	96.59	244	138	3	12		x		NA	Present	Present	Present
2008	244.46	139.655	96.57	244	138	4	12	x			NA	Absent	Absent	Absent
2008	244.585	139.49	96.595	244	138	5	12	x			NA	Absent	Absent	Absent
2008	244.53	139.37	96.58	244	138	6	12	x			NA	Absent	Absent	Absent
2008	244.185	139.32	96.575	244	138	7	12	x			NA	Absent	Absent	Absent
2008	244.11	139.245	96.605	244	138	8	12		x		NA	Absent	Absent	Absent
2008	244.055	139.2	96.57	244	138	9	12	x			NA	Absent	Absent	Absent
2008	244.97	139.42	96.603	244	138	10	12		x		NA	Absent	Absent	Absent
2008	244.775	139.545	96.63	244	138	11	12	x			NA	Absent	Absent	Absent
2008	244.79	139.5	96.592	244	138	12	12	x			NA	Absent	Absent	Absent
2008	244.59	139.27	96.595	244	138	13	12	x			NA	Absent	Absent	Absent
2008	244.62	139.265	96.57	244	138	14	12	x			NA	Absent	Absent	Absent
2008	244.66	139.26	96.575	244	138	15	12	x			NA	Absent	Absent	Absent
2008	244.53	139.24	96.57	244	138	16	12		x		Proximal	Absent	Absent	Absent
2008	244.365	139.095	96.575	244	138	17	12	x			NA	Absent	Absent	Absent
2008	244.605	139.21	96.593	244	138	18	12	x			NA	Absent	Absent	Absent
2008	244.63	139.225	96.58	244	138	19	12	x			NA	Absent	Absent	Absent
2008	244.77	139.245	96.585	244	138	20	12			x	Medial	Present	Absent	Absent
2008	244.77	139.205	96.57	244	138	21	12		x		NA	Absent	Absent	Absent
2008	244.92	139.185	96.565	244	138	22	12		x		NA	Absent	Absent	Absent
2008	244.29	139.035	96.58	244	138	23	12	x			NA	Absent	Absent	Absent
2008	244.64	139.22	96.563	244	138	24	12		x		NA	Absent	Absent	Absent
2008	244.36	139.1	96.56	244	138	26	12			x	Distal	Absent	Absent	Absent
2008	244.44	139.7	96.515	244	138	2	13		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2008	244.56	139.585	96.56	244	138	3	13		x		NA	Absent	Absent	Absent
2008	244.695	139.44	96.54	244	138	4	13			x	Distal	Absent	Absent	Present
2008	244.465	139.34	96.53	244	138	5	13		x		NA	Absent	Absent	Absent
2008	244.61	139.25	96.545	244	138	6	13	x			NA	Absent	Absent	Absent
2008	244.52	139.21	96.525	244	138	7	13		x		NA	Absent	Absent	Absent
2008	244.61	139.19	96.55	244	138	8	13		x		Distal	Present	Present	Present
2008	244.67	139.2	96.52	244	138	9	13	x			NA	Absent	Absent	Absent
2008	244.295	139.12	96.525	244	138	10	13		x		NA	Absent	Absent	Absent
2008	244.4	139.09	96.51	244	138	12	13		x		NA	Absent	Absent	Absent
2008	244.62	139.2	96.51	244	138	13	13	x			NA	Absent	Absent	Absent
2008	244.46	139.63	96.5	244	138	1	14		x		Medial	Present	Absent	Present
2008	244.73	139.635	96.47	244	138	2	14		x		Proximal	Absent	Absent	Absent
2008	244.86	139.55	96.47	244	138	3	14		x		Distal	Absent	Absent	Absent
2008	244.73	139.44	96.49	244	138	4	14	x			NA	Absent	Absent	Absent
2008	244.4	139.16	96.475	244	138	5	14		x		NA	Absent	Absent	Absent
2008	244.375	139.15	96.48	244	138	6	14	x			NA	Absent	Absent	Absent
2008	244.35	139.14	96.47	244	138	7	14		x		NA	Absent	Absent	Absent
2008	244.31	139.12	96.47	244	138	8	14		x		NA	Absent	Absent	Absent
2008	244.38	139.11	96.48	244	138	9	14		x		NA	Absent	Absent	Absent
2008	244.34	139.06	96.51	244	138	10	14	x			NA	Absent	Absent	Absent
2008	244.31	139.03	96.49	244	138	11	14	x			NA	Absent	Absent	Absent
2008	244.29	139.055	96.47	244	138	12	14	x			NA	Absent	Absent	Absent
2008	244.7	139.44	96.45	244	138	1	15		x		Medial	Absent	Absent	Absent
2008	244.545	139.31	96.455	244	138	2	15		x		NA	Absent	Absent	Absent
2008	244.495	139.24	96.43	244	138	3	15		x		NA	Absent	Absent	Absent
2008	244.42	139.19	95.45	244	138	4	15		x		NA	Absent	Absent	Absent
2008	244.125	139.31	96.43	244	138	5	15				NA	Absent	Absent	Absent
2008	244.405	139.22	96.42	244	138	6	15		x		NA	Absent	Absent	Absent
2008	244.22	139.13	96.44	244	138	7	15		x		NA	Absent	Absent	Absent
2008	244.5	139.19	96.43	244	138	8	15		x		Distal	Absent	Absent	Absent
2008	244.365	139.13	96.455	244	138	9	15		x		NA	Absent	Absent	Absent
2008	244.535	139.66	96.445	244	138	10	15	x			NA	Absent	Absent	Absent
2008	244.54	139.695	96.45	244	138	11	15		x		NA	Absent	Absent	Absent
2008	244.665	139.78	96.42	244	138	12	15	x			NA	Absent	Absent	Absent
2008	244.785	139.805	96.41	244	138	14	15		x		Distal	Present	Absent	Absent
2008	244.11	139.63	96.4	244	138	15	15		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2008	244.83	139.33	96.42	244	138	16	15		x		NA	Absent	Absent	Absent
2008	244.32	139.11	96.405	244	138	17	15		x		NA	Absent	Absent	Absent
2008	244.17	139.75	96.41	244	138	18	15	x			NA	Absent	Absent	Absent
2008	244.18	139.25	96.46	244	138	19	15		x		NA	Absent	Absent	Absent
2008	244.385	139.097	96.44	244	138	20	15		x		Distal	Absent	Absent	Absent
2008	244.15	139.047	96.145	244	138	21	15	x			NA	Absent	Absent	Absent
2008	244.26	139.03	96.48	244	138	22	15			x	Distal	Absent	Absent	Absent
2008	244.405	139.08	96.47	244	138	23	15	x			NA	Absent	Absent	Absent
2008	244.355	139.44	96.39	244	138	1	16	x			NA	Absent	Absent	Absent
2008	244.375	139.12	96.385	244	138	2	16		x		Na	Absent	Absent	Absent
2008	244.145	139.02	96.405	244	138	3	16		x		Medial	Absent	Absent	Absent
2008	244.83	139.365	96.38	244	138	4	16			x	NA	Present	Absent	Present
2008	244.9	139.51	96.36	244	138	1	17		x		NA	Absent	Absent	Absent
2008	244.97	139.26	96.34	244	138	2	17		x		NA	Absent	Absent	Absent
2008	244.21	139.64	96.252	244	138	1	18			x	Medial	Present	Absent	Present
2008	244.3	139.33	96.257	244	138	2	18	x			NA	Absent	Absent	Absent
2008	244.37	139.35	96.26	244	138	3	18	x			NA	Absent	Absent	Absent
2008	244.365	139.3	96.301	244	138	4	18	x			NA	Absent	Absent	Absent
2008	244.032	139.255	96.262	244	138	5	18		x		NA	Absent	Absent	Absent
2008	244.165	139.125	96.255	244	138	6	18		x		NA	Absent	Absent	Absent
2008	244.2	139.11	96.25	244	138	7	18	x			NA	Absent	Absent	Absent
2008	244.175	139.055	96.255	244	138	8	18	x			NA	Absent	Absent	Absent
2008	244.185	139.41	96.22	244	138	9	18				NA	Absent	Absent	Absent
2008	244.4	139.325	96.177	244	138	1	20	x			NA	Absent	Absent	Absent
2008	244.3	139.3	96.177	244	138	2	20	x			NA	Absent	Absent	Absent
2008	244.045	139.455	96.26	244	138	3	20		x		Medial	Absent	Absent	Absent
2008	244.61	139	96.17	244	138	4	20	x			NA	Absent	Absent	Absent
2008	244.35	139.145	96.16	244	138	5	20			x	Medial	Absent	Absent	Absent
2008	244.202	139.65	96.21	244	138	6	20			x	proximal	Absent	Absent	Absent
2008	244.02	139.765	96.15	244	138	1	21		x		NA	Absent	Absent	Absent
2008	244.145	139.665	96.1	244	138	2	21		x		NA	Absent	Absent	Absent
2008	244.03	139.625	96.12	244	138	3	21	x			Complete	Absent	Absent	Absent
2008	244.545	139.125	96.05	244	138	1	22			x	NA	Absent	Absent	Absent
2008	244.05	139.225	96.085	244	138	2	22		x		NA	Absent	Absent	Absent
2008	244.035	139.56	96.09	244	138	3	22			x	NA	Visible	Absent	Absent
2008	244.155	139.655	96	244	138	4	22			x	NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2008	244.455	139.845	95.985	244	138	1	24		x		NA	Absent	Absent	Absent
2008	244.585	139.815	95.91	244	138	1	25		x		NA	Absent	Absent	Absent
2008	244.625	139.725	95.945	244	138	2	25		x		NA	Absent	Absent	Absent
2008	244.1	139.635	95.95	244	138	5	25		x		NA	Absent	Absent	Absent
2008	244.32	139.775	95.845	244	138	1	26		x		NA	Absent	Absent	Absent
2008	244.25	139.24	95.85	244	138	2	26	x			NA	Absent	Absent	Absent
2008	244.245	139.35	95.86	244	138	3	26		x		NA	Absent	Absent	Absent
2008	244.09	139.655	95.82	244	138	1	27		x		Medial	Absent	Absent	Absent
2008	244.73	139.795	95.75	244	138	1	28		x		NA	Present	Present	Present
2008	244.46	139.615	95.67	244	138	1	30			x	Medial	Absent	Absent	Absent
2008	244.49	139.19	95.67	244	138	2	30			x	NA	Absent	Absent	Absent
2008	244.435	139.735	95.625	244	138	1	31		x		NA	Absent	Absent	Absent
2008	244.32	139.3	95.61	244	138	2	31		x		Medial	Absent	Absent	Absent
2008	244.01	139.14	95.645	244	138	3	31		x		Complete	Absent	Absent	Absent
2008	244.01	139.16	95.6	244	138	4	31	x			NA	Absent	Absent	Absent
2008	242.055	139.63	96.73	242	138	3	6		x		NA	Absent	Absent	Absent
2008	243.15	139.1	96.58	242	138	5	9		x		NA	Absent	Absent	Absent
2008	243.6	139.17	96.53	242	138	8	10		x		NA	Absent	Absent	Absent
2008	242.17	142.49	95.9	242	142	3	18		x		NA	Absent	Absent	Absent
2008	242.96	141.64	95.34	242	140	6	28		x		NA	Absent	Absent	Absent
2008	242.76	141.45	95.39	242	140	10	28	x			NA	Absent	Absent	Absent
2008	242.654	140.585	95.392	242	140	10	25		x		NA	Present	Absent	Absent
2008	244.26	139.12	96.5	244	138	11	13		x		NA	Absent	present	Absent
2008	243.99	140	95.8	242	140	2			x		NA	Absent	Absent	Absent
2008	242.743	140.454	95.393	242	140	12	25		x		NA	Absent	Absent	Absent
2008	243.99	140	95.8	242	140	1			x		NA	Absent	Absent	Absent
2008	242.662	140.862	95.342	242	140	6	26	x			NA	Absent	Absent	Absent
2008	242.27	141.26	95.47	242	140	2	26	x			NA	Absent	Absent	Absent
2009	242.03	139.77	95.67	242	138	1	1		x		Complete	Absent	Absent	Absent
2009	243.53	139.56	95.75	242	138	6	6			x	Complete	Absent	Absent	Absent
2009	243.69	139.68	96.11	242	138	2	14	x			NA	Absent	Absent	Absent
2009	243.45	139.78	96.3	242	138	1	14		x		Complete	Absent	Absent	Absent
2009	243.84	139.53	96.32	242	138	4	14	x			NA	Absent	Absent	Absent
2009	243.44	139.55	96.35	242	138	3	14	x			NA	Absent	Absent	Absent
2009	243.23	139.15	96.235	242	138	3	15		x		NA	Absent	Absent	Absent
2009	243.73	139.17	96.26	242	138	2	15		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2009	243.85	1339.43	96.26	242	138	1	15	x			NA	Absent	Absent	Absent
2009	243.85	139.035	96.265	242	138	4	15	x			NA	Absent	Absent	Absent
2009	243.59	139.825	96.2	242	138	6	16		x		NA	Absent	Absent	Absent
2009	243.7	139.37	96.2	242	138	4	16			x	NA	Absent	Absent	Absent
2009	243.03	139.03	96.2	242	138	5	16	x			NA	Absent	Absent	Absent
2009	243.41	139.775	96.2	242	138	7	16	x			NA	Absent	Absent	Absent
2009	243.75	139.66	96.205	242	138	2	16	x			Complete	Absent	Absent	Absent
2009	243.78	139.64	96.225	242	138	3	16		x		NA	Absent	Absent	Absent
2009	243.69	139.91	96.25	242	138	1	16		x		NA	Visible	Visible	Visible
2009	243.72	139.36	95.91	242	138	1	22			x	Complete	Absent	Absent	Absent
2009	243.14	139.08	95.91	242	138	2	22		x		NA	Absent	Absent	Absent
2009	243.08	139.56	95.51	242	138	22	23			x	NA	Absent	Absent	Absent
2009	243.36	139.59	95.865	242	138	4	23		x		NA	Absent	Absent	Absent
2009	243.64	139.78	95.87	242	138	2	23		x		NA	Absent	Absent	Absent
2009	243.25	139.87	95.88	242	138	1	23		x		NA	Possible	Absent	Absent
2009	243.01	139.16	95.885	242	138	5	23	x			NA	Absent	Absent	Absent
2009	243.11	139.01	95.89	242	138	6	23		x		NA	Absent	Absent	Absent
2009	243.64	139.79	95.815	242	138	2	24			x	NA	Absent	Absent	Absent
2009	243.11	139.08	95.83	242	138	3	24		x		Complete	Absent	Absent	Absent
2009	243.91	139.81	95.85	242	138	1	24		x		NA	Absent	Absent	Absent
2009	243.42	139.87	95.76	242	138	4	25			x	NA	Present	Present	Present
2009	243.38	139.73	95.76	242	138	3	25		x		NA	Possible	Absent	Absent
2009	243.61	139.77	95.77	242	138	5	25		x		NA	Absent	Absent	Absent
2009	243.73	139.13	95.775	242	138	7	25		x		NA	Absent	Absent	Absent
2009	243.3	139.73	95.78	242	138	2	25		x		NA	Absent	Absent	Absent
2009	243.21	139.79	95.78	242	138	1	25		x		NA	Absent	Absent	Absent
2009	243.61	139.76	95.7	242	138	1	26	x			NA	Absent	Absent	Absent
2009	243.86	139.52	95.7	242	138	2	26		x		NA	Absent	Absent	Absent
2009	243.58	139.77	95.66	242	138	2	27			x	Complete	Absent	Absent	Absent
2009	243.6	139.58	95.66	242	138	3	27		x		NA	Absent	Absent	Absent
2009	243.1	139.6	95.62	242	138	2	28		x		Complete	Absent	Absent	Absent
2009	243.27	139.375	95.62	242	138	4	28		x		NA	Absent	Absent	Absent
2009	243.17	139.5	95.62	242	138	3	28		x		NA	Absent	Absent	Absent
2009	243.21	139.27	95.63	242	138	5	28		x		NA	Absent	Absent	Absent
2009	243.6	139.76	95.645	242	138	1	28		x		NA	Absent	Absent	Absent
2009	243.39	139.77	95.55	242	138	4	29			x	NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2009	243.62	139.67	95.55	242	138	7	29		x		NA	Absent	Absent	Absent
2009	243.42	139.72	95.55	242	138	5	29		x		NA	Absent	Absent	Absent
2009	243.9	139.31	95.55	242	138	20	29		x		NA	Absent	Absent	Absent
2009	243.57	139.65	95.55	242	138	6	29		x		NA	Absent	Absent	Absent
2009	243.26	139.56	95.56	242	138	10	29	x			NA	Absent	Absent	Absent
2009	243.3	139.23	95.57	242	138	17	29	x			NA	Absent	Absent	Absent
2009	243.65	139.74	95.575	242	138	1	29	x			NA	Absent	Absent	Absent
2009	243.33	139.52	95.58	242	138	11	29		x		NA	Absent	Absent	Absent
2009	243.2	139.6	95.59	242	138	9	29		x		NA	Absent	Absent	Absent
2009	243.96	139.3	95.595	242	138	16	29		x		NA	Absent	Absent	Absent
2009	243.23	139.56	95.45	242	138	24	30		x		NA	Absent	Absent	Absent
2009	243.25	139.66	95.47	242	138	2	30		x		Complete	Absent	Absent	Absent
2009	243.46	139.66	95.495	242	138	4	30			x	NA	Absent	Absent	Absent
2009	243.75	139.16	95.5	242	138	23	30		x		Distal	Absent	Absent	Absent
2009	243.39	139.73	95.5	242	138	3	30		x		NA	Absent	Absent	Absent
2009	243.46	139.63	95.5	242	138	14	30		x		NA	Absent	Absent	Absent
2009	243.18	139.08	95.5	242	138	27	30		x		NA	Absent	Absent	Absent
2009	243.25	139.84	95.5	242	138	10	30			x	NA	Absent	Absent	Absent
2009	243.28	139.68	95.5	242	138	15	30		x		Medial	Absent	Absent	Absent
2009	243.32	139.59	95.505	242	138	20	30		x		NA	Absent	Absent	Absent
2009	243.93	139.86	95.51	242	138	6	30	x			NA	Absent	Absent	Absent
2009	243.92	139.8	95.51	242	138	7	30		x		NA	Absent	Absent	Absent
2009	243.99	139.735	95.51	242	138	5	30	x			Complete	Absent	Absent	Absent
2009	243.44	139.55	95.51	242	138	19	30			x	Complete	Absent	Absent	Absent
2009	243.6	139.105	95.52	242	138	25	30		x		NA	Absent	Absent	Absent
2009	243.56	139.63	95.52	242	138	13	30		x		Distal	Absent	Absent	Absent
2009	243.55	139.53	95.52	242	138	18	30		x		Distal	Absent	Absent	Absent
2009	243.77	139.75	95.52	242	138	9	30		x		NA	Absent	Absent	Absent
2009	243.22	139.79	95.52	242	138	11	30			x	Medial	Absent	Absent	Absent
2009	243.11	139.58	95.52	242	138	21	30	x			NA	Absent	Absent	Absent
2009	243.79	139.72	95.53	242	138	8	30	x			NA	Absent	Absent	Absent
2009	243.78	139.47	95.53	242	138	17	30		x		NA	Absent	Absent	Absent
2009	243.76	139.62	95.53	242	138	12	30	x			NA	Absent	Absent	Absent
2009	243.11	139.71	95.53	242	138	16	30		x		Distal	Absent	Absent	Absent
2009	243.41	139.79	95.53	242	138	1	30	x			NA	Absent	Absent	Absent
2009	243.21	139	95.54	242	138	28	30		x		Distal	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2009	243.23	139.11	95.55	242	138	26	30		x		NA	Absent	Absent	Absent
2009	243.92	139.79	95.435	242	138	38	31		x		NA	Absent	Absent	Absent
2009	243.61	139.01	95.445	242	138	40	31			x	Medial	Absent	Absent	Absent
2009	243.6	139.61	95.45	242	138	23	31		x		NA	Present	Absent	Present
2009	243.3	139.34	95.45	242	138	26	31		x		NA	Absent	Absent	Absent
2009	243.32	139.01	95.45	242	138	36	31	x			NA	Absent	Absent	Absent
2009	243.25	139.43	95.45	242	138	27	31	x			NA	Absent	Absent	Absent
2009	243.85	139.22	95.45	242	138	39	31		x		NA	Absent	Absent	Absent
2009	243.7	139.53	95.45	242	138	18	31		x		Complete	Absent	Absent	Absent
2009	243.57	139.03	95.45	242	138	41	31			x	NA	Absent	Absent	Absent
2009	243.23	139.56	95.45	242	138	24	31		x		NA	Present	Present	Present
2009	243.6	139.03	95.455	242	138	35	31		x		proximal	Absent	Absent	Absent
2009	243.22	139.12	95.455	242	138	37	31		x		NA	Absent	Absent	Absent
2009	243.69	139.05	95.46	242	138	34	31	x			NA	Absent	Absent	Absent
2009	243.74	139.49	95.46	242	138	19	31		x		Complete	Absent	Absent	Absent
2009	243.68	139.36	95.46	242	138	21	31	x			NA	Absent	Absent	Absent
2009	243.6	139.38	95.465	242	138	22	31	x			Complete	Absent	Absent	Absent
2009	243.04	139.93	95.465	242	138	8	31		x		NA	Absent	Absent	Absent
2009	243.1	139.62	95.47	242	138	11	31		x		Complete	Absent	Absent	Absent
2009	243.2	139.48	95.47	242	138	28	31		x		NA	Absent	Absent	Absent
2009	243.86	139.84	95.47	242	138	5	31		x		NA	Absent	Absent	Absent
2009	243.52	139.33	95.47	242	138	25	31		x		NA	Absent	Absent	Absent
2009	243.3	139.64	95.475	242	138	10	31		x		Complete	Absent	Absent	Absent
2009	243.1	139.37	95.48	242	138	29	31		x		NA	Absent	Absent	Absent
2009	243.52	139.49	95.48	242	138	17	31		x		NA	Absent	Absent	Absent
2009	243.9	139.2	95.48	242	138	31	31		x		NA	Absent	Absent	Absent
2009	243.54	139.61	95.48	242	138	14	31	x			NA	Absent	Absent	Absent
2009	243.92	139.04	95.48	242	138	33	31		x		proximal	Absent	Absent	Absent
2009	243.79	139.5	95.48	242	138	20	31		x		NA	Absent	Absent	Absent
2009	243.015	139.47	95.48	242	138	30	31		x		Complete	Absent	Absent	Absent
2009	243.5	139.62	95.48	242	138	13	31		x		NA	Absent	Absent	Absent
2009	243.58	139.62	95.49	242	138	15	31	x			NA	Absent	Absent	Absent
2009	243.95	139.85	95.49	242	138	3	31		x		NA	Possible	Absent	Absent
2009	243.62	139.56	95.49	242	138	16	31		x		Complete	Absent	Absent	Absent
2009	243.34	139.72	95.49	242	138	9	31		x		NA	Absent	Absent	Absent
2009	243.25	139.55	95.49	242	138	12	31		x		Complete	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2009	243.89	139.78	95.5	242	138	4	31		x		NA	Absent	Absent	Absent
2009	243.15	139.82	95.5	242	138	7	31		x		Complete	Absent	Absent	Absent
2009	243.14	139.9	95.5	242	138	6	31		x		Medial	Absent	Absent	Absent
2009	243.86	139.18	95.49	242	138	32	32		x		NA	Absent	Absent	Absent
2009	243.63	139.14	95.51	242	138	24								
2009	243.21	139.82	95.55	242	138	3								
2009	243.65	139.67	95.55	242	138	8	29		x		Medial	Absent	Absent	Absent
2009	243.69	139.56	95.55	242	138	13	29		x		Medial	Absent	Absent	Absent
2009	243.94	139.14	95.565	242	138	18	29			x	Medial	Absent	Absent	Absent
2009	243.9	139.58	95.57	242	138	14	29		x		Complete	Absent	Absent	Absent
2009	243.21	139.91	95.58	242	138	2	29	x			NA	Absent	Absent	Absent
2009	243.66	139.53	95.58	242	138	12	29		x		NA	Absent	Absent	Absent
2009	243.93	139.38	95.58	242	138	15	29			x	Medial	Absent	Absent	Absent
2009	243.96	139.17	95.58	242	138	19	29		x		NA	Absent	Absent	Absent
2009	243.08	139.56	95.51	242	142	22	30		x		NA	Absent	Absent	Absent
2009	243.77	142.7	96.01	242	142	1	24	x			NA	Absent	Absent	Absent
2009	243.18	142.06	96.03	242	142	2	24		x		Medial	Absent	Absent	Absent
2009	243.22	142.33	95.95	242	142	3	25		x		NA	Absent	Absent	Absent
2009	243.44	142.31	95.95	242	142	4	25			x	NA	Absent	Absent	Absent
2009	243.58	142.08	95.96	242	142	2	25		x		NA	Absent	Absent	Absent
2009	243.85	142	95.97	242	142	1	25			x	proximal	Absent	Absent	Absent
2009	243.57	142.56	95.97	242	142	5	25		x		NA	Absent	Absent	Absent
2009	243.675	142.725	95.97	242	142	6	25	x			proximal	Absent	Absent	Absent
2009	243.39	142.39	95.97	242	142	7	25		x		NA	Absent	Absent	Absent
2009	243.445	142.14	95.045	242	142	2	26		x		NA	Absent	Absent	Absent
2009	243.22	142.62	95.9	242	142	4	26			x	NA	Absent	Absent	Absent
2009	243.09	142.82	95.915	242	142	6	26		x		Medial	Absent	Absent	Absent
2009	243.28	142.22	95.92	242	142	3	26			x	NA	Absent	Absent	Absent
2009	243.37	142.82	95.93	242	142	5	26		x		NA	Possible	Absent	Absent
2009	243.36	142.15	95.94	242	142	1	26		x		NA	Absent	Absent	Absent
2009	243.33	142.23	95.86	242	142	2	27		x		NA	Absent	Absent	Absent
2009	243.825	142.43	95.86	242	142	3	27			x	NA	Absent	Absent	Absent
2009	243.61	142.15	95.88	242	142	1	27		x		NA	Absent	Absent	Absent
2009	243.84	142.87	95.88	242	142	5	27	x			NA	Absent	Absent	Absent
2009	243.8	142.39	95.89	242	142	4	27			x	proximal	Absent	Absent	Absent
2009	243.51	142.23	95.89	242	142	6	27		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2009	243.69	142.1	95.81	242	142	3	28		x		NA	Absent	Absent	Absent
2009	243.83	242.34	95.82	242	142	1	28		x		NA	Absent	Absent	Absent
2009	243.38	142.34	95.83	242	142	7	28		x		Proximal	Absent	Absent	Absent
2009	243.17	142.32	95.83	242	142	5	28		x		NA	Absent	Absent	Absent
2009	243.3	142.37	95.84	242	142	6	28		x		NA	Absent	Absent	Absent
2009	243.56	142.14	95.84	242	142	4	28		x		NA	Absent	Absent	Absent
2009	243.875	142.1	95.84	242	142	2	28		x		NA	Absent	Absent	Absent
2009	243.25	142.125	95.75	242	142	3	29	x			NA	Absent	Absent	Absent
2009	243.85	142.65	95.75	242	142	5	29		x		NA	Absent	Absent	Absent
2009	243.05	142.89	95.78	242	142	4	29		x		NA	Absent	Absent	Absent
2009	243.82	242.12	95.79	242	142	1	29		x		NA	Absent	Absent	Absent
2009	243.04	142.27	95.79	242	142	2	29	x			NA	Absent	Absent	Absent
2009	243.53	142.37	95.7	242	142	5	30	x			NA	Absent	Absent	Absent
2009	243.45	142.92	95.7	242	142	11	30		x		NA	Absent	Absent	Absent
2009	243.27	142.655	95.71	242	142	7	30		x		NA	Absent	Absent	Absent
2009	243.19	142.69	95.71	242	142	8	30		x		NA	Absent	Absent	Absent
2009	243.87	142.95	95.71	242	142	13	30		x		proximal	Absent	Absent	Absent
2009	243.71	142.63	95.71	242	142	15	30		x		NA	Absent	Absent	Absent
2009	243.09	142.16	95.71	242	142	18	30		x		NA	Absent	Absent	Absent
2009	243.11	142.82	95.71	242	142	19	30		x		NA	Absent	Absent	Absent
2009	243.05	142.76	95.72	242	142	6	30		x		NA	Absent	Absent	Absent
2009	243.42	142.07	95.72	242	142	10	30		x		NA	Absent	Absent	Absent
2009	243.64	142.47	95.72	242	142	17	30		x		NA	Absent	Absent	Absent
2009	243.49	142.37	95.73	242	142	4	30		x		NA	Absent	Absent	Absent
2009	243.34	142.8	95.73	242	142	9	30		x		Complete	Absent	Absent	Absent
2009	243.76	142.76	95.73	242	142	14	30		x		NA	Absent	Absent	Absent
2009	243.62	142.52	95.73	242	142	16	30		x		NA	Absent	Absent	Absent
2009	243.01	142.145	95.74	242	142	1	30		x		NA	Absent	Absent	Absent
2009	243.32	142.29	95.74	242	142	3	30	x			NA	Absent	Absent	Absent
2009	243.43	142.68	95.745	242	142	12	30	x			NA	Absent	Absent	Absent
2009	243.4	142.05	95.75	242	142	2	30	x			NA	Absent	Absent	Absent
2009	243.08	142.395	95.65	242	142	6	31	x			NA	Absent	Absent	Absent
2009	243.05	142.09	95.66	242	142	2	31		x		NA	Absent	Absent	Absent
2009	243.22	142.1	95.66	242	142	3	31		x		NA	Absent	Absent	Absent
2009	243.12	142.32	95.66	242	142	5	31		x		NA	Absent	Absent	Absent
2009	243.72	142.69	95.66	242	142	14	31		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2009	243.54	142.75	95.66	242	142	15	31		x		NA	Absent	Absent	Absent
2009	243.47	142.915	95.67	242	142	11	31		x		Distal	Absent	Absent	Absent
2009	243.46	142.98	95.67	242	142	12	31			x	Distal	Absent	Absent	Absent
2009	243.71	142.44	95.67	242	142	13	31		x		NA	Absent	Absent	Absent
2009	243.34	142.81	95.67	242	142	16	31	x			NA	Absent	Absent	Absent
2009	243.83	142.67	95.67	242	142	16	31		x		NA	Absent	Absent	Absent
2009	243.295	142.12	95.68	242	142	4	31		x		NA	Absent	Absent	Absent
2009	243.79	142.08	95.69	242	142	1	31		x		Distal	possible	Absent	Absent
2009	243.13	142.66	95.69	242	142	7	31		x		proximal	Absent	Absent	Absent
2009	243.27	142.85	95.69	242	142	8	31		x		NA	Absent	Absent	Absent
2009	243.38	142.89	95.69	242	142	9	31	x			NA	Absent	Absent	Absent
2009	243.5	142.87	95.69	242	142	10	31	x			NA	Absent	Absent	Absent
2009	243.51	142.1	95.6	242	142	2	32		x		NA	Absent	Absent	Absent
2009	243.29	142.34	95.6	242	142	8	32		x		NA	Absent	Absent	Absent
2009	243.39	142.19	95.6	242	142	10	32	x			NA	Absent	Absent	Absent
2009	243.19	142.71	95.6	242	142	24	32		x		Complete	Absent	Absent	Absent
2009	243.06	142.75	95.6	242	142	25	32		x		NA	Absent	Absent	Absent
2009	243.33	142.225	95.61	242	142	5	32		x		NA	Absent	Absent	Absent
2009	243.21	142.5	95.61	242	142	12	32		x		NA	Absent	Absent	Absent
2009	243.36	142.575	95.61	242	142	14	32		x		NA	Absent	Absent	Absent
2009	243.16	142.92	95.61	242	142	19	32		x		NA	Absent	Absent	Absent
2009	243.09	142.035	95.62	242	142	1	32			x	NA	Absent	Absent	Absent
2009	243.33	142.18	95.62	242	142	4	32	x			NA	Absent	Absent	Absent
2009	243.27	142.28	95.62	242	142	6	32		x		NA	Absent	Absent	Absent
2009	243.32	142.27	95.62	242	142	7	32	x			NA	Absent	Absent	Absent
2009	243.09	142.38	95.62	242	142	9	32		x		NA	Absent	Absent	Absent
2009	243.15	142.15	95.63	242	142	3	32		x		NA	Absent	Absent	Absent
2009	243.32	142.54	95.63	242	142	13	32		x		NA	Absent	Absent	Absent
2009	243.21	142.79	95.63	242	142	17	32		x		NA	Absent	Absent	Absent
2009	243.06	142.96	95.63	242	142	18	32		x		Complete	Absent	Absent	Absent
2009	243.71	142.69	95.63	242	142	21	32	x			NA	Absent	Absent	Absent
2009	243.255	142.48	95.64	242	142	11	32		x		NA	Absent	Absent	Absent
2009	243.49	142.56	95.64	242	142	15	32	x			NA	Absent	Absent	Absent
2009	243.49	142.79	95.64	242	142	20	32	x			NA	Absent	Absent	Absent
2009	243.63	142.89	95.64	242	142	23	32	x			NA	Absent	Absent	Absent
2009	243.03	142.48	95.65	242	142	16	32	x			NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2009	243.64	142.945	95.68	242	142	22	32			x	proximal	Absent	Absent	Absent
2009	243.22	142.33	95.56	242	142	15	33		x		Distal	Absent	Absent	Absent
2009	243.02	142.74	95.56	242	142	36	33		x		NA	Absent	Absent	Absent
2009	243.36	142.175	95.56	242	142	2	33	x			NA	Absent	Absent	Absent
2009	243.24	142.27	95.56	242	142	12	33	x			NA	Absent	Absent	Absent
2009	243.42	142.95	95.56	242	142	28	33		x		NA	Absent	Absent	Absent
2009	243.17	142.185	95.57	242	142	1	33	x			NA	Absent	Absent	Absent
2009	243.22	142.28	95.57	242	142	11	33			x	Medial	Absent	Absent	Absent
2009	243.44	142.44	95.57	242	142	18	33	x			NA	Absent	Absent	Absent
2009	243.35	142.75	95.57	242	142	34	33		x		NA	Absent	Absent	Absent
2009	243.07	142.9	95.57	242	142	38	33	x			NA	Absent	Absent	Absent
2009	243.16	142.93	95.57	242	142	40	33		x		NA	Absent	Absent	Absent
2009	243.03	142.27	95.58	242	142	4	33		z		NA	Absent	Absent	Absent
2009	243.06	142.36	95.58	242	142	8	33	x			NA	Absent	Absent	Absent
2009	243.03	142.455	95.58	242	142	10	33			x	Medial	Absent	Absent	Absent
2009	243.285	142.38	95.58	242	142	14	33		x		Distal	Absent	Absent	Absent
2009	243.05	142.43	95.58	242	142	7	33		x		NA	Absent	Absent	Absent
2009	243.1	142,35	95.58	242	142	16	33		x		NA	Absent	Absent	Absent
2009	243.6	142.48	95.58	242	142	19	33		x		NA	Absent	Absent	Absent
2009	243.52	142.17	95.59	242	142	3	33		x		Distal	Absent	Absent	Absent
2009	243.035	142.32	95.59	242	142	5	33	x			NA	Absent	Absent	Absent
2009	243.1	142.33	95.59	242	142	6	33		x		NA	Absent	Absent	Absent
2009	243.65	142.52	95.59	242	142	20	33		x		NA	Absent	Absent	Absent
2009	243.17	142.64	95.59	242	142	22	33			x	Distal	Absent	Absent	Absent
2009	243.12	142.88	95.59	242	142	26	33			x	NA	Absent	Absent	Absent
2009	243.22	142.71	95.59	242	142	30	33		x		NA	Absent	Absent	Absent
2009	243.38	142.65	95.59	242	142	31	33		x		NA	Absent	Absent	Absent
2009	243.21	142.39	95.59	242	142	13	33		x		NA	Absent	Absent	Absent
2009	243.02	142.6	95.59	242	142	17	33	x			NA	Absent	Absent	Absent
2009	243.14	142.64	95.59	242	142	21	33	x			NA	Absent	Absent	Absent
2009	243.1	142.74	95.59	242	142	23	33	x			NA	Absent	Absent	Absent
2009	243.06	142.8	95.59	242	142	24	33	x			NA	Absent	Absent	Absent
2009	243.01	142.92	95.59	242	142	25	33		x		NA	Absent	Absent	Absent
2009	243.13	142.96	95.59	242	142	27	33		x		NA	Absent	Absent	Absent
2009	243.13	142.75	95.59	242	142	35	33		x		NA	Absent	Absent	Absent
2009	243.28	142.71	95.595	242	142	33	33		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2009	243.18	142.73	95.595	242	142	29	33		x		NA	Absent	Absent	Absent
2009	243.27	142.68	95.595	242	142	32	33		x		NA	Absent	Absent	Absent
2009	243.82	142.625	95.5	242	142	12	34		x		NA	Absent	Absent	Absent
2009	243.59	142.235	95.51	242	142	4	34			x	NA	Absent	Absent	Absent
2009	243.54	142.52	95.51	242	142	9	34	x			NA	Absent	Absent	Absent
2009	243.79	142.92	95.51	242	142	13	34	x			NA	Absent	Absent	Absent
2009	243.3	142.08	95.52	242	142	2	34	x			NA	Absent	Absent	Absent
2009	243.41	142.145	95.52	242	142	3	34		x		proximal	Absent	Absent	Absent
2009	243.3	142.5	95.52	242	142	7	34		x		NA	Absent	Absent	Absent
2009	243.54	142.44	95.52	242	142	8	34	x			NA	Absent	Absent	Absent
2009	243.52	142.59	95.52	242	142	10	34		x		NA	Absent	Absent	Absent
2009	243.462	142.71	95.52	242	142	11	34		x		NA	Absent	Absent	Absent
2009	243.21	142.1	95.53	242	142	1	34	x			NA	Absent	Absent	Absent
2009	243.05	142.57	95.53	242	142	5	34		x		NA	Absent	Absent	Absent
2009	243.01	142.49	95.54	242	142	6	34		x		NA	Absent	Absent	Absent
2009	243.64	142.31	95.445	242	142	12	35	x			NA	Absent	Absent	Absent
2009	243.29	142.165	95.45	242	142	2	35		x		NA	Absent	Absent	Absent
2009	243.155	142.22	95.45	242	142	6	35		x		proximal	Absent	Absent	Absent
2009	243.67	142.32	95.45	242	142	13	35			x	NA	Absent	Absent	Absent
2009	243.62	142.46	95.45	242	142	16	35		x		NA	Absent	Absent	Absent
2009	243.69	142.455	95.45	242	142	17	35		x		NA	Absent	Absent	Absent
2009	243.275	142.17	95.46	242	142	1	35		x		NA	Absent	Absent	Absent
2009	243.55	142.36	95.46	242	142	10	35		x		proximal	Absent	Absent	Absent
2009	243.73	142.3	95.46	242	142	14	35		x		NA	Absent	Absent	Absent
2009	243.825	142.34	95.46	242	142	15	35	x			NA	Absent	Absent	Absent
2009	243.34	142.12	95.47	242	142	3	35		x		Complete	Absent	Absent	Absent
2009	243.75	142.06	95.47	242	142	7	35			x	NA	Absent	Absent	Absent
2009	243.59	142.275	95.47	242	142	9	35		x		NA	Absent	Absent	Absent
2009	243.56	142.4	95.47	242	142	11	35		x		Complete	Absent	Absent	Absent
2009	243.41	142.16	95.48	242	142	5	35	x			NA	Absent	Absent	Absent
2009	243.37	142.1	95.49	242	142	4	35	x			NA	Absent	Absent	Absent
2009	243.43	142.095	95.49	242	142	8	35			x	proximal	Absent	Absent	Absent
2009	243.02	142.92	95.58	242	142	37	37	x			NA	Absent	Absent	Absent
2009	243.11	142.88	95.57	242	142	39	39		x		NA	Absent	Absent	Absent
2009	242.54	142.42	95	242	142	10	23	x			NA	Absent	Absent	Absent
2009	242.92	142.52	95.655	242	142	7	23		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2009	242.12	142.24	95.66	242	142	5	23			x	NA	Absent	Absent	Absent
2009	242.64	142.41	95.66	242	142	6	23	x			NA	Absent	Absent	Absent
2009	242.105	142.17	95.665	242	142	4	23			x	NA	Absent	Absent	Absent
2009	242.33	142.86	95.665	242	142	12	23			x	NA	Absent	Absent	Absent
2009	242.07	142.74	95.665	242	142	14	23	x			NA	Absent	Absent	Absent
2009	242.1	142.075	95.67	242	142	3	23	x			NA	Absent	Absent	Absent
2009	242.55	142.49	95.67	242	142	8	23			x	NA	Absent	Absent	Absent
2009	242.39	142.52	95.68	242	142	9	23		x		Complete	Absent	Absent	Absent
2009	242.49	142.65	95.68	242	142	11	23	x			NA	Absent	Absent	Absent
2009	242.38	142.35	95.68	242	142	13	23	x			NA	Absent	Absent	Absent
2009	242.35	142.12	95.7	242	142	2	23			x	NA	Absent	Absent	Absent
2009	242.88	142.13		242	142	1	23			x	NA	Absent	Absent	Absent
2009	242.85	142.11	95.6	242	142	2	24	x			NA	Absent	Absent	Absent
2009	242.39	142.11	95.6	242	142	4	24		x		Distal	Absent	Absent	Absent
2009	242.32	142.04	95.6	242	142	5	24		x		NA	Absent	Absent	Absent
2009	242.23	142.05	95.6	242	142	6	24		x		proximal	Absent	Absent	Absent
2009	242.62	142.95	95.6	242	142	9	24	x			NA	Absent	Absent	Absent
2009	242.47	142.43	95.6	242	142	10	24				NA	Absent	Absent	Absent
2009	242.34	142.62	95.6	242	142	15	24	x			NA	Absent	Absent	Absent
2009	242.74	142.86	95.6	242	142	18	24	x			NA	Absent	Absent	Absent
2009	242.86	142.15	95.61	242	142	3	24		x		NA	Absent	Absent	Absent
2009	242.56	142.29	95.61	242	142	8	24		x		NA	Absent	Absent	Absent
2009	242.26	142.5	95.61	242	142	11	24		x		NA	Absent	Absent	Absent
2009	242.11	142.54	95.62	242	142	16	24	x			NA	Absent	Absent	Absent
2009	242.87	142	95.63	242	142	1	24	x			NA	Absent	Absent	Absent
2009	242.77	142.36	95.63	242	142	7	24			x	NA	Absent	Absent	Absent
2009	242.9	142.57	95.63	242	142	12	24	x			NA	Absent	Absent	Absent
2009	242.58	142.31	95.63	242	142	14	24	x			NA	Absent	Absent	Absent
2009	242.85	142.72	95.63	242	142	17	24		x		NA	Absent	Absent	Absent
2009	242.29	142.99	95.65	242	142	19	24		x		Distal	Absent	Absent	Absent
2009	242.79	142.01	95.55	242	142	3	25		x		Distal	Absent	Absent	Absent
2009	242.77	142.02	95.55	242	142	5	25	x			NA	Absent	Absent	Absent
2009	242.7	142.01	95.55	242	142	6	25		x		NA	Absent	Absent	Absent
2009	242.28	142.38	95.55	242	142	17	25			x	NA	Absent	Absent	Absent
2009	242.2	142.41	95.55	242	142	19	25		x		NA	Absent	Absent	Absent
2009	242.23	142.51	95.55	242	142	22	25	x			NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2009	242.88	142.55	95.55	242	142	23	25		x		NA	Absent	Absent	Absent
2009	242.86	142.58	95.55	242	142	24	25		x		NA	Absent	Absent	Absent
2009	242.66	142.87	95.55	242	142		25		x		NA	Absent	Absent	Absent
2009	242.79	142.06	95.56	242	142	4	25	x			NA	Absent	Absent	Absent
2009	242.85	142.23	95.56	242	142	8	25		x		NA	Absent	Absent	Absent
2009	242.64	142.14	95.56	242	142	9	25		x		NA	Absent	Absent	Absent
2009	242.18	142.2	95.56	242	142	11	25	x			NA	Absent	Absent	Absent
2009	242.59	142.34	95.56	242	142	14	25		x		NA	Absent	Absent	Absent
2009	242.77	142.43	95.56	242	142	18	25		x		NA	Absent	Absent	Absent
2009	242.54	142.07	95.57	242	142	7	25		x		NA	Absent	Absent	Absent
2009	242.58	142.19	95.57	242	142	10	25	x			NA	Absent	Absent	Absent
2009	242.35	142.14	95.57	242	142	12	25		x		NA	Absent	Absent	Absent
2009	242.23	142.26	95.57	242	142	13	25		x		NA	Absent	Absent	Absent
2009	242.71	142.61	95.57	242	142	26	25		x		NA	Absent	Absent	Absent
2009	242.85	142.75	95.57	242	142	30	25	x			NA	Absent	Absent	Absent
2009	242.69	142.8	95.57	242	142	32	25		x		NA	Absent	Absent	Absent
2009	242.09	142.7	95.57	242	142	33	25		x		NA	Absent	Absent	Absent
2009	242.4	142.75	95.57	242	142	34	25		x		Distal	Absent	Absent	Absent
2009	242.04	142.97	95.57	242	142	36	25	x			Distal	Absent	Absent	Absent
2009	242.41	142.31	95.575	242	142	16	25		x		NA	Absent	Absent	Absent
2009	242.45	142.53	95.575	242	142	21	25		x		NA	Absent	Absent	Absent
2009	242.78	142.01	95.58	242	142	2	25		x		NA	Absent	Absent	Absent
2009	242.7	142.01	95.58	242	142	6	25		x		NA	Absent	Absent	Absent
2009	242.48	142.37	95.58	242	142	15	25	x			NA	Absent	Absent	Absent
2009	242.65	142.59	95.58	242	142	27	25		x		NA	Absent	Absent	Absent
2009	242.86	142.78	95.58	242	142	31	25		x		proximal	Absent	Absent	Absent
2009	242.63	142.65	95.58	242	142		25		x		NA	Absent	Absent	Absent
2009	242.87	142.05	95.59	242	142	1	25		x		NA	Absent	Absent	Absent
2009	242.54	142.51	95.59	242	142	20	25	x			NA	Absent	Absent	Absent
2009	242.63	142.59	95.59	242	142	25	25		x		Complete	Absent	Absent	Absent
2009	242.59	142.6		242	142	29	25		x		NA	Absent	Absent	Absent
2009	242.49	142.23	95.5	242	142	3	26		x		NA	Absent	Absent	Absent
2009	242.5	142.52	95.5	242	142	5	26			x	NA	Absent	Absent	Absent
2009	242.57	142.39	95.51	242	142	4	26			x	NA	Absent	Absent	Absent
2009	242.69	142.51	95.51	242	142	7	26		x		NA	Absent	Absent	Absent
2009	242.62	142.72	95.51	242	142	11	26		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2009	242.49	142.11	95.52	242	142	2	26		x		NA	Absent	Absent	Absent
2009	242.3	142.67	95.52	242	142	6	26			x	Distal	Absent	Absent	Absent
2009	242.56	142.72	95.52	242	142	12	26			X	NA	Absent	Absent	Absent
2009	242.7	142.8	95.52	242	142	14	26			x	NA	Absent	Absent	Absent
2009	242.83	142.91	95.52	242	142	17	26	x			Complete	Absent	Absent	Absent
2009	242.82	142.2	95.53	242	142	1	26		x		NA	Absent	Absent	Absent
2009	242.84	142.71	95.53	242	142	9	26		x		NA	Absent	Absent	Absent
2009	242.67	142.76	95.53	242	142	10	26		x		NA	Absent	Absent	Absent
2009	242.68	142.81	95.53	242	142	13	26		x		NA	Absent	Absent	Absent
2009	242.79	142.83	95.53	242	142	15	26	x			NA	Absent	Absent	Absent
2009	242.85	142.81	95.53	242	142	16	26		x		NA	Absent	Absent	Absent
2009	242.72	142.62	95.54	242	142	8	26		x		NA	Absent	Absent	Absent
2009	242.53	142.65	95.47	242	142	2	27		x		NA	Absent	Absent	Absent
2009	242.77	142.07	95.485	242	142	4	27			x	Complete	Absent	Absent	Absent
2009	242.68	142.8	95.49	242	142	1	27			x	proximal	Absent	Absent	Absent
2009	242.56	142.81	95.495	242	142	3	27		x		NA	Absent	Absent	Absent
2009	242.85	143.36	95.37	242	142	2	29			x	NA	Absent	Absent	Absent
2009	242.86	142.8	95.375	242	142	4	29			x	NA	Absent	Absent	Absent
2009	243.01	142.45		242	142	9								
2009	242.65	142.67	95.62					x			Distal	Absent	Absent	Absent
2009	246.39	138.87	97.49	246	138	1	12		x		NA	Absent	Absent	Absent
2009	246.37	138.82	97.5	246	138	2	12			x	Medial	Absent	Absent	Absent
2009	246.42	138.5	97.52	246	138	3	12	x			NA	Absent	Absent	Absent
2009	246.95	138.9	97.52	246	138	4	12	x			NA	Absent	Absent	Absent
2009	246.97	139.05	97.47	246	138	1	13			x	Distal	Absent	Absent	Absent
2009	246.96	138.77	97.5	246	138	1	13		x		NA	Absent	Absent	Absent
2009	246.47	139.53	97.43	246	138	1	**14**	x			NA	Absent	Absent	Absent
2009	246.54	139.53	97.42	246	138	2	14	x			NA	Absent	Absent	Absent
2009	246.26	139.13	97.35	246	138	1	15			x	NA	x	Absent	Absent
2009	246.6	139.38	97.35	246	138	2	15	X			NA	Absent	Absent	Absent
2009	246.67	139.62	97.32	246	138	1	16		x		NA	Absent	Absent	Absent
2009	246.97	139.36	97.32	246	138	2	16	x			NA	Absent	Absent	Absent
2009	246.92	139.55	97.32	246	138	1	17		x		NA	Absent	Absent	Absent
2009	246.83	139.36	97.29	246	138	2	17			x	NA	Absent	Absent	Absent
2009	246.83	139.36	97.22	246	138	1	18	x			NA	Absent	Absent	Absent
2009	246.79	139.1	97.2	246	138	2	18	x			NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2009	246.13	139.88	97.16	246	138	1	19	x			NA	Absent	Absent	Absent
2009	247	139.86	97.1	246	138	1	20	x			NA	Absent	Absent	Absent
2009	246.54	138.86	97.65	246	138	1	10		x		Complete	Absent	Absent	Absent
2009	246.91	138.99	97.56	246	138	1	11	x			NA	Absent	Absent	Absent
2009	246.58	138.68	97.56	246	138	1	11		x		Distal	Absent	Absent	Absent
2009	246.4	138.7	97.56	246	138	2	11			x	Distal	x	Absent	Absent
2009	246.7	138.92	97.55	246	138	1	12			x	Distal	Absent	Absent	Absent
2009	246.4	138.55	97.53	246	138	2	12			x	Complete	Absent	Absent	Absent
2009	246.39	138.34	97.53	246	138	3	12			x	Complete	Absent	Absent	Absent
2009	246.39	138.1	97.53	246	138	4	12		x		Proximal	x	Absent	Absent
2009	246.71	138.16	97.52	246	138	5	12	x			NA	Absent	Absent	Absent
2009	246.94	138.1	97.55	246	138	6	12			x	NA	Absent	Absent	Absent
2009	246.82	138.36	97.54	246	138	7	12		x		NA	Absent	Absent	Absent
2009	246.13	138.55	97.5	246	138	1	13							
2009	246.7	138.28	97.42	246	138	1	15		x		NA	Absent	Absent	Absent
2009	246.9	138.76	97.34	246	138	2	15		x		NA	Absent	Absent	Absent
2009	246.45	138.83	97.3	246	138	1	17		x		Complete	Absent	Absent	Absent
2009	246.37	138.47	97.29	246	138	2	17		x		Complete	Absent	Absent	Absent
2009	246.16	138.52	97.15	246	138	1	20			x	NA	Absent	Absent	Absent
2009	246.89	138.14	97.07	246	138	1	21	x			NA	Absent	Absent	Absent
2009	247.55	141.66	97.44	246	140	1	23		x		NA	Absent	Absent	Absent
2009	247.65	141.5	97.48	246	140	2	23		x		NA	Absent	Absent	Absent
2009	247.67	141.76	97.43	246	140	3	23			x	Distal	Absent	Absent	Absent
2009	247.36	141.1	97.4	246	140	4	23			x	Complete	Absent	Absent	Absent
2009	247.9	141.65	97.4	246	140	5	23			**x**	**NA**	**Absent**	**Absent**	Absent
2009	247.95	141.63	97.4	246	140	6	23		x		NA	Absent	Absent	Absent
2009	247.96	141.76	97.46	246	140	7	23		x		NA	Absent	Absent	Absent
2009	247.98	141.74	97.45	246	140	8	23	x			NA	Absent	Absent	Absent
2009	247.74	141.98	97.4	246	140	1	24		x		Complete	Absent	Absent	Absent
2009	247.88	141.8	97.4	246	140	2	24			x	NA	Absent	Absent	Absent
2009	247.61	141.79	97.47	246	140	3	24		x		NA	Absent	Absent	Absent
2009	247.37	141.81	97.39	246	140	4	24		x		Medial	Absent	Absent	Absent
2009	247.22	141.69	97.36	246	140	5	24		x		Distal	Absent	Absent	Absent
2009	247.17	141.08	97.4	246	140	6	24		x		NA	Absent	Absent	Absent
2009	247.27	141.77	97.34	246	140	1	25		x		NA	Absent	Absent	Absent
2009	247.55	140.4	97.49	246	140	1	23		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2009	247.12	140.58	97.39	246	140	2	23		x		Complete	Absent	Absent	Absent
2009	247.12	140.76	97.39	246	140	3	23	x			NA	Absent	Absent	Absent
2009	247.52	140.99	97.39	246	140	4	23		x		NA	Absent	Absent	Absent
2009	247.9	140.68	97.43	246	140	5	23	x			NA	Absent	Absent	Absent
2009	246.xx	140.xx	97.3	246	140				x		NA	Absent	Absent	Absent
2009	246.68	141.24	97.4	246	140	1	24		x		NA	Absent	Absent	Absent
2009	246.8	141.05	97.37	246	140	2	24	x			NA	Absent	Absent	Absent
2009	246.63	141.16	97.4	246	140	3	24	x			NA	Absent	Absent	Absent
2009	246.42	141.31	97.39	246	140	4	24		x		proximal	Absent	Absent	Absent
2009	246.24	141.64	97.38	246	140	5	24		x		NA	Absent	Absent	Absent
2009	246.33	141.61	97.39	246	140	6	24		x		NA	Absent	Absent	Absent
2009	246.36	141.61	97.37	246	140	7	24		x		NA	Absent	Absent	Absent
2009	246.56	141.34	97.4	246	140	1	F107	x			NA	Absent	Absent	Absent
2009	246.79	141.46	97.215	246	140	2	F107			x	NA	Absent	Absent	Absent
2009	246.65	141.645	97.247	246	140	3	F107	x			NA	Absent	Absent	Absent
2009	246.58	141.68	97.275	246	140	4	F107	x			NA	Absent	Absent	Absent
2009	246.38	141.52	97.278	246	140	5	F107	x			NA	Absent	Absent	Absent
2009	246.27	141.64	97.26	246	140	6	F107	x			NA	Absent	Absent	Absent
2009	246.3	141.56	97.22	246	140	7	F107	x			NA	Absent	Absent	Absent
2009	246.53	141.745	97.212	246	140	8	F107	x			NA	Absent	Absent	Absent
2009	246.92	141.505	97.275	246	140	9	F107	x			NA	Absent	Absent	Absent
2009	246.455	141.4	97.202	246	140	10	F107	x			NA	Absent	Absent	Absent
2009	246.625	141.48	97.155	246	140	11	F107	x			NA	Absent	Absent	Absent
2009	246.33	141.31	97.47	246	140	1	F94		x		NA	Absent	Absent	Absent
2009	246.31	141.41	97.46	246	140	2	F94		x		Complete	Absent	Absent	Absent
2009	246.27	141.24	97.33	246	140	3	F94		x		NA	Absent	Absent	Absent
2009	246.92	141.06	97.46	246	140	4	F94	x			NA	Absent	Absent	Absent
2009	246.66	141.43	97.36	246	140	5	F94		x		NA	Absent	Absent	Absent
2009	246.2	141.3	97.5	246	140	6	F94	x			NA	Absent	Absent	Absent
2009	246.2	141.45	97.49	246	140	7	F94		x		NA	Absent	Absent	Absent
2009	244.406	141.31	97.48	246	140	8	F94		x		proximal	Absent	Absent	Absent
2009	246.56	141.1	97.44	246	140	9	F94		x		Step	Absent	Absent	Absent
2009	246.45	141.45	97.45	246	140	10	F94		x		NA	Absent	Absent	Absent
2009	246.2	141.57	97.43	246	140	11	F94		x		NA	Absent	Absent	Absent
2009	246.48	141.18	97.44	246	140	12	F94		x		NA	Absent	Absent	Absent
2009	246.405	141.14	97.47	246	140	13	F94		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2009	246.48	141.3	97.435	246	140	14	F94		x		NA	Absent	Absent	Absent
2009	246.295	141.29	97.46	246	140	15	F94		x		NA	Absent	Absent	Absent
2009	246.445	141.245	97.47	246	140	16	F94		x		Medial	Absent	Absent	Absent
2009	246.4	141.3	97.44	246	140	17	F94		x		NA	Absent	Absent	Absent
2009	246.33	141.33	97.44	246	140	18	F94	x			NA	Absent	Absent	Absent
2009	246.58	141.235	97.395	246	140	19	F94	x			Proximal	Absent	Absent	Absent
2009	246.65	141.305	97.395	246	140	20	F94	x			NA	Absent	Absent	Absent
2009	246.68	141.27	97.38	246	140	21	F94	x			NA	Absent	Absent	Absent
2009	246.7	140.77	97.35	246	140	1	25		x		NA	Absent	Absent	Absent
2009	245.43	140.97	97.35	246	140	2	25		x		Complete	Absent	Absent	Absent
2009	246.3	142.6	97.33	246	140	3	25		x		NA	Absent	Absent	Absent
2009	246.42	140.64	97.3	246	140	1	26	x			NA	Absent	Absent	Absent
2009	248.18	141.13	97.51	248	140	1	22		x		NA	Absent	Absent	Absent
2009	248.45	141.01	97.67	248	140	2	22		x		NA	Absent	Absent	Absent
2009	248.62	141.02	97.52	248	140	3	22		x		NA	Absent	Absent	Absent
2009	248.87	141.01	97.51	248	140	4	22		x		NA	Absent	Absent	Absent
2009	248.71	141.59	97.52	248	140	5	22	x			NA	Absent	Absent	Absent
2009	248.88	141.6	97.51	248	140	6	22	x			NA	Absent	Absent	Absent
2009	248.01	141.86	97.49	248	140	1	23		x		NA	Absent	Absent	Absent
2009	248.98	141.41	97.46	248	140	2	24			x	NA	Absent	Absent	Absent
2009	248.06	141.67	97.52	248	140	3	F105			x	NA	Absent	Absent	Absent
2009	248.58	141.6	140cm	248	140	11	F105		x		NA	Absent	Absent	Absent
2009	248.73	140.88	97.59	248	140	1	21		x		NA	Absent	Absent	Absent
2009	248.3	140.82	97.64	248	140	2	21	x			NA	Absent	Absent	Absent
2009	248.55	140.26	97.59	248	140	3	21	x			NA	Absent	Absent	Absent
2009	248.35	140.24	97.6	248	140	4	21		x		Complete	Absent	Absent	Absent
2009	248.27	140.78	97.6	248	140	5	21	x			NA	Absent	Absent	Absent
2009	248.34	140.64	97.59	248	140	6	21	x			NA	Absent	Absent	Absent
2009	248.93	140.8	97.56	248	140	7	21		x		NA	Absent	Absent	Absent
2009	248.17	140.34	97.6	248	140	8	21	x			NA	Absent	Absent	Absent
2009	248.07	140.78	97.5	248	140	1	22		x		Complete	Absent	Absent	Absent
2009	248.55	140.09	97.53	248	140	1	22		x		NA	Absent	Absent	Absent
2009	248.82	140.06	97.52	248	140	2	22	x			NA	Absent	Absent	Absent
2009	248.89	140.22	97.41	248	140	3	22		x		NA	Absent	Absent	Absent
2009	248.05	140.47	97.48	248	140	1	23		x		NA	Absent	Absent	Absent
2009	248.49	140.84		248	140	2	23	x			NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2009	248.81	140.84	97.49	248	140	3	23		x		NA	Absent	Absent	Absent
2009	248.57	140.92	97.5	248	140	1	24							
2009	248.77	140.89	97.4	248	140	3	24							
2009	248.58	140.63	97.42	248	140	4	24							
2009	248.91	140.28	97.48	248	140	5	24	x			NA	Absent	Absent	Absent
2009	248.12	140.57	97.44	248	140	6	24		x		NA	Absent	Absent	Absent
2009	248.39	140.41	97.41	248	140	7	24		x		NA	Absent	Absent	Absent
2009	246.74	142	97.38	246	142	1	1			x	Complete	Absent	Absent	Absent
2009	246.835	141.44	97.04	246	140	9	7		x		NA	Absent	Absent	Absent
2009	246.465	141.43	97.15	246	140	6	4		x		NA	Absent	Absent	Absent
2009	248.46	141.44	97.1	248	140	2	9	x			NA	Absent	Absent	Absent
2009	246.59	141.27	96.91	246	140	9	9		x		Complete	Absent	Absent	Absent
2009	246.05	141.91	96.91	246	140	1	9		x		NA	Absent	Absent	Absent
2009	246.88	141.38	96.92	246	140	10	9		x		NA	Absent	Absent	Absent
2009	246.28	141.86	97.08	246	140	3	6			x	Distal	Present	Absent	Absent
2009	246.717	142.76	97.35	246	142	6	2			x	Medial	Absent	Absent	Absent
2009	248.215	141.11	97.1	248	140	1	9		x		NA	Absent	Absent	Absent
2009	246.92	141.8	97.135	246	140	9	5		x		NA	Absent	Absent	Absent
2009	246.15	141.43	97.195	246	140	3	4		x		Complete	Absent	Absent	Absent
2009	248.03	141.08	97.2	248	140	1	6		x		NA	Absent	Absent	Absent
2009	246.978	141.27	97.19	246	140	9	4		x		proximal	Absent	Absent	Absent
2009	246.34	141.01	96.87	246	140	1	10		x		NA	Absent	Absent	Absent
2009	248.3	140.11	96.9	248	140	2	10			x	Complete	Absent	Absent	Absent
2009	246.05	141.16	97.04	246	140	1	7			x	NA	x	Absent	x
2009	246.505	141.855	97.18	246	140	1	4			x	Step	Absent	Absent	Absent
2009	248.18	140.05	96.95	248	140	1	9			x	NA	Absent	Absent	Absent
2009	248.24	140.4	97.15	248	140	1	5			x	Complete	Absent	Absent	Absent
2009	248.15	140.245	96.94	248	140	4	10		x		NA	Absent	Absent	Absent
2009	246.235	141.05	97.197	246	140	5	4		x		NA	Absent	Absent	Absent
2009	246.532	141.12	97.14	246	140	4	5	x			NA	Absent	Absent	Absent
2009	248.41	140.08	96.95	248	140	7	9		x		NA	Absent	Absent	Absent
2009	248.54	140.19	96.92	248	140	3	10		x		NA	Absent	Absent	Absent
2009	248.5	141.115	96.99	248	140	1	11	x			Distal	Absent	Absent	Absent
2009	246.15	141.71	96.91	246	140	4	9		x		Complete	Absent	Absent	Absent
2009	246.15	141.39	96.98	246	140	4	9		x		NA	Absent	Absent	Absent
2009	246.27	141.8	97.04	246	140	11	7	x			NA	Absent	Absent	x

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2009	248.92	141.11	97.16	248	140	2	8		x		NA	Absent	Absent	Absent
2009	246.37	141.39	97.1	246	140	5	5		x		NA	Absent	Absent	Absent
2009	246.11	141.83	97.08	246	140	2	6		x		NA	Absent	Absent	Absent
2009	246.4	141.91	96.92	246	140	2	9		x		NA	Absent	Absent	Absent
2009	248.665	141.13	97.05	248	140	4	10	x			Distal	Absent	Absent	Absent
2009	248.48	140.82	97.22	248	140	2	4			x	Complete	Absent	Absent	Absent
2009	246.13	141.42	97.185	246	140	4	4			x	NA	Absent	Absent	Absent
2009	246.56	141.14	96.895	246	140	2	10		x		NA	Absent	Absent	Absent
2009	246.87	141.05	96.965	246	140	6	8		x		NA	Absent	Absent	Absent
2009	248.55	141.645	97.03	248	140	5	10		x		Complete	Absent	Absent	Absent
2009	248.86	141.22	97.05	248	140	3	10		x		NA	Absent	Absent	Absent
2009	246.06	141.8	97.15	246	140	7	5		x		NA	Absent	Absent	Absent
2009	246.74	141.58	96.96	246	140	10	8			x	NA	Absent	Absent	visible
2009	248.49	140.3	96.95	248	140	4	9	x			NA	Absent	Absent	Absent
2009	248.42	140.75	97.01	248	140	1	8			x	Distal	Absent	Absent	Absent
2009	248.233	141.255	97.135	248	140	1	8		x		NA	Absent	Absent	Absent
2009	248.26	140.36	96.97	248	140	6	9		x		NA	Absent	Absent	Absent
2009	248.945	141.13	97.16	248	140	3	8		x		NA	Absent	Absent	Absent
2009	246.18	141.18	97.24	246	140	1	3		x		Medial	Absent	Absent	Absent
2009	246.18	141.18	97.24	246	140	1	3		x		NA	Absent	Absent	Absent
2009	248.68	141.88	97.2	248	140	2	6	x			NA	Absent	Absent	Absent
2009	246.995	141.86	97.115	246	140	10	5		x		Medial	Absent	Absent	Absent
2009	248.175	140.235	96.96	248	140	3	9			x	NA	Absent	Absent	Absent
2009	246.37	141.19	97.03	246	140	4	7		x		NA	Absent	Absent	Absent
2009	246.63	141.13	97.01	246	140	6	7		x		NA	Absent	Absent	Absent
2009	248.23	140.3	96.92	248	140	5	10		x		Distal	Absent	Absent	Absent
2009	246.91	141.35	96.98	246	140	9	8		x		NA	Absent	Absent	Absent
2009	248.89	141.3	97	248	140	3	11	x			NA	Absent	Absent	Absent
2009	248.835	141.8	97.21	248	140	2	7		x		NA	Absent	Absent	Absent
2009	246.4	141.63	97.15	246	140	8	5		x		NA	Absent	Absent	Absent
2009	248.46	140.82	97.22	248	140	1	4		x		NA	Absent	Absent	Absent
2009	246.31	141.6	96.92	246	140	5	9		x		NA	Absent	Absent	Absent
2009	246.15	141.665	97.125	246	140	6	5			x	NA	Absent	Absent	Absent
2009	248.2	140.26	97.25	248	140	1	3			x	NA	Absent	Absent	Absent
2009	246.35	141.4	96.92	246	140	7	9		x		NA	Absent	Absent	Absent
2009	246.26	141.02	97	246	140	1	8		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2009	248.26	140.05	96.9	248	140	6	10		x		NA	Absent	Absent	Absent
2009	246.88	141.06	96.97	246	140	5	8		x		NA	Absent	Absent	Absent
2009	248.19	141.735	96.93	248	140	3	12			x	Complete	Absent	Absent	Absent
2009	246.59	141.91	96.96	246	140	11	8		x		NA	Absent	Absent	Absent
2009	246.85	141.27	97.07	246	140	5	6			x	NA	Absent	Absent	Absent
2009	248.41	140.19	96.99	248	140	2	9			x	Na	Absent	Absent	Absent
2009	246.8	141.43	97	246	140	10	7			x	NA	x	Absent	x
2009	246.13	141.87	96.98	246	140	7	8			x	Complete	Absent	Absent	Absent
2009	246.82	141.15	97.07	246	140	6	6			x	Medial	Absent	Absent	Absent
2009	246.48	141.2	96.86	246	140	3	10	x			Complete	Absent	Absent	Absent
2009	246.515	141.03	97.15	246	140	1	5	x			NA	Absent	Absent	Absent
2009	246.64	141.385	96.88	246	140	5	10		x		NA	Absent	Absent	Absent
2009	247.1	141.42	97.21	246	140	2	3		x		NA	Absent	Absent	Absent
2009	246.13	141.28	96.98	246	140	3	8		x		NA	Absent	Absent	Absent
2009	248.67	140.335	97.09	248	140	1	7		x		NA	Absent	Absent	Absent
2009	247.54	141.71	97.2	246	140	1	3		x		NA	Absent	Absent	Absent
2009	247.92	141.26	97.03	246	140	2	7		x		NA	Absent	Absent	Absent
2009	248.32	140.76	97.32	248	140	1	2			x	NA	Absent	Absent	Absent
2009	246.05	141.55	97.185	246	140	2	4		x		Proximal	Absent	Absent	Absent
2009	246.72	141.75	96.92	246	140	6	9		x		NA	Absent	Absent	Absent
2009	247.32	141.875	97.324	246	140	1	1	x			Complete	Absent	Absent	Absent
2009	24826	140.33	96.9	248	140	1	10		x		NA	Absent	Absent	Absent
2009	246.21	141.17	97	246	140	2	8		x		NA	Absent	Absent	Absent
2009	246.15	141.76	96.9	246	140	3	9		x		NA	Absent	Absent	Absent
2009	246.673	141.12	97.11	246	140	3	5	x			NA	Absent	Absent	Absent
2009	246.67	141.4	97.01	246	140	8	7		x		NA	Absent	Absent	Absent
2009	246.5	141.33	97.01	246	140	5	7		x		Complete	Absent	Absent	Absent
2009	248.69	141.23	96.97	248	140	2	11	x			NA	Absent	Absent	Absent
2009	248.1	140.12	97.15	248	140	2	5	x			NA	Absent	Absent	Absent
2009	246.63	141.1	96.94	246	140	11	9		x		NA	Absent	Absent	Absent
2009	246.655	141.0325	97.15	246	140	2	5		x		NA	Absent	Absent	Absent
2009	248.67	141.555	97.12	248	140	4	8		x		NA	Absent	Absent	Absent
2009	246.45	141.08	97.25	248	140	1	5			x	Medial	Absent	Absent	Absent
2009	248.565	140.36	97.145	248	140	1	6	x			Complete	Absent	x	Absent
2009	246.7	141.235	97.03	246	140	7	7		x		NA	Absent	Absent	Absent
2009	247.06	141.12	97.17	246	140	1	4	x			NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2009	246.14	141.22	97	246	140	2	7	x			NA	Absent	Absent	Absent
2009	246.52	141.48	96.89	246	140	6	10		x		NA	Absent	Absent	Absent
2009	248.83	141.18	97.175	248	140	1	7		x		NA	Absent	Absent	Absent
2009	246.83	141.37	96.95	246	140	8	8			x	Complete	Absent	Absent	Absent
2009	246.2	141.74	97	246	140	12	7	x			Complete	Absent	Absent	Absent
2009	248.39	140.1	97.33	248	140	2	2		x		NA	Absent	Absent	Absent
2009	246.77	141.43	97.08	246	140	4	6		x		NA	Absent	Absent	Absent
2009	246.46	141.36	96.88	246	140	4	10		x		NA	Absent	Absent	Absent
2009	247.07	141.205	97.04	246	140	4	7	x			NA	Absent	Absent	Absent
2009	246.34	141.06	97.02	246	140	3	7		x		NA	Absent	Absent	Absent
2009	246.935	141.35	97.16	246	140	8	4			x	Complete	Absent	Absent	Absent
2009	248.615	141.615	97.1	248	140	5	8		x		NA	Absent	Absent	Absent
2009	248.65	140.89	97.29	248	140	4	3	x			NA	Absent	Absent	Absent
2009	248.67	141.67	97.07	248	140	4	9			x	Distal	Absent	Absent	Absent
2009	247	141.47	97.2	246	140	1	4		x		NA	Absent	Absent	Absent
2009	246.19	141.38	97.1	246	140	1	5		x		NA	Absent	Absent	Absent
2009	248.46	141.545	97	248	140	4	11	x			NA	Absent	Absent	Absent
2009	248.27	141.1	96.91	248	140	2	12		x		NA	Absent	Absent	Absent
2009	248.94	140.13	97.3	248	140	3	3	x			NA	Absent	Absent	Absent
2009	247.88	141.73	96.99	246	140	3	7		x		NA	Absent	Absent	Absent
2009	246.07	141.45	96.9	246	140	8	9	x			NA	Absent	Absent	Absent
2009	246.11	141.69	96.89	246	140	8	10		x		NA	Absent	Absent	Absent
2009	246.4	141.31	97.155	246	140	7	4	x			NA	Absent	Absent	Absent
2009	246.07	141.26	97.1	246	140	2	5		x		NA	Absent	Absent	Absent
2009	246.37	142.1	97.41	246	142	1	1			x	NA	Absent	Absent	Absent
2009	247.02	141.48	97.2	246	140	3	3	x			NA	Absent	Absent	Absent
2009	248.75	141.57	97.06	248	140	3	9	x			NA	Absent	Absent	Absent
2009	248.74	140.235	97.155	248	140	2	6		x		NA	Absent	Absent	Absent
2009	248.28	140.14	97.3	248	140	2	3		x		NA	Absent	Absent	Absent
2009	248.95	141.21	97.04	248	140	2	10		x		NA	Absent	Absent	Absent
2009	247.73	141.73	97	246	140	1	7		x		NA	Absent	Absent	Absent
2009	248.26	141.16	96.915	248	140	1	12		x		NA	Absent	Absent	Absent
2009	248.435	141.29	97.015	248	140	1	10	x			NA	Absent	Absent	Absent
2009	246.59	142.215	97.282	246	142	5	3	x			NA	Absent	Absent	Absent
2009	246.68	141.58	96.86	246	140	7	11		x		NA	Absent	Absent	Absent
2009	246.35	141.19	97.31	246	140	2	3		x		Proximal	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2009	246.21	142.59	97.315	246	142	3	2		x		Medial	Absent	Absent	Absent
2009	246.27	142.9	97.32	246	142	4	2			x	NA	Absent	Absent	Absent
2009	246.045	142.19	97.32	246	142	1	2		x		NA	Absent	Absent	Absent
2009	246.58	142.45	97.302	246	142	5	2	x			NA	Absent	Absent	a
2009	246.19	142.4	97.3	246	142	2	2		x		NA	Absent	Absent	Absent
2009	246.83	142.2	97.32	246	142	7	2			x	proximal	Absent	Absent	Absent
2009	246.288	142.93	97.27	246	142	9	3		x		NA	Absent	Absent	Absent
2009	246.305	142.9	97.283	246	142	8	3			x	proximal	Absent	Absent	Absent
2009	246.26	142.92	97.257	246	142	10	3			x	NA	Absent	Absent	Absent
2009	246.457	142.18	97.3	246	142	1	3			x	NA	Absent	Absent	Absent
2009	246.79	142.46	97.3	246	142	3	3			x	NA	Absent	Absent	Absent
2009	246.1	142.63	97.261	246	142	7	3		x		NA	Absent	Absent	Absent
2009	246.142	142.6	97.296	246	142	6	3			x	NA	Absent	Absent	Absent
2009	246.8	142.392	97.26	246	142	4	3		x		NA	Absent	Absent	a
2009	246.427	142.573	97.26	246	142	3	3			x	NA	Absent	Absent	Absent
2010	246.52	140.55	97.243	246	140	6	1		x		NA	Absent	Absent	Absent
2010	246.36	140.635	97.258	246	140	4	1	x			NA	Absent	Absent	Absent
2010	247.01	140.955	97.378	246	140	1	1			x	NA	Absent	Absent	Absent
2010	246.5	140.44	97.238	246	140	3	1	x			NA	Absent	Absent	Absent
2010	247.945	140.81	97.25	246	140	2	1	x			NA	Absent	Absent	Absent
2010	246.94	140.63	97.238	246	140	2	1	x			NA	Absent	Absent	Absent
2010	247.745	140.55	97.253	246	140	3	1	x			NA	Absent	Absent	Absent
2010	246.91	140.98	97.253	246	140	5	1	x			NA	Absent	Absent	Absent
2010	246.66	140.925	97.283	246	140	1	1	x			NA	Absent	Absent	Absent
2010	247.45	140.78	97.238	246	140	1	2		x		NA	Absent	Absent	Absent
2010	246.66	140.8	97.258	246	140	1	2	x			NA	Absent	Absent	Absent
2010	247.18	140.87	97.208	246	140	2	2			x	Medial	Absent	Absent	Absent
2010	246.6	140.61	97.198	246	140	3	3			x	NA	Absent	Absent	Absent
2010	246.21	140.915	97.208	246	140	1	3		x		NA	Absent	Absent	Absent
2010	247.69	140.77	97.178	246	140	1	3	x			NA	Absent	Absent	Absent
2010	246.46	140.92	97.208	246	140	2	3	x			NA	Absent	Absent	Absent
2010	246.42	140.62	97.163	246	140	9	4		x		Medial	Absent	Absent	Absent
2010	246.76	140.18	97.168	246	140	14	4			x	Medial	Absent	Absent	Absent
2010	246.17	140.95	97.168	246	140	3	4		x		Complete	Absent	Absent	Absent
2010	247.635	140.97	97.108	246	140	2	4		x		Medial	Absent	Absent	Absent
2010	247.07	140.95	97.098	246	140	5	4			x	Medial	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2010	247.659	140.54	97.128	246	140	7	4			x	NA	Absent	Absent	Absent
2010	247.905	140.965	97.098	246	140	1	4		x		NA	Absent	Absent	Absent
2010	247.13	140.72	97.068	246	140	6	4		x		NA	Absent	Absent	Absent
2010	247.05	140.97	97.118	246	140	3	4	x			NA	Absent	Absent	Absent
2010	247.08	140.88	97.118	246	140	4	4	x			NA	Absent	Absent	Absent
2010	247.11	140.12	97.108	246	140	9	4	x			NA	Absent	Absent	Absent
2010	247.87	140.57	97.123	246	140	8	4	x			NA	Absent	Absent	Absent
2010	246.5	140.94	97.178	246	140	5	4	x			NA	Absent	Absent	Absent
2010	246.16	140.73	97.183	246	140	7	4	x			NA	Absent	Absent	Absent
2010	246.93	140.56	97.168	246	140	12	4	x			NA	Absent	Absent	Absent
2010	246.63	140.28	97.138	246	140	13	4	x			NA	Absent	Absent	Absent
2010	246.15	140.99	97.188	246	140	1	4		x		NA	Absent	Absent	Absent
2010	246.22	140.99	97.188	246	140	2	4		x		NA	Absent	Absent	Absent
2010	246.47	140.99	97.188	246	140	4	4		x		Medial	Absent	Absent	Absent
2010	246.83	140.88	97.188	246	140	6	4		x		NA	Present	Present	Absent
2010	246.29	140.72	97.178	246	140	8	4		x		NA	Absent	Absent	Absent
2010	246.13	140.51	97.168	246	140	10	4		x		NA	Absent	Absent	Absent
2010	246.56	140.5	97.168	246	140	11	4		x		Distal	Absent	Absent	Absent
2010	246.6	140.13	97.148	246	140	15	4		x		NA	Absent	Absent	Absent
2010	247.41	140.75	97.088	246	140	2	5		x		NA	Absent	Absent	Absent
2010	247.56	140.785	97.078	246	140	1	5		x		NA	Absent	Absent	Absent
2010	247.18	140.75	97.063	246	140	13	5		x		NA	Absent	Absent	Absent
2010	247.42	140.93	97.078	246	140	7	5			x	NA	Absent	Absent	Absent
2010	247.485	140.61	97.048	246	140	14	5			x	NA	Absent	Absent	Absent
2010	247.08	140.73	97.088	246	140	12	5		x		NA	Absent	Absent	Absent
2010	247.12	140.48	97.068	246	140	15	5		x		NA	Absent	Absent	Absent
2010	247.395	140.59	97.058	246	140	17	5		x		NA	Absent	Absent	Absent
2010	247.13	140.64	97.088	246	140	16	5	x			NA	Absent	Absent	Absent
2010	247.55	140.95	97.048	246	140	6	5			x	Complete	Absent	Absent	Absent
2010	247.65	140.78	97.048	246	140	10	5			x	Distal	Absent	Absent	Absent
2010	247.335	140.86	97.058	246	140	8	5		x		NA	Absent	Absent	Absent
2010	247.19	140.1	97.048	246	140	18	5		x		NA	Absent	Absent	Absent
2010	247.98	140.5	97.088	246	140	11	5		x		NA	Absent	Absent	Absent
2010	247.52	140.8	97.058	246	140	19	5		x		Medial	Absent	Absent	Absent
2010	247.81	140.97	97.073	246	140	5	5		x		NA	Absent	Absent	Absent
2010	247.385	140.85	97.043	246	140	9	5		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2010	247.315	140.81	97.088	246	140	3	5	x			NA	Absent	Absent	Absent
2010	247.045	140.94	97.098	246	140	4	5	x			NA	Absent	Absent	Absent
2010	247.04	141.42	96.95	246	140	4	8		x		NA	Absent	Absent	Absent
2010	247.56	141.935	96.94	246	140	3	8	x			NA	Absent	Absent	Absent
2010	247.755	141.6	96.94	246	140	2	8	x			NA	Absent	Absent	Absent
2010	247.542	141.065	97.979	246	140	1	8		x		NA	Absent	Absent	Absent
2010	247.48	141.15	96.89	246	140	6	9		x		NA	Absent	Absent	Absent
2010	247.52	141.32	96.89	246	140	5	9		x		Distal	Absent	Absent	Absent
2010	247.71	141.14	96.89	246	140	4	9			x	Distal	Absent	Absent	Absent
2010	247.71	141.3	96.89	246	140	3	9		x		Distal	Absent	Absent	Absent
2010	247.98	141.88	96.91	246	140	2	9		x		NA	Absent	Absent	Absent
2010	247.26	141.15	96.89	246	140	8	9		x		NA	Present	present	Absent
2010	247.08	141.37	96.91	246	140	9	9	x			NA	Absent	Absent	Absent
2010	247.3	141.46	96.88	246	140	7	9	x			NA	Absent	Absent	Absent
2010	247.64	141.47	96.92	246	140	1	9	x			NA	Absent	Absent	Absent
2010	247.66	141.68	96.88	246	140	17	10		x		Complete	Absent	Absent	Absent
2010	247.8	141.74	96.82	246	140	18	10		x		NA	Absent	Absent	Absent
2010	247.8	141.31	96.83	246	140	5	10			x	NA	Absent	Absent	Absent
2010	247.54	141.3	96.83	246	140	8	10	x			NA	Absent	Absent	Absent
2010	247.36	141.62	96.87	246	140	15	10			x	Distal	Absent	Absent	Absent
2010	247.65	141.09	96.85	246	140	4	10		x		NA	Absent	Absent	Absent
2010	247.57	141.33	96.86	246	140	7	10	x			NA	Absent	Absent	Absent
2010	247.12	141.31	96.87	246	140	12	10			x	NA	Absent	Absent	Absent
2010	247.99	141.88	96.84	246	140	25	10	x			NA	Absent	Absent	Absent
2010	247.99	141.09	96.85	246	140	1	10		x		NA	Absent	Absent	a
2010	247.89	141.08	96.85	246	140	2	10		x		Medial	Absent	Absent	Absent
2010	247.84	141.05	96.83	246	140	3	10	x			NA	Absent	Absent	Absent
2010	247.65	141.35	96.86	246	140	6	10	x			Complete	Absent	Absent	Absent
2010	247.32	141.22	96.83	246	140	10	10		x		NA	Absent	Absent	Absent
2010	247.25	141.47	96.87	246	140	14	10		x		NA	Absent	Absent	Absent
2010	247.42	141.59	96.84	246	140	16	10		x		NA	Absent	Absent	Absent
2010	247.88	141.68	96.86	246	140	19	10	x			NA	Absent	Absent	Absent
2010	247.79	141.91	96.84	246	140	20	10		x		Complete	Absent	Absent	Absent
2010	247.43	141.76	96.86	246	140	21	10		x		NA	Absent	Absent	Absent
2010	247.25	141.76	96.84	246	140	22	10	x			NA	Absent	Absent	Absent
2010	248	141.6	96.83	246	140	26	10		x		Medial	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2010	247.43	141.3	96.84	246	140	9	10		x		NA	Absent	Absent	Absent
2010	247.08	141.1	96.86	246	140	11	10		x		NA	Absent	Absent	Absent
2010	247.14	141.36	96.86	246	140	13	10		x		NA	Absent	Absent	Absent
2010	247.2	141.78	96.89	246	140	23	10		x		NA	Absent	Absent	Absent
2010	247.07	141.65	96.86	246	140	24	10		x		NA	Absent	Absent	Absent
2010	246.225	142.13	97.22	246	142	2	4			x	proximal	Absent	Absent	Absent
2010	246.045	142.32	97.24	246	142	4	4			x	NA	Absent	Absent	Absent
2010	246.92	142.85	97.245	246	142	6	4	x			NA	Absent	Absent	Absent
2010	246.87	142.1	97.218	246	142	3	4			x	Medial	Absent	Absent	Absent
2010	246.65	142.78	97.23	246	142	5	4		x		NA	Absent	Absent	Absent
2010	246.52	142.36	97.24	246	142	1	4		x		NA	Absent	Absent	Absent
2010	246.67	142.92	97.2	246	142	7	4		x		NA	Absent	Absent	Absent
2010	246.61	142.77	97.14	246	142	7	5		x		Medial	Absent	Absent	Absent
2010	246.28	142.04	97.2	246	142	1	5		x		Complete	Absent	Absent	Absent
2010	246.59	142.14	97.19	246	142	3	5		x		NA	Absent	Absent	Absent
2010	246.07	142.38	97.14	246	142	2	5		x		NA	Absent	Absent	Absent
2010	246.71	142.31	97.17	246	142	5	5	x			NA	Absent	Absent	Absent
2010	246.49	142.72	97.16	246	142	8	5	x			NA	Absent	Absent	Absent
2010	246.2	142.89	97.14	246	142	9	5	x			NA	Absent	Absent	Absent
2010	246.1	142.84	97.18	246	142	10	5	x			NA	Absent	Absent	Absent
2010	246.89	142.27	97.15	246	142	6	5	x			NA	Absent	Absent	Absent
2010	246.64	142.22	97.17	246	142	4	5	x			NA	Absent	Absent	Absent
2010	246.28	142.825	97.133	246	142	9	6		x		NA	Absent	Absent	Absent
2010	246.94	142.165	97.138	246	142	1	6			x	NA	Absent	Absent	Absent
2010	246.17	142.11	97.148	246	142	4	6		x		NA	Absent	Absent	Absent
2010	246.775	142.81	97.123	246	142	10	6		x		NA	Absent	Absent	Absent
2010	246.27	142.4	97.123	246	142	5	6		x		NA	Absent	Absent	Absent
2010	246.53	142.17	97.143	246	142	3	6		x		NA	Absent	Absent	Absent
2010	246.84	142.44	97.143	246	142	7	6	x			NA	Absent	Absent	Absent
2010	246.57	142.24	97.123	246	142	2	6		x		NA	Absent	Absent	Absent
2010	246.61	142.42	97.143	246	142	6	6		x		NA	Absent	Absent	Absent
2010	246.57	142.51	97.128	246	142	8	6		x		NA	Absent	Absent	Absent
2010	246.19	142.54	97.103	246	142	8	7		x		Medial	Absent	Absent	Absent
2010	246.68	142.325	97.088	246	142	2	7		x		NA	Absent	Absent	Absent
2010	246.45	142.22	97.123	246	142	4	7	x			NA	Absent	Absent	Absent
2010	246.75	142.725	97.108	246	142	9	7	x			NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2010	246.17	142.87	97.098	246	142	15	7		x		NA	Absent	Absent	Absent
2010	246.735	142.8925	97.098	246	142	12	7		x		NA	Absent	Absent	Absent
2010	246.375	142.23	97.073	246	142	16	7		x		NA	Absent	Absent	Absent
2010	246.74	142.645	97.083	246	142	5	7		x		NA	Absent	Absent	Absent
2010	246.625	142.265	97.078	246	142	3	7		x		NA	Absent	Absent	Absent
2010	246.71	142.62	97.098	246	142	6	7		x		NA	Absent	Absent	Absent
2010	246.775	142.135	97.068	246	142	1	7	x			NA	Absent	Absent	Absent
2010	246.32	142.82	97.053	246	142	11	7		x		NA	Absent	Absent	Absent
2010	246.5	142.95	97.135	246	142	14	7	x			NA	Absent	Absent	Absent
2010	246.58	142.93	97.123	246	142	13	7	x			NA	Absent	Absent	Absent
2010	246.295	142.605	97.105	246	142	7	7	x			NA	Absent	Absent	Absent
2010	246.15	142.7	97.108	246	142	10	7	x			NA	Absent	Absent	Absent
2010	246.41	142.675	97.013	246	142	9	8			x	NA	Absent	Absent	Absent
2010	246.07	142.29	97.043	246	142	3	8	x			NA	Absent	Absent	Absent
2010	246.79	142.43	97.053	246	142	5	8	x			NA	Absent	Absent	Absent
2010	246.71	142.715	97.023	246	142	8	8	x			NA	Absent	Absent	Absent
2010	246.245	142.35	97.043	246	142	4	8		x		NA	Absent	Absent	Absent
2010	246.225	142.63	97.013	246	142	10	8		x		NA	Absent	Absent	Absent
2010	246.735	142.725	97.033	246	142	7	8		x		NA	Absent	Absent	Absent
2010	246.635	142.2	97.023	246	142	1	8	x			NA	Absent	Absent	Absent
2010	246.49	142.18	97.013	246	142	2	8	x			NA	Absent	Absent	Absent
2010	246.71	142.51	97.038	246	142	6	8	x			NA	Absent	Absent	Absent
2010	248.09	141.05	96.878	248	140	9	12			x	Medial	Absent	Absent	Absent
2010	248.015	141.58	96.878	248	140	12	12		x		NA	Absent	Absent	Absent
2010	248.09	141.33	96.848	248	140	14	13		x		NA	Absent	Absent	a
2010	248.27	141.04	96.888	248	140	10	13	x			NA	Absent	Absent	Absent
2010	248.04	141.84	96.888	248	140	2	13		x		NA	Absent	Absent	Absent
2010	248.02	141.31	96.868	248	140	13	13		x		NA	Absent	Absent	Absent
2010	248.63	141.155	96.858	248	140	8	13		x		NA	Absent	Absent	Absent
2010	248.76	141.64	96.878	248	140	4	13		x		Complete	Absent	Absent	Absent
2010	248.76	141.11	96.895	248	140	7	13	x			NA	Absent	Absent	Absent
2010	248.15	141.505	96.878	248	140	6	13	x			NA	Absent	Absent	Absent
2010	248.14	141.6	96.888	248	140	5	13			x	Distal	Absent	present	Absent
2010	248.015	141.23	96.858	248	140	11	13	x			NA	Absent	Absent	Absent
2010	248.13	141.73	96.868	248	140	3	13	x			NA	Absent	Absent	Absent
2010	248.24	141.64	96.8	248	140	9	14		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2010	248.45	141.69	96.828	248	140	6	14			x	NA	Absent	Absent	Absent
2010	248.84	141.85	96.808	248	140	7	14		x		proximal	Absent	Absent	Absent
2010	248.115	141.65	96.808	248	140	5	14	x			NA	Absent	Absent	Absent
2010	248.065	141.05	96.838	248	140	2	14		x		NA	Absent	Absent	Absent
2010	248.015	141.44	96.828	248	140	1	14	x			NA	Absent	Absent	Absent
2010	248.35	141.11	96.803	248	140	3	14		x		NA	Absent	Absent	Absent
2010	248.24	141.72	96.818	248	140	8	14	x			NA	Absent	Absent	Absent
2010	248.82	141.04	96.878	248	140	4	14	x			NA	Absent	Absent	Absent
2010	248.075	141.9	96.788	248	140	1	15		x		NA	Absent	Absent	Absent
2010	248.54	141.8	96.793	248	140	10	15		x		Medial	Absent	Present	Absent
2010	248.125	141.92	96.788	248	140	2	15		x		NA	Absent	Absent	Absent
2010	248.71	141.94	96.768	248	140	9	15	x			NA	Absent	Absent	Absent
2010	248.43	141.58	96.788	248	140	7	15	x			NA	Absent	Absent	Absent
2010	248.46	141.16	96.768	248	140	4	15	x			NA	Absent	Absent	Absent
2010	248.53	141.66	96.788	248	140	8	15	x			NA	Absent	Absent	Absent
2010	248.375	141.55	96.778	248	140	6	15		x		NA	Absent	Absent	Absent
2010	248.14	141.91	96.868	248	140	1	15		x		Distal	Absent	Absent	Absent
2010	248.24	141.61	96.778	248	140	3	15	x			NA	Absent	Absent	Absent
2010	248.59	141.18	96.758	248	140	5	15	x			NA	Absent	Absent	Absent
2010	263.865	146.63	97.801	263	145	1	1			x	Distal	Absent	Absent	Absent
2010	263.96	146.49	97.691	263	145	2	3		x		NA	Absent	Absent	Absent
2010	264.03	146.87	97.621	263	145	3	3		x		NA	Absent	Absent	Absent
2010	263.76	146.93	97.681	263	145	1	3		x		NA	Absent	Absent	Absent
2010	263.51	146.6	97.601	263	145	4	3	x			NA	Absent	Absent	Absent
2010	263.62	145.12	97.231	263	145	1	7	x			NA	Absent	Absent	Absent
2010	263.12	145.1	97.126	263	145	3	8		x		NA	Absent	Absent	Absent
2010	263.24	145.38	97.161	263	145	2	8		x		Distal	Present	Absent	Absent
2010	263.93	145.41	97.201	263	145	1	8	x			NA	Absent	Absent	Absent
2010	264.81	146.6	97.031	263	145	1	9		x		NA	Absent	Absent	Absent
2010	263.99	146.21	96.901	263	145	1	10			x	Distal	Absent	Absent	Absent
2010	263.21	146.24	96.851	263	145	1	11		x		Proximal	Absent	Absent	Absent
2011	246.265	140.105	96.843	246	140	9	**11**			x	proximal	Absent	Absent	Absent
2011	246.625	140.095	96.828	246	140	5	**11**			x	NA	Absent	Absent	Absent
2011	246.26	140.09	96.853	246	140	8	**11**		x		NA	Absent	Absent	Absent
2011	246.43	140.745	96.838	246	140	14	**11**		x		NA	Absent	Absent	Absent
2011	246.18	140.01	96.848	246	140	10	**11**	x			NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2011	246.38	140.08	96.823	246	140	7	**11**		x		NA	Absent	Absent	Absent
2011	246.705	140.63	96.838	246	140	4	**11**	x			NA	Absent	Absent	Absent
2011	246.79	140.62	96.803	246	140	3	**11**	x			NA	Absent	Absent	Absent
2011	246.9	140.08	96.823	246	140	2	**11**		x		NA	Absent	Absent	Absent
2011	246.415	140.575	96.823	246	140	13	**11**	x			NA	Absent	Absent	Absent
2011	246.525	1440.1	96.823	246	140	6	**11**	x			NA	Absent	Absent	Absent
2011	246.13	140.28	96.833	246	140	12	**11**	x			NA	Absent	Absent	Absent
2011	246.96	140.43	96.823	246	140	1	**11**	x			NA	Absent	Absent	Absent
2011	246.1	140.275	96.843	246	140	11	**11**	x			NA	Absent	Absent	Absent
2011	246.39	140.88	96.803	246	140	15	**11**	x			NA	Absent	Absent	Absent
2011	246.37	140.47	96.785	246	140	11	12		x		NA	Absent	Absent	Absent
2011	246.625	140.653	96.783	246	140	2	12		x		NA	Absent	Absent	Absent
2011	246.59	140.095	96.766	246	140	5	12		x		NA	Absent	Absent	Absent
2011	246.61	140.352	96.768	246	140	4	12		x		NA	Absent	Absent	Absent
2011	246.13	140.676	96.786	246	140	7	12		x		NA	Absent	Absent	Absent
2011	246.047	140.315	96.779	246	140	10	12	x			NA	Absent	Absent	Absent
2011	246.54	140.45	96.773	246	140	3	12		x		NA	Absent	Absent	Absent
2011	246.92	140.83	96.808	246	140	1	12	x			NA	Absent	Absent	Absent
2011	246.136	140.562	96.779	246	140	8	12	x			NA	Absent	Absent	Absent
2011	246.036	140.518	96.789	246	140	9	12		x		NA	Absent	Absent	Absent
2011	246.355	140.88	96.777	246	140	6	12		x		NA	Absent	Absent	Absent
2011	246.7	140.35	96.763	246	140	1	13		x		Complete	Absent	Absent	Absent
2011	246.385	140.28	96.753	246	140	5	13	x			NA	Absent	Absent	Absent
2011	246.62	140.745	96.763	246	140	2	13		x		NA	Absent	Absent	Absent
2011	246.36	140.345	96.733	246	140	3	13	x			NA	Absent	Absent	Absent
2011	246.385	140.27	96.753	246	140	6	13	x			NA	Absent	Absent	Absent
2011	246.315	140.485	96.758	246	140	4	13	x			NA	Absent	Absent	Absent
2011	246.085	140.665	96.723	246	140	7	13	x			NA	Absent	Absent	Absent
2011	247.1	140.88	97.03	246	140	4	6		x		Distal	Absent	Absent	Absent
2011	247.42	140.76	97.03	246	140	2	6		x		NA	Absent	Absent	Absent
2011	247.32	140.6	96.98	246	140	5	6		x		NA	Absent	Absent	Absent
2011	247.43	140.86	97.01	246	140	3	6	x			NA	Absent	Absent	Absent
2011	247.22	140.19	97.038	246	140	1	6		x		NA	Absent	Absent	Absent
2011	247.07	140.51	96.95	246	140	4	7	x			NA	Absent	Absent	Absent
2011	247.44	140.72	96.97	246	140	6	7		x		Complete	Absent	Absent	Absent
2011	247.35	140.39	96.95	246	140	2	7	x			NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2011	247.05	140.52	96.95	246	140	5	7		x		NA	Absent	Absent	Absent
2011	247.04	140.47	96.93	246	140	3	7		x		Distal	Absent	Absent	Absent
2011	247.18	140.24	96.95	246	140	1	7		x		NA	Absent	Absent	Absent
2011	247.19	140.83	96.94	246	140	3	8	x			NA	Absent	Absent	Absent
2011	247.3	140.89	96.94	246	140	4	8		x		NA	Absent	Absent	Absent
2011	247.87	140.68	96.94	246	140	2	8	x			NA	Absent	Absent	Absent
2011	247.06	140.59	96.9	246	140	1	8		x		NA	Absent	Absent	Absent
2011	246.38	140.34	96.853	246	140	6	9			x	Distal	Absent	Absent	Absent
2011	246.16	140.89	96.863	246	140	3	9		x		Distal	Absent	Absent	Absent
2011	246.57	140.975	96.868	246	140	2	9	x			NA	Absent	Absent	Absent
2011	246.33	141.01	96.888	246	140	1	9	x			NA	Absent	Absent	Absent
2011	246.05	140.8	96.868	246	140	4	9		x		NA	Absent	Absent	Absent
2011	246.45	140.59	96.853	246	140	5	9	x			NA	Absent	Absent	Absent
2011	246.64	140.27	97.138	246	140	6	5			x	NA	x	Absent	Absent
2011	246.64	140.28	97.138	246	140	7	5		x		Medial	Present	Absent	Absent
2011	246.61	140.92	97.148	246	140	2	5							
2011	246.02	140.88	97.148	246	140	4	5	x			NA	Absent	Absent	Absent
2011	246.45	140.37	97.128	246	140	5	5		x		NA	Absent	Absent	Absent
2011	246.54	140.71	97.13	246	140	3	5			x	NA	Absent	Absent	Absent
2011	246.77	140.88	97.138	246	140	1	5	x			NA	Absent	Absent	Absent
2011	246.59	140.98	97.1	246	140	1	6			x	Distal	Absent	Absent	Absent
2011	246.28	140.49	97.07	246	140	7	6	x			NA	Absent	Absent	Absent
2011	246.09	140.33	97.08	246	140	9	6	x			NA	Absent	Absent	Absent
2011	246.06	140.36	97.09	246	140	8	6		x		Complete	Absent	Absent	Absent
2011	246.53	140.95	97.09	246	140	2	6		x		Distal	Absent	Absent	Absent
2011	246.24	140.49	97.07	246	140	6	6	x			NA	Absent	Absent	Absent
2011	246.85	140.65	97.07	246	140	4	6	x			NA	Absent	Absent	Absent
2011	246.23	140.54	97.07	246	140	5	6	x			NA	Absent	Absent	Absent
2011	246.7	140.87	97.09	246	140	3	6		x		Complete	Absent	Absent	Absent
2011	246.69	140.61	96.99	246	140	8	7		x		Complete	Absent	Absent	Absent
2011	246.68	140.07	97.033	246	140	23	7		x		NA	Absent	Absent	Absent
2011	246.11	140.33	97.038	246	140	14	7			x	NA	Absent	Absent	Absent
2011	246.31	140.41	97.043	246	140	13	7	x			NA	Absent	Absent	Absent
2011	246.265	140.72	97.028	246	140	6	7		x		NA	Absent	Absent	Absent
2011	246.49	140.52	97.048	246	140	11	7	x			NA	Absent	Absent	Absent
2011	246.62	140.83	97.038	246	140	3	7		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2011	246.79	140.65	97.008	246	140	22	7	x			NA	Absent	Absent	Absent
2011	246.705	140.09	97.038	246	140	19	7	x			NA	Absent	Absent	Absent
2011	246.975	140.93	97.018	246	140	2	7		x		NA	Absent	Absent	Absent
2011	246.2	140.69	97.038	246	140	7	7	x			NA	Absent	Absent	Absent
2011	246.575	140.11	97.008	246	140	17	7	x			NA	Absent	Absent	Absent
2011	246.33	140.47	97.028	246	140	12	7	x			NA	Absent	Absent	Absent
2011	246.88	140.655	97.028	246	140	10	7	x			NA	Absent	Absent	Absent
2011	246.28	140.18	97.028	246	140	15	7	x			NA	Absent	Absent	Absent
2011	246.82	140.375	97.028	246	140	16	7		x		NA	Absent	Absent	Absent
2011	246.69	140.93	97.028	246	140	21	7	x			NA	Absent	Absent	Absent
2011	246.82	140.65	97.028	246	140	9	7	x			NA	Absent	Absent	Absent
2011	246.03	140.72	97.018	246	140	20	7	x			NA	Absent	Absent	Absent
2011	246.43	140.02	97.038	246	140	18	7	x			NA	Absent	Absent	Absent
2011	246.71	140.93	97.038	246	140	1	7		x		NA	Absent	Absent	Absent
2011	246.57	140	96.953	246	140	1	7	x			NA	Absent	Absent	Absent
2011	246.98	140.75	97.038	246	140	4	7	x			NA	Absent	Absent	Absent
2011	247.04	141...	96.87	246	140	5	7	x			NA	Absent	Absent	Absent
2011	246.45	140.72	96.978	246	140	12	8	x			NA	Absent	Absent	Absent
2011	246.3	140.14	96.988	246	140	23	8		x		NA	Absent	Absent	Absent
2011	246.54	140.96	96.988	246	140	3	8	x			NA	Absent	Absent	Absent
2011	246.825	140.17	96.988	246	140	25	8			x	proximal	Absent	Absent	Absent
2011	246.915	140.54	96.968	246	140	18	8		x		Complete	Absent	Absent	Absent
2011	246.84	140.8	96.988	246	140	13	8	x			NA	Absent	Absent	Absent
2011	246.62	140.815	96.968	246	140	7	8		x		NA	Absent	Absent	Absent
2011	246.99	140.76	96.988	246	140	14	8	x			NA	Absent	Absent	Absent
2011	246.25	140.595	96.958	246	140	17	8	x			proximal	Absent	Absent	Absent
2011	246.16	140.72	96.993	246	140	11	8	x			NA	Absent	Absent	Absent
2011	247.01	140.36	96.973	246	140	24	8	x			NA	Absent	Absent	Absent
2011	246.525	140.325	96.968	246	140	20	8	x			NA	Absent	Absent	Absent
2011	246.52	140.84	96.988	246	140	5	8	x			NA	Absent	Absent	Absent
2011	247	140.65	96.958	246	140	16	8	x			NA	Absent	Absent	Absent
2011	246.69	140.98	96.988	246	140	6	8	x			NA	Absent	Absent	Absent
2011	246.58	140.76	96.968	246	140	8	8		x		NA	Absent	Absent	Absent
2011	246.12	140.36	96.958	246	140	19	8		x		NA	Absent	Absent	Absent
2011	246.7	140.29	96.968	246	140	21	8	x			NA	Absent	Absent	Absent
2011	246.215	140.9	96.968	246	140	2	8	x			NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2011	246.96	141.05	96.948	246	140	15	8	x			NA	Absent	Absent	Absent
2011	247.04	141.07	96.993	246	140	1	8		x		NA	Absent	Absent	Absent
2011	246.07	140.08	96.993	246	140	22	8	x			NA	Absent	Absent	Absent
2011	246.68	140.76	96.988	246	140	9	8	x			NA	Absent	Absent	Absent
2011	246.63	140.75	96.958	246	140	10	8	x			NA	Absent	Absent	Absent
2011	246.51	140.9	96.968	246	140	4	8	x			NA	Absent	Absent	Absent
2011	246.74	140.58	96.908	246	140	6	9	x			proximal	Absent	Absent	Absent
2011	246.32	140.855	96.938	246	140	1	9		x		NA	Absent	Absent	Absent
2011	246.31	140.62	96.938	246	140	5	9		x		NA	Absent	Absent	Absent
2011	246.735	140.4	96.918	246	140	7	9	x			NA	Absent	Absent	Absent
2011	246.38	140.19	96.938	246	140	12	9	x			NA	Absent	Absent	Absent
2011	246.94	140.11	96.938	246	140	13	9		x		NA	Absent	Absent	Absent
2011	246.09	140.09	96.919	246	140	15	9		x		NA	Absent	Absent	Absent
2011	246.45	140.78	96.928	246	140	2	9	x			NA	Absent	Absent	Absent
2011	246.23	140.64	96.938	246	140	4	9	x			NA	Absent	Absent	Absent
2011	246.09	140.1	96.928	246	140	11	9	x			NA	Absent	Absent	Absent
2011	246.88	140.46	96.948	246	140	8	9	x			NA	Absent	Absent	Absent
2011	246.915	140.465	96.948	246	140	9	9	x			NA	Absent	Absent	Absent
2011	246.9	140.08	96.898	246	140	16	9	x			NA	Absent	Absent	Absent
2011	246.95	140.28	96.918	246	140	10	9	x			NA	Absent	Absent	Absent
2011	246.01	140.9	96.943	246	140	14	9			x	Complete	Absent	Absent	Absent
2011	247	140.65	96.938	246	140	3	9		x		NA	Absent	Absent	Absent
2011	246.87	140.34	96.878	246	140	17	10	x			NA	Absent	Absent	Absent
2011	246.34	140.37	96.878	246	140	14	10	x			NA	Absent	Absent	Absent
2011	246.97	140.42	96.858	246	140	18	10			x	Complete	Absent	Absent	Absent
2011	246.18	140.03	96.88	246	140	23	10	x			NA	Absent	Absent	Absent
2011	246.54	140.19	96.878	246	140	26	10		x		Complete	Absent	Absent	Absent
2011	246.935	140.82	96.868	246	140	9	10		x		NA	Absent	Absent	Absent
2011	246.85	140.37	96.868	246	140	16	10	x			NA	Absent	Absent	Absent
2011	246.71	140.95	96.89	246	140	3	10	x			NA	Absent	Absent	Absent
2011	246.625	140.42	96.88	246	140	15	10	x			NA	Absent	Absent	Absent
2011	246.495	140.62	96.878	246	140	11	10		x		NA	Absent	Absent	Absent
2011	246.15	140.15	96.858	246	140	21	10	x			NA	Absent	Absent	Absent
2011	246.87	140.82	96.868	246	140	8	10	x			NA	Absent	Absent	Absent
2011	246.69	140.84	96.87	246	140	6	10	x			NA	Absent	Absent	Absent
2011	246.45	140.57	96.898	246	140	10	10	x			NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2011	246.46	140.105	96.878	246	140	24	10	x			NA	Absent	Absent	Absent
2011	246.53	140.455	96.858	246	140	13	10	x			NA	Absent	Absent	Absent
2011	246.77	140.06	96.853	246	140	27	10	x			NA	Absent	Absent	Absent
2011	246.15	140.08	96.88	246	140	22	10	x			NA	Absent	Absent	Absent
2011	246.69	140.98	96.89	246	140	2	10		x		NA	Absent	Absent	Absent
2011	246.26	140.86	96.89	246	140	1	10	x			NA	Absent	Absent	Absent
2011	246.46	140.19	96.868	246	140	25	10	x			NA	Absent	Absent	Absent
2011	246.015	140.23	96.88	246	140	19	10		x		Complete	Absent	Absent	Absent
2011	246.65	140.54	96.888	246	140	12	10		x		NA	Absent	Absent	Absent
2011	246.93	141.03	96.89	246	140	4	10		x		NA	Absent	Absent	Absent
2011	246.27	140.22	96.888	246	140	20	10	x			NA	Absent	Absent	Absent
2011	246.77	140.8	96.888	246	140	7	10	x			NA	Absent	Absent	Absent
2011	246.58	140.795	96.838	246	140	3	11	x			NA	Absent	Absent	Absent
2011	246.28	140.38	96.818	246	140	10	11			x	Complete	Absent	Absent	Absent
2011	246.32	140.47	96.828	246	140	8	11	x			proximal	Absent	Absent	Absent
2011	246.48	140.38	96.838	246	140	12	11		x		NA	Absent	Absent	Absent
2011	246.89	140.98	96.818	246	140	1	11	x			NA	Absent	Absent	Absent
2011	246.93	140.315	96.738	246	140	15	11	x			NA	Absent	Absent	Absent
2011	246.24	140.31	96.848	246	140	11	11		x		NA	Absent	Absent	Absent
2011	246.05	140.54	96.838	246	140	6	11	x			NA	Absent	Absent	Absent
2011	246.87	140.41	96.828	246	140	13	11	x			NA	Absent	Absent	Absent
2011	246.04	140.77	96.818	246	140	2	11	x			NA	Absent	Absent	Absent
2011	246.185	140.47	96.828	246	140	7	11	x			NA	Absent	Absent	Absent
2011	246.74	140.04	96.808	246	140	17	11		x		NA	Absent	Absent	Absent
2011	246.47	140.6	96.838	246	140	5	11	x			NA	Absent	Absent	Absent
2011	246.69	140.05	96.838	246	140	16	11	x			NA	Absent	Absent	Absent
2011	246.92	140.85	96.828	246	140	4	11	x			NA	Absent	Absent	Absent
2011	246.71	140.59	96.828	246	140	9	11		x		NA	Absent	Absent	Absent
2011	246.93	140.4	96.828	246	140	14	11		x		NA	Absent	Absent	Absent
2011	246.26	140.18	96	246	140	18	11		x		NA	Absent	Absent	Absent
2011	246.25	140.4	96.788	246	140	10	12	x			NA	Absent	Absent	Absent
2011	246.715	140.58	96.788	246	140	8	12		x		Complete	Absent	Absent	Absent
2011	246.43	140.3	96.788	246	140	15	12				Complete	Absent	Absent	Absent
2011	246.42	140.1	96.788	246	140	17	12		x		NA	Absent	Absent	Absent
2011	246.53	140.35	96.748	246	140	11	12	x			NA	Absent	Absent	Absent
2011	246.61	140.99	96.788	246	140	1	12	x			NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2011	246.725	140.27	96.788	246	140	13	12	x			NA	Absent	Absent	Absent
2011	246.69	140.35	96.758	246	140	12	12	x			NA	Absent	Absent	Absent
2011	246.85	140.56	96.788	246	140	9	12	x			NA	Absent	Absent	Absent
2011	246.28	140.31	96.788	246	140	14	12	x			NA	Absent	Absent	Absent
2011	246.86	140.65	96.793	246	140	5	12	x			NA	Absent	Absent	Absent
2011	246.22	140.7	96.748	246	140	2	12	x			NA	Absent	Absent	Absent
2011	246.92	140.78	96.758	246	140	6	12	x			NA	Absent	Absent	Absent
2011	246.9	140.33	96.753	246	140	16	12		x		NA	Absent	Absent	Absent
2011	246.985	140.75	96.793	246	140	7	12	x			NA	Absent	Absent	Absent
2011	246.59	140.77	96.778	246	140	4	12		x		NA	Absent	Absent	Absent
2011	246.475	140.73	96.798	246	140	3	13		x		NA	Absent	Absent	Absent
2011	246.67	140.76	97.018	246	140	5								
2011	246.846	142.595	97.175	246	142	16	9		x		NA	Absent	Absent	Absent
2011	246.155	142.4	97.008	246	142	2	9		x		Complete	Absent	Absent	Absent
2011	246.43	142.77	97.003	246	142	11	9			x	NA	Present	Absent	Absent
2011	246.055	142.615	96.893	246	142	4	9	x			Complete	Absent	Absent	Absent
2011	246.07	142.11	97.043	246	142	1	9		x		NA	Absent	Absent	Absent
2011	246.22	142.57	97.003	246	142	6	9			x	Proximal	Present	Absent	Absent
2011	246.825	142.85	96.979	246	142	17	9	x			NA	Absent	Absent	Absent
2011	246.725	142.51	97.003	246	142	15	9		x		Distal	Present	Absent	Absent
2011	246.535	142.482	96.991	246	142	13	9		x		NA	Absent	Absent	Absent
2011	246.623	142.93	96.991	246	142	14	9			x	Distal	x	Absent	x
2011	246.347	142.51	96.968	246	142	9	9		x		NA	x	Absent	x
2011	246.425	142.53	96.981	246	142	12	9		x		NA	Absent	Absent	Absent
2011	246.245	142.41	96.995	246	142	3	9		x		Complete	Absent	Absent	Absent
2011	246.175	142.75	96.953	246	142	8	9			x	NA	Absent	Absent	Absent
2011	246.195	142.69	97.009	246	142	7	9		x		NA	Absent	Absent	Absent
2011	246.09	142.59	96.979	246	142	5	9		x		NA	Absent	Absent	Absent
2011	246.38	142.655	96.983	246	142	10	9	x			NA	Absent	Absent	Absent
2011	246.87	142.4	96.953	246	142	15	10	x			NA	Absent	Absent	Absent
2011	246.32	142.54	96.973	246	142	11	10	x			NA	Absent	Absent	Absent
2011	246.71	142.59	96.963	246	142	18	10		x		NA	Absent	Absent	Absent
2011	246.09	142.78	96.973	246	142	25	10		x		NA	Absent	Absent	Absent
2011	246.64	142.02	96.953	246	142	1	10		x		NA	Absent	Absent	Absent
2011	246.01	142.85	97.023	246	142	29	10	x			NA	Absent	Absent	Absent
2011	246.36	142.66	96.963	246	142	16	10		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2011	246.72	142.38	96.913	246	142	13	10		x		NA	Absent	Absent	Absent
2011	246.72	142.38	96.913	246	142	13	10			x	Complete	Absent	Absent	Absent
2011	246.58	142.73	96.963	246	142	23	10		x		NA	Absent	Absent	Absent
2011	246.31	142.53	96.903	246	142	12	10		x		proximal	Absent	Absent	Absent
2011	246.63	142.67	96.983	246	142	19	10		x		NA	Absent	Absent	Absent
2011	246.72	142.11	96.933	246	142	3	10		x		NA	Absent	Absent	Absent
2011	246.5	142.45	96.963	246	142	9	10		x		NA	Absent	Absent	Absent
2011	246.06	142.24	96.973	246	142	6	10		x		NA	Absent	Absent	Absent
2011	246.03	142.35	96.973	246	142	8	10		x		NA	Absent	Absent	Absent
2011	246.55	142.75	96.963	246	142	22	10		x		NA	Absent	Absent	Absent
2011	246.4	142.69	96.903	246	142	17	10		x		NA	Absent	Absent	Absent
2011	246.8	142.35	96.953	246	142	14	10		x		Complete	Absent	Absent	Absent
2011	246.6	142.09	96.923	246	142	2	10		x		NA	Absent	Absent	Absent
2011	246.6	142.09	96.923	246	142	2	10		x		NA	Absent	Absent	Absent
2011	246.03	142.3	96.923	246	142	7	10		x		NA	Absent	Absent	Absent
2011	246.86	142.08	96.913	246	142	4	10		x		proximal	Absent	Absent	Absent
2011	246.86	142.08	96.913	246	142	4	10		x		NA	Absent	Absent	Absent
2011	246.69	142.84	96.943	246	142	27	10		x		NA	Absent	Absent	Absent
2011	246.64	142.88	96.943	246	142	26	10		x		NA	Absent	Absent	Absent
2011	246.46	142.5	96.903	246	142	10	10		x		NA	Absent	Absent	Absent
2011	246.75	142.67	96.953	246	142	20	10		x		NA	Absent	Absent	Absent
2011	246.53	142.71	96.933	246	142	21	10		x		NA	Absent	Absent	Absent
2011	246.48	142.29	96.913	246	142	5	10		x		NA	Absent	Absent	Absent
2011	246.58	142.78	96.923	246	142	24	10		x		NA	Absent	Absent	Absent
2011	246.2	142.91	96.943	246	142	28	10		x		NA	Absent	Absent	Absent
2011	246.14	142.58	96.883	246	142	10	11	x			NA	Absent	Absent	Absent
2011	246.63	142.72	96.893	246	142	20	11		x		NA	Absent	Absent	Absent
2011	246.34	142.47	96.863	246	142	7	11		x		NA	Absent	Absent	Absent
2011	246.82	142.52	96.903	246	142	9	11		x		NA	Absent	Absent	Absent
2011	246.19	142.67	96.883	246	142	11	11	x			NA	Absent	Absent	Absent
2011	246.63	142.72	96.893	246	142	21	11	x			NA	Absent	Absent	Absent
2011	246.33	142.77	96.853	246	142	22	11	x			NA	Absent	Absent	Absent
2011	246.48	142.73	96.893	246	142	17	11	x			NA	Absent	Absent	Absent
2011	246.02	142.96	96.853	246	142	24	11	x			NA	Absent	Absent	Absent
2011	246.45	142.35	96.883	246	142	5	11	x			NA	Absent	Absent	Absent
2011	246.51	142.73	96.893	246	142	18	11	x			NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2011	246.85	142.17	96.873	246	142	4	11	x			NA	Absent	Absent	Absent
2011	246.26	142.68	96.873	246	142	12	11	x			NA	Absent	Absent	Absent
2011	246.73	142.16	96.853	246	142	3	11	x			NA	Absent	Absent	Absent
2011	246.44	142.69	96.853	246	142	16	11		x		NA	Absent	Absent	Absent
2011	246.2	142.45	96.913	246	142	6	11	x			NA	Absent	Absent	Absent
2011	246.55	142.12	96.863	246	142	2	11	x			NA	Absent	Absent	Absent
2011	246.42	142.61	96.883	246	142	15	11	x			NA	Absent	Absent	Absent
2011	246.34	142.97	96.863	246	142	25	11	x			NA	Absent	Absent	Absent
2011	246.36	142.67	96.863	246	142	14	11	x			NA	Absent	Absent	Absent
2011	246.35	142.81	96.853	246	142	23	11	x			NA	Absent	Absent	Absent
2011	246.44	142.97	96.863	246	142	26	11		x		NA	Absent	Absent	Absent
2011	246.27	142.62	96.863	246	142	13	11	x			NA	Absent	Absent	Absent
2011	246.57	142.74	96.903	246	142	19	11	x			NA	Absent	Absent	Absent
2011	246.72	142.42	96.863	246	142	8	11	x			NA	Absent	Absent	Absent
2011	246.61	142.01	96.873	246	142	1	11	x			NA	Absent	Absent	Absent
2011	246.38	142.92	96.843	246	142	29	12	x			NA	Absent	Absent	Absent
2011	246.2	142.39	96.843	246	142	8	12	x			NA	Absent	Absent	Absent
2011	246.43	142.34	96.833	246	142	6	12	x			NA	Absent	Absent	Absent
2011	246.72	142.77	96.803	246	142	24	12	x			NA	Absent	Absent	Absent
2011	246.69	142.65	96.823	246	142	19	12	x			NA	Absent	Absent	Absent
2011	246.2	142.96	96.843	246	142	30	12	x			NA	Absent	Absent	Absent
2011	246.02	142.75	96.823	246	142	23	12	x			NA	Absent	Absent	Absent
2011	246.78	142.68	96.803	246	142	20	12	x			NA	Absent	Absent	Absent
2011	246.75	142.98	96.833	246	142	31	12	x			NA	Absent	Absent	Absent
2011	246.86	142.03	96.843	246	142	2	12	x			NA	Absent	Absent	Absent
2011	246.61	142.12	96.843	246	142	5	12	x			NA	Absent	Absent	Absent
2011	246.58	142.63	96.833	246	142	18	12	x			NA	Absent	Absent	Absent
2011	246.44	142.44	96.843	246	142	12	12	x			NA	Absent	Absent	Absent
2011	246.6	142.74	96.843	246	142	21	12	x			NA	Absent	Absent	Absent
2011	246.16	142.44	96.823	246	142	13	12	x			NA	Absent	Absent	Absent
2011	246.18	142.47	96.803	246	142	14	12	x			NA	Absent	Absent	Absent
2011	246.65	142.43	96.833	246	142	10	12	x			NA	Absent	Absent	Absent
2011	246.16	142.04	96.803	246	142	1	12	x			NA	Absent	Absent	Absent
2011	246.49	142.4	96.843	246	142	9	12	x			NA	Absent	Absent	Absent
2011	246.58	142.8	96.843	246	142	25	12		x		NA	Absent	Absent	Absent
2011	246.12	142.4	96.813	246	142	11	12	x			NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2011	246.35	142.9	96.843	246	142	28	12	x			NA	Absent	Absent	Absent
2011	246.68	142.81	96.843	246	142	27	12	x			NA	Absent	Absent	Absent
2011	246.87	142.33	96.823	246	142	7	12	x			NA	Absent	Absent	Absent
2011	246.74	142.73	96.803	246	142	22	12	x			NA	Absent	Absent	Absent
2011	246.13	142.18	96.803	246	142	3	12	x			NA	Absent	Absent	Absent
2011	246.57	142.19	96.823	246	142	4	12	x			NA	Absent	Absent	Absent
2011	246.77	142.59	96.813	246	142	17	12	x			NA	Absent	Absent	Absent
2011	246.71	142.59	96.803	246	142	16	12	x			NA	Absent	Absent	Absent
2011	246.91	142.57	96.843	246	142	15	12	x			NA	Absent	Absent	Absent
2011	246.61	142.83	96.843	246	142	26	12	x			NA	Absent	Absent	Absent
2011	246.415	142.925	96.738	246	142	21	13	x			NA	Absent	Absent	Absent
2011	246.63	142.67	96.983	246	142	19	13	x			NA	Absent	Absent	Absent
2011	246.495	142.58	96.745	246	142	16	13		x		NA	Absent	Absent	Absent
2011	246.31	142.265	96.778	246	142	6	13	x			NA	Absent	Absent	Absent
2011	246.86	142.91	96.754	246	142	23	13	x			NA	Absent	Absent	Absent
2011	246.72	142.75	96.748	246	142	18	13		x		NA	Absent	Absent	Absent
2011	246.74	142.58	96.747	246	142	14	13	x			NA	Absent	Absent	Absent
2011	246.77	142.625	96.743	246	142	15	13	x			NA	Absent	Absent	Absent
2011	246.66	142.12	96.778	246	142	2	13	x			NA	Absent	Absent	Absent
2011	246.69	142.38	96.758	246	142	11	13		x		NA	Absent	Absent	Absent
2011	246.38	142.1	96.773	246	142	3	13	x			NA	Absent	Absent	Absent
2011	246.175	142.97	96.783	246	142	22	13	x			NA	Absent	Absent	Absent
2011	246.74	142.51	96.776	246	142	13	13	x			NA	Absent	Absent	Absent
2011	246.63	142.45	96.778	246	142	10	13	x			NA	Absent	Absent	Absent
2011	246.38	142.38	96.779	246	142	9	13	x			NA	Absent	Absent	Absent
2011	246.76	142.42	96.758	246	142	12	13	x			NA	Absent	Absent	Absent
2011	246.822	142.705	96.743	246	142	17	13	x			NA	Absent	Absent	Absent
2011	246.11	142.095	96.733	246	142	5	13	x			NA	Absent	Absent	Absent
2011	246.695	142.785	96.748	246	142	19	13	x			NA	Absent	Absent	Absent
2011	246.77	142.875	96.758	246	142	20	13	x			NA	Absent	Absent	Absent
2011	246.22	142.325	96.763	246	142	8	13	x			NA	Absent	Absent	Absent
2011	246.395	142.18	96.793	246	142	4	13	x			NA	Absent	Absent	Absent
2011	246.79	142.02	96.808	246	142	1	13	x			NA	Absent	Absent	Absent
2011	246.17	142.295	96.773	246	142	7	14	x			NA	Absent	Absent	Absent
2011	248.29	140.88	96.738	248	140	6	16		x		NA	Absent	Absent	Absent
2011	248.14	140.83	96.758	248	140	7	16	x			NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2011	248.495	140.76	96.728	248	140	4	16			x	Complete	present	Absent	Absent
2011	248.79	140.66	96.728	248	140	3	16	x			NA	Absent	Absent	Absent
2011	248.74	140.39	96.733	248	140	2	16		x		NA	Absent	Absent	Absent
2011	248.75	140.35	96.738	248	140	1	16		x		NA	Absent	Absent	Absent
2011	248.37	140.82	96.748	248	140	5	16	x			NA	Absent	Absent	Absent
2011	248.625	140.01	96.693	248	140	6	17	x			NA	Absent	Absent	Absent
2011	248.21	140.11	96.678	248	140	3	17	x			NA	Absent	Absent	Absent
2011	248.15	140.09	96.683	248	140	2	17		x		NA	Absent	Absent	Absent
2011	248.165	140.17	96.688	248	140	1	17	x			NA	Absent	Absent	Absent
2011	248.52	140.32	96.658	248	140	7	17	x			NA	Absent	Absent	Absent
2011	248.355	140.205	96.653	248	140	4	17	x			NA	Absent	Absent	Absent
2011	248.44	140.14	96.628	248	140	5	17	x			NA	Absent	Absent	Absent
2012	246.92	139.57	97.15	246	138	3	3	x			NA	Absent	Absent	Absent
2012	246.44	139.46	97.15	246	138	1	3		x		NA	Absent	Absent	Absent
2012	246.89	139.09	97.16	246	138	2	3		x		Complete	Absent	Absent	Absent
2012	246.2	138.05	97.11	246	138	1	3		x		NA	Absent	Absent	Absent
2012	246.2	138.05	97.11	246	138	1	3							
2012	246.23	139.92	97.14	246	138	4	4	x			NA	Absent	Absent	Absent
2012	246.32	139.24	97.14	246	138	2	4	x			NA	Absent	Absent	Absent
2012	246.33	139.55	97.10	246	138	11	4	x			NA	Absent	Absent	Absent
2012	246.12	139.07	97.13	246	138	1	4	x			NA	Absent	Absent	Absent
2012	246.12	139.84	97.14	246	138	6	4	x			NA	Absent	Absent	Absent
2012	246.38	139.52	97.13	246	138	8	4		x		NA	Absent	Absent	Absent
2012	246.04	139.88	97.10	246	138	7	4		x		NA	Absent	Absent	Absent
2012	246.18	139.94	97.13	246	138	5	4	x			NA	Absent	Absent	Absent
2012	246.31	139.81	97.14	246	138	3	4		x		Complete	possible	Absent	Absent
2012	246.32	139.45	97.12	246	138	9	4		x		Medial	Absent	Absent	Absent
2012	246.29	139.5	97.10	246	138	10	4		x		NA	Absent	Absent	Absent
2012	246.61	139.81	97.05	246	138	4	5		x		NA	Absent	Absent	Absent
2012	246.22	139.71	97.05	246	138	3	5	x			NA	Absent	Absent	Absent
2012	246.2	139.63	97.06	246	138	2	5	x			NA	Absent	Absent	Absent
2012	246.13	139.23	97.05	246	138	1	5		x		NA	Absent	Absent	Absent
2012	246.23	138.13	97.07	246	138	1	5		x		proximal	Absent	Absent	Absent
2012	246.25	138.05	97	246	138	2	5		x		NA	Absent	Absent	Absent
2012	246.68	138.78	97.08	246	138	5	5		x		NA	Absent	Absent	Absent
2012	246.5	138.19	97	246	138	3	5		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2012	246.63	138.6	96.99	246	138	4	5		x		Medial	Absent	Absent	Absent
2012	246.03	138.77	97.15	246	138	6	5							
2012	246.6	139.23	97.002	246	138	5	6		x		Proximal	Absent	Absent	Absent
2012	246.35	138.36	97.00	246	138	4	6	x			NA	Absent	Absent	Absent
2012	246.23	138.65	97.00	246	138	2	6		x		NA	Absent	Absent	Absent
2012	246.04	138.37	97.03	246	138	1	6		x		NA	Absent	Absent	Absent
2012	246.48	139.63	97.03	246	138	8	6	x			NA	Absent	Absent	Absent
2012	246.3	139.59	97.02	246	138	7	6	x			NA	Absent	Absent	Absent
2012	246.68	139.49	97.02	246	138	6	6	x			NA	Absent	Absent	Absent
2012	246.18	138.97	97.00	246	138	3	6		x		NA	Absent	Absent	Absent
2012	246.17	138.54	96.99	246	138	5	6	x			NA	Absent	Absent	Absent
2012	246.21	138.45	96.98	246	138	3	6		x		NA	Absent	Absent	Absent
2012	246.35	138.45	96.97	246	138	4	6		x		Complete	Absent	Absent	Absent
2012	246.68	138.13	96.95	246	138	2	6		x		Medial	Absent	Absent	Absent
2012	246.05	138.38	96.97	246	138	1	6	x			NA	Absent	Absent	Absent
2012	246.48	139.175	96.95	246	138	3	7		x		Distal	Absent	Absent	Absent
2012	246.71	139.44	96.97	246	138	6	7		x		NA	Absent	Absent	Absent
2012	246.99	139.9	96.99	246	138	2	7	x			NA	Absent	Absent	Absent
2012	246.925	139.68	96.96	246	138	8	7			x	NA	Absent	Absent	Absent
2012	246.11	139.99	96.96	246	138	1	7		x		NA	Absent	Absent	Absent
2012	246.88	139.885	96.95	246	138	9	7	x			NA	Absent	Absent	Absent
2012	246.55	139.99	97	246	138	14	7	x			NA	Absent	Absent	Absent
2012	246.99	139.21	96.99	246	138	5	7	x			NA	Absent	Absent	Absent
2012	246.94	139.7	96.95	246	138	10	7		x		NA	Absent	Absent	Absent
2012	246.85	139.79	96.95	246	138	13	7		x		Medial	Absent	Absent	Absent
2012	246.95	139.87	96.96	246	138	12	7	x			NA	Absent	Absent	Absent
2012	246.685	139.5	96.96	246	138	7	7		x		NA	Absent	Absent	Absent
2012	246.96	139.85	96.96	246	138	11	7	x			NA	Absent	Absent	Absent
2012	246	139	96.98	246	138	4	7	x			NA	Absent	Absent	Absent
2012	246.11	138.09	96.89	246	138	11	7		x		NA	Absent	Absent	Absent
2012	246.15	138.7	96.95	246	138	2	7		x		NA	Absent	Absent	Absent
2012	246.18	138.1	96.91	246	138	10	7		x		NA	Absent	Absent	Absent
2012	246.21	138.115	96.94	246	138	1	7	x			NA	Absent	Absent	Absent
2012	246.66	138.82	96.91	246	138	6	7	x			NA	Absent	Absent	Absent
2012	246.82	138.45	96.92	246	138	8	7		x		NA	Absent	Absent	Absent
2012	246.67	138.75	96.82	246	138	7	7		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2012	246.72	138.09	96.9	246	138	9	7		x		NA	Absent	Absent	Absent
2012	246.51	138.87	96.91	246	138	5	7	x			NA	Absent	Absent	Absent
2012	246.09	138.9	96.94	246	138	3	7							
2012	246.22	138.89	96.88	246	138	4	7							
2012	246.17	139.13	96.92	246	138	5	8	x			NA	Absent	Absent	Absent
2012	246	139.04	96.95	246	138	6	8	x			NA	Absent	Absent	Absent
2012	246.86	139.98	96.82	246	138	12	8	x			NA	Absent	Absent	Absent
2012	246.64	139.1	96.94	246	138	2	8	x			NA	Absent	Absent	Absent
2012	246.98	139.41	96.92	246	138	7	8	x			NA	Absent	Absent	Absent
2012	246.98	139.64	96.92	246	138	10	8		x		NA	Absent	Absent	Absent
2012	246.98	139.7	96.94	246	138	11	8		x		NA	x	Absent	Absent
2012	246.78	139.71	96.91	246	138	9	8	x			NA	Absent	Absent	Absent
2012	246.19	139.05	96.92	246	138	4	8		x		NA	Absent	Absent	Absent
2012	246.3	139.18	96.92	246	138	3	8	x			NA	Absent	Absent	Absent
2012	246.55	139.68	96.94	246	138	8	8		x		Complete	Absent	Absent	Absent
2012	246.99	139.08	96.95	246	138	1	8	x			NA	Absent	Absent	Absent
2012	246.46	138.87	96.89	246	138	10	8	x			NA	Absent	Absent	Absent
2012	246.03	138.38	96.87	246	138	5	8		x		NA	Absent	Absent	Absent
2012	246.34	138.21	96.87	246	138	1	8		x		NA	Absent	Absent	Absent
2012	246.16	138.7	96.89	246	138	7	8		x		Distal	Absent	Absent	Absent
2012	246.04	138.4	96.89	246	138	6	8		x		NA	Absent	Absent	Absent
2012	246.11	138.84	96.9	246	138	8	8		x		NA	Absent	Absent	Absent
2012	246.41	138.58	96.86	246	138	11	8	x			NA	Absent	Absent	Absent
2012	246.29	138.27	96.89	246	138	2	8	x			NA	Absent	Absent	Absent
2012	246.17	188.43	96.89	246	138	4	8	x			NA	Absent	Absent	Absent
2012	246.28	138.85	96.87	246	138	9	8	x			NA	Absent	Absent	Absent
2012	246.97	138.92	96.89	246	138	12	8		x		NA	x	Absent	Absent
2012	246.25	138.3	96.9	246	138	3	8		x		NA	Absent	Absent	Absent
2012	246.04	139.42	96.88	246	138	5	9	x			NA	Absent	Absent	Absent
2012	246.42	139.33	96.9	246	138	6	9		x		proximal	Absent	Absent	Absent
2012	246.28	139.74	96.9	246	138	8	9		x		NA	Absent	Absent	Absent
2012	246.08	139.07	96.878	246	138	1	9	x			NA	Absent	Absent	Absent
2012	246.912	139.11	96.9	246	138	4	9	x			NA	Absent	Absent	Absent
2012	246..15	139.76	96.88	246	138	7	9		x		NA	Absent	Absent	Absent
2012	246.79	139.97	96.9	246	138	13	9	x			NA	Absent	Absent	Absent
2012	246.79	139.2	96.87	246	138	14	9		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2012	246.39	139.56	96.9	246	138	15	9		x		NA	Absent	Absent	Absent
2012	246.58	139.94	96.88	246	138	12	9	x			NA	Absent	Absent	Absent
2012	246.39	138.15	96.9	246	138	16	9		x		NA	Absent	Absent	Absent
2012	246.981	139.65	96.9	246	138	9	9		x		NA	Absent	Absent	Absent
2012	246.11	139.97	96.9	246	138	10	9	x			NA	Absent	Absent	Absent
2012	246.36	139.91	96.87	246	138	11	9		x		Complete	Absent	Absent	Absent
2012	246.42	139.2	96.895	246	138	2	9	x			NA	Absent	Absent	Absent
2012	246.66	139.055	96.9	246	138	3	9		x		Complete	Absent	Absent	Absent
2012	246.99	138.78	96.8	246	138	14	9		x		NA	Absent	Absent	Absent
2012	246.41	138.56	96.8	246	138	8	9	x			NA	Absent	Absent	Absent
2012	246.09	138.21	96.81	246	138	1	9	x			NA	Absent	Absent	Absent
2012	246.13	138.61	96.82	246	138	5	9		x		NA	Absent	Absent	Absent
2012	246.88	138.65	96.8	246	138	13	9	x			NA	Absent	Absent	Absent
2012	246.73	138.75	96.84	246	138	11	9		x		NA	Absent	Absent	Absent
2012	246.24	138.33	96.84	246	138	2	9	x			NA	Absent	Absent	Absent
2012	246.86	138.69	96.84	246	138	12	9		x		Medial	Absent	Absent	Absent
2012	246.4	138.62	96.8	246	138	7	9	x			NA	Absent	Absent	Absent
2012	246.84	138.87	96.84	246	138	10	9	x			NA	Absent	Absent	Absent
2012	246.18	138.57	96.82	246	138	4	9	x			NA	Absent	Absent	Absent
2012	246.41	138.7	96.78	246	138	20	9		x		Complete	Absent	Absent	Absent
2012	246.2	138.5	96.84	246	138	3	9		x		NA	Absent	Absent	Absent
2012	246.8	138.64	96.81	246	138	6	9		x		NA	Absent	Absent	Absent
2012	246.37	138.15	96.79	246	138	19	9		x		Complete	Absent	Absent	Absent
2012	246.83	138.28	96.83	246	138	18	9	x			NA	Absent	Absent	Absent
2012	246.52	138.32	96.83	246	138	17	9		x		NA	Absent	Absent	Absent
2012	246.64	138.94	96.85	246	138	9	9		x		proximal	Absent	Absent	Absent
2012	246.58	138.47	96.84	246	138	16	9		x		proximal	Absent	Absent	Absent
2012	246.5	138.55	96.84	246	138	15	9	x			NA	Absent	Absent	Absent
2012	246.97	139.44	96.82	246	138	10	10	x			NA	Absent	Absent	Absent
2012	246.46	139.37	96.82	246	138	5	10	x			NA	Absent	Absent	Absent
2012	246.16	139.99	96.81	246	138	17	10	x			NA	Absent	Absent	Absent
2012	246.95	139.92	96.8	246	138	19	10	x			NA	Absent	Absent	Absent
2012	246.83	139.37	96.84	246	138	9	10	x			NA	Absent	Absent	Absent
2012	246.04	139.85	96.83	246	138	16	10	x			NA	Absent	Absent	Absent
2012	246.76	139.55	96.82	246	138	15	10	x			NA	Absent	Absent	Absent
2012	246.99	139.79	96.84	246	138	20	10		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2012	246.43	139.07	96.8	246	138	2	10		x		NA	Absent	Absent	Absent
2012	246.44	139.5	96.84	246	138	12	10		x		NA	Absent	Absent	Absent
2012	246.59	139.37	96.81	246	138	6	10				NA	Absent	Absent	Absent
2012	246.66	139.36	96.8	246	138	8	10	x			NA	Absent	Absent	Absent
2012	246.62	139.4	96.81	246	138	7	10	x			NA	Absent	Absent	Absent
2012	246.16	139.57	96.8	246	138	11	10	x			NA	Absent	Absent	Absent
2012	246.61	139.08	96.81	246	138	3	10				NA	Absent	Absent	Absent
2012	246.7	139.47	96.83	246	138	13	10		x		NA	Absent	Absent	Absent
2012	246.7	139.55	96.84	246	138	14	10	x			NA	Absent	Absent	Absent
2012	246.47	139.8	96.8	246	138	18	10		x		Proximal	Absent	Absent	Absent
2012	246.12	139.25	96.8	246	138	1	10		x		Complete	Absent	Absent	Absent
2012	246.48	139.34	96.81	246	138	4	10		x		Complete	Absent	Absent	Absent
2012	246.52	138.35	96.8	246	138	8	10	x			NA	Absent	Absent	Absent
2012	246.55	138.27		246	138	7	10	x			NA	Absent	Absent	Absent
2012	246.07	138.22	96.81	246	138	4	10		x		NA	Absent	Absent	Absent
2012	246.8	138.29	96.8	246	138	12	10		x		NA	Absent	Absent	Absent
2012	246.66	138.44	96.79	246	138	9	10		x		NA	Absent	Absent	Absent
2012	246.29	138.62	96.79	246	138	3	10	x			NA	Absent	Absent	Absent
2012	246.27	138.11	96.79	246	138	5	10	x			NA	Absent	Absent	Absent
2012	246.09	138.51	96.8	246	138	2	10	x			NA	Absent	Absent	Absent
2012	246.42	138.79	96.79	246	138	1	10	x			NA	Absent	Absent	Absent
2012	246.26	138.17	96.79	246	138	6	10	x			Complete	Absent	Absent	Absent
2012	246.34	138.48	96.73	246	138	13	10		x		NA	Absent	Absent	Absent
2012	246.78	138.13	96.77	246	138	11	10		x		NA	Absent	Absent	Absent
2012	246.47	138.38	96.79	246	138	10	10	x			Complete	Absent	Absent	a
2012	246.86	139.86	96.8	246	138	15	11	x			NA	Absent	Absent	Absent
2012	246.77	139.9	96.78	246	138	14	11		x		NA	Absent	Absent	Absent
2012	246.78	139.25	96.76	246	138	20	11	x			NA	Absent	Absent	Absent
2012	246.37	139.98	96.76	246	138	18	11		x		proximal	Absent	Absent	Absent
2012	246.15	139.68	96.75	246	138	7	11		x		Medial	Absent	Absent	Absent
2012	246.92	139.88	96.8	246	138	16	11		x		proximal	Absent	Absent	Absent
2012	246.59	139.46	96.8	246	138	3	11		x		NA	Absent	Absent	Absent
2012	246.03	139.36	96.76	246	138	1	11		x		NA	Absent	Absent	Absent
2012	246.57	139.37	96.78	246	138	2	11	x			NA	Absent	Absent	Absent
2012	246.23	138.69	96.79	246	138	8	11		x		NA	Absent	Absent	Absent
2012	246.07	139.88	96.8	246	138	11	11		x		Complete	Absent	Absent	Present

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2012	246.52	139.83	96.8	246	138	13	11		x		Distal	Present	Absent	Present
2012	246.97	139.67	96.78	246	138	9	11		x		NA	Absent	Absent	Absent
2012	246.4	139.57	96.8	246	138	4	11	x			proximal	Absent	Absent	Absent
2012	246.05	139.92	96.8	246	138	12	11		x		NA	Absent	Absent	Absent
2012	246.77	139.51	96.78	246	138	6	11		x		NA	Absent	Absent	Absent
2012	246.52	139.59	96.78	246	138	5	11			x	NA	Absent	Absent	Absent
2012	246.8	139.26	96.75	246	138	21	11		x		NA	Present	Absent	Absent
2012	246.99	139.77	96.8	246	138	10	11		x		NA	Absent	Absent	Absent
2012	246.98	139.86	96.8	246	138	17	11		x		NA	Absent	Absent	Absent
2012				246	138	19	11							
2012	246.45	138.76	96.73	246	138	13	11	x			NA	Absent	Absent	Absent
2012	246.18	138.71	96.72	246	138	5	11		x		NA	Absent	Absent	Absent
2012	246.31	138.72	96.72	246	138	8	11		x		Distal	Absent	Absent	Absent
2012	246.82	138.79	96.72	246	138	21	11		x		NA	Absent	Absent	Absent
2012	246.3	138.98	96.76	246	138	4	11		x		NA	Absent	Absent	Absent
2012	246.29	138.91	96.74	246	138	24	11		x		NA	Absent	Absent	Absent
2012	246.5	138.52	96	246	138	25	11	x			NA	Absent	Absent	Absent
2012	246.03	138.27	96.12	246	138	1	11	x			NA	Absent	Absent	Absent
2012	246.7	138.7	96.73	246	138	18	11	x			NA	Absent	Absent	Absent
2012	246.17	138.44	96.71	246	138	19	11		x		NA	Absent	Absent	Absent
2012	246.39	138.49	96.73	246	138	9	11		x		NA	Absent	Absent	Absent
2012	246.4	138.65	96.71	246	138	10	11	x			NA	Absent	Absent	Absent
2012	246.49	138.85	96.71	246	138	14	11		x		NA	Absent	Absent	Absent
2012	246.12	138.4	96.74	246	138	6	11	x			NA	Absent	Absent	Absent
2012	246.25	138.86	96.74	246	138	3	11		x		proximal	Absent	Absent	Absent
2012	246.78	138.87	96.73	246	138	22	11		x		NA	Absent	Absent	Absent
2012	246.48	138.13	96.7	246	138	17	11		x		NA	Absent	Absent	Absent
2012	246.52	138.48	96.71	246	138	16	11	x			NA	Absent	Absent	Absent
2012	246.22	138.37	96.72	246	138	7	11		x		NA	Absent	Absent	Absent
2012	246.41	138.68	96.71	246	138	11	11		x		NA	Absent	Absent	Absent
2012	246.84	138.88	96.73	246	138	23	11		x		NA	Absent	Absent	Absent
2012	246.45	138.71	96.72	246	138	12	11	x			NA	Absent	Absent	Absent
2012	246.78	138.77	96.73	246	138	20	11	x			NA	Absent	Absent	Absent
2012	246.45	138.8	96.76	246	138	15	11		x		NA	Absent	Absent	Absent
2012	246.01	138.38	96.73	246	138	2	11		x		NA	Absent	Absent	Absent
2012				246	138	9	12	x			NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2012	246.3	139.58	96.7	246	138	20	12	x			NA	Absent	Absent	Absent
2012	246.26	139.48	96.73	246	138	17	12		x		NA	Absent	Absent	Absent
2012	246.295	139.34	96.73	246	138	6	12	x			NA	Absent	Absent	Absent
2012	246.24	139.25	96.75	246	138	5	12		x		NA	Absent	Absent	Absent
2012	246.09	139.55	96.7	246	138	19	12		x		NA	Absent	Absent	Absent
2012				246	138	15	12	x			NA	Absent	Absent	Absent
2012	246.62	138.2	96.72	246	138	10	12	x			NA	Absent	Absent	Absent
2012	246.28	139.12	96.71	246	138	4	12		x		NA	Absent	Absent	Absent
2012	246.445	139.68	96.75	246	138	23	12	x			NA	Absent	Absent	Absent
2012	246.555	139.31	96.73	246	138	14	12	x			NA	Absent	Absent	Absent
2012	246.95	139.29	96.72	246	138	12	12	x			NA	Absent	Absent	Absent
2012	246.7	139.79	96.75	246	138	30	12		x		Complete	Absent	Present	Present
2012	246.205	139.15	96.75	246	138	3	12		x		NA	Absent	Absent	Absent
2012	256.56	139.15	96.74	246	138	16	12		x		Complete	Absent	Absent	Absent
2012	246.64	139.95	96.74	246	138	31	12	x			NA	Absent	Absent	Absent
2012	246.41	139.21	96.73	246	138	7	12	x			NA	Absent	Absent	Absent
2012	246.2	139.78	96.72	246	138	27	12		x		NA	Absent	Absent	Absent
2012	246.98	139.25	96.72	246	138	11	12	x			NA	Absent	Absent	Absent
2012	246.28	139.75	96.75	246	138	28	12	x			NA	Absent	Absent	Absent
2012	246.23	139.64	96.75	246	138	21	12	x			NA	Absent	Absent	Absent
2012	246.49	139.17	96.7	246	138	8	12		x		NA	Absent	Absent	Absent
2012	246.045	139.39	96.755	246	138	13	12	x			NA	Absent	Absent	Absent
2012	246.25	139.1	96.75	246	138	32	12	x			NA	Absent	Absent	Absent
2012	241.92	139.6	96.73	246	138	22	12			x	Complete	Absent	Absent	Absent
2012	246.565	139.79	96.745	246	138	29	12		x		NA	Absent	Absent	Absent
2012	246.23	139.78	96.72	246	138	33	12		x		NA	Absent	Absent	Absent
2012	246.18	139.76	96.72	246	138	26	12	x			NA	Absent	Absent	Absent
2012	246.71	139.56	96.72	246	138	18	12	x			NA	Absent	Absent	Absent
2012	246.07	139.71	96.73	246	138	1	12		x		Complete	Absent	Absent	Absent
2012	246	139.76	96.72	246	138	24	12	x			NA	Absent	Absent	Absent
2012	246.06	139.76	96.73	246	138	25	12		x		Complete	Absent	Absent	Absent
2012	246.07	139.79	96.71	246	138	2	12			x	NA	Absent	Absent	Absent
2012	246.44	139.23	96.7	246	138	34	12							
2012	246.17	139.45	96.86	246	138	12	13		x		NA	Absent	Absent	Absent
2012	246.52	139.23	96.66	246	138	4	13	x			NA	Absent	Absent	Absent
2012	246.2	139.75	96.67	246	138	17	13	x			NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2012	246.17	139.94	96.66	246	138	18	13		x		NA	Absent	Absent	Absent
2012	246.79	139.06	96.68	246	138	9	13		x		NA	Absent	Absent	Absent
2012	246.28	139.62	96.68	246	138	16	13	x			NA	Absent	Absent	Absent
2012	246.27	139.09	96.67	246	138	1	13		x		NA	Absent	Absent	Absent
2012	246.36	139.41	96.66	246	138	13	13		x		NA	Absent	Absent	Absent
2012	246.57	139.06	96.67	246	138	7	13	x			NA	Absent	Absent	Absent
2012	246.65	139.04	96.67	246	138	14	13		x		proximal	Absent	Absent	Absent
2012	246.68	139.17	96.68	246	138	10	13	x			NA	Absent	Absent	Absent
2012	246.56	139.04	96.64	246	138	5	13		x		NA	Absent	Absent	Absent
2012	246.55	139.1	96.66	246	138	8	13	x			NA	Absent	Absent	Absent
2012	246.22	139.16	96.69	246	138	2	13		x		NA	Absent	Absent	Absent
2012	246.94	139.37	96.67	246	138	15	13	x			NA	Absent	Absent	Absent
2012	246.93	139.25	96.65	246	138	11	13	x			NA	Absent	Absent	Absent
2012	2446.66	139.43	96.66	246	138	21	13	x			NA	Absent	Absent	Absent
2012	246.41	139.22	96.69	246	138	3	13	x			Complete	Absent	Absent	Absent
2012	246.58	139.02	96.67	246	138	6	13		x		NA	Absent	Absent	Absent
2012	246.99	139.94	96.69	246	138	20	13		x		NA	Absent	Absent	Absent
2012	246.09	139.91	96.69	246	138	19	13		x		NA	Absent	Absent	Absent
2012	246.55	141.04	96.83	246	140	5	11			x	NA	Absent	Absent	Absent
2012	246.96	141.9	96.84	246	140	11	11		x		NA	Absent	Absent	Absent
2012	246.7	141.45	96.82	246	140	7	11		x		NA	Absent	Absent	Absent
2012	246.33	141.35	96.82	246	140	4	11	x			NA	Absent	Absent	Absent
2012	246.13	141.58	96.83	246	140	1	11	x			NA	Absent	Absent	Absent
2012	246.28	141.63	96.84	246	140	3	11	x			NA	Absent	Absent	Absent
2012	246.6	141.54	96.84	246	140	6	11			x	proximal	Absent	Absent	Absent
2012	246.84	141.65	96.83	246	140	9	11	x			NA	Absent	Absent	Absent
2012	246.2	141.48	96.84	246	140	2	11		x		NA	Absent	Absent	Absent
2012	246.79	141.15	96.81	246	140	8	11	x			NA	Absent	Absent	Absent
2012	246.95	141.63	96.82	246	140	10	11	x			NA	Absent	Absent	Absent
2012	246.64	141.25	96.82	246	140	13	12	x			NA	Absent	Absent	Absent
2012	246.32	141.19	96.79	246	140	3	12			x	Proximal	Absent	Absent	Absent
2012	246.81	141.6	96.83	246	140	9	12		x		Complete	Absent	Absent	Absent
2012	246.1	141.49	96.81	246	140	1	12		x		NA	Absent	Absent	Absent
2012	246.95	141.54	96.84	246	140	12	12	x			NA	Absent	Absent	Absent
2012	246.95	141.81	96.85	246	140	10	12			x	NA	Absent	Absent	Absent
2012	246.13	141.3	96.81	246	140	2	12		x		Proximal	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2012	246.53	141.11	96.81	246	140	4	12	x			NA	Absent	Absent	Absent
2012	246.81	141.02	96.83	246	140	14	12		x		NA	Absent	Absent	Absent
2012	246.8	141.8	96.80	246	140	8	12	x			NA	Absent	Absent	Absent
2012	246.58	141.83	96.79	246	140	6	12	x			NA	Absent	Absent	Absent
2012	246.71	141.95	96.81	246	140	7	12		x		NA	Absent	Absent	Absent
2012	246.52	141.45	96.84	246	140	5	12		x		NA	Absent	Absent	Absent
2012	246.93	141.84	96.81	246	140	11	12	x			NA	Absent	Absent	Absent
2012	246.87	141.67	96.7	246	140	13	13		x		NA	Absent	Absent	Absent
2012	246.36	141.41	96.72	246	140	4	13		x		NA	Absent	Absent	Absent
2012	246.61	141.955	96.74	246	140	7	13		x		NA	Absent	Absent	Absent
2012	246.36	141.98	96.72	246	140	5	13		x		NA	Absent	Absent	Absent
2012	246.84	141.62	96.7	246	140	15	13		x		Medial	Absent	Absent	Absent
2012	246.8	141.85	96.75	246	140	16	13	x			NA	Absent	Absent	Absent
2012	246.79	141.07	96.72	246	140	19	13		x		NA	Absent	Absent	Absent
2012	246.85	141.8	96	246	140	12	13		x		NA	Absent	Absent	Absent
2012	246.83	141.13	96.72	246	140	18	13			x	Proximal	Absent	Absent	Absent
2012	246.53	141.17	96.7	246	140	9	13		x		NA	Absent	Absent	Absent
2012	246.44	141.88	96.7	246	140	6	13	x			NA	Absent	Absent	Absent
2012	246.96	141.9	96.73	246	140	20	13		x		NA	Absent	Absent	Absent
2012	246.56	141.17	96.69	246	140	10	13		x		NA	Absent	Absent	Absent
2012	246.18	141.14	96.72	246	140	1	13	x			NA	Absent	Absent	Absent
2012	246.55	141.51	96.72	246	140	8	13	x			NA	Absent	Absent	Absent
2012	246.84	141.66	96.7	246	140	14	13	x			NA	Absent	Absent	Absent
2012	246.03	141.65	96.73	246	140	2	13	x			NA	Absent	Absent	Absent
2012	246.67	141.72	96.73	246	140	11	13	x			NA	Absent	Absent	Absent
2012	246.92	141.36	96.73	246	140	17	13		x		NA	Absent	Absent	Absent
2012	246.18	141.72	96.7	246	140	3	13	x			NA	Absent	Absent	Absent
2012	246.035	140.1	96.71	246	140	2	13	x			NA	Absent	Absent	Absent
2012	246.03	140.17	96.72	246	140	3	13		x		NA	Absent	Absent	Absent
2012	246.65	140.35	96.7	246	140	6	13	x			NA	Absent	Absent	Absent
2012	246.06	140.58	96.72	246	140	10	13	x			NA	Absent	Absent	Absent
2012	246.18	140.69	96.74	246	140	11	13	x			NA	Absent	Absent	Absent
2012	246.58	140.55	96.74	246	140	12	13	x			NA	Absent	Absent	Absent
2012	246.87	140.64	96.71	246	140	18	13	x			NA	Absent	Absent	Absent
2012	246.66	140.73	96.7	246	140	20	13	x			NA	Absent	Absent	Absent
2012	246.66	140.96	96.72	246	140	22	13		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2012	246.72	140.56	96.74	246	140	16	13		x		NA	Absent	Absent	Absent
2012	246.61	140.8	96.74	246	140	19	13			x	Proximal	Absent	Absent	Absent
2012	246.76	141.74	96.71	246	140	23	13	x			NA	Absent	Absent	Absent
2012	246.03	140.05	96.74	246	140	1	13			x	Medial	Absent	Absent	Absent
2012	246.54	140.295	96.71	246	140	4	13		x		Complete	x	Absent	Absent
2012	246.7	140.485	96.74	246	140	9	13			x	Complete	Absent	Absent	Absent
2012	246.92	140.81	96.72	246	140	24	13		x		Complete	Absent	Absent	Absent
2012	246.46	140.64	96.73	246	140	13	13		x		Proximal	Absent	Absent	Absent
2012	246.94	140.51		246	140	17	13		x		Complete	Absent	Absent	Absent
2012	246.36	140.55	96.7	246	140	7	13		x		NA	Absent	Absent	Absent
2012	246.61	140.99	96.7	246	140	21	13		x		NA	Absent	Absent	Absent
2012	246.59	140.43	96.74	246	140	8	13	NA	NA	NA	NA	Absent	Absent	Absent
2012	246.44	140.71	96.74	246	140	14	13		x		NA	Absent	Absent	Absent
2012	246.65	140.29	96.7	246	140	5	13	x			NA	Absent	Absent	Absent
2012	246.58	140.55	96.74	246	140	15	13	x			NA	Absent	Absent	Absent
2012	246.98	140.72	96.73	246	140	25	13		x		NA	Absent	Absent	Absent
2012	246	140.06	96.7	246	140	26	13		x		Proximal	Absent	Absent	Absent
2012	247.06	141.21	96.65	246	140	3	14				Complete	x	Absent	Absent
2012	247.29	141.93	96.68	246	140	4	14	x			NA	Absent	Absent	Absent
2012	247.27	141.21	96.72	246	140	5	14	x			NA	Absent	Absent	Absent
2012	247.86	141.85	96.65	246	140	8	14				NA	Absent	Absent	Absent
2012	247.02	141.92	96.72	246	140	1	14		x		NA	Absent	Absent	Absent
2012	247.04	141.36	96.68	246	140	2	14	x			NA	x	x	Absent
2012	247.81	141.66	96.65	246	140	7	14		x		NA	Absent	Absent	Absent
2012	247.5	141.14	96.68	246	140	6	14			x	Complete	x	Absent	Absent
2012	246.52	141.42	96.65	246	140	2	14	x			NA	Absent	Absent	Absent
2012	246.59	141.8	96.71	246	140	3	14			x	NA	Absent	Absent	Absent
2012	246.7	141.71	96.7	246	140	4	14		x		Complete	Absent	Absent	Absent
2012	246.75	141.92	96.71	246	140	6	14	X			NA	Absent	Absent	Absent
2012	246.86	141.81	96.71	246	140	8	14	X			NA	Absent	Absent	Absent
2012	246.1	141.36	96.73	246	140	11	14		x		proximal	Absent	Absent	Absent
2012	246.13	141.54	96.78	246	140	16	14		x		proximal	Absent	Absent	Absent
2012	246.4	141.18	96.68	246	140	25	14		x		NA	Absent	Absent	Absent
2012	246.02	141.46	96.68	246	140	37	14			x	NA	Absent	Absent	Absent
2012	246.66	141.8	96.7	246	140	5	14			x	Complete	Absent	Absent	Absent
2012	246.39	141.15	96.7	246	140	26	14		x		Complete	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2012	246.8	141.49	96.66	246	140	35	14		x		NA	Absent	Absent	Absent
2012	246.14	141.59	96.71	246	140	14	14		x		NA	Absent	Absent	Absent
2012	246.04	141.52	96.71	246	140	19	14			x	NA	Absent	Absent	Absent
2012	246.18	141.34	96.7	246	140	23	14		x		NA	Absent	Absent	Absent
2012	246.16	141.19	96.7	246	140	24	14		x		proximal	Absent	Absent	Absent
2012	246.54	141.21	96.67	246	140	27	14			x	proximal	Absent	Absent	Absent
2012	246.6	141.53	96.67	246	140	29	14		x		NA	Absent	Absent	Absent
2012	246.2	141.52	96.66	246	140	34	14		x		Medial	Absent	Absent	Absent
2012	246.15	141.34	96.68	246	140	22	14		x		NA	Absent	Absent	Absent
2012	246.84	141.51	96.73	246	140	9	14		x		Complete	Absent	Absent	Absent
2012	246.21	141.52	96.73	246	140	17	14	x			NA	Absent	Absent	Absent
2012	246.64	141.19	96.66	246	140	28	14	x			NA	Absent	Absent	Absent
2012	246.18	141.32	96.66	246	140	32	14		x		NA	Absent	Absent	Absent
2012	246.07	141.74	96.73	246	140	12	14		x		NA	Absent	Absent	Absent
2012	246.08	141.64	96.78	246	140	13	14		x		NA	Absent	Absent	Absent
2012	246.12	141.31	96.69	246	140	31	14		x		NA	Absent	Absent	Absent
2012	246.31	141.995	96.71	246	140	1	14	x			Complete	Absent	Absent	Absent
2012	246.77	141.85	96.71	246	140	7	14	X			NA	Absent	Absent	Absent
2012	246.04	141.54	96.66	246	140	33	14		x		NA	Absent	Absent	Absent
2012	246.76	141.44	96.67	246	140	10	14	X			NA	Absent	Absent	Absent
2012	246.02	141.59	96.79	246	140	15	14		x		NA	Absent	Absent	Absent
2012	246.24	141.49	96.69	246	140	18	14		x		NA	Absent	Absent	Absent
2012	246.03	141.48	96.72	246	140	20	14		x		NA	Absent	Absent	Absent
2012	246.12	141.3	96.67	246	140	36	14		x		NA	Absent	Absent	Absent
2012	246.06	141.28	96.69	246	140	30	14			x	proximal	Absent	Absent	Absent
2012	246.02	141.38	96.69	246	140	21	14		x		NA	Absent	Absent	Absent
2012	246.16	140.76	96.67	246	140	22	14		x		NA	Absent	Absent	Absent
2012	246.67	140.35	96.65	246	140	12	14		x		proximal	Absent	Absent	Absent
2012	246.33	140.07	96.68	246	140	3	14	x			NA	Absent	Absent	Absent
2012	246.35	140.45	96.66	246	140	11	14		x		NA	Absent	Absent	Absent
2012	246.05	140.95	96.67	246	140	26	14		x		NA	Absent	Absent	Absent
2012	246.29	140.65	96.69	246	140	19	14		x		NA	Absent	Absent	Absent
2012	246.18	140.99	96.65	246	140	30	14	x			NA	Absent	Absent	Absent
2012	246.61	140.42	96.66	246	140	13	14			x	NA	Absent	Absent	Absent
2012	246.82	140.22	96.68	246	140	6	14			x	NA	Absent	Absent	Absent
2012	246.64	140.64	96.65	246	140	20	14		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2012	246.44	140.61	96.66	246	140	18	14			x	Distal	Absent	Absent	Absent
2012	246.04	140.38	96.68	246	140	7	14			x	NA	Absent	Absent	Absent
2012	246.74	140.57	96.66	246	140	14	14			x	Complete	Absent	Absent	Absent
2012	246.99	140.72	96.69	246	140	24	14	x			NA	Absent	Absent	Absent
2012	246.04	140.55	96.66	246	140	15	14		x		NA	Absent	Absent	Absent
2012	246.04	140.02	96.69	246	140	1	14	x			NA	Absent	Absent	Absent
2012	246.23	140.99	96.67	246	140	28	14		x		NA	Absent	Absent	Absent
2012	246.35	140.91	96.69	246	140	25	14		x		NA	Absent	Absent	Absent
2012	246.39	140.03	96.65	246	140	2	14	x			NA	Absent	Absent	Absent
2012	246.32	140.29	96.69	246	140	5	14	x			NA	Absent	Absent	Absent
2012	246.89	140.38	96.69	246	140	8	14		v		NA	Absent	Absent	Absent
2012	246.25	140.63	96.65	246	140	17	14		x		NA	Absent	Absent	Absent
2012	246.34	140.52	96.65	246	140	16	14			x	proximal	Absent	Absent	Absent
2012	246.86	140.65	96.69	246	140	21	14		x		NA	Absent	Absent	Absent
2012	246.54	140.295	96.71	246	140	4	14	x			Complete	present	Absent	Absent
2012	246.34	140.72	96.65	246	140	29	14		x		NA	Absent	Absent	Absent
2012	246.15	140.95	96.67	246	140	27	14		x		NA	Absent	Absent	Absent
2012	246.48	140.36	96.67	246	140	9	14	x			NA	Absent	Absent	Absent
2012	246.11	140.41(?)	96.65	246	140	10	14			x	Complete	Absent	Absent	Absent
2012	246.33	140.71	96.65	246	140	23	14	x			NA	Absent	Absent	Absent
2012	247.43	141.58	96.59	246	140	5	15		x		NA	Absent	Absent	Absent
2012	247.73	141.46	96.58	246	140	6	15		x		NA	Absent	Absent	Absent
2012	247.26	141.97	96.59	246	140	4	15		x		NA	Absent	Absent	Absent
2012	247.84	141.89	96.60	246	140	7	15		x		Complete	Absent	Absent	Absent
2012	247.94	141.16	96.62	246	140	8	15		x		NA	Absent	Absent	Absent
2012	247.26	141.3	96.60	246	140	3	15		x		NA	Absent	Absent	Absent
2012	247.03	141.54	96.61	246	140	1	15		x		Complete	Absent	Absent	Absent
2012	247.06	141.45	96.60	246	140	2	15	x			NA	Absent	Absent	Absent
2012	246.65	141.93	96.61	246	140	5	15		x		NA	Absent	Absent	Absent
2012	246.12	141.66	96.63	246	140	2	15		x		NA	Absent	Absent	Absent
2012	246.14	141.71	96.6	246	140	1	15	x			NA	Absent	Absent	Absent
2012	246.84	141.74	96.62	246	140	4	15		x		NA	Absent	Absent	Absent
2012	246.64	141.81	96.6	246	140	3	15		x		NA	Absent	Absent	Absent
2012	247.23	140.48	96.57	246	140	2	16	x			NA	Absent	Absent	Absent
2012	247.16	140.9	96.55	246	140	3	16		x		NA	Absent	Absent	Absent
2012	247.77	140.44	96.575	246	140	1	16		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2012	247.11	140.94	96.585	246	140	4	16		x		Complete	Absent	Absent	Absent
2012	247.32	140.98	96.56	246	140	5	16	x			NA	Absent	Absent	Absent
2012	246.51	141.76	96.58	246	140	18	16		x		NA	Absent	Absent	Absent
2012	246.1	141.86	96.59	246	140	16	16	x			NA	Absent	Absent	Absent
2012	246.34	141.26	96.6	246	140	5	16	x			NA	Absent	Absent	Absent
2012	246.3	141.37	96.55	246	140	7	16		x		proximal	Absent	Absent	Absent
2012	246.16	141.15	96.55	246	140	2	16		x		NA	Absent	Absent	Absent
2012	246.12	141.04	96.6	246	140	1	16		x		NA	Absent	Absent	Absent
2012	246.58	141.68	96.59	246	140	17	16		x		proximal	Absent	Absent	Absent
2012	246.76	141.22	96.57	246	140	12	16	x			NA	Absent	Absent	Absent
2012	246.61	141.14	96.58	246	140	8	16		x		NA	Absent	Absent	Absent
2012	246.95	141.27	96.62	246	140	13	16		x		NA	Absent	Absent	Absent
2012	246.3	141.12	96.55	246	140	3	16		x		NA	Absent	Absent	Absent
2012	246.97	141.56	96.59	246	140	15	16		x		NA	Absent	Absent	Absent
2012	246.92	141.31	96.58	246	140	14	16	x			NA	Absent	Absent	Absent
2012	246.36	141.25	96.61	246	140	6	16		x		NA	Absent	Absent	Absent
2012	246.65	141.12	96.57	246	140	10	16		x		NA	Absent	Absent	Absent
2012	246.56	141.82	96.59	246	140	19	16		x		NA	Absent	Absent	Absent
2012	246.42	141.15	96.61	246	140	4	16		x		Proximal	x	Absent	Absent
2012	246.76	141.07	96.54	246	140	11	16		x		proximal	Absent	Absent	Absent
2012	246.61	141.02	96.55	246	140	9	16	x			NA	Absent	Absent	Absent
2012	246.55	140.49	96.58	246	140	15	16		x		Complete	Absent	Absent	Absent
2012	246.43	140.59	96.58	246	140	13	16		x		Medial	yes	Absent	Absent
2012	246.38	140.54	96.6	246	140	10	16		x		NA	Absent	Absent	Absent
2012	246.61	140.96	96.55	246	140	23	16		x		Medial	Absent	Absent	Absent
2012	246.39	140.88	96.55	246	140	19	16	x			NA	Absent	Absent	Absent
2012	246.33	140.55	96.56	246	140	9	16		x		Complete	Absent	Absent	Absent
2012	246.29	140.09	96.59	246	140	1	16		x		NA	Absent	Absent	Absent
2012	246.62	140.67	96.55	246	140	29	16	x			NA	Absent	Absent	Absent
2012	246.61	140.66	96.55	246	140	17	16		x		NA	Absent	Absent	Absent
2012	246.31	140.67	96.57	246	140	1	16	x			NA	Absent	Absent	Absent
2012	246.82	140.65	96.56	246	140	27	16		x		NA	Absent	Absent	Absent
2012	246.04	140.55	96.56	246	140	7	16		x		NA	Absent	Absent	Absent
2012	246.55	140.71	96.58	246	140	16	16		x		NA	Absent	Absent	Absent
2012	246.59	140.88	96.58	246	140	25	16	x			NA	Absent	Absent	Absent
2012	246.61	140.86	96.59	246	140	24	16		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2012	246.5	140.24	96.59	246	140	2	16		x		NA	Absent	Absent	Absent
2012	246.15	140.15	96.55	246	140	6	16	x			NA	Absent	Absent	Absent
2012	246.36	140.62	96.56	246	140	12	16	x			NA	Absent	Absent	Absent
2012	246.03	140.46	96.58	246	140	4	16	x			NA	Absent	Absent	Absent
2012	246.45	140.41	96.59	246	140	3	16		x		NA	Absent	Absent	Absent
2012	246.76	140.69	96.59	246	140	26	16		x		proximal	yes	yes	yes
2012	246.63	140.73	96.6	246	140	18	16		x		NA	Absent	Absent	Absent
2012	246.14	140.66	96.57	246	140	14	16	x			NA	Absent	Absent	Absent
2012	246.58	140.96	96.55	246	140	22	16		x		NA	Absent	Absent	Absent
2012	246.5	140.99	96.58	246	140	21	16		x		Medial	Absent	Absent	Absent
2012	246.4	140.94	96.57	246	140	20	16		x		NA	Absent	Absent	Absent
2012	246.78	140.62	96.55	246	140	28	16		x		NA	Absent	Absent	Absent
2012	246.04	140.63	96.59	246	140	8	16		x		NA	Absent	Absent	Absent
2012	246.13	140.51	96.59	246	140	5	16	x			NA	Absent	Absent	Absent
2012	246.51	142.05	96.73	246	142	2	14	x			NA	Absent	Absent	Absent
2012	246.3	142.3	96.71	246	142	9	14	x			NA	Absent	Absent	Absent
2012	246.4	142.7	96.7	246	142	26	14		x		NA	Absent	Absent	Absent
2012	246.89	142.29	96.74	246	142	15	14		x		NA	Absent	Absent	Absent
2012	246.59	142.28	96.74	246	142	11	14		x		Complete	Absent	Absent	Absent
2012	246.46	142.2	96.75	246	142	7	14	x			NA	Absent	Absent	Absent
2012	246.31	142.72	96.71	246	142	25	14		x		NA	Absent	Absent	Absent
2012	246.91	142.22	96.705	246	142	14	14	x			NA	Absent	Absent	Absent
2012	246.44	142.3	96.7	246	142	10	14		x		NA	Absent	Absent	Absent
2012	246.36	142.41	96.72	246	142	18	14	x			NA	Absent	Absent	Absent
2012	246.63	142.9	96	246	142	27	14		x		Complete	Absent	Absent	Absent
2012	246.48	142.43	96.7	246	142	20	14		x		Distal	Absent	Absent	Absent
2012	246.48	142.09	96	246	142	3	14		x		NA	Absent	Absent	Absent
2012	246.27	142.41	96.72	246	142	17	14				NA	Absent	Absent	Absent
2012				246	142	28	14		x		NA	Absent	Absent	Absent
2012	246.7	142.07	96.72	246	142	4	14	x			NA	Absent	Absent	Absent
2012	246.3	142.15	96.73	246	142	6	14	x			NA	Absent	Absent	Absent
2012	246.3	142.23	96.72	246	142	8	14	x			NA	Absent	Absent	Absent
2012	246.92	142.45	96.74	246	142	22	14	x			NA	Absent	Absent	Absent
2012	246.31	142.64	96.72	246	142	24	14		x		NA	Absent	Absent	Absent
2012	246.89	142.29	96.72	246	142	16	14	x			NA	Absent	Absent	Absent
2012	246.87	142.21	96.71	246	142	13	14		x		proximal	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2012	246.91	142	96.72	246	142	5	14		x		NA	Absent	Absent	Absent
2012	246.64	142.94	96.71	246	142	29	14		x		Distal	Absent	Absent	Absent
2012	246.49	142	96.725	246	142	1	14	x			NA	Absent	Absent	Absent
2012	246.54	142.44	96.7	246	142	21	14	x			NA	Absent	Absent	Absent
2012	246.43	142.42	96.73	246	142	19	14		x		NA	Absent	Absent	Absent
2012	246.63	142.27	96.7	246	142	12	14	x			NA	Absent	Absent	Absent
2012	246.22	142.63	96	246	142	23	14		x					
2012	246.08	142.06	96.65	246	142	1	15	x			NA	Absent	Absent	Absent
2012	246.52	142.16	96.65	246	142	15	15			x	NA	Absent	Absent	Absent
2012	246.93	142.27	96.69	246	142	19	15		x		NA	Absent	Absent	Absent
2012	246.58	142.22	96.67	246	142	16	15			x	NA	Absent	Absent	Absent
2012	246.58	142.22	96.66	246	142	17	15		x		Complete	Absent	Absent	Absent
2012	246.63	142.78	96.66	246	142	6	15		x		NA	Absent	Absent	Absent
2012	246.28	142.28	96.66	246	142	3	15	x			NA	Absent	Absent	Absent
2012	246.59	142.04	96.68	246	142	14	15	x			NA	Absent	Absent	Absent
2012	246.41	142.07	96.67	246	142	12	15	x			NA	Absent	Absent	Absent
2012	246.66	142.36	96.67	246	142	13	15	x			NA	Absent	Absent	Absent
2012	246.14	142.93	96.65	246	142	2	15	x			NA	Absent	Absent	Absent
2012	246.82	142.89	96.64	246	142	7	15	x			NA	Absent	Absent	Absent
2012	246.74	142.7	96.66	246	142	9	15	x			NA	Absent	Absent	Absent
2012	246.42	142.8	96	246	142	4	15	x			proximal	Absent	Absent	Absent
2012	246.89	142.34	96.65	246	142	11	15		x		NA	Absent	Absent	Absent
2012	246.76	142.15	96.68	246	142	21	15	x			NA	Absent	Absent	Absent
2012	246.81	142.16	96.68	246	142	20	15	x			NA	Absent	Absent	Absent
2012	246.63	142.26	96.67	246	142	18	15	x			NA	Absent	Absent	Absent
2012	246.73	142.11	96.65	246	142	23	15		x		Na	Absent	Absent	Absent
2012	246.92	142.87	96.65	246	142	8	15		x		NA	Absent	Absent	Absent
2012	246.68	142.6	96.65	246	142	10	15		x		NA	Absent	Absent	Absent
2012	246.58	142.88	96.65	246	142	5	15	x			NA	Absent	Absent	Absent
2012	246.81	142.14	96.67	246	142	22	15		x		NA	Absent	Absent	Absent
2012	246.89	142.77	96.62	246	142	4	16		x		Na	Absent	Absent	Absent
2012	246.89	142.37	96.6	246	142	6	16	x			Na	Absent	Absent	Absent
2012	246.27	142.09	96.62	246	142	7	16	x			Na	Absent	Absent	Absent
2012	246.92	142.19	96.63	246	142	9	16		x		NA	Absent	Absent	Absent
2012	246.49	142.89	96.62	246	142	2	16		x		Na	Absent	Absent	Absent
2012	246.81	142.15	96.64	246	142	8	16			x	Distal	Absent	Absent	present

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2012	246.37	142.97	96.6	246	142	1	16			x	Na	Absent	Absent	Absent
2012	246.8	142.58	96.6	246	142	5	16		x		NA	Absent	Absent	Absent
2012	246.57	142.84	96.61	246	142	3	16	x			Na	Absent	Absent	Absent
2012	246.31	142.81	96.75	246	142	1	17		x		Distal	Absent	Absent	Absent
2012	246.72	142.02	96.57	246	142	5	17			x	Complete	Absent	Absent	Absent
2012	246.73	142.66	96.6	246	142	9	17		x		NA	Absent	Absent	Absent
2012	246.76	142.49	96.55	246	142	12	17		x		NA	Absent	Absent	Absent
2012	246.92	142.67	96.55	246	142	13	17		x		Na	Absent	Absent	Absent
2012	246.8	142.55	96.6	246	142	14	17	x			Distal	x	Absent	Absent
2012	246.65	142.51	96.55	246	142	16	17	x			NA	Absent	Absent	Absent
2012	246.83	142.55	96.55	246	142	17	17		x		NA	Absent	Absent	Absent
2012	246.57	142.12	96.58	246	142	4	17		x		Complete	Absent	Absent	Absent
2012	246.62	142.51	96.58	246	142	11	17	x			Na	Absent	Absent	Absent
2012	246.63	142.18	96.6	246	142	6	17		x		Na	Absent	Absent	Absent
2012	246.58	142.52	96.58	246	142	10	17		x		Na	Absent	Absent	Absent
2012	246.03	142.02	96.58	246	142	3	17		x		Distal	Absent	Absent	Absent
2012	246.88	142.98	96.59	246	142	15	17		x		NA	Absent	Absent	Absent
2012	246.13	142.32	96	246	142	2	17		x		NA	Absent	Absent	Absent
2012	246.84	142.26	96.57	246	142	7	17		x		NA	x	Absent	Absent
2012	246.55	142.64	96.59	246	142	8	17	x			NA	Absent	Absent	Absent
2012	248.2	141.5	96.64	248	140	1	18		x		Na	Absent	Absent	Absent
2012	248.51	141.98	96.64	248	140	8	18	x			NA	Absent	Absent	Absent
2012	248.6	141.44	96.62	248	140	9	18	x			NA	Absent	Absent	Absent
2012	248.83	141.08	96.65	248	140	14	18		x		NA	Absent	Absent	Absent
2012	248.5	141.86	96.61	248	140	7	18	x			proximal	Absent	Absent	Absent
2012	248.52	141.65	96.62	248	140	6	18	x			NA	Absent	Absent	Absent
2012	248.81	141.47	96.61	248	140	13	18		x		NA	Absent	Absent	Absent
2012	248.43	141.49	96.62	248	140	4	18		x		NA	Absent	Absent	Absent
2012	248.63	141.42	96.61	248	140	10	18		x		NA	Absent	Absent	Absent
2012	248.36	141.75	96.61	248	140	15	18				Na	Absent	Absent	Absent
2012	248.63	141.34	96.63	248	140	11	18		x		NA	Absent	Absent	Absent
2012	248.48	141.59	96.61	248	140	5	18	x			NA	Absent	Absent	Absent
2012	248.74	141.26	96.62	248	140	12	18		x		NA	Absent	Absent	Absent
2012	248.28	141.46	96.62	248	140	2	18	x			NA	Absent	Absent	Absent
2012	248.35	141.74	96.61	248	140	3	18	x			NA	Absent	Absent	Absent
2012	248.25	141.57	96.57	248	140	4	19		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2012	248.74	141.7	96.555	248	140	15	19		x		proximal	Absent	Absent	Absent
2012	248.6	141.07	96.57	248	140	11	19		x		NA	Absent	Absent	Absent
2012	248.4	141.75	96.6	248	140	8	19	x			NA	Absent	Absent	Absent
2012	248.64	141.23	96.57	248	140	12	19		x		NA	Absent	Absent	Absent
2012	248.53	141.82	96.6	248	140	10	19	x			NA	Absent	Absent	Absent
2012	248.77	141.94	96.59	248	140	14	19	x			NA	Absent	Absent	Absent
2012	248.41	141.66	96.59	248	140	7	19		x		NA	Absent	Absent	Absent
2012	248.05	141.42	96.59	248	140	3	19	x			NA	Absent	Absent	Absent
2012	248.31	141.48	96.6	248	140	5	19	x			NA	Absent	Absent	Absent
2012	248.53	141.19	96.57	248	140	9	19	x			NA	Absent	Absent	Absent
2012	248.92	141.2	96.59	248	140	1	19		x		Complete	Absent	Absent	present
2012	248.09	141.17	96.58	248	140	2	19		x		Complete	Absent	Absent	Absent
2012	248.38	141.17	96.56	248	140	6	19		x		NA	Absent	Absent	Absent
2012	248.7	141.36	96.56	248	140	13	19		x		NA	Absent	Absent	Absent
2012	248.31	141.77	96.52	248	140	2	20		x		NA	Absent	Absent	Absent
2012	248.77	141.52	96.52	248	140	12	20		x		Distal	Absent	Absent	Absent
2012	248.89	141.12	96.54	248	140	16	20	x			NA	Absent	Absent	Absent
2012	248.9	141.07	96.54	248	140	17	20	x			NA	Absent	Absent	Absent
2012	248.09	141.53	96.54	248	140	1	20		x		proximal	Absent	Absent	Absent
2012	248.37	141.18	96.53	248	140	5	20	x			NA	Absent	Absent	Absent
2012	248.57	141.4	96.54	248	140	9	20		x		NA	Absent	Absent	Absent
2012	248.73	141.31	96.52	248	140	10	20		x		proximal	x	x	Absent
2012	248.79	141.38	96.53	248	140	11	20	x			NA	Absent	Absent	Absent
2012	248.96	141.13	96.53	248	140	20	20	x			NA	Absent	Absent	Absent
2012	248.92	141.04	96.53	248	140	21	20		x		NA	Absent	Absent	Absent
2012	248.9	141.83	96.5	248	140	14	20		x		NA	Absent	Absent	Absent
2012	248.9	141.17	96.51	248	140	15	20		x		NA	Absent	Absent	Absent
2012	248.55	141.12	96.51	248	140	6	20	x			NA	Absent	Absent	Absent
2012	248.17	141.96	96.49	248	140	19	20	x			NA	Absent	Absent	Absent
2012	248.6	141.15	96.51	248	140	7	20	x			NA	Absent	Absent	Absent
2012	248.3	141.99	96.53	248	140	3	20	x			NA	Absent	Absent	Absent
2012	248.88	141.82	96.52	248	140	13	20	x			NA	Absent	Absent	Absent
2012	248.41	141.92	96.51	248	140	4	20		x		NA	Absent	Absent	Absent
2012	248.67	141.15	96.5	248	140	8	20	x			NA	Absent	Absent	Absent
2012	248.89	141.05	96.53	248	140	18	20	x			NA	Absent	Absent	Absent
2012	248.44	141.16	96.44	248	140	8	21		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2012	248.31	141.74	96.46	248	140	4	21			x	NA	Absent	Absent	Absent
2012	248.55	141.45	96.43	248	140	17	21		x		NA	Absent	Absent	Absent
2012	248.14	141.97	96.45	248	140	2	21		x		NA	Absent	Absent	Absent
2012	248.95	141.09	96.47	248	140	15	21		x		NA	Absent	Absent	Absent
2012	248.53	141.79	96.49	248	140	7	21	x			NA	Absent	Absent	Absent
2012	248.55	141.28	96.49	248	140	10	21	x			NA	Absent	Absent	Absent
2012	248.22	141.99	96.45	248	140	3	21		x		proximal	Absent	Absent	Absent
2012	248.68	141.03	96.5	248	140	12	21		x		Complete	Absent	Absent	Absent
2012	248.49	141.82	96.45	248	140	6	21	x			NA	Absent	Absent	Absent
2012	248.58	141.28	96.49	248	140	9	21	x			NA	Absent	Absent	Absent
2012	248.75	141	96.49	248	140	13	21	x			NA	Absent	Absent	Absent
2012	248.7	141.66	96	248	140	16	21		x		NA	Absent	Absent	Absent
2012	248.89	141.1	96.44	248	140	14	21		x		proximal	Absent	Absent	Absent
2012	248.65	141.1	96.46	248	140	18	21		x		NA	Absent	Absent	Absent
2012	248.05	141.83	96.45	248	140	1	21	x			NA	Absent	Absent	Absent
2012	248.58	141.07	96.49	248	140	11	21	x			NA	Absent	Absent	Absent
2012	248.4	141.85	96.45	248	140	5	21		x		proximal	possible	Absent	Absent
2012	248.14	141.29	96.51	248	140	7	21F117		x		Medial	Absent	Absent	Absent
2012	248.27	141.39	96.58	248	140	3	21F117	x			NA	Absent	Absent	Absent
2012	248.22	141.34	96.48	248	140	8	21F117		x		NA	Absent	Absent	Absent
2012	248.26	141.44	96.58	248	140	2	21F117	x			NA	Absent	Absent	Absent
2012	248.2	141.33	96.51	248	140	4	21F117	x			NA	Absent	Absent	Absent
2012	248.27	141.86	96.55	248	140	6	21F117	x			NA	Absent	Absent	Absent
2012				248	140	1	21F117							
2012	248.2	141.26	96.62	248	140	5	21F117	x			NA	Absent	Absent	Absent
2012	248.22	140.4	96.85	248	140	1	11	x			NA	Absent	Absent	Absent
2012	248.1	140.4	96.85	248	140	2	11		x		proximal	Absent	Absent	Absent
2012	248.27	140.38	96.81	248	140	11	12		x		NA	Absent	Absent	Absent
2012	248.24	140.93	96.83	248	140	2	12			x	NA	Absent	Absent	Absent
2012	248.34	140.79	96.82	248	140	3	12		x		NA	possible	Absent	Absent
2012	248.1	140.42	96.8	248	140	9	12		x		NA	Absent	Absent	Absent
2012	248.34	140.74	96.8	248	140	4	12			x	Medial	Absent	Absent	Absent
2012	248.16	140.16	96.82	248	140	12	12		x		NA	Absent	Absent	Absent
2012	248.51	140.76	96.8	248	140	6	12		x		NA	Absent	Absent	Absent
2012	248.49	140.1	96.81	248	140	15	12	x			NA	Absent	Absent	Absent
2012	248.37	140.19	96.8	248	140	14	12		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2012	248.06	140.42	96.8	248	140	8	12	x			NA	Absent	Absent	Absent
2012	248.04	140.89	96.84	248	140	1	12	x			NA	Absent	Absent	Absent
2012	248.15	140.11	96.83	248	140	13	12	x			NA	Absent	Absent	Absent
2012	248.48	140.77	96.81	248	140	5	12		x		NA	Absent	Absent	Absent
2012	248.12	140.4	96.8	248	140	10	12	x			NA	Absent	Absent	Absent
2012	248.57	140.71	96.8	248	140	7	12		x		NA	Absent	Absent	Absent
2012	248.19	140.93	96.75	248	140	1	13	x			NA	Absent	Absent	Absent
2012	248.91	140.79	96.75	248	140	2	13		x		NA	Absent	Absent	Absent
2012	248.47	140.55	96.77	248	140	4	13		x		Complete	Absent	Absent	Absent
2012	248.13	140.25	96.76	248	140	6	13		x		NA	Absent	Absent	Absent
2012	248.23	140.1	96.75	248	140	7	13	x			NA	Absent	Absent	Absent
2012	248.57	140.1	96.76	248	140	9	13		x		NA	x	Absent	Absent
2012	248.12	140.48	96.78	248	140	3	13		x		Distal	Absent	Absent	Absent
2012	248.94	140.31	96.8	248	140	10	13		x		NA	Absent	Absent	Absent
2012	248.59	140.16	96.78	248	140	8	13				NA	Absent	Absent	Absent
2012	248.52	140.5	96.78	248	140	5	13		x		NA	Absent	Absent	Absent
2012	248.61	140.88	96.72	248	140	2	14	x			NA	Absent	Absent	Absent
2012	248.15	140.73	96.71	248	140	3	14	x			NA	Absent	Absent	Absent
2012	248.24	140.68	96.71	248	140	4	14			x	NA	Absent	Absent	Absent
2012	248.63	140.71	96.71	248	140	5	14		x		proximal	Absent	Absent	Absent
2012	248.93	140.58	96.76	248	140	6	14		x		Complete	Absent	Absent	Absent
2012	248.94	140.55	96.75	248	140	7	14		x		NA	Absent	Absent	Absent
2012	248.78	140.51	96.73	248	140	8	14	x			NA	Absent	Absent	Absent
2012	248.22	140.23	96.7	248	140	11	14	x			NA	Absent	Absent	Absent
2012	248.42	140.29	96.73	248	140	12	14		x		NA	Absent	Absent	Absent
2012	248.17	140.22	96.71	248	140	14	14		x		NA	Absent	Absent	Absent
2012	248.15	140.28	96.73	248	140	10	14	x			NA	Absent	Absent	Absent
2012	248.45	140.2	96.7	248	140	13	14			x	Complete	Absent	Absent	Absent
2012	248.07	140.91	96.74	248	140	1	14	x			NA	Absent	Absent	Absent
2012	248.89	140.4	96.7	248	140	9	14			x	Complete	Absent	Absent	Absent
2012	248.83	140.86	96.7	248	140	4	15	x			NA	Absent	Absent	Absent
2012	248.93	140.9	96.7	248	140	6	15			x	NA	Absent	Absent	Absent
2012	248.3	140.7	96.65	248	140	8	15		x		NA	Absent	Absent	Absent
2012	248.4	140.59	96.65	248	140	9	15	x			NA	Absent	Absent	Absent
2012	248.1	140.41	96.65	248	140	12	15	x			NA	Absent	Absent	Absent
2012	248.28	140.14	96.66	248	140	16	15		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2012	248.75	140.3	96.66	248	140	13	15		x		Complete	Absent	Absent	Absent
2012	248.04	140.2	96.66	248	140	14	15		x		Complete	Absent	Absent	Absent
2012	248.37	140.94	96.68	248	140	2	15			x	NA	Absent	Absent	Absent
2012	248.02	140.76	96.69	248	140	7	15		x		Complete	Absent	Absent	Absent
2012	248.37	140.99	96.65	248	140	1	15		x		NA	x	x	x
2012	248.83	140.85	96.7	248	140	5	15	x			NA	Absent	Absent	Absent
2012	248.58?	140.8	96.67	248	140	3	15	x			NA	Absent	Absent	Absent
2012	248.28	140.22	96.68	248	140	15	15	x			NA	Absent	Absent	Absent
2012	248.2	140.46	96.17	248	140	11	15			x	proximal	Present	Absent	Absent
2012	248.06	140.5	96.68	248	140	10	15	x			NA	Absent	Absent	Absent
2012	248.87	140.54	96.6	248	140	7	16		x		NA	Absent	Absent	
2012	248.2	140.55	96.58	248	140	10	16	x			NA	Absent	Absent	Absent
2012	248.13	140.44	96.63	248	140	14	16	x			NA	Absent	Absent	Absent
2012	248.05	140.07	96.63	248	140	21	16	x			NA	Absent	Absent	Absent
2012	248.33	140.55	96.63	248	140	9	16	x			NA	Absent	Absent	Absent
2012	248.12	140.03	96.64	248	140	22	16	x			NA	Absent	Absent	Absent
2012	248.91	140.39	96.6	248	140	16	16	x			NA	Absent	Absent	Absent
2012	248.82	140.62	96.6	248	140	6	16	x			Complete	Absent	Absent	Absent
2012	248.12	140.2	96.62	248	140	20	16		x		NA	Absent	Absent	Absent
2012	248.67	140.85	96.61	248	140	4	16		x		Complete	Absent	Absent	Absent
2012	248	140.53	96.61	248	140	12	16		x		NA	Absent	Absent	Absent
2012	248.12	140.81	96.59	248	140	3	16	x			NA	Absent	Absent	Absent
2012	248.63	140.7	96.62	248	140	5	16		x		proximal	Absent	Absent	Absent
2012	248.48	140.57	96.6	248	140	8	16		x		NA	Absent	Absent	Absent
2012	248.12	140.95	96.61	248	140	2	16		x		NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2012	248.03	140.59	96.62	248	140	11	16		x		NA	Absent	Absent	Absent
2012	248.19	140.19	96.61	248	140	19	16		x		NA	Absent	Absent	Absent
2012	248.43	140.25	96.6	248	140	17	16		x		NA	Absent	Absent	Absent
2012	248.34	140.22	96.61	248	140	18	16		x		NA	Absent	Absent	Absent
2012	248.13	140.51	96.62	248	140	13	16	x			NA	Absent	Absent	Absent
2012	248.35	140	96.65	248	140	23	16			x	Complete	x	Absent	Absent
2012	248.18	140.32	96.6	248	140	15	16		x		proximal	Absent	Absent	Absent
2012	248.34	140.71?	96.6	248	140	1	16							
2012	248.47	140.75	96.55	248	140	13	17		X		NA	Absent	Absent	Absent
2012	248.11	140.58	96.56	248	140	8	17		x		NA	Absent	Absent	Absent
2012	248.41	140.06	96.55	248	140	36	17		x		NA	Absent	Absent	Absent
2012	248.77	140.67	96.55	248	140	17	17	x			NA	Absent	Absent	Absent
2012	248.31	140.12	96.57	248	140	37	17	x			NA	Absent	Absent	Absent
2012	248.49	140.3	96.57	248	140	29	17	x			NA	Absent	Absent	Absent
2012	248.72	140.45	96.55	248	140	31	17		x		NA	Absent	Absent	Absent
2012	248.8	140.52	96.55	248	140	32	17		x		NA	Absent	Absent	Absent
2012	248.83	140.39	96.55	248	140	33	17		x		NA	Absent	Absent	Absent
2012	248.88	140.47	96.55	248	140	34	17		x		NA	Absent	Absent	Absent
2012	248.87	140.2	96.56	248	140	35	17		x		NA	Absent	Absent	Absent
2012	248.51	140.71	96.59	248	140	12	17	x			NA	Absent	Absent	Absent
2012	248.76	140.81	96.56	248	140	2	17	x			NA	Absent	Absent	Absent
2012	248.01	140.49	96.55	248	140	21	17		x		Complete	x	Absent	Absent
2012	248.25	140.62	96.55	248	140	7	17	x			NA	x	Absent	Absent
2012	248.88	140.61	96.56	248	140	19	17	x			NA	Absent	Absent	Absent
2012	248.47	140.32	96.59	248	140	28	17	x			NA	Absent	Absent	Absent

Table A32-1 continued

Year	N	E	Depth	N	E	Art	Level	Cortical	Sec.	Tert.	Portion	TA	Crazing	Potlid
2012	248.91	140.63	96	248	140	20	17	x			NA	Absent	Absent	Absent
2012	248.56	140.57	96.55	248	140	16	17	x			NA	Absent	Absent	Absent
2012	248.8	140.44	96.56	248	140	23	17	x			NA	Absent	Absent	Absent
2012	248.6	140.44	96.55	248	140	22	17	x			NA	Absent	Absent	Absent
2012	248.81	140.64	96	248	140	18	17		x		NA	Absent	Absent	Absent
2012	248.11	140.4	96.59	248	140	24	17		x		Complete	Absent	Absent	Absent
2012	248.43	140.67	96.59	248	140	10	17		x		NA	x	Absent	Absent
2012	248.39	140.6	96.585	248	140	9	17		x		Complete	Absent	Absent	Absent
2012	248.62	140.3	96.55	248	140	30	17	x			NA	Absent	Absent	Absent
2012	248.22	140.29	96.55	248	140	26	17			x	NA	x	Absent	Absent
2012	248.68	140.92	96.595	248	140	1	17		x		proximal	Absent	Absent	Absent
2012	248.53	140.78	96.55	248	140	14	17	x			NA	x	Absent	Absent
2012	248.45	140.71	96.59	248	140	11	17		x		NA	x	x	x
2012	248.21	140.68	96.55	248	140	5	17		x		Complete	Absent	Absent	Absent
2012	248.33	140.3	96.59	248	140	27	17		x		NA	Absent	Absent	Absent
2012	248.24	140.69	96.56	248	140	4	17		x		NA	Absent	Absent	Absent
2012	248.22	140.47	96.55	248	140	25	17	x			NA	Absent	Absent	Absent
2012	248.18	140.79	96.585	248	140	3	17		x		NA	Absent	Absent	Absent
2012	248.12	139.99	96.55	248	140	38	17		x		NA	Absent	Absent	Absent
2012	248.24	140.65	96.56	248	140	6	17		x		Complete	Absent	Absent	Absent
2012	248.42	140.66	96.56	248	140	15	17	x			NA	Absent	Absent	Absent



Figure A32-1
Examples of thermally altered piece plotted items from the Pleistocene Terrace at the Topper Site. At left; Flake Fragment, At center; Amorphous Debris, At right; Amorphous Debris.





Figure A32-2
Examples of River stained chert (top) and upland chert (bottom) from the Topper Site (38AL23), Images courtesy of Albert C. Goodyear.

APPENDIX 33

METRIC, TECHNOLOGICAL AND CONDITIONAL ATTRIBUTES OF MAPPED ARTIFACTS AT THE TOPPER SITE (38AL23) BY STRATUM

2022

Table A33-1
Metric attributes for complete flakes

	Clovis	**Pleistocene Sands**	**Pleistocene Terrace**
Mean Length	46.17	56.70	25.95
Mean Width	26.44	41.67	17.35
Mean Thickness	11.39	19.46	7.51
Mean Weight	21.028	53.21	4.85

Table A33-2
Conditional attributes for complete flakes

	Clovis				**Pleistocene Sands**				**Pleistocene Terrace**			
Cortex	River	Upland			River	Upland			River	Upland		
	3	24			1	43			0	123		
Termination	Fe.	Hng.	Step		Fe.	Hng.	Step		Fe.	Hng.	Step	
	20	2	1		32	3	7		101	12	9	
Removal Scars	uni	bi	multi	Av.	uni	Bi	multi	Av.	uni	bi	multi	Av.
	10	0	16	8.7	14	4	26	8.09	69	7	29	
Thermal Alteration	TA	PL	CR		TA	PL	CR		TA	PL	CR	
	4	0	0		0	0	0		8	1	2	

*Fe=Feather; Hng=Hinge; uni=uni-directional; bi=bi-directional; multi= multi-directional; TA=Thermal alteration; PL=potlidding; CR=crazing

Table A33-3
Cortical attributes for complete flakes

	Clovis	**Pleistocene Sands**	**Terrace**	**Total**
Decortication	2 (7.4%)	0	18 (14.75%)	20
Secondary	11 (40.7%)	29 (65.9%)	63 (51.63%)	103
Interior/Tertiary	14 (51.85%)	15 (34.09%)	41 (33.60%)	70

Table A33-4
Conditional attributes for broken flakes

	Clovis				**Pleistocene Sands**				**Pleistocene Terrace**			
Cortex	River		Upland		River		Upland		River		Upland	
	3		8		0				0		116	
Termination	Fe.	Hng.	Step		Fe.	Hng.	Step		Fe.	Hng.	Step	
	1	1	17		11	0	15		13	2	45	
Removal Scars	uni	bi	multi	Av.	uni	Bi	multi	Av.	uni	bi	multi	Av.
	4	1	16	14.8	9	0	18	8.2	28	6	20	3.0
Thermal Alteration	TA	PL	CR		TA	PL	CR		TA	PL	CR	
	5	0	0		2	0	0		4	1	0	

*Fe=Feather; Hng=Hinge; uni=uni-directional; bi=bi-directional; multi= multi- directional; TA=Thermal alteration; PL= potlidding; CR=crazing.

Table A33-5
Termination types for Broken Flakes

	Clovis	**Pleistocene Sands**	**Pleistocene Terrace**
Step	18	15	48
Hinge	2	0	1
Feather	1	10	13

Table A33-6
Cortical Attributes for Broken Flakes

	Clovis	**Pleistocene Sands**	**Pleistocene Terrace**
Decortication	0 (0%)	1(20%)	4(80%)
Secondary	5(10%)	13(26%)	32 (64%)
Interior	16	14	26

Table A33-7
Conditional attributes for flake fragments

	Clovis				**Pleistocene Sands**				**Pleistocene Terrace**			
Cortex	River	Upland			River	Upland			River	Upland		
	6	71			1	102			0	344		
Termination	Fe.	Hng.	Step		Fe.	Hng.	Step		Fe.	Hng.	Step	
	27	0	33		62	1	40		70	3	51	
Removal Scars	uni	bi	multi	Avg.	uni	bi	multi	Avg.	uni	bi	multi	Av.
	10	1	63	15.4	11	3	89	8.5	49	11	68	3.9
Thermal Alteration	TA	PL	CR		TA	PL	CR		TA	PL	CR	
	10	0	2		5	1	0		8	6	1	

*Fe=Feather; Hng=Hinge; uni=uni-directional; bi=bi-directional; multi= multi- directional; TA=Thermal alteration; PL=potlidding; CR=crazing

Table A33-8
Cortical attributes for flake fragments

	Clovis	**Pleistocene Sands**	**Pleistocene Terrace**
Decortication	1(1.2%)	2 (1.9%)	18 (10.97%)
Secondary	41(53.24%)	65 (63.10%)	83 (50.60%)
Interior	32 (41.55%)	36 (34.95%)	41(25%)
NA	3	0	22

Table A33-9
Conditional attributes for Debris

	Clovis				**Pleistocene Sands**				**Pleistocene Terrace**			
Cortex	River	Upland			River	Upland			River	Upland		
	1	16			0	166			0	546		
Termination	Fe.	Hng.	Step		Fe.	Hng.	Step		Fe.	Hng.	Step	
	4	1	12		32	3	76		162	5	175	
Removal Scars	uni	bi	multi	Avg.	uni	bi	multi	Avg.	uni	bi	multi	Avg.
	2	1	14	10.3	21	5	140	9.8	138	29	345	4.14
Thermal Alteration	TA	PL	CR		TA	PL	CR		TA	PL	CR	
	3	0	0		8	6	1		50	15	20	

*Fe=Feather; Hng=Hinge; uni=uni-directional; bi=bi-directional; multi= multi- directional; TA=Thermal alteration; PL=potlidding; CR=crazing

Table A33-10
Cortical attributes for Debris

	Clovis	**Pleistocene Sands**	**Pleistocene Terrace**
Decortication	1(5.8)	3 (1.8)	38 (7.02)
Secondary	7 (41.1)	132 (79.5)	382 (70.60)
Interior	9 (52.9)	31 (18.6)	121 (22.3)

Table A33-11
Conditional attributes for amorphous debris

	Clovis				**Pleistocene Sands**				**Pleistocene Terrace**			
Cortex	River		Upland		River		Upland		River		Upland	
	1		29		0		0					
Termination	Fe.	Hng.	Step		Fe.	Hng.	Step		Fe.	Hng.	Step	
	0	0	30		16	0	105					
Removal Scars	uni	bi	multi	3.7	uni	bi	multi	3.4	uni	bi	multi	2.4
	5	3	22		65	22	134					
Thermal Alteration	TA	PL	CR		TA	PL	CR		TA	PL	CR	
	2	0	0		2	1	1					

*Fe=Feather; Hng=Hinge; uni=uni-directional; bi=bi-directional; multi= multi-directional; TA=Thermal alteration; PL=potlidding; CR=crazing

Table A33-12
Cortical attributes for amorphous debris

	Clovis	**Pleistocene Sands**	**Pleistocene Terrace**
Decortication	3	16	147
Secondary	20	184	1064
Interior	7	21	121

Table A33-13
Conditional attributes for pebbles

	Clovis			**Pleistocene Sands**			**Alluvial Terrace**		
Cortex	River		Upland	River		Upland	River		Upland
	0		23	0		224	0		1060
Termination	Fe.	Hng.	Step	Fe.	Hng.	Step	Fe.	Hng.	Step
	0	0	2	0	0	0	0	0	0
Removal Scars	uni	bi	multi	uni	bi	multi	uni	bi	multi
	0	1	0	6	0	0	0	0	0
Thermal Alteration	TA	PL	CR	TA	PL	CR	TA	PL	CR
	0	0	0	0	0	0	2	0	0

*Fe=Feather; Hng=Hinge; uni=uni-directional; bi=bi-directional; multi= multi-directional; TA=Thermal alteration; PL=potlidding; CR=crazing

Table A33-14.
Cortical attributes for pebbles

	Clovis	**Pleistocene Sands**	**Pleistocene Terrace**
Decortication	20	214	937
Secondary	2	9	106
Interior	1	1	6

APPENDIX 34

RESULTS OF FLAKE FORMATION ANALYSIS

2029

Table A34-1
Results of flake formation analysis

	Clovis	**Pleistocene Sands**	**Pleistocene Terrace**
Total Items Mapped	**391**	**923**	**3396**
Conchoidal Flakes	109 (27.87%)	155 (16.79%)	304 (8.95%)
Bend Fracture Flakes	8 (2.04%)	45 (4.87%)	234 (6.89%)
Number of Piece plotted items by Type per 5cm level (meter^2)			
Total Items Mapped	**6.74**	**2.96**	**9.98**
Conchoidal Flakes	1.87	.498	.88
Bend Fracture Flakes	.13	.144	.680

Table A34-2
Conchoidal flake morphology with results of a One Way Analysis of Variance (ANOVA)

	Clovis	**PS**	**PT**	***df***	***F***	***P-value***	***F crit***	
Length	45.58	54.95	26.51	2	44.63177	1.14E-18	3.012351	Significant
Width	26.32	40.42	17.87	2	43.58776	2.8E-18	3.012351	Significant
Thickness	10.80	20.17	7.84	2	24.69783	5.43E-11	3.012351	Significant
Weight	20.21	96.63	5.46	2	23.04238	2.6E-10	3.013192	Significant

**df*= degrees of freedom; PS = Pleistocene Sands; PT = Pleistocene Terrace

Table A34-3A
Bend break morphology with results of a One Way Analysis of Variance (ANOVA)

	Clovis	**Pleistocene Sands**	**Pleistocene Terrace**	**df**	***F***	***P-value***	***F crit***	
Length	23.1	26.38	25.01	2	0.440431	0.644497	3.029	Not Significant
Width	16.53	19.97	19.06	2	0.604311	0.547188	3.029	Not Significant
Thickness	6.55	13.09	8.79	2	3.54471	.030	3.029	Significant
Weight	2.3	5.8	5.66		.5196116	.59538	3.031	Not Significant

**df*= degrees of freedom.

Table A34-3B
Results of a T-test comparing blade length for Clovis and Pleistocene Sands bend breaks at the Topper Site.

	Clovis	**Pleistocene Sands**	**Degrees of freedom**	**T-Values**	**P-value**
Length	23.1	26.38	2	.658507	.513359
Removal scars	2. 57	4.26		1.038201	.304074

Table A34-4

Conditional and technological attributes of Clovis bend breaks and conchoidal flakes.

	Clovis Bend Breaks	**Clovis Conchoidal Flakes**
Cortex		
Primary	1 (12.5)	3 (2.75)
Secondary	4 (50)	51 (46.78)
Tertiary	3 (37.5)	55 (50.45)
Total	8	109
µ Removal Scars	2. 57	14.67
µ Total Detachment Scars	4	17.15
Multi directional scars	6 (75)	85(77.98)
Bi-directional scars	1 (12.5)	2 (1.8)
Uni-directional scars	1 (12.5)	22 (20.18)
Thermal Alteration	0	18 (16.50)
Crazing	0	0
Pot-lidding	0	2 (1.8)
Termination		
Step	8	45 (41.28)
Hinge	0	3 (2.75)
Feather	0	61 (55.96)
Modification	2 (25)	22 (20.18)

* Percentages provided in parentheses

Table A34-5
Distribution of artifacts associated with potential bend break manufacture at the Topper Site (38AL23).

	Clovis	**Pleistocene Sands**	**Pleistocene Terrace**
Bend Breaks	8 (2.04%)	45 (4.87%)	234 (6.89%)
Anvil Stones	0	9 (.971%)	5 (.147%)
Broken Quartz Pebbles	10 (2.55%)	52 (5.63%)	431 (12.69%)
Chert Pebbles	23 (5.88%)	224 (24.26%)	1060
Hammer stones	8 (2.04%)	22 (2.38%)	5 (.147%)
Artifacts Associated with Bend Break Manufacture per 5cm level (meter^2)			
Bend Breaks	.137	.144	.688
Anvil Stones	0	.028	.014
Broken Quartz Pebbles	.172	.167	1.25
Chert Pebbles	.396	.720	3.08
Hammer stones	.137	.070	.014

Table A34-6
Average morphological attributes of anvil stones

	Clovis	**Pleistocene Sands**	**Pleistocene Terrace**
Length	0	151.86	155.85
Width	0	104.47	126.8
Thickness	0	68.57	98.55
Weight	0	398.86	7000
Removal Scars	0	3.8	1.6

Table A34-7
Morphological attributes of broken quartz pebbles

	Clovis (10)	**Pleistocene Sands (52)**	**Pleistocene Terrace (436)**
Length	34.63	39.63	28.66
Width	28.95	28.05	21.02
Thickness	19.97	20.31	14.92
Weight	26.94	36.78	15.39
Removal Scars	1.28	1.44	1.41

Table A34-8
Morphological attributes of quartz hammerstones

	Clovis	**Pleistocene Sands**	**Pleistocene Terrace**
Complete	64 (58.71%%)	39 (25.16%)	98 (32.34%)
Proximal	13 (11.92%)	12 (7.74%)	51 (16..83%)
Medial	13 (11.92%)	26 (16.77%)	32 (10.56%)
Distal	09 (8.25%)	32 (20.64%)	73 (24.09%)
NA	10 (9.17%)	45 (29.03%)	49 (16.17%)
Riverstaining	11 (10.09%)	0 (0%)	0 (0%)

Table A34-9
Conchoidal flake condition by stratigraphic profile.

	Clovis	**Pleistocene Sands**	**Pleistocene Terrace**
Length	53.395	46.57	33.2
Width	38.82	33.18	29.5
Thickness	27.14	23.79	25.8
Weight	88.12	49.66	27
Removal Scars	1.75	1.59	1

Table A34-10

Conditional and technological attributes of Pleistocene Sands bend breaks and conchoidal flakes.

	Pleistocene Sands Bend Breaks	**Pleistocene Sands Conchoidal Flakes**
Cortex		
Primary	5 (11.1)	3 (1.92)
Secondary	23 (51.11)	94 (60.25)
Tertiary	17 (37.7)	59 (38.46)
Total		
Removal Scars	4.26	8.61
Detachment Scars	5.97	9.89
Multi directional scars	34 (75.55)	113 (72.43)
Bi-directional scars	0	5 (3.20)
Uni-directional scars	11 (24.44)	38 (24.35)
Thermal Alteration	0	7 (4.48)
Crazing	0	1 (.64)
Pot-lidding	0	1 (.64)
Termination		
Step	44 (97.77)	80 (51.61)
Hinge	0	3 (1.93)
Feather	1 (2.22)	72 (46.4)
Modification	17 (37.7)	79 (50.96)

* Percentages provided in parentheses

Table A34-11
Piece plotted modified bend breaks by stratigraphic unit

	Modified Bend Breaks	**Percentage of total Bend Breaks**	**Modified Bend Breaks per 5cm level**
Clovis	2	25	.0344
Pleistocene Sands	17	37.7	.0546
Pleistocene Terrace	104	40.17	.273

Table A34-12 Attributes of Clovis
modified bend breaks and unmodified bend breaks

	Modified	**Unmodified**	**T Value**	**P Value**	**Result <.05**
µWeight	2.4	2.28	0.078012	0.940355	Not significant
µLength	25.58	22.69	0.413147	0.693858	Not significant
µWidth	16.39	16.56	0.047309	0.963802	Not significant
µThickness	7.47	6.52	0.558627	0.596632	Not significant
µBreak Angles	2.5	3.33	1.846372	0.114364.	Not significant
µRemoval Scars	5.5	2.6	2.486549	0.047383	Significant
% multi-dir. Scars	100	33.3			
% Formless Debris	0	66.6			

Table A34-13
Attributes for Pleistocene Sands
modified bend breaks versus unmodified bend breaks

	Modified	**Unmodified**	**T Value**	**P Value**	**Result <.05**
µWeight	9.8	3.65	2.155	0.037236	Significant
µLength	32.4	22.8	2.715775	0.009635	Significant
µWidth	25.96	16.42	3.474353	0.001223	Significant
µThickness	21.43	8.6	2.065328	0.045253.	Significant
µBreak Angles	3.12	2.73	1.433795	0.159402	Not significant
µRemoval Scars	6.12	3.24	2.578502	0.01343	Significant
% multi-dir. Scars	100	72.42			
% Formless Debris	17.64	48.27			

Table A34-14
Attributes for all Pleistocene Terrace
modified bend breaks versus unmodified bend breaks

	Modified	**Unmodified**	**T Value**	**P Value**	**Result <.05**
µWeight	7.57	4.35	1.769687	0.078252	*not* significant
µLength	27.82	23.06	2.619907	0.009405	significant
µWidth	21.08	17.67	2.137759	0.033634	significant
µThickness	10.14	7.86	2.466378	0.014413	significant
µBreak Angles	3.07	3.06	0.004983	0.996029	*not* significant
µRemoval Scars	3.02	3.83	1.490867	0.137355.	*not* significant
% multi-dir. Scars	64.89	66.4			
% Formless Debris	38.29	70			

Table A34-15
Conditional and technological attributes of Pleistocene Terrace bend breaks and conchoidal flakes.

	Pleistocene Terrace Bend Breaks	**Pleistocene Terrace Conchoidal Flakes**
Cortex		
Primary	34 (14.52)	37 (12.17)
Secondary	137 (58.54)	166 (54.6)
Tertiary	62(26.49)	101
Total		**304**
Removal Scars	2.82	3.16
Detachment Scars	3.98	4.31
Multi directional scars	178 (76.06)	147 (48.35)
Bi-directional scars	9 (3.84)	22(7.23)
Uni-directional scars	47 (20.08)	135 (44.40)
Thermal Alteration	2 (.854)	13 (4.27)
Crazing	2 (.854)	9 (2.96)
Pot-lidding	0	6
Termination		
Step	219 (93.58)	126 (41.47)
Hinge	1 (.427)	15 (4.93)
Feather	14 (5.98)	163 (53.61)
Modification	52 (22.31)	49 (16.11)

* Percentages provided in parentheses

Table A34-16
Morphological attributes of conchoidal flakes and modified conchoidal flakes from the Pleistocene Terrace

Unmodified Conchoidal Flakes					
	U.Terrace	L.Terrace	t value	P Value	Significance
Length (mm)	26.05	26.67	0.009995	0.992034	*not* significant at $p < 0.05$
Width (mm)	18.11	17.7	0.447368	0.655005	*not* significant at $p < 0.05$
Thickness (mm)	7.63	7.99	0.65136	0.515424	*not* significant at $p < 0.05$
Weight (g)	6.08	5.09	0.739003	0.460656	*not* significant at $p < 0.05$
Exterior Scars	3.38	2.15	3.900886	0.000123	significant at $p < 0.05$.
Percent cortical	7.6%	18.18%			
Modified Conchoidal Flakes					
	U.Terrace	L.Terrace	T Value	P Value	Significance
Length (mm)	46.68	34.85	2.237442	0.030754	significant at $p < 0.05$
Width (mm)	33.66	25.19	1.559415	0.126585	not significant at $p < 0.05$.
Thickness (mm)	22.64	11.35	3.123111	0.003278	significant at $p < 0.05$
Weight (g)	35.34	12.14	2.111879	0.040991	significant at $p < 0.05$
Exterior Removal Scars	6.53	3.57	3.362885	0.000781	significant at $p < 0.05$.
Retouch Scars	6	3.34			
Percent cortical	0%	10%			

Table A34-17
Attributes for Pleistocene Terrace bend breaks by subunit

	97.25-96.50M (43.2%)		**96.50-95.25M (56.8%)**	
	Modified	**Unmodified**	**Modified**	**Unmodified**
Weight (g)	4.81	3.25	8.72	5.29
Length (mm)	24.57	22.65	29.51	23.47
Width (mm)	19.22	17.00	22.04	18.32
Thickness (mm)	8.45	7.26	10.98	8.45
Break Angles (n)	3.22	3.09	3	3
Removal Scars (n)	2.78	2.25	3.14	3.14
% multi-dir. Scars (n)	62.5	57.74	66.12	75.36
%Cortical Bend Breaks (n)	12.50	11.2	19.35	14.49
%Interior Bend Breaks (n)	28.12	22.53	24.19	31.28
Modified Bend Breaks	32	*	62	*
%Modified	31.68	*	47.69	*
Segments of modification (n)	2.25	*	2.5	*
Retouch scars (n)	2.33	*	2.5	*
%Bi marginal retouch	0	*	4.58	*
% Formless Debris	40.62	69.01%	40.32	71.01

Table A34-18
Flake Formation Analysis: Flake Attributes

Yr	North	East	Depth	Class	Portion	Wt.	L	W	T
2002	242.63	141.88	98.85	Flake Fragment	Distal	15.6	23.06	51.05	12.5
2002	244.87	142.1	98.73	Broken Flake	NA	39.9	57.11	37.7	22.8
2002	244.87	142.1	98.73	Flake	NA	40	56.92	36.41	22.8
2005	247.6	140.26	98.71	Broken Flake	NA	20.6	66.5	31.5	11.2
2005	247.58	143.98	98.42	Broken Flake	Proximal	99.5	76.71	58.42	14.9
2002	246.85	143.9	98.42	Flake Fragment	NA	133.1	89	57.6	33.4
2005	247.66	143.18	98.41	Flake	Complete	24.9	68.78	37.97	12.9
2002		141.6	98.405	Broken Flake	Distal	13.6	59.21	25.25	8.57
2002	242.92	140.66	98.365	Broken Flake	Distal	18	62.2	25	9.2
2002	244.75	140.04	98.36	Broken Flake	NA	36.4	54.9	37.4	14.4
2001	240.45	130.56	98.34	Broken Flake	NA	19.6	62.6	32.1	10.3
2002	244.83	138.76	98.33	Flake	Complete	8.6	43	24.3	8.7
1999	243.78	133.97	98.32	Flake Fragment	NA	97.1	93.2	43.1	23.7
1999	243.76	133.93	98.32	Flake Fragment	NA	124.6	99.8	54.3	23.6
1999	243.72	133.89	98.32	Flake Fragment	NA	75.3	85.4	54.1	14.5
1999	243.68	133.85	98.32	Flake Fragment	Complete	87.6	88.1	47	26.4
1999	243.69	133.95	98.32	Flake Fragment	Complete	128	102.3	52	24.5
1999	243.76	133.89	98.315	Flake Fragment	NA	53.2	76.2	45.1	15.2
1999	243.78	133.93	98.315	Flake Fragment	Complete	66.3	78.7	46.1	19.1
2002	245.01	143.8	98.315	Flake Fragment	NA	22	41.95	38.77	14.4
1999	243.8	133.91	98.31	Flake Fragment	NA	35.5	68.8	29.6	14.6
2005	247.19	142.35	98.31	Flake	Complete	1.5	32.31	9.3	5.07
1999	243.588	133.52	98.29	Flake Fragment	NA	91.7	76.9	41.6	26.8
2005	247.68	143.63	98.27	Flake Fragment	NA	112.8	74.14	40.81	40.9
2005	247.72	143.16	98.27	Flake Fragment	NA	23.2	53.54	34.93	15.6
2002	246.8	139.65	98.265	Broken Flake	Proximal	11.7	41.81	26.33	10.1
1999	242.075	133.43	98.255	Flake Fragment	Medial	11.4	49.8	25.8	6.8
2001	240.3	132.76	98.25	Broken Flake	NA	71.8	69.22	49.02	21.7
2005	247.83	143.98	98.25	Flake Fragment	Medial	93.5	63.18	54.89	22.0
2005	247.63	143.3	98.25	Flake Fragment	NA	118.9	60.88	59.39	38.5
2002	246.55	142.27	98.24	Flake Fragment	NA	11.8	41.31	25.82	9.45
2002	244.7	143.05	98.235	Flake	Complete	8.2	65.7	12.7	9.4
2005	247.63	143.86	98.23	Flake	Complete	0.5	20.7	5.8	5.2
2005	247.12	142.11	98.23	Flake Fragment	Distal	0.6	17.91	13.2	2.9
1999	243.62	134	98.22	Flake Fragment	Complete	72.6	67.2	46.7	26.5
2002	246.93	142.94	98.22	Flake Fragment	Medial	76.7	64.71	69.35	21.4
2002	246.97	143.26	98.22	Flake Fragment	NA	19.4	44.82	36.02	15.3
2002	246.9	142.78	98.205	Flake Fragment	NA	73.6	68.5	48.6	25.7
2002	246.14	142	98.2	Flake Fragment	NA	348.7	94.31	105.99	73.2
2002	246.91	142.3	98.2	Flake Fragment	NA	72.8	87.25	40.66	30.2
2002	243.39	139.02	98.19	Flake	Complete	20.4	62.33	25.42	11.1
2002	246.7	142.35	98.19	Flake Fragment	NA	55.2	62.9	47.9	17.7
2005	247.38	142.74	98.19	Flake Fragment	Proximal	3.8	31.24	22.47	5.74
2002	244.54	140.24	98.185	Flake	Complete	4	42.71	26.6	4.59
2002	244.6	140.16	98.185	Flake	Complete	2.6	24.41	21.43	7.24
2002	245.63	140.27	98.175	Flake Fragment	Distal	8	39.82	28.27	11.7

Table A34-18 continued

Yr	North	East	Depth	Class	Portion	Wt.	L	W	T
									9
2002	244.74	143.8	98.175	Flake Fragment	NA	35.9	60.4	41.2	13.3
2002	244	138	98.17	Flake Fragment	NA	604.6	111.6	91.48	42.9
2002	246.7	142.25	98.17	Flake Fragment	NA	414.9	108	79.1	65.7
2005	247.91	142.83	98.17	Flake Fragment	Distal	44	63.8	38.4	26.9
2002	244.66	142.25	98.15	Flake Fragment	NA	5.8	58.9	18.1	5.6
2002	245.81	141.12	98.14	Flake Fragment	Medial	28.9	51.9	45.9	17.9
2002	244.78	141.78	98.135	Flake Fragment	NA	34.4	75	44.9	10.5
2002	242	141.75	98.13	Flake Fragment	Proximal	10.3	33.2	37.67	10.6
2005	247.36	142.4	98.13	Broken Flake	Proximal	1.9	16.2	22.8	5.3
2002	246.3	139.6	98.13	Flake Fragment	NA	14.6	47.12	28.18	13.1
2005	247.77	140.82	98.13	Flake Fragment	NA	41.1	52.13	37.21	27.9
2002	243.1	140.31	98.125	Flake	Complete	93.7	79.69	48.13	24.2
2002	242.75	141.97	98.115	Flake Fragment	Medial	25.5	54.3	29.84	20.8
2005	247.89	140.93	98.1	Flake Fragment	NA	17.3	49.82	22.19	19.7
2005	247.3	140.32	98.09	Flake Fragment	NA	69.5	54.7	48.6	19.6
2005	247.96	143.15	98.09	Flake Fragment	NA				
2002	244.24	140.22	98.085	Flake Fragment	NA	43.4	41.5	53.6	15.7
2002	245.38	138.18	98.08	Flake Fragment	Distal	75.8	73.45	50.97	25.9
2005	247.49	141.69	98.08	Flake Fragment	NA	0.4	25.9	1.9	4
2005	247.96	140.43	98.06	Broken Flake	Proximal	1.4	32	13.8	4
2002	246.18	138.9	98.06	Flake Fragment	NA	252.8	90.29	80.36	39.8
2002	244.35	143.77	98.025	Flake	Complete	22.6	64.5	31	9.4
2002	242.96	138.97	98.01	Flake Fragment	NA	10.7	37.97	29.81	14.2
2002	243.26	138.57	98.01	Flake Fragment	NA	21.5	42.36	39.31	22.7
2002	244.03	139.61	98.01	Broken Flake	Proximal	109.8	89.61	57.05	24.7
2002	245.24	138.61	98.01	Flake Fragment	Distal	3.6	26.97	27.12	6.55
2002	246.8	138.78	98.01	Flake Fragment	NA	17.8	40.72	37.89	11.0
2002	243.88	140.37	98.005	Flake Fragment	NA	100.4	70.24	45.75	35.6
2002	245.67	138.91	97.995	Flake Fragment	Medial	1.2	27.79	141.2	2.51
2005	247.95	140.25	97.99	Flake	Complete	0.5	27.06	9.98	2.95
2002	243.55	140.58	97.98	Flake Fragment	NA	30.9	53.23	34.51	16.8
2005	247.06	142.1	97.95	Flake	Complete	18.7	41.21	36.88	21.6
2005	246.64	143.05	97.95	Flake	Complete	0.2	12.69	10.74	2.47
2005	247.49	142.66	97.95	Flake Fragment	Medial	6.2	36.42	23.07	12.8
2005	246.21	143.39	97.95	Flake Fragment	Medial	2.1	27.62	14.38	7.8
2002	245.8	138.43	97.94	Flake Fragment	NA	20.5	72.21	29.1	96.5
2005	247.07	142.86	97.93	Flake	Complete	0.1	8.3	3.9	0.8
2005	247.64	142.78	97.93	Flake Fragment	Proximal	1	20.48	12.6	3.88
2002	245.94	138.44	97.925	Flake Fragment	Proximal	31.2	50.45	45.34	12.6
2005	246.21	143.26	97.92	Flake Fragment	Distal	0.1	8.8	5.5	2.2
2002	243.71	142.21	97.915	Flake	Complete	63.3	57.1	61.5	16.9
2005	246.48	142.66	97.9	Broken Flake	Proximal				
2005	246.69	141.73	97.89	Broken Flake	Proximal	6.3	32.4	32	6.1
2005	246.5	141.76	97.89	Broken Flake	Proximal	3.3	25	28.9	3.8
2005	246.85	141.56	97.88	Broken Flake	Proximal	1.6	22.1	20.9	3

Table A34-18 continued

Yr	North	East	Depth	Class	Portion	Wt.	L	W	T
2005	246.73	142.89	97.88	Flake Fragment	NA				
2005	247.06	142.19	97.88	Flake Fragment	NA				
2005	246.84	141.67	97.87	Flake	Complete	40.4	62.9	34.2	19.5
2005	246.46	141.25	97.87	Flake	Complete	68.7	68.8	55.3	17.8
2005	246.84	142.12	97.86	Flake Fragment	Medial				
2005	247.6	140.3	97.85	Flake Fragment	NA				
2005	246.62	141.53	97.84	Flake	Complete	10.2	61.49	23.28	11.3
2005	246.28	141.4	97.83	Broken Flake	NA	36	62.6	34.4	23.5
2005	246.8	141.42	97.81	Flake	Complete	9.9	39.8	33.2	9.9
2005	246.37	141.46	97.8	Flake	Complete	2.2	23.4	15.1	5.4
2005	246.28	141.46	97.8	Flake	Complete	3.5	39	15.9	8.1
2002	245.78	138.2	97.765	Flake Fragment	NA	26.8	55.8	37.76	13.4
2005	246.5	141.2	97.75	Flake Fragment	Medial				
2005	246.76	141.93	97.75	Flake Fragment	NA	2.1	18.7	17	5.9
2005	246.25	141.4	97.75	Flake Fragment	Medial	2	24.54	13.95	9.9
2002	243	143.39	97.73	Flake Fragment	Distal	32.1	66.36	40.56	18.1
2005	246.33	141.4	97.73	Broken Flake	Distal	10.8	40.9	35.33	11.6
2005	246.76	141.43	97.73	Flake	Complete	10	41.15	33.86	11.3
2005	246.7	141.3	97.73	Flake Fragment	Medial	17.6	59.75	25.23	14.4
2005	246.64	141.25	97.73	Flake Fragment	Medial	6	30.28	29.95	10.5
2002	243.65	143.06	97.72	Flake	Complete	17	52	49	7.7
2002	246	138.42	97.72	Flake	Complete	2.1	37.43	12.29	5.17
2002	244.46	143.85	97.705	Flake Fragment	Distal	20.1	44.09	31.29	18.8
2002	243.63	140.23	97.7	Flake Fragment	NA	20.1	47	27.3	16.7
2005	246.36	141.54	97.69	Broken Flake	NA	5.4	38.9	28.7	6.2
1999	242.94	130.85	97.677	Flake Fragment	NA	21.2	52.2	27.9	16.4
2002	243.77	140.79	97.67	Flake Fragment	Proximal	1.4	19.79	15.07	7.76
2002	245.58	143.39	97.65	Flake Fragment	Medial	13.6	41.5	21.3	17.4
2009	246.54	138.86	97.65	Flake	Complete	2.3	30.6	20.8	3.8
2005	246.68	141.92	97.65	Flake Fragment	NA	27.1	38.7	38.6	21.9
1999	243.01	130.95	97.63	Flake	Complete	77.7	67.4	59.6	20.5
2005	247.2	140.65	97.62	Flake	Complete	2.9	36.5	17.7	4.5
2002	243.97	138.64	97.605	Flake Fragment	Distal	1.8	21.8	21.73	6.49
2002	243.53	140.09	97.6	Broken Flake	NA	191	7.6	5.9	5.8
2002	245.43	138.23	97.6	Broken Flake	Distal	4.4	40	18.5	7.2
2002	245.61	138.12	97.58	Flake	Complete	6.1	32.9	26.6	9.2
2002	245.47	142.33	97.57	Flake Fragment	NA	3.4	27.6	18.94	9.38
2009	246.4	138.7	97.56	Flake Fragment	Distal	0.1	13.7	5.9	0.2
2002	243.27	145.09	97.55	Flake Fragment	Medial	19.1	41.51	29.84	17.9
2005	246.24	140.03	97.55	Flake Fragment	Distal	8.8	37	29.1	15.4
2005	246.57	142.69	97.55	Flake Fragment	NA	31.1	43.65	27.45	23.2
2009	246.7	138.92	97.55	Flake Fragment	Distal	0.8	22.6	12.4	4
2002	245.93	141.38	97.54	Flake	Complete	416.1	107.64	106.56	67.1
2005	246.57	141.3	97.54	Flake	Complete	17.3	43.71	42.26	16.8
2002	243.7	142.91	97.535	Broken Flake	Proximal	34.3	46.28	44.81	24.4
2002	243.68	143.74	97.53	Flake	Complete	18.2	50.23	34.22	14.2

Table A34-18 continued

Yr	North	East	Depth	Class	Portion	Wt.	L	W	T
2009	246.4	138.55	97.53	Flake	Complete	1.5	32.3	15.2	3.5
2009	246.39	138.34	97.53	Flake	Complete	1.6	31	22	4.3
2005	246.28	140.07	97.53	Flake Fragment	NA	X	165	88.5	56.1
2002	243.28	142.98	97.525	Flake Fragment	NA	11.4	39.1	29.38	13.9
2005	246.18	142.4	97.52	Broken Flake	Distal	27.6	51.3	45.5	13.6
1999	242.31	130.76	97.51	Flake Fragment	Medial	1.5	23.1	14.9	3.9
2002	243.64	139.21	97.51	Flake Fragment	NA	379.7	140.56	77.33	40.8
2002	243.69	138.19	97.51	Flake Fragment	Distal	12.3	69.8	30.3	7.7
2005	247.285	141.38	97.51	Flake Fragment	Medial	3.1	25.26	19.86	8.73
2005	246.4	142.71	97.51	Flake Fragment	Medial	1	23.85	15.13	3.79
2002	243.5	140.57	97.505	Flake Fragment	Medial	9.4	26.9	25.3	10.5
2002	244.76	139.93	97.5	Flake Fragment	Medial	42.1	64.8	43.1	19.2
2005	246.28	143.37	97.5	Flake	Complete	3.5	32.1	21.5	7.5
2009	246.34	138.55	97.5	Flake	Complete	1.3	21.56	21.31	55.5
2009	246.37	138.82	97.5	Flake Fragment	Medial	17.2	40.4	30	16.4
2002	243.39	144	97.495	Broken Flake	Proximal	4.2	25.5	26.5	7.8
2002	244	139.8	97.49	Flake Fragment	NA	20	37.9	43	15.7
2002	244.69	142.49	97.49	Flake Fragment	Medial	1.7	14.9	16.6	6.4
2002	245.08	143.74	97.48	Broken Flake	NA	688.7	128.67	119.94	63.0
2002	244.43	143.35	97.48	Flake Fragment	Medial	21.7	39.7	3.9	18.4
2002	244.02	142.9	97.48	Flake Fragment	NA	415.9	105.9	90.8	46.9
2002	244	142.8	97.48	Flake Fragment	NA	50	60.3	47.4	16.9
2002	244.72	142.27	97.48	Flake Fragment	Medial	2.8	16.8	18.1	6.5
2005	246.22	142.74	97.47	Flake Fragment	NA	25.1	42	33.9	19.3
2009	246.97	139.05	97.47	Flake Fragment	Distal	66.5	71.7	49.9	30.2
2009	246.445	141.245	97.47	Flake Fragment	Medial		41.2	20.1	9.6
2002	242	142	97.465	Flake	Complete	126.2	89.9	70.6	33.2
2002	242.64	142	97.46	Broken Flake	Medial	11.4	37.36	35.78	13.5
2002	244.36	137.84	97.46	Flake	Complete	102.3	62	52.6	30.9
2002	244.14	138.04	97.46	Flake	Complete	354.9	106.8	100	57.7
2002	243.93	138.32	97.46	Flake Fragment	NA		51.35	49.22	22.4
2002	244.55	137.46	97.46	Flake Fragment	NA	65.3	69.7	50.5	21.7
2002	244.96	143.2	97.46	Flake Fragment	Medial	701.3	143.1	65.9	66.5
2002	245.35	143.23	97.46	Flake Fragment	NA	779	137.9	107.9	65.6
2002	244.91	142.39	97.46	Flake Fragment	Distal	9.2	34.4	25.5	11.9
2009	246.31	141.41	97.46	Flake	Complete		118.49	92.6	43.1
2002	244.08	140.8	97.455	Broken Flake	NA	6.6	24.2	25.7	8.3
2002	245.37	138.73	97.455	Flake	Complete	777	17.6	11.0	5.0
2002	244.43	143.09	97.455	Flake Fragment	Na	1.06	24.4	17.4	6.5
2002	242.77	139.2	97.45	Broken Flake	Distal	34.9	76.55	51.79	20.7
2002	244.17	137.4	97.45	Flake	Complete	841.2	178	92	68.2
2002	244.51	142.59	97.45	Flake	Complete	248.9	91.8	81	60.2
2002	243.92	137.18	97.45	Flake Fragment	NA	261	110.3	81.7	48.4
2002	244.38	137.58	97.45	Flake Fragment	Medial	6.6	27.2	25.7	14.5
2002	244.5	137.78	97.45	Flake Fragment	NA	3.3	18.8	16.4	8.9
2002	244.38	142.98	97.45	Flake Fragment	Distal	1.3	18.8	15.2	5.1

Table A34-18 continued

Yr	North	East	Depth	Class	Portion	Wt.	L	W	T
2002	244.44	142.99	97.45	Flake Fragment	Distal	2.6	27.4	14.1	9.9
2002	244.55	142.91	97.45	Flake Fragment	Medial	16.8	36	34.6	15.4
2002	244.58	142.93	97.45	Flake Fragment	Medial	4.1	34.3	13.4	10.9
2002	244.59	142.85	97.45	Flake Fragment	Distal	4.1	24.7	22.2	8.4
2002	244.62	142.88	97.45	Flake Fragment	Medial	7.9	31.9	18.7	11.5
2002	244.72	142.76	97.45	Flake Fragment	Complete	3.2	31.7	16.3	10
2002	244.82	142.74	97.45	Flake Fragment	Medial	9.3	39.2	27.9	10.1
2002	244.96	142.7	97.45	Flake Fragment	Distal	2.2	18.9	15.1	8.2
2002	244.93	141.24	97.45	Flake Fragment	Distal	11	58.6	26.2	8.3
2005	246.74	142.15	97.45	Flake	Complete	1.4	17.5	16.1	6.9
2005	247.2	142.42	97.45	Flake Fragment	NA	12.1	44.8	31.8	13.4
2002	243.57	142.72	97.44	Broken Flake	Proximal	5.6	29.81	17.3	10.9
2003	242.75	143.66	97.44	Flake	Complete	194.5	94.96	69.82	33.3
2002	242.45	139.1	97.44	Flake Fragment	Distal	6.8	35	29.62	9.55
2002	243.61	142.72	97.44	Flake Fragment	Distal	3.9	23	21.8	7.2
2002	244.64	138.32	97.44	Flake Fragment	Distal	3.6	29.2	23	5
2002	243.16	139	97.435	Flake Fragment	NA	13	46.85	25.43	14.4
2002	245.5	141.27	97.435	Flake Fragment	Medial	3.9	27.61	20.52	9.51
2002	244.06	137.88	97.43	Flake	NA	X	178.3	117.4	65.4
2002	244.3	138.21	97.43	Flake Fragment	NA	X	105.1	107.3	99
2003	244.87	142.73	97.43	Flake Fragment	Distal	19.4	67.56	27.22	12.7
2002	242.58	141.64	97.425	Flake Fragment	NA	30.7	53.77	50.44	15.5
2002	245.66	140.87	97.425	Flake Fragment	Medial	191.8	101.12	57.73	35.3
2003	245.48	142.83	97.42	Broken Flake	Proximal	10.5	50.4	24	9.8
2003	245.71	143.63	97.42	Flake	Complete				
2002	245.45	140.85	97.415	Flake	Fragment	683	143.0	95.0	55.0
2003	242.71	142.03	97.41	Broken Flake	Proximal	32.8	68.2	53	16.2
1999	243.61	131.68	97.41	Flake	Complete	0.1	12.5	5.1	2.7
1999	243.78	131.56	97.41	Flake Fragment	Distal	1	19.1	14.3	5.6
2002	243.03	138.62	97.41	Flake Fragment	NA	16.7	42.74	28.2	15.1
2003	244.17	142.53	97.41	Flake Fragment	Distal	1.6	27.7	10.6	6.6
2009	247.36	141.1	97.4	Flake Fragment	Complete	8.6	44.8	20.7	18.2
2009	246.58	141.235	97.395	Broken Flake	Proximal		65.2	54	17.8
2002	245.01	139.95	97.39	Flake Fragment	NA	48	51.6	45.2	28.3
2009	246.42	141.31	97.39	Broken Flake	Proximal	4.7			
2002	244.45	142.72	97.385	Flake Fragment	NA	752.7	90.9	108.9	87.9
2003	242.85	142.53	97.38	Flake Fragment	Distal	12	44.43	31.84	11.5
2009	246.74	142	97.38	Flake	Complete	0.2	13.03	9.23	2.04
2002	245.54	138.69	97.375	Flake Fragment	Medial	3.6	38	19.3	7.2
2002	243.2	139.64	97.365	Flake	Complete	30.5	46.7	40.9	23.6
2003	245.06	143.71	97.365	Flake	Complete	49.9	68.54	44.08	21.9
2003	245.35	143.91	97.36	Broken Flake	Distal	260	11.0	7.2	4.0
2003	245.43	140.43	97.36	Flake Fragment	NA	570	15.2	9.1	4.3
2003	243.79	143.84	97.355	Broken Flake	Distal	9	35	31.6	20.1
2003	242.98	141.05	97.35	Flake Fragment	NA	4.3	28.5	21.96	67.8
2009	246.717	142.76	97.35	Flake Fragment	Medial	0.5	17.98	10.28	3.28

Table A34-18 continued

Yr	North	East	Depth	Class	Portion	Wt.	L	W	T
2002	242.85	139.95	97.345	Flake	Complete	28.2	77.08	46.96	11.8
2002	243.14	138.64	97.34	Flake Fragment	NA	6.8	35.16	23.43	9.9
2002	245.5	138.85	97.34	Flake Fragment	NA	120.6	80.86	63.73	30.6
2003	243.82	141.38	97.325	Flake Fragment	NA	33.1	39.9	47	26.2
2003	242.49	140.12	97.32	Broken Flake	Distal	0.2	17.9	6.1	2.5
2002	242.8	138.3	97.32	Flake	Complete	71	73.19	53.7	18
2003	242.97	141.12	97.32	Flake Fragment	NA	903.7	132.18	103.64	63.4
2003	243.23	140.9	97.32	Flake Fragment	NA	918.5	152.74	77.28	61.2
2009	246.83	142.2	97.32	Broken Flake	Proximal	0.9	16.1	13.4	5.6
2003	243.12	141.15	97.315	Flake Fragment	NA	X	217	148.36	51.0
2003	245.07	143.73	97.315	Flake	Complete	46.8	66.6	48.37	28.3
2003	245.42	142.85	97.315	Flake Fragment	NA		41.51	24.96	10.8
2002	245.7	138.72	97.31	Flake Fragment	NA	181.7	89.08	58.37	42.1
2002	245.52	138.74	97.31	Flake Fragment	NA	373.6	109.18	87.37	54,3
2001	240.435	132.84	97.3	Flake	Complete	30.9	54.3	44.8	16
2002	242.14	139.39	97.3	Flake	Complete	13.1	41.31	36.26	15
2003	245.03	143.14	97.3	Broken Flake	Proximal		54.48	48.06	15.3
2002	244.35	138.47	97.3	Flake Fragment	Distal	1.1	24.26	15.51	5.64
2009	246.45	138.83	97.3	Flake	Complete	2.1	26.5	17.5	9.3
2003	245.13	143.14	97.295	Flake Fragment	Medial	2.7	39.5	23	4.9
2002	243.03	138.87	97.29	Flake Fragment	Distal	33.8	57.33	48.35	20.2
2003	244.2	143.42	97.29	Flake	Complete	140.8	110.62	55.23	27.6
2009	246.37	138.47	97.29	Flake	Complete	1.1	22.5	13.8	5.4
2001	240.65	132.87	97.285	Flake Fragment	NA	116.7	74	62.4	38.5
2003	243.35	141.21	97.285	Flake Fragment	NA	X	151.88	71.24	72.5
2009	246.305	142.9	97.283	Broken Flake	Proximal	1	15.1	14.6	4.3
2001	240.58	132.91	97.28	Flake Fragment	Complete	19.5	36.97	39.99	1.43
2003	242.84	140.3	97.28	Flake Fragment	NA	95.7	82.24	58.19	29.4
2003	244.03	143.41	97.275	Broken Flake	Proximal	523.3	96.12	102.76	64.3
2003	243.66	143.99	97.27	Broken Flake	Distal	23.2	42.7	42.7	19
2002	243.74	139.09	97.265	Broken Flake	Distal	2.2	26.32	19.31	4.97
2001	240.51	132.96	97.26	Flake Fragment	NA	170.1	78.1	74.2	30.5
2010	246.52	140.55	97.243	Flake Fragment	NA	77.7	71.84	56.94	29.7
2001	240.52	132.9	97.24	Flake	Complete	29.6	54.94	30.47	9.5
2009	246.18	141.18	97.24	Flake Fragment	Medial	2.4	25.35	15.4	11.0
2010	247.18	140.87	97.208	Flake Fragment	Medial	20	32.1	29.1	26.8
2009	246.15	141.43	97.195	Flake	Complete	0.6	21.7	9.3	3.6
2010	246.47	140.99	97.188	Flake Fragment	Medial	1.2	22	11.22	5.7
2010	246.83	140.88	97.188	Flake Fragment	NA	29.9	31.5	43.76	32.3
2001	240.87	132.45	97.17	Flake	Complete				
2010	246.76	140.18	97.168	Flake Fragment	Medial	2.8	20.26	14.22	10.3
2009	246.935	141.35	97.16	Flake	Complete	28.1	62.3	45.6	13.9
2001	241.27	132.62	97.15	Flake Fragment	Distal	90.2	70.81	25.92	28.5
1999	243.71	133.15	97.15	Flake Fragment	NA	355.9	104.32	63.49	47.7
2009	246.16	138.52	97.15	Flake	NA	1.2	21.1	14.6	3.9
1999	243.2	132.19	97.12	Flake Fragment	NA	26.7	45.1	42.3	22.7

Table A34-18 continued

Yr	North	East	Depth	Class	Portion	Wt.	L	W	T
2002	243.12	143.45	97.11	Broken Flake	Distal	20.9	76.3	25.2	19
2011	246.59	140.98	97.1	Flake Fragment	Distal	0.6	16.8	9.6	2.9
2011	246.7	140.87	97.09	Flake	Complete	12.6	38.7	27.4	10.9
2010	247.41	140.75	97.088	Flake Fragment	NA	76.9	69.7	51.1	21.8
2002	244.68	138.34	97.08	Flake Fragment	Distal	37.5	66.62	38.68	14.2
2009	246.28	141.86	97.08	Flake Fragment	Distal	0.5	18.89	6.99	3.8
2009	246.77	141.43	97.08	Flake Fragment	NA	25.6	45.03	47.26	9.72
2010	247.56	140.785	97.078	Flake Fragment	NA	274.4	120.38	70.85	45.1
2009	246.89	138.14	97.07	Flake Fragment	NA	3	22.8	21.9	9.5
2009	246.82	141.15	97.07	Flake Fragment	Medial	5.9	25.75	26.26	7.07
1999	243.75	133.15	97.065	Flake Fragment	Medial	117.9	71.66	44.95	70.9
2010	247.52	140.8	97.058	Flake Fragment	Medial	8.1	28.34	17.67	14.7
2010	247.55	140.95	97.048	Flake	Complete	2.2	24.78	19.62	6.8
2010	247.65	140.78	97.048	Flake Fragment	Distal	2.4	29.35	17.23	6.85
2004	242.39	142.08	97.01	Flake Fragment	Complete	0.6	11.1	13.3	5
2011	246.69	140.61	96.99	Flake	Complete	0.3	19.3	7.8	1
2011	246.3	140.14	96.988	Flake Fragment	NA	0.5	15.8	12.1	3.7
2004	242.75	142.75	96.975	Broken Flake	Proximal				
2008	243.52	139.16	96.97	Broken Flake	Proximal	14.1	41.05	28.25	14.1
2011	247.44	140.72	96.97	Flake	Complete	1.9	27.6	12.7	3.9
2011	246.915	140.54	96.968	Flake	Complete	1.9	18.9	17.5	4.7
1999	242.98	133.67	96.95	Flake Fragment	Medial	40.2	49.7	22.8	39.4
2009	246.83	141.37	96.95	Flake	Complete	19.6	51.1	39.7	14.5
2012	246.48	139.175	96.95	Flake	Distal	0.2	13.9	7.6	2.8
2004	242.84	142.13	96.92	Flake Fragment	Distal				
2011	246.74	140.58	96.908	Broken Flake	Proximal	2.1	25.5	20.8	3.8
2007	244.165	139.18	96.905	Flake Fragment	Distal	0.5	18.3	7.7	2.6
2012	246.66	139.055	96.9	Flake	Complete	1.2	17.6	17.9	4.4
2010	247.71	141.3	96.89	Flake Fragment	Distal	1.5	22.9	14.8	5.4
2010	247.71	141.14	96.89	Flake Fragment	Distal	1.1	21.6	9	6.8
2010	247.52	141.32	96.89	Flake Fragment	Distal	0.6	17.5	10.8	4.3
2010	247.26	141.15	96.89	Flake Fragment	NA	14.3	35.4	29.9	19.6
2010	247.66	141.68	96.88	Flake	Complete	37.5	58.7	24.6	21.3
2011	246.015	140.23	96.88	Flake	Complete	17.8	17.4	25	23.1
2011	246.54	140.19	96.878	Flake	Complete	2	21.2	16.9	9.8
2004	242.19	140.06	96.87	Flake Fragment	NA	46.3	72.3	42.2	27
	246.36	139.91	96.87	Flake	Complete	0.7	13.3	15.1	5.5
1999	243.54	131.23	96.86	Broken Flake	Distal	4	34.2	17	11.1
2009	246.48	141.2	96.86	Flake	Complete	6.3	31	25.2	11.4
2011	246.97	140.42	96.858	Flake	Complete	1.7	26.3	15.7	4.7
2007	244.295	139.48	96.855	Flake	Complete	1.4	20.2	14.7	5.9
2010	263.21	146.24	96.851	Broken Flake	Proximal		11.8	12.4	5.4
2004	242.41	140.5	96.85	Flake Fragment	Na	X	134	103.4	5.4
2012	246.64	138.94	96.85	Flake	Proximal		15.1	13.2	4.3
2010	247.89	141.08	96.85	Flake Fragment	Medial	1.9	24.65	10.72	9.87
2012	248.1	140.4	96.85	Broken Flake	Proximal	0.3			

Table A34-18 continued

Yr	North	East	Depth	Class	Portion	Wt.	L	W	T
2011	246.265	140.105	96.843	Broken Flake	Proximal	0.5	19.8	9.4	0.9
2012	246.6	141.54	96.84	Broken Flake	Proximal	1.3	18.4	13.3	5.2
2010	247.79	141.91	96.84	Flake	Complete	2.5	27.22	16.9	5.69
2012	246.86	138.69	96.84	Flake Fragment	Medial		12.8	11.6	3.8
2007	244.44	139.88	96.83	Flake Fragment	Distal	0.9	26.71	16.33	3.65
2004	242.64	142.77	96.82	Flake Fragment	Proximal				
2011	246.28	140.38	96.818	Flake	Complete	1.4	25.2	12.1	4.1
2012	246.48	139.34	96.81	Flake	Complete	1	17.2	17.5	3.9
2004	242.87	141.57	96.805	Flake Fragment	Na	9.3	38.4	24.2	15.4
2004	242.59	142.64	96.8	Broken Flake	Complete				
2007	244.99	139.28	96.8	Flake Fragment	Medial	0.8	17.03	9.26	5.44
2012	248.34	140.74	96.8	Broken Flake	Medial	2.3	37.1	19.4	6.5
2001	241.36	131.46	96.79	Flake	Proximal				
2007	244.32	139.48	96.79	Flake Fragment	Distal	0.3	10.66	8.91	5.15
2012	246.32	141.19	96.79	Broken Flake	Proximal	4.9	31.6	23.2	9.1
2012	246.47	138.38	96.79	Flake	Complete		14.6	9.8	4.4
2007	244.71	139.31	96.785	Flake Fragment	Distal	1.1	23.48	12.7	4.97
2012	246.13	141.54	96.78	Broken Flake	Proximal		18	12.4	4
1998	244.055	131.2	96.75	Flake Fragment	NA	83.6	71.6	46.6	30.6
2012	246.7	139.79	96.75	Flake	Complete		17.9	15.3	3
1998	244.09	130.88	96.74	Flake Fragment	Medial	26.5	40.2	32.2	27.2
2012	246.61	140.8	96.74	Broken Flake	Proximal	0.2	13.9	8.4	2.7
2012	256.56	139.15	96.74	Flake	Complete		13.7	14.4	3.4
2012	246.7	140.485	96.74	Flake	Complete	1.6	20.6	15.4	7.5
2006	242.9	142.17	96.73	Flake Fragment	Distal	2	25	19.4	6.5
2012	246.1	141.36	96.73	Broken Flake	Proximal		17.4	11.4	2.7
2012	241.92	139.6	96.73	Flake	Complete		22.4	10.2	5.1
2004	242.3	140.31	96.725	Flake Fragment	NA	X	163.9	147	87.3
1998	245.14	131.93	96.72	Broken Flake	Proximal	5.1	25.72	25.75	7.39
2012	246.83	141.13	96.72	Broken Flake	Proximal	0.7	17.4	12	4.7
2007	244.46	139.905	96.715	Flake Fragment	Distal	3.9	33.55	15.78	68.8
2000	243.33	131.63	96.71	Flake Fragment	NA	21.3	44.6	30.2	24.8
2006	242.75	142.09	96.71	Flake Fragment	Distal	0.8	15.65	12.92	4.2
2012	246.31	141.995	96.71	Flake	Complete		18.1	15	5.4
2012	246.54	140.295	96.71	Flake	Complete	1.8	29.6	19.6	15.1
2012	246.54	140.295	96.71	Flake	Complete	6.2	32.7	23.5	11
2006	242.48	142.12	96.7	Flake	Complete				
2007	244.48	139.26	96.7	Flake Fragment	Distal	9.5	44.4	28.96	7.98
2012	246.16	141.19	96.7	Broken Flake	Proximal		29.2	11.7	5.2
2012	246.39	141.15	96.7	Flake	Complete		19.5	8.4	4.1
2012	246.84	141.62	96.7	Flake Fragment	Medial	3	23.4	18.5	15.4
2012	246.06	141.28	96.69	Broken Flake	Proximal		24.3	13.5	7.2
2012	247.5	141.14	96.68	Flake	Complete	1	20.1	15.7	2.3
2006	242.43	142.95	96.67	Broken Flake	Proximal	0.3	12.8	8.6	2.4
2004	242.31	140.21	96.67	Flake Fragment	Proximal	1.9	24.1	18.7	6.4

Table A34-18 continued

Yr	North	East	Depth	Class	Portion	Wt.	L	W	T
2012	246.65	139.04	96.67	Broken Flake	Proximal		25.2	13.5	4.1
2012	246.54	141.21	96.67	Broken Flake	Proximal		24.1	16.8	6.9
2000	243.82	130.53	96.665	Flake Fragment		1.8	23.1	10.9	8.4
2007	244.15	139.95	96.66	Flake Fragment	NA	12.6	45.7	24.54	13.8
2007	244.64	139.22	96.66	Broken Flake	Proximal	6.9	26.36	28.96	12.3
2012	246.74	140.57	96.66	Flake	Complete	0.3	34.2	18.9	16.3
2008	243.95	139.49	96.65	Broken Flake	Proximal	4.2	23.27	23.63	8.12
2008	242	139.565	96.65	Flake Fragment	Medial	1.1	14.27	19.03	4.2
2012	246.34	140.52	96.65	Broken Flake	Proxmal	1.3	18	12.4	4
2012	246.11	140.41	96.65	Flake	Complete	1.8	32.5	26.7	14.7
2006	242.41	142.41	96.625	Flake	Complete				
2007	244.29	139.82	96.62	Broken Flake	NA	111.8	58.56	51.46	59.7
2008	242.85	139.17	96.61	Flake	Complete	0.9	16	13.6	3.32
2006	242.96	141.76	96.61	Flake Fragment	NA	0.9	12.6	9.8	8.1
2006	242.03	142.32	96.605	Flake Fragment	Proximal				
2007	244.21	139.93	96.6	Broken Flake	NA	275.9	88.74	56.99	51.7
2012	247.84	141.89	96.6	Flake	Complete	2.2	25.6	12.7	6.6
2012	246.58	141.68	96.59	Broken Flake	Proximal	1.3	17.1	12.9	6.7
2012	246.76	140.69	96.59	Broken Flake	Proximal	6.7	32.7	23	11.1
2012	247.11	140.94	96.585	Flake	Complete	4.9	30.8	21.5	6.8
2012	246.55	140.49	96.58	Flake	Complete	2.1	18.4	13.7	6.2
2012	246.33	140.55	96.56	Flake	Complete	6.3	30.9	23.3	10.6
2008	243.855	139.075	96.535	Flake Fragment	Distal	6.5	38.2	27	11.3
2006	242.32	140.72	96.52	Broken Flake	Proximal	6	31.7	28.1	11.7
2006	242.34	142.635	96.51	Broken Flake	Medial	3.1	33.03	25.23	5.7
2006	242.5	140.45	96.51	Flake Fragment	Distal	0.8	18.6	12.1	6
2006	242.205	142.58	96.5	Broken Flake	Proximal				
2008	244.73	139.635	96.47	Broken Flake	Proximal	1.2	18.35	15.74	5.38
2008	243.86	142.28	96.455	Flake Fragment	NA	43	24.7	13.9	12.6
2006	242.84	141.08	96.45	Flake	Complete	3.2	28.5	22.1	7.6
2006	242.44	142.94	96.45	Flake Fragment	Distal				
2006	242.58	141.29	96.43	Flake Fragment	Proximal	6.8	30.3	17.8	10.5
2008	244.125	139.31	96.43	Flake Fragment	NA	86.8	99.78	54.61	24.4
2008	244.6	139.38	96.43	Flake Fragment	Distal	14.4	44.7	24.45	12.7
2008	244.83	139.33	96.42	Flake Fragment	NA	4.9	16.72	19.36	11.0
2008	243.41	139.46	96.41	Flake	Complete	2.9	32.8	17.1	5.3
2008	244.145	139.02	96.405	Flake Fragment	Medial	7.8	40.43	25.73	14.6
2008	243.2	139.97	96.4	Flake	Complete	53.8	76.4	55.5	26.5
2006	242.71	142.99	96.39	Flake Fragment	Proximal				
2004	243.595	141.425	96.345	Flake Fragment	Medial	1	17.3	14.1	3.6
2008	243.27	142.265	96.34	Flake Fragment	NA	1.8	49.2	32.7	12.9
2006	242.775	141.77	96.33	Broken Flake	Proximal	13.3	38.9	31.6	15.9
2006	242.83	141.47	96.31	Flake Fragment	Distal	2.9	24.1	24	7.4
2006	242.64	141.68	96.31	Flake Fragment	Medial	1.8	20.3	15.7	6.5
2008	243.63	142.84	96.29	Flake Fragment	NA	6.1	27.1	20.2	17.1

Table A34-18 continued

Yr	North	East	Depth	Class	Portion	Wt.	L	W	T
2006	242.97	141.09	96.29	Flake	Complete	0.8	15.7	11.5	3.9
2008	243.635	142.77	96.28	Flake Fragment	NA	34.9	45.5	37.2	18.8
2008	243.66	142.955	96.26	Flake	Complete	5.6	24.3	22.7	13
2006	242.31	140.68	96.25	Flake Fragment	Proximal	6.1	26.1	21.3	10.2
2008	243.53	142.94	96.25	Flake Fragment	NA	14.7	41.7	21.7	17.4
2008	242.37	142.38	96.23	Broken Flake	Proximal	173	113.5	74.2	40
2008	242.81	142.13	96.23	Flake	Complete	0.5	20.2	10.4	2.9
2006	242.12	141.33	96.22	Broken Flake	Proximal	14.5	38	34.6	12.7
2006	242.04	141.71	96.21	Broken Flake	Proximal	2.9	20.3	14.5	7.8
2008	242.02	142.48	96.21	Flake	Complete	5.8	40.6	19.4	10.4
2008	244.2025	139.65	96.21	Broken Flake	Proximal	0.5	26.25	9.18	1.86
2006	242.98	141.7	96.2	Flake	Complete	2.6	21.9	16	10.6
2008	242.11	142.71	96.2	Flake	Complete	1.3	19.7	16.8	3.8
2008	242.11	142.72	96.2	Flake	Complete	1.6	17.7	11.4	6.5
2005	242.82	140.05	96.2	Flake Fragment	NA	1.6	23.1	15.9	4.8
2008	243.345	142.93	96.18	Flake Fragment	NA	43.8	68.1	29.1	27.2
2008	242.75	142.23	96.18	Flake Fragment	Medial	1.8	19.2	18.4	8.6
2008	242.46	142.35	96.18	Flake Fragment	Medial	0.2	12.5	6.2	1.7
2008	242.07	142.79	96.17	Flake	Complete	0.4	17.7	7	1.1
2008	242.05	142.77	96.16	Flake	Complete	2.1	20.2	15.1	5.3
2008	242.2	142.55	96.15	Flake	Complete	0.9	15.9	12.3	4.5
2008	242.87	142.76	96.15	Flake	Complete	0.9	13.9	10.5	7.6
2006	242.11	141.19	96.15	Flake Fragment	Proximal	2.3	22.4	21.6	8.1
2006	242.99	141.22	96.145	Flake	Complete	5.2	30.5	23.6	10.4
2008	242.22	142.87	96.14	Broken Flake	Proximal	0.9	18.1	17.8	2.9
2008	242.69	142.91	96.13	Broken Flake	Proximal	0.8	22.8	6.2	3.2
2008	243.61	142.635	96.13	Flake	Complete	4.9	33.1	22.3	9.9
2008	242.65	142.31	96.13	Flake	Complete	0.2	13.8	8	2.7
2008	243.27	142.69	96.13	Flake Fragment	NA	7.9	57.3	27.4	7.8
2008	242.49	142.36	96.13	Flake Fragment	Distal	12.6	33.7	21.8	18.5
2008	242.17	142.67	96.13	Flake Fragment	Distal	13	30.1	30.1	13.3
2004	243.29	141.69	96.12	Flake	Complete	1.5	24.1	11.3	4.7
2008	242.82	142.29	96.11	Broken Flake	NA	0.9	19.2	10.1	6.8
2005	243.56	140.04	96.11	Flake	Complete	6.1	34.8	26.4	11.4
2008	242.17	142.59	96.11	Flake	Complete	1.3	26.9	12.6	6.2
2006	242.99	141.97	96.1	Broken Flake	Proximal	500.3	154.7	117.8	54.6
2006	242.19	140.58	96.085	Broken Flake	Proximal	0.2	8.3	8	3.9
2005	243.16	140.255	96.085	Flake	Complete	5.6	24.8	22.6	9.5
2008	242.82	142.89	96.08	Broken Flake	Distal	3.1	36	24.6	3.4
2008	242.19	142.96	96.08	Flake	Complete	6.3	29.2	18	12.7
2008	242.8	142	96.08	Flake Fragment	NA	6.4	24.9	22.2	15.8
2006	242.59	140.91	96.075	Flake Fragment	Proximal	32.4	59.2	37.4	16.8
2006	242.95	140.22	96.07	Flake	Complete	0.4	10.7	8.3	4.9
2008	242.22	142.98	96.065	Flake Fragment	NA	3.4	20.9	18.1	10.7
2008	242.58	142.91	96.06	Flake	Complete	0.7	17.2	10.2	3.9
2006	242.63	140.7	96.06	Flake Fragment	Distal	1.4	24.6	12.5	4.3

Table A34-18 continued

Yr	North	East	Depth	Class	Portion	Wt.	L	W	T
2008	242.3	142.11	96.055	Flake Fragment	NA	1.1	17.8	14.7	6.7
2008	243.42	142.52	96.05	Flake	Complete	6.9	42.8	30	7.7
2008	243.32	142.42	96.05	Flake Fragment	Medial	18.4	65.4	43.7	8.6
2008	242.95	142.79	96.04	Flake Fragment	NA	0.8	15.9	6.2	6.4
2006	242.97	141.63	96.03	Broken Flake	Proximal	1.5	19.9	14.6	7.5
2008	242.34	142.3	96.03	Flake Fragment	NA	7.5	30.3	19.7	9.8
2006	242.28	142.185	96.02	Flake	Complete	2.8	22.4	18.7	7.1
2008	242.59	142.65	96.02	Flake	Complete	10.2	33.5	21.5	15.8
2008	242.08	142.53	96	Flake	Complete	30.1	42.7	37.2	24.9
2006	242.93	140.38	96	Flake Fragment	Distal	0.6	11.4	8.8	4.6
2006	242.35	140.43	96	Flake Fragment	Distal	0.1	8.7	3.8	3.1
2004	243.06	141.165	95.975	Flake Fragment	Medial	0.5	22.8	11.2	3.3
2009	243.85	142	95.97	Broken Flake	Proximal	1.6	29.6	11.7	4.8
2009	243.675	142.725	95.97	Broken Flake	Proximal	0.4	12.7	10.1	4.3
2008	242.56	142.62	95.97	Flake Fragment	Distal	2.2	23.9	17.3	6.5
2008	242.3	142.5	95.965	Flake	Complete	0.4	15.1	9.1	2.8
2008	242.76	142.46	95.965	Flake Fragment	Proximal	2.6	23.3	15	7.4
2007	242.5	141.5	95.96	Flake	Complete	7.4	35.1	26.2	11.9
2008	242.38	142.02	95.95	Flake	Complete	13.4	40.7	31.8	16.2
2008	242.62	142.93	95.94	Flake	Comlpete	1.4	23.6	11.3	6.1
2008	242.8	142.67	95.92	Broken Flake	Proximal	10.8	42	30.1	13.6
2009	243.72	139.36	95.91	Flake	Complete	8.4	32.86	26.1	10.1
2008	242.53	142.37	95.91	Flake Fragment	NA	2.1	21.7	17.3	7.1
2004	243.185	141.22	95.9	Flake	Complete	0.6	22.7	7	4.2
2005	243.965	141.89	95.89	Flake	Complete	0.6	17.4	14.1	2.3
2009	243.8	142.39	95.89	Flake Fragment	Proximal	5.9	39.2	25	8.3
2008	242.15	142.3	95.885	Flake Fragment	Medial	4.6	30.3	22.2	10
2008	242.66	142.99	95.85	Flake Fragment	NA	6.5	27.8	22.2	11.6
2007	242.46	141.92	95.84	Broken Flake	Proximal	11	42.7	23.3	14.5
2009	243.875	142.1	95.84	Flake Fragment	NA	7.7	41.04	26.33	9.05
2005	243.35	141.69	95.83	Flake	Complete	9.3	66.3	26.6	6.3
2008	242.15	142.5	95.83	Flake	Complete	25.9	51.9	26.8	18.7
2009	243.11	139.08	95.83	Flake	Complete	1.8	22.11	11.36	7.89
2004	243.84	141.89	95.83	Flake Fragment	Distal	2.8	23.8	26.6	4.9
2009	243.38	142.34	95.83	Flake Fragment	Proximal	30.9	46.68	32.66	15.9
2007	242.82	141.78	95.81	Flake	Complete	1.1	15.1	13.2	4.9
2007	242.25	141.82	95.81	Flake Fragment	Distal	0.3	12	7.4	3.1
2007	242.77	140.4	95.8	Broken Flake	Proximal	0.9	20.1	12.5	3.7
2008	242.9	142.8	95.8	Broken Flake	Proximal	2.1	17.5	17.7	7.8
2007	242.11	141.71	95.75	Flake	Complete	1.7	20.8	16.9	4.8
2007	242.44	140.75	95.75	Flake Fragment	Proximal	28.2	46.4	33.5	16.8
2008	242.33	142.34	95.75	Flake Fragment	NA	35.6	36.3	32.4	23.6
2005	243.4	140.64	95.74	Flake Fragment	Distal	4	35.5	16.1	8
2005	243.42	141.75	95.74	Flake Fragment	Distal	9.3	33.6	27.1	14.2
2005	243.3	140.66	95.74	Flake Fragment	Distal	6.6	33.6	22.9	11.3
2008	242.57	142.32	95.73	Flake Fragment	Medial	0.6	16.3	14.8	3.7

Table A34-18 continued

Yr	North	East	Depth	Class	Portion	Wt.	L	W	T
2008	242.63	142.81	95.72	Broken Flake	Proximal	5	38.4	15.1	13.2
2007	242.99	141.88	95.72	Flake Fragment	Distal	1.2	16.1	15.3	7.5
2007	242.54	141.77	95.72	Flake Fragment	Medial	30.5	49.86	40.94	18.7
2007	242.12	141.41	95.71	Broken Flake	Proximal	34.4	46.9	43.3	20.6
2008	242.57	142.1	95.71	Flake Fragment	NA	1.1	22.7	11.8	6.2
2008	242.24	142.11	95.71	Flake Fragment	Medial	2.3	21.9	15.7	9
2007	242.26	141.26	95.7	Flake	Complete	0.1	11.6	6.3	2.4
2007	242.44	140.48	95.7	Flake	Complete	0.9	23.1	9.8	10
2007	242	141.8	95.69	Flake Fragment	Distal	31.5	62.5	47.9	15.6
2005	243.34	141.2	95.68	Broken Flake	Proximal	0.7	14.4	15.7	3.7
2007	242.1	140.02	95.68	Flake	Complete	1.3	22.7	12.6	4.8
2009	242.39	142.52	95.68	Flake	Complete	3.6	26	16.5	8.8
2009	243.64	142.945	95.68	Flake Fragment	Proximal	0.3	17	8.4	3
2005	243.35	141.09	95.67	Flake Fragment	Distal	1.7	32.2	10.7	7
2009	243.58	139.77	95.66	Flake	Complete	0.3	13.47	8.97	3.21
2007	242.08	141.99	95.655	Flake Fragment	Proximal	2.9	21.9	23.4	5.8
2007	242.28	141.63	95.65	Broken Flake	Proximal	0.8	13.7	12.1	5.5
2005	243.52	140.14	95.65	Flake	Proximal	0.4	17.8	8	3.9
2007	242.71	141.79	95.65	Flake Fragment	Proximal	9.3	32.7	25.3	17.5
2008	244.01	139.14	95.645	Flake	Complete	7.5	26.65	26.33	13.8
2007	242.465	141.52	95.63	Flake	Complete	1.2	21.2	13.9	5.6
2007	242.94	141.8	95.63	Broken Flake	Proximal	2.9	20.2	16.9	10.2
2009	243.1	139.6	95.62	Flake	Complete	0.9	18.9	14.3	3.5
2009	242.65	142.67	95.62	Flake Fragment	Distal				
2007	242.5	141.84	95.61	Flake Fragment	Distal	1.9	23.8	15.7	6.8
2009	242.23	142.05	95.6	Broken Flake	Proximal	1.5	18.5	16.5	5.1
2007	242.33	141.82	95.6	Flake	Complete	1.3	23.7	16	5.3
2005	243.7	140.56	95.6	Flake Fragment	NA	10.5	33.5	32.7	12.4
2007	242.08	141.94	95.6	Flake Fragment	Proximal	0.8	21.8	9.6	4.5
2009	243.52	142.17	95.59	Flake Fragment	Distal	18.4	54.4	34.6	16.7
2009	243.17	142.64	95.59	Flake Fragment	Distal	1.3	20.8	16.6	5
2009	242.63	142.59	95.59	Flake Fragment	Complete	3.1	27.5	16.3	15.6
2009	242.86	142.78	95.58	Broken Flake	Proximal	4.4	19.4	20.7	11.1
2007	242.82	141.96	95.58	Flake Fragment	Diistal	0.8	19.2	10.2	3.1
2009	242.48	142.37	95.58	Flake Fragment	NA	24.8	54	34.2	12.9
2007	242.18	141.68	95.57	Flake	Complete	4.5	35.3	23.7	9
2009	243.9	139.58	95.57	Flake	Complete	5.8	29	22.8	11.7
2007	242.21	141.62	95.56	Flake Fragment	NA	6.1	31.5	24.7	7
2007	242.71	141.92	95.56	Flake Fragment	Distal	2.8	25.7	19.4	9.6
2009	242.79	142.01	95.55	Broken Flake	Distal	2.7	21.4	15.7	4.8
2007	242.26	141.66	95.55	Flake Fragment	Distal	9.3	43.7	21.2	10.7
2009	243.11	139.71	95.53	Flake Fragment	Distal	4.1	32.31	20.22	9.95
2009	242.85	142.81	95.53	Flake Fragment	NA	25.8	45.6	24.9	21.4
2009	242.83	142.91	95.52	Flake	Complete	12.3	41.6	25.7	10.5
2007	242.27	141.44	95.52	Flake Fragment	Medial	7.5	39.47	25.76	9.61
2007	242.76	141.82	95.51	Flake Fragment	Proximal	31.2	44.5	36.5	24.1

Table A34-18 continued

Yr	North	East	Depth	Class	Portion	Wt.	L	W	T
2009	242.57	142.39	95.51	Flake Fragment	NA	3.1	30.8	19	7.1
2005	243.17	141.29	95.5	Flake	Complete	1.4	18.9	16.6	4
2005	243.07	141.4	95.5	Flake Fragment	Distal	0.6	21.3	11	2.7
2009	243.15	139.82	95.5	Flake Fragment	Complete	4.4	26.44	22.84	6.76
2009	242.49	142.23	95.5	Flake Fragment	NA	12.3	36.1	26	15.7
2009	242.68	142.8	95.49	Broken Flake	Proximal	1.7	18.5	15.8	4.9
2007	242.7	140.85	95.49	Flake Fragment	NA	9.6	43	27	13.3
2009	242.77	142.07	95.485	Flake	Complete	2	21.5	13.1	6.4
2009	243.92	139.04	95.48	Broken Flake	Proximal	0.4	14.62	7.63	4.68
2007	242.89	141.72	95.47	Flake Fragment	Medial	58	58.1	42.3	30.1
2005	243.5	141.86	95.46	Flake Fragment	Medial	2.2	15.7	19.5	7.4
2009	243.6	139.03	95.455	Flake Fragment	Proximal	7	31.07	22.76	13.2
2009	243.61	139.01	95.445	Flake Fragment	Medial	10.9	50.45	34.42	7.16
2008	243.04	142.44	95.1	Broken Flake	Proximal	6.1	27.1	20.2	17.1
2008	243.02	142.79	95.085	Flake Fragment	Medial	0.8	19.2	13.7	2.8
2004	244.13	142.25	95	Flake Fragment	Distal	11.5	50.4	22.8	8.2
1999				Flake Fragment	NA	4.5	44	15.8	6.7
2003	245.21	143.12		Flake Fragment	Medial	3.5	23.6	23.5	5.1
2005	247.1	140.18		Flake Fragment	Medial	4.8	28.57	27.64	4.43

Table A34-19
Flake Formation Analysis: Flake Attributes

Yr	North	East	Depth	scars	scars	Wt (g)	L	W	T
2005	247.78	143.01	97.965	3	1	1.5	19.24	11.29	7.37
2005	247.46	142.83	97.95	3	3	1.1	15.83	16.21	4.39
2005	247.52	142.97	97.95	4	3	2.9	25.13	19.69	7.7
2005	247.76	142.8	97.93	3	4	0.8	15.39	10.3	5.7
2005	246.84	142.12	97.86	3	6				
2005	246.15	142.01	97.85	3	7	6.1	40.44	21.66	10
2005	247.65	141.97	97.84	2	10	2.4	25.58	16.39	7.47
2005	247.65	142.36	97.81	4	4	1.3	20.12	20.21	3.97
2005	246.76	141.93	97.75	4	8	2.1	18.7	17	5.9
2010	263.76	146.93	97.681	3	6		20.2	11.3	4.4
2005	247.87	142.13	97.68	3	3	1.3	17.06	12.62	7.18
2005	247.48	141.63	97.64	4	4	3.5	26.7	19.5	6.8
2005	247.91	142.25	97.57	3	4	9.7	39.61	12.03	10.62
2005	246.31	143.06	97.57	4	6	2.9	23.91	22.63	6.14
2005	247.27	140.93	97.56	2	4	0.4	14.6	11.2	4.8
2005	246.3	140.57	97.53	3	3	2	23.61	15.06	8.65
2002	244.31	139.22	97.52	2	2	31.8	54.69	41.11	14.66
2005	247.285	141.38	97.51	3	4	3.1	25.26	19.86	8.73
2002	244.13	139.71	97.51	3	7	33.5	63.36	44.58	136.1
2002	244.47	139.13	97.51	2	9	8.2	32.47	28.05	11.11
2005	146.77	141.17	97.51	3	8	2.4	25.81	16.35	6.87
2002	243.5	140.57	97.505	3	7	9.4	26.9	25.3	10.5
2005	246.78	140.12	97.5	2	6	1.4	20.54	13.31	7.7
2002	243.55	141.57	97.49	1	12	50.5	67.84	56.69	17.41
2002	244.69	142.49	97.49	4	6	1.7	14.9	16.6	6.4
2002	243.65	141.42	97.48	3	5	0.7	20.48	7.52	4.06
2002	244.72	140.9	97.465	4	13	11.5	33.7	32.7	8.1
2009	248.98	141.41	97.46	1	3	3.5	42	20.4	4.9
2002	244.08	140.8	97.455	4	15	6.6	24.2	25.7	8.3
2002	244.43	143.09	97.455	3	6	1.06	24.4	17.4	6.5
2002	244.45	143.09	97.455	3	5	0.5	15.9	11.1	4.0
2002	244.78	142.77	97.45	2	3	2.8	23.6	18.3	6.9
2005	246.85	143.15	97.45	3	5	1.2	18.5	13	6.7
2002	243.22	139.965	97.445	4	7	1.9	27.7	15.2	6.2

Table A34-19 continued

Yr	North	East	Depth	scars	scars	Wt (g)	L	W	T
2002	244.64	138.32	97.44	2	7	3.6	29.2	23	5
2005	246.21	143.07	97.4	3	1	1.2	13.74	10.71	6.02
2003	245.35	143.37	97.385	3	10	12.4	39.5	30.79	19.58
2003	245.18	142.83	97.37	3	5	0.8	17.7	12.43	5.35
2003	243.79	143.84	97.355		5	9	35	31.6	20.1
2003	242.98	141.05	97.35	4	9	4.3	28.5	21.96	67.8
2009	246.717	142.76	97.35	2	7	0.5	17.98	10.28	3.28
2009	246.7	140.77	97.35		1	5			
2003	242.63	140.29	97.34	4	6				
2003	242.73	143.03	97.325		3	0.2	7.4	5.4	2.2
2003	244.13	140.1	97.3	2	5	1.5	23.1	18	6.3
2009	246.457	142.18	97.3	4	12	1.6	20.64	18.23	38.3
2009	246.305	142.9	97.283	2	6	1	15.1	14.6	4.3
2003	244.63	140.34	97.28	3	8	2.7	23.1	13.7	8.5
2009	246.288	142.93	97.27	3	2	0.5	15.5	11.1	3.2
2009	246.26	142.92	97.257	2	3	0.7	15.41	13.87	3.74
2010	263.62	145.12	97.231	4	9		40.6	38.1	19.7
2010	246.21	140.915	97.208	2	3	1.2	19.6	14.4	7.1
2009	247.54	141.71	97.2	2	6	6.9	25.8	26.3	12.9
2009	246.505	141.855	97.18	2	9	0.9	15.8	14.4	5.3
2009	244.9	138.7	97.17	4	5	5.2	24.5	26.4	6.7
2010	246.76	140.18	97.168	3	7	2.8	20.26	14.22	10.34
2009	246.465	141.43	97.15	5	2	0.4	10.9	10	2.2
2009	246.4	141.63	97.15	3	0	3.6	18.88	23.3	9.5
2009	246.16	138.52	97.15	3	4	1.2	21.1	14.6	3.9
2010	246.6	140.13	97.148	3	6	0.4	13.92	9.43	4.05
2012	246.12	139.84	97.14	3	0	5.8	28.5	27.4	9
2012	246.38	139.52	97.13	2	4	17.1	33.9	26.7	16.1
2012	246.12	139.07	97.13	3	0	6.3	27.5	26	14
2010	263.12	145.1	97.126	4	4		13.5	11.8	3.7
2004	242.28	140.78	97.12	3	6				
2010	247.42	140.93	97.078	4	6	0.3	11.87	8.74	2.91
2009	246.89	138.14	97.07	4	5	3	22.8	21.9	9.5
2012	246.23	138.13	97.07	4	2	4.5	33.7	22.3	7.6

Table A34-19 continued

Yr	North	East	Depth	scars	scars	Wt (g)	L	W	T
2011	246.11	140.33	97.038	4	4	0.7	15.7	14.5	3.3
2011	246.62	140.83	97.038	3	4	2.9	30.9	24.7	5
2010	264.81	146.6	97.031	4	6		11.6	10.3	2.4
2009	247.92	141.26	97.03	2	1	7.1	34.7	18.1	15.6
2004	242.37	140.56	97.03	2	2	1.4	16.9	19.5	8
2009	246.67	141.4	97.01	2	6	9	33.7	27.7	10.2
2007	244.5	139.05	97.01	3	5	0.4	17.54	10.62	4.15
2004	242.15	142.24	97.01	3	3	4.8	19.8	30.6	8.1
2011	247.01	140.36	96.973	2	0	4.3	26.3	25.9	9.1
2009	248.69	141.23	96.97		5	9.6	40.2	26	9.1
2012	246.68	138.13	96.95	3	1	1.7	25.2	12.1	7.3
2010	247.04	141.42	96.95	3	2	2.1	24.8	14.2	7.4
2011	246.38	140.19	96.938	2	0	2.9	26.9	20.7	10.6
2012	246.82	138.45	96.92	2	5	8.2	27.3	25.2	10.2
2009	246.05	141.91	96.91		2	0.5	12.4	11.2	4.7
2007	244.84	139.85	96.905	2	1	0.4	16.25	8.94	6.28
2012	246.28	139.74	96.9	3	4	1.1	18.2	12.6	5.5
2004	242.67	142.77	96.9		3				
2009	246.56	141.14	96.895	4	6	1.5	20.8	16.7	5.6
2004	242.4	142.18	96.885	3	7	1.2	16.6	14.8	5.3
2012	246.34	138.21	96.87		6	0.5	16	9.6	3.8
2009	246.34	141.01	96.87	4	6	0.7	20.3	9.1	3.1
2007	244.67	139.84	96.87	2	6	4.7	38.89	23.3	10.15
2004	242.18	142.46	96.86		5				
2012	246.17	139.45	96.86	2	5		20.7	16	7
2011	246.18	140.01	96.848	4	1	4.1	25.2	25.1	11.3
2004	242.33	140.73	96.845	2	4	31.2	40.1	35.3	25.1
2004	242.73	140.82	96.84	3	5	1	13	11.6	6.1
2012	248.24	140.93	96.83		5	0.2	14.6	8.2	2.3
2004	242.38	142.84	96.825	2	2				
2004	242.36	141.22	96.825	2	6	7.1	38	21.2	10.3
2004	242.35	141.25	96.825	2	3	4.8	40.7	13.3	9.7
2012	246.67	138.75	96.82	3	4	0.5	12.6	10.7	5.6
2004	242.39	142.8	96.81		5				

Table A34-19 continued

Yr	North	East	Depth	scars	scars	Wt (g)	L	W	T
2007	244.205	139	96.81	4	7	0.2	10.4	7.94	1.55
2012	246.66	138.44	96.79	3	3		25.5	18.6	8.9
2010	248.075	141.9	96.788	4	7	4.6	24.73	22.61	9.32
2011	246.13	140.676	96.786	2	2	7.9	32.2	29.8	9.5
2012	246.52	139.59	96.78	2	5		18.5	12.8	2.7
2008	243.94	139.25	96.78	4	3	0.5	12.46	12.04	2.58
2012	246.77	139.51	96.78	4	3		21.8	20.9	6.6
2006	242.77	141.56	96.77	3	4	0.8	15.47	11.61	4.16
2006	242.15	142.32	96.77	3	6	2.3	27.77	16.36	7.11
2012	246.78	138.13	96.77		5		17.5	12.6	6.2
2006	242.47	142.7	96.77	3	3	1.5	21.09	13.57	8.35
2008	243.2	139.67	96.765	4	3	3.6	25.52	23.98	8.89
2012	246.45	138.8	96.76	4	3		35.5	20.2	10.5
2012	246.37	139.98	96.76	2	2		16.3	12.5	5.6
2006	242.28	142.14	96.755	4	5	0.7	17.35	10.19	3.24
2012	246.205	139.15	96.75	5	3		16.9	16.7	4.1
2004	242.12	140.21	96.75	4	4	1.2	12	13.9	4.4
2007	243.085	142.45	96.74	3	5				
2012	246.2	139.78	96.72	3	5		22.7	20.8	10.4
2012	246.07	139.79	96.71		6		39.8	34.5	
2012	246.41	138.68	96.71	4	3		17.2	11.8	7.3
2006	242.75	142.09	96.71	3	6	0.8	15.65	12.92	4.26
2006	242.77	142.29	96.71	2	0	3.7	23.2	16.3	9.8
2004	242.6	140.35	96.7	4	5	1.9	18.4	13.7	6
2012	246.89	140.38	96.69	2	3	1.7	26.4	18.7	10.8
2012	246.04	140.38	96.68	2	5	0.3	18.8	15.5	7.9
2012	246.58	139.02	96.67	4	6		14.4	12.1	5.2
2008	243.245	142.38	96.67	3	3	1.1	14.8	12.7	5.9
2012	246.16	140.76	96.67	3	5	1.3	28	13.2	8.7
2012	246.61	140.42	96.66		5	0.1	21.9	16	10.8
2012	246.34	140.52	96.65	2	2	1.3	18	12.4	4
2012	248.74	141.26	96.62		3	3.5	31.1	16.9	10.3
2012	246.95	141.27	96.62	2	4	3.1	24.1	16.7	8.9
2012	246.42	141.15	96.61	3	1	2.8	21.9	15.1	9.7

Table A34-19 continued

Yr	North	East	Depth	scars	scars	Wt (g)	L	W	T
2008	243.89	142.97	96.6	1	5	23.6	46.6	32.5	19.3
2012	246.38	140.54	96.6	4	4	2.7	21.3	15.7	7.8
2012	247.26	141.97	96.59	2	0	4.3	27.4	19.2	7.9
2006	242.98	142.44	96.585	3	3	7.7	34.8	27.8	8.2
2008	243.15	139.1	96.58	2	2	8.5	26.41	24.55	14.25
2008	244.92	139.185	96.565	3	10	2.5	19.87	22.11	7.14
2012	248.56	140.57	96.55		0	3.5	21.1	16	10.5
2006	242.22	140.15	96.55	4	5	2.7	27.4	19.7	5.6
2012	246.3	141.37	96.55	3	4	7	32	22.7	11.1
2004	243.34	141.27	96.54	3	3				
2012	246.76	141.07	96.54	4	5	8.2	38.3	25.6	10.6
2006	242.28	140.12	96.53	5	8	5.5	27.8	18.4	12.5
2008	243.345	139.67	96.53	5	5	1.4	18.02	13.16	5.38
2006	242.53	140.18	96.53	3	3	1.2	17.1	16.1	10.4
2008	243.86	139.385	96.515	3	5	2.5	30.43	17.45	7.22
2006	242.63	142.65	96.51	3	4	3.3	31.93	16.37	6.72
2006	242.34	142.635	96.51	4	7	3.1	33.03	25.23	5.76
2006	242.22	140.97	96.51	5	6	5.5	25	18.3	10.4
2008	243.78	139.36	96.48	3	6	3.2	21.1	18.58	6.61
2012	248.31	141.74	96.46	3	7	1.2	16.8	15.3	5.2
2008	244.365	139.13	96.455	2	4	1.8	16.8	16.12	6.2
2008	243.59	139.235	96.455	5	7	0.9	17.55	14.86	2.02
2008	243.59	139.235	96.455	5	7	0.9	17.55	14.86	2.02
2006	242.07	142.49	96.45	3	5	4.3	31.5	20.7	9.03
2006	242.35	140.84	96.45	3	4	1.6	22	12.6	6.1
2008	244.54	139.695	96.45	3	5	20.6	37.92	39.38	13.07
2012	248.44	141.16	96.44	3	3	2.8	25.1	19	6.7
2006	242.58	141.29	96.43	3	3	6.8	30.3	17.8	10.5
2006	242.93	142.925	96.42	3	3				
2006	242.24	140.68	96.36	3	6	4.4	30.55	23.39	8.14
2008	243.51	139.15	96.36		3	3.4	26.4	19.2	9.1
2006	242.81	141.83	96.35	4	6	2.3	20.6	16.4	5.5
2006	242.7	141.11	96.35	3	4	0.5	17.5	7.8	3.9
2006	242.64	141.865	96.34	3	7	0.4	13.79	11.94	4.41

Table A34-19 continued

Yr	North	East	Depth	scars	scars	Wt (g)	L	W	T
2006	242.83	141.27	96.34	4	4	1.7	18.9	16.7	5.1
2008	243.1	142.93	96.32	3	2	1.5	21.7	15.6	9.4
2006	242.83	141.47	96.31	3	5	2.9	24.1	24	7.4
2006	242.85	141.05	96.29	3	1	2.7	20.1	17.3	6
2004	243.56	141.61	96.29	3	5	0.5	12.9	11.4	2.9
2006	242.02	140.52	96.28	2	1	6	26.8	19.2	9.5
2006	242.17	140.19	96.255	4	5	4.4	29.66	23.31	7.6
2008	243.68	142.675	96.24	3	2	3.1	27.8	18.4	11
2006	242.53	140.3	96.24	3	4	5.2	31.7	25.5	7.7
2008	243.05	142.03	96.225	3	0	19.5	50.5	27.8	16.7
2006	242.31	141.47	96.22	3	6	10.8	25.4	25.59	18.21
2006	242.33	141.82	96.21		1	8.6	34.9	32.3	10.3
2008	242.94	142.32	96.21	3	4	38	55.7	41.7	21.6
2008	242.19	142.5	96.21	3	1	5.7	25.8	21.2	9
2009	243.7	139.37	96.2	3	5	10.5	31.9	25.2	13.2
2009	243.7	139.37	96.2	3	5	10.5	31.9	25.2	13.2
2008	242.75	142.93	96.18	4	4	5.4	28.4	21.2	11.2
2005	243.51	140.08	96.175	2	0	2.4	23.2	21.4	7.5
2008	242.31	142.46	96.17	3	2	1.5	16.6	11.9	7.6
2008	242.19	142.64	96.17	3	2	2.7	26.1	15.5	5.5
2008	242.48	142.72	96.165	2	2				
2006	242.39	141.18	96.16	4	1	2.2	16.3	17.5	4.6
2006	242.7	140.68	96.155	4	6	5.7	29.17	15.56	11.64
2005	243.92	140.15	96.15		3	1.9	26.1	16.5	6.2
2008	244.58	139.63	96.15	2	7	0.4	10.2	8.8	4.3
2006	242.4	141.46	96.145	2	1	1.6	24.03	15.9	5.79
2008	242.25	142.94	96.13		7	2.2	18.1	15.6	7.4
2008	242.33	142.14	96.13	3	2	0.4	12.6	11.7	3.2
2008	242.17	142.67	96.13	2	1	13	30.1	30.1	13.3
2005	244.65	140.05	96.12	4	5	1.5	0.3	10.2	8.3
2008	242.69	142.71	96.115	3	6	0.4	14.7	10.9	3.6
2006	242.76	140.88	96.11	3	4	0.5	11.2	9.8	3.7
2008	242.28	142.68	96.1	2	3	34.5	67.5	36.8	14.4
2005	243.755	140.21	96.1	3	4	2	20.9	19.7	8.3

Table A34-19 continued

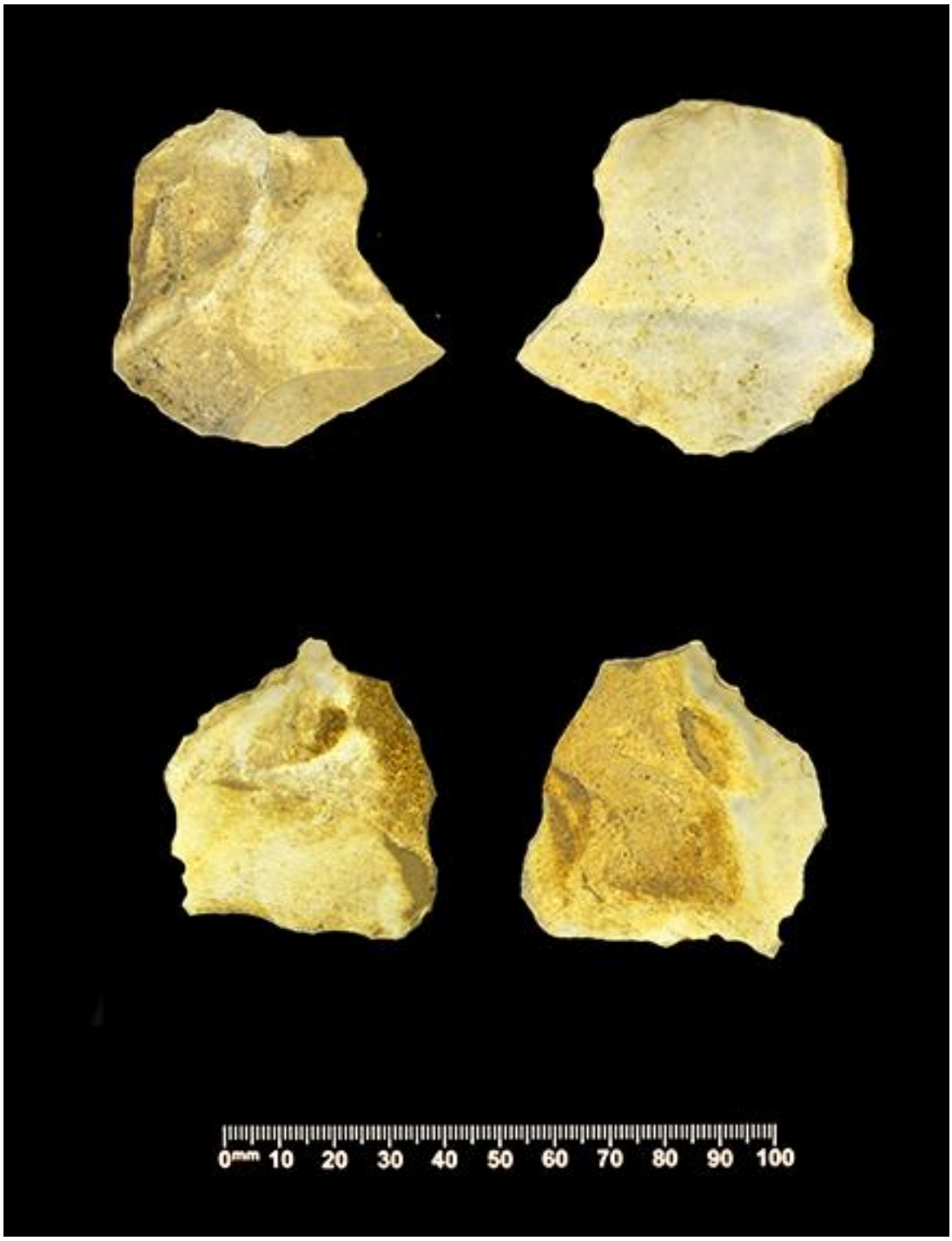
Yr	North	East	Depth	scars	scars	Wt (g)	L	W	T
2008	242.66	142.24	96.085	3	3	0.7	9.7	9.4	4.3
2008	242.02	142.01	96.05	3	1	4.1	24.2	22.8	8.4
2008	242.48	142.21	96.025	2	5	78.9	66.9	56	23.7
2008	243.29	142.76	96.025	3	3	1.1	17.1	15.3	5.3
2008	243.48	142.69	96.02		2	22.3	49.1	29.1	18.9
2006	242.22	140.62	96.01	3	4	0.4	9.07	10.97	4.7
2006	242.35	140.43	96	2	2	4.8	28.5	17.1	6.5
2008	242.79	142.99	96	2	5	4.6	23.8	16	12.7
2006	242.63	140.38	95.95	3	5	12	31.1	29.3	10.6
2006	242.14	140	95.93	3	6	1	17.1	13.6	4.3
2008	242.8	142.67	95.92		4	10.8	42	30.1	13.6
2008	242.32	142.99	95.9	3	4	3.9	27	26.4	7.2
2009	243.64	139.78	95.87	3	6	1.9	23.84	18.74	57.4
2009	243.64	139.79	95.815	2	4	6.3	33.49	21.47	8.87
2008	242.06	142.25	95.81	3	3	2.9	25.4	17.4	9.3
2006	242.33	140.8	95.8	4	3	0.5	16.22	15.62	3.17
2007	242.11	141.17	95.78	3	6	2.1	18.7	16	8.8
2007	242.24	141.32	95.76	2	0	16.2	36.3	28.8	11.6
2008	242.89	142.65	95.76		4	20.5	32.2	29.6	14.2
2008	242.67	142.59	95.76		4	3.1	15.4	13.8	15.8
2008	242.67	142.59	95.76	3	6	3.1	15.4	13.8	15.8
2007	242.44	140.75	95.75	2	4	28.2	46.4	33.5	16.8
2008	242.33	142.34	95.75		2	35.6	36.3	32.4	23.6
2007	242.04	140.25	95.75	3	4	7.4	29.6	22.3	9.9
2008	242.38	142.31	95.74	3	3	0.1	12	6.4	2.5
2007	242.2	140.54	95.74	4	4	1	16.1	11.9	5.1
2007	242.45	140.47	95.73	2	6	1.6	16.4	13.9	5.1
2005	243.34	140.24	95.71	2	3				
2008	242.91	142.9	95.71	3	5	1.5	16.1	15	6.8
2008	242.22	142.05	95.71	3	4	2	22.7	15.6	8.2
2008	242.14	142.23	95.705	3	4	1.5	21.2	12.4	8
2008	242.44	142.98	95.705	3	7	0.8	19.1	11.1	6
2007	242.93	141.36	95.7	4	6	2.6	18.3	17.7	7.2
2008	242.72	142.55	95.7	3	3	8.4	29.7	19.9	12.9

Table A34-19 continued

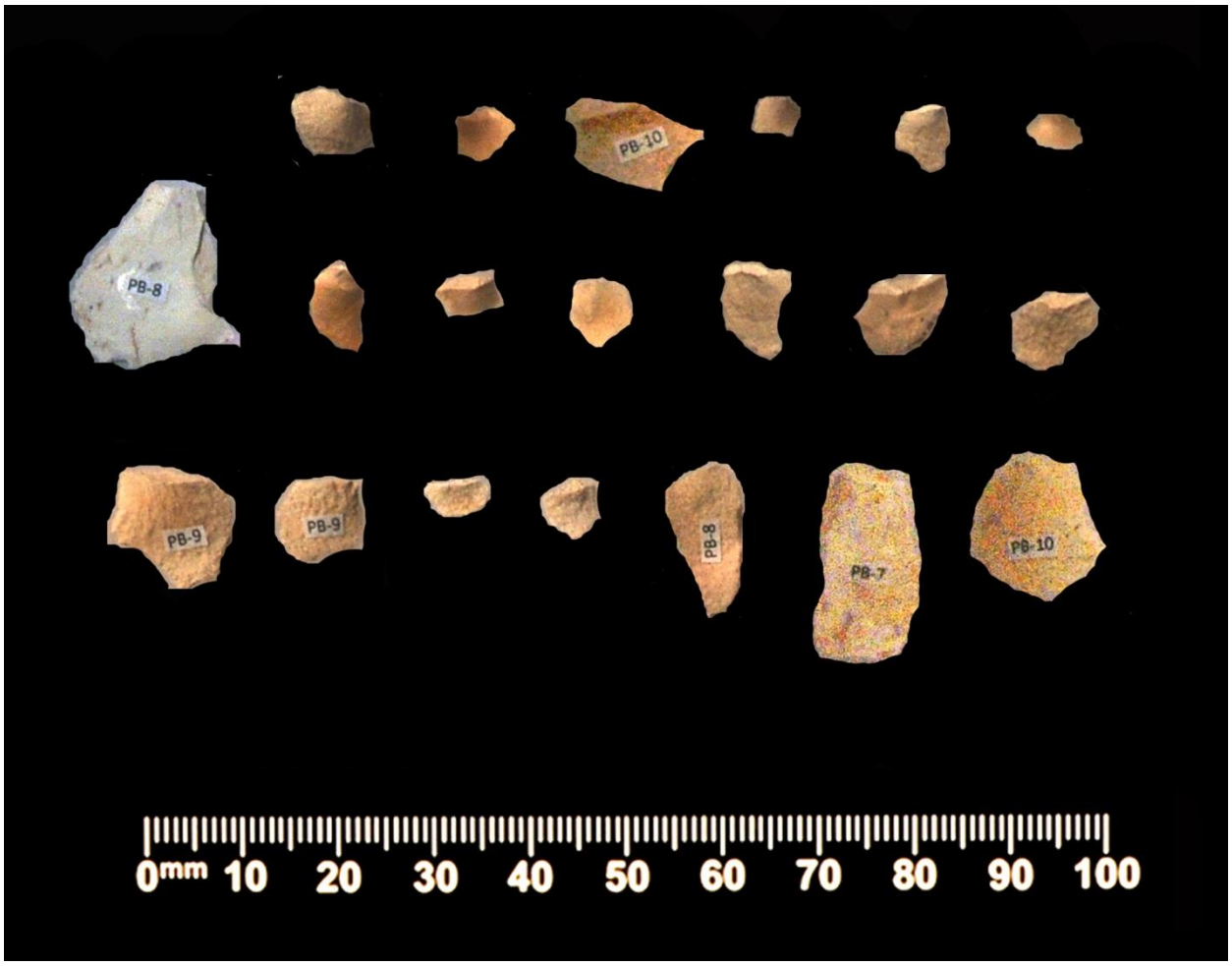
Yr	North	East	Depth	scars	scars	Wt (g)	L	W	T
2008	242.14	142.53	95.7	4	2	14.9	37.9	27.2	12.6
2007	242.29	140.04	95.69	1	3	11.8	39.3	20.6	15.1
2009	242.55	142.49	95.67	3	5	1	19.1	11.8	4.9
2009	242.12	142.24	95.66	4	6	3	27.1	19.7	6.3
2009	242.64	142.41	95.66	4	4	3	25.3	16	9.6
2007	242.08	141.99	95.655	4	5	2.9	21.9	23.4	5.8
2005	243.05	141.7	95.65	2	4	5.5	26.8	21.9	9.9
2009	243.6	139.76	95.645	2	4	10.1	31.3	24.7	8.5
2009	242.87	142	95.63	3	4	2.5	23.8	13.6	6.6
2009	242.58	142.31	95.63	4	6	5	27.1	22.3	8
2009	242.77	142.36	95.63	4	7	2.1	18.9	14.7	8.7
2009	242.56	142.29	95.61	2	6	4.9	27.9	18.4	15.2
2009	242.26	142.5	95.61	3	3	2.8	28.3	19.3	5.5
2009	242.32	142.04	95.6	4	3	1	17.2	11.2	4.2
2009	242.47	142.43	95.6		6	4.5	25.4	16.7	13.3
2009	242.39	142.11	95.6	3	3	1.2	24.5	10.2	6.2
2009	242.74	142.86	95.6		3	4.8	29.2	17.1	9.5
2009	243.96	139.3	95.595	3	4	4.3	31.2	19.9	8.6
2009	242.63	142.59	95.59	2	3	3.1	27.5	16.3	15.6
2005	243.56	140.36	95.58	4	6	19.2	45.5	32.5	11.4
2009	242.78	142.01	95.58	4	4	7.4	31.6	25.8	10.7
2009	242.48	142.37	95.58		2	24.8	54	34.2	12.9
2009	242.35	142.14	95.57		4	3.5	24	16.2	2.1
2009	242.85	142.75	95.57	3	4	31.3	43.5	37.9	17.6
2009	242.04	142.97	95.57	3	4	4.5	22.4	23.9	14.4
2009	242.18	142.2	95.56	5	5	28.3	52.1	37.7	16.5
2007	242.11	141.71	95.56	3	7	11.7	34.6	22.7	9.7
2007	242.4	141.79	95.56	3	5	9.2	34.5	33.8	10.7
2009	242.28	142.38	95.55	4	5	1.7	22.9	14.9	8.4
2007	242.84	141.85	95.55	3	5	10.5	44.9	30.4	11.5
2009	242.66	142.87	95.55		1				
2009	243.9	139.31	95.55	3	1	0.6	15.7	13.8	5.3
2009	243.39	139.77	95.55	2	3	1.4	24.1	16.8	6
2009	242.49	142.11	95.52	2	2	1.3	17.4	15.6	5.3

Table A34-19 continued

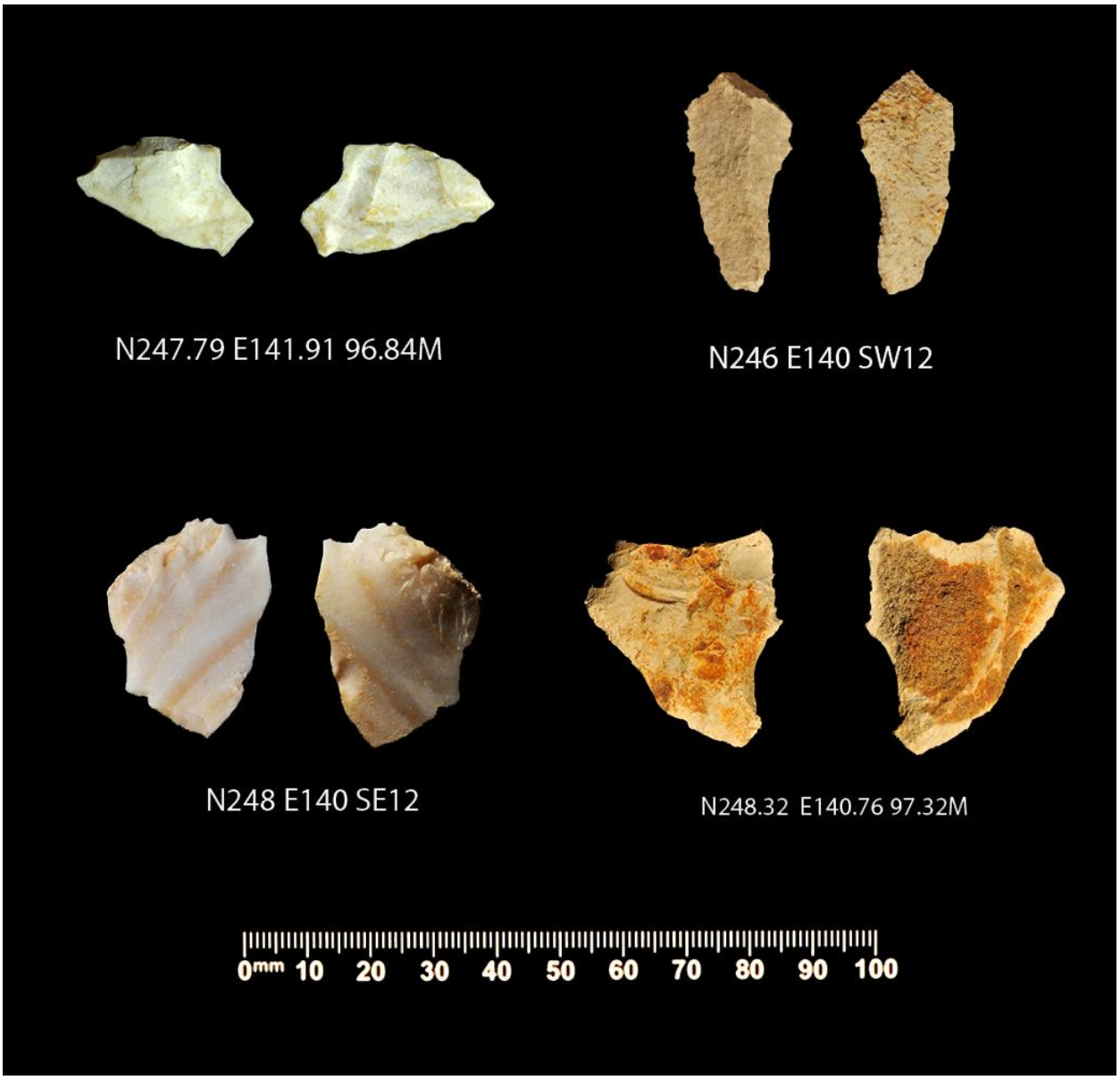
Yr	North	East	Depth	scars	scars	Wt (g)	L	W	T
2009	243.11	139.58	95.52	4	3	4.7	26.46	20.96	9.2
2009	243.77	139.75	95.52	4	5	2.4	15.81	17.4	7.13
2009	243.92	139.8	95.51	2	2	7.6	26.39	29.69	8.55
2005	243.3	141.94	95.5	2	5	0.9	15.6	8.4	5.4
2009	243.28	139.68	95.5	4	4	5	29.36	20.87	7.86
2009	243.46	139.66	95.495	4	6	10.1	32.17	29.94	10.66
2009	243.79	139.5	95.48	3	4	1.5	14.6	16.19	6.18
2009	243.59	142.275	95.47	3	2	13.9	38.8	28.7	14.2
2009	243.86	139.84	95.47	3	5	1	17.71	11.05	6.09
2007	242.83	140.74	95.46	4	6	24.1	52.9	34.6	14.2
2009	243.22	139.12	95.455	3	3	0.3	13.41	7.83	30.1
2009	242.86	142.8	95.375	3	6	1.9	20.98	15.2	5.24
2009	243.445	142.14	95.045		7	1.6	20.4	14.9	5.3
2007	242.3	140.11	95	4	1	3.3	21.6	22.1	6.8
2007	242.535	141.77	95	3	7	0.7	18.5	10.3	5.5



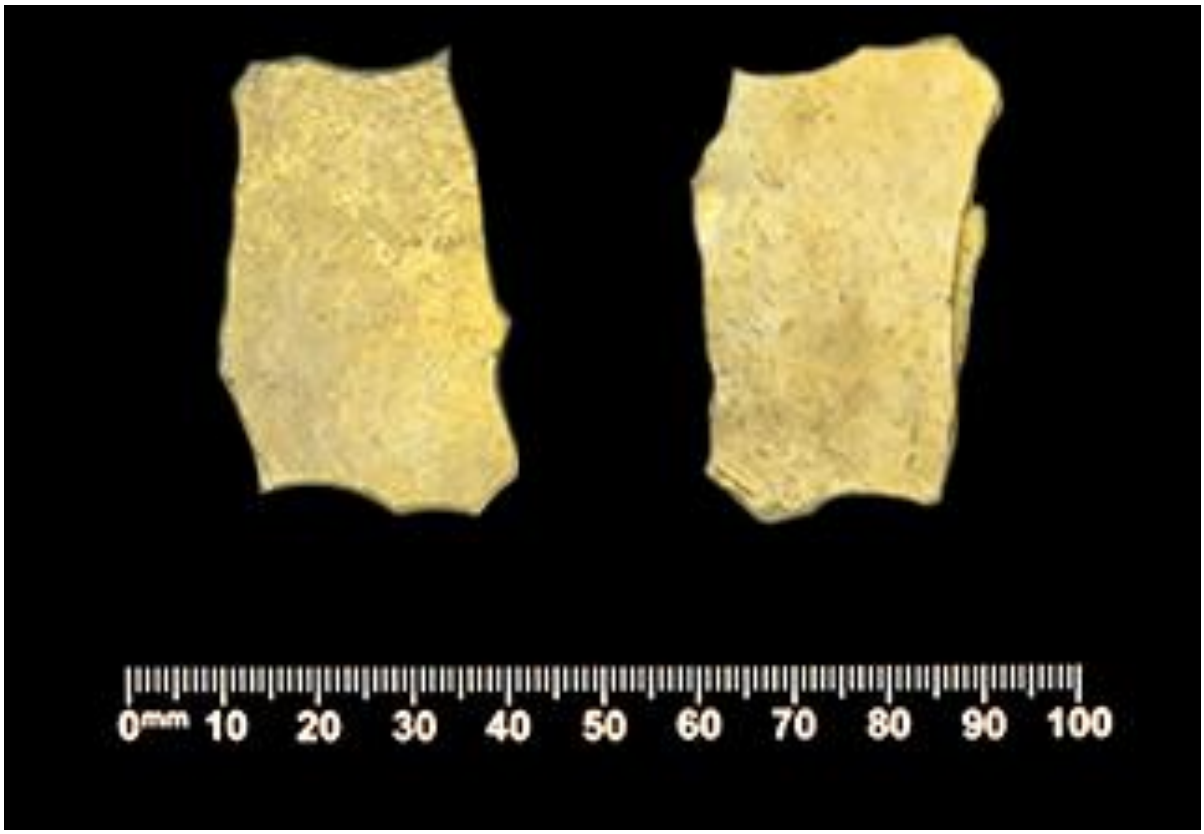
A34-1
Complete Conchoidal platform bearing flakes recovered from the screen bags (N244 E140) from the Clovis Deposits.



A34-2
Complete Conchoidal platform bearing flakes recovered from the screen bags from the Pleistocene Sands pre Clovis deposits. Artifacts from units N242 E140, N242 E142, N244 E140, and N244 E142 (97.45-97.15M).



A34-3
Complete Conchoidal platform bearing flakes from the Pleistocene Terrace.



A34-4

Bend Break from the Clovis screen bag. This example likely formed from a snapped flake fragment. Artifact from unit N244 E142.



A34-5
Bend Breaks from Pleistocene Sands

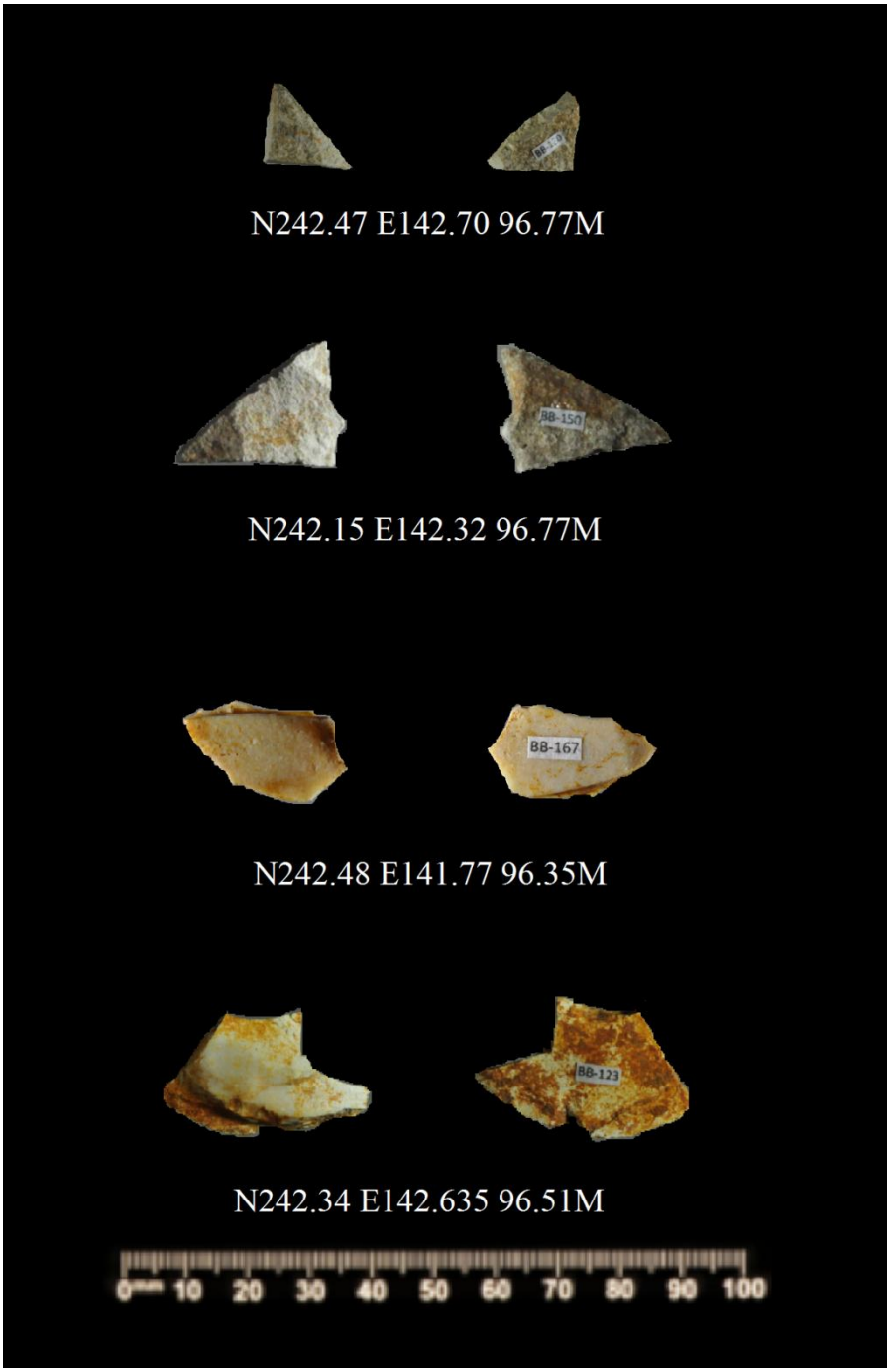


Figure A34-6
Unmodified Bend Breaks from the Pleistocene Terrace at the Topper Site

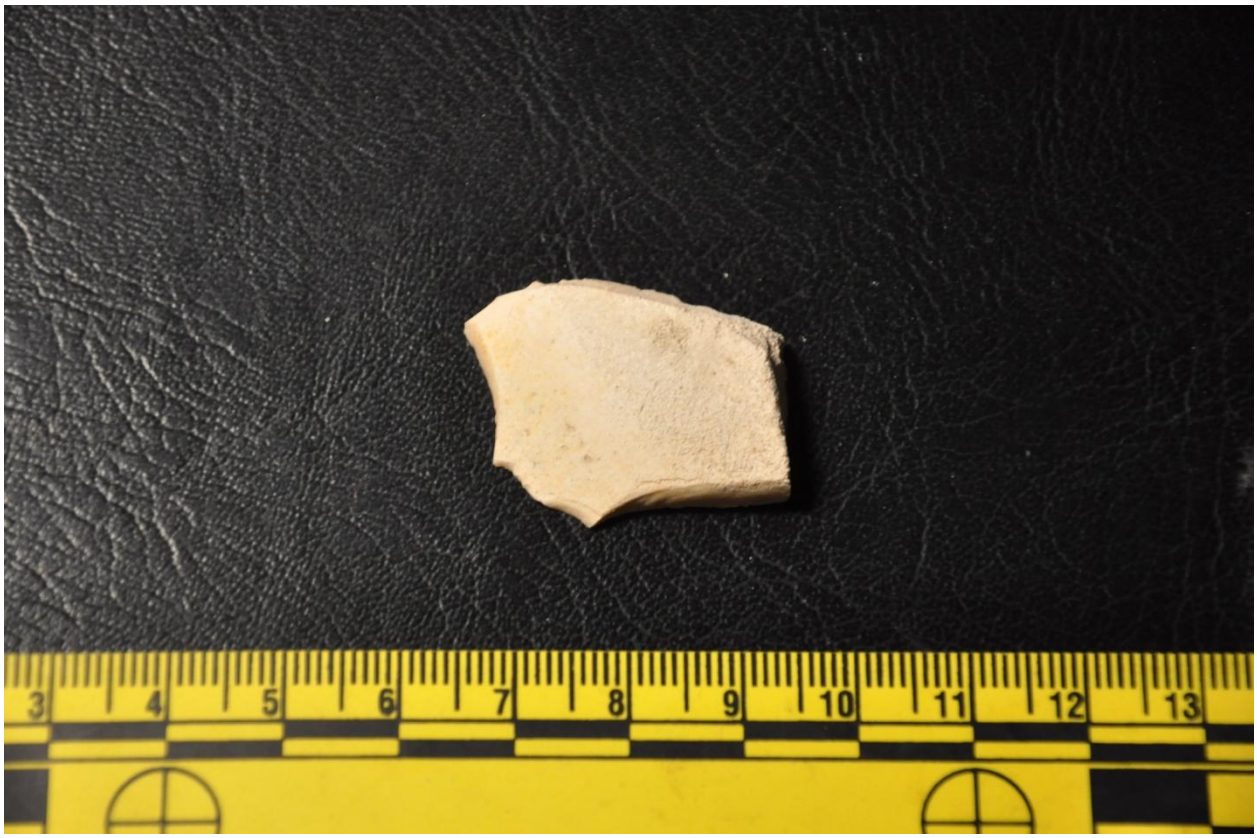


Figure A34-7
View of modified Bend Breaks from the Pleistocene Sands at the Topper Site.

APPENDIX 35

RESULTS OF STONE TOOL ANALYSIS

Table A35-1
Biface morphology by Type

	MALA	**Clovis**	**Pleistocene Sands (n=3)**
Length	62.33	70.24	48
Width	29.37	40.7	31.6
Thickness	20.57	19.24	20.2
Weight	23.4	58.62	30.1

Table A35-2
Clovis flake tool morphology by type

Artifact	**Length**	**Width**	**Thickness**	**Removal**	**Retouch**
Blades	52.13	18.78	10.06	6.25	4.8
Unifaces/scrapers	55.63	36.51	20.08	20.26	8.95
Utilized flakes	41.7	29.42	11.49	5.87	7

Table A35-3
Pleistocene Sands flake tool morphology by type

Artifact	Length	Width	Thickness	Removal	Retouch
Blades	31.57	17.37	9.56	2.8	3.33
Unifaces/scrapers	69.84	51.53	28.41	13.86	8.97
Utilized flakes	48.78	35.36	17.86	6.36	6.11

Table A35-4
Pleistocene Terrace flake tool morphology by type

Artifact	Length	Width	Thickness	Removal	Retouch
Blades	27.34	16.78	6.68	2.53	4.5
Unifaces/scrapers	55.68	39.5	21.59	6.8	5.37
Utilized flakes	38.42	28.17	16.17	4.15	3.34

Table A35-5

Distribution of Clovis artifacts for selected attribute conditions by mean index of modification value.

Interpretation Free Category	Number Modified Artifacts	Percent Modified Artifacts	Mean Index of Modification Value
Flake	5	13.51	4
Broken Flake	1	2.7	7
Flake Fragment	24	64.86	3.8
Debris	6	16.21	3.8
Formless Debris	1	16.21	1
Pebble	0	2.7	0
Cortical Class			
Cortical	1	2.7	5
Secondary	19	51.35	4.2
Interior	17	45.94	3.64
Scar Directionality			
Uni	4	10.81	2.25
Bi	0	0	0
Multi	33	89.18	4.21
<10 scars	14	37.83	2.71
>10 scars	23	62.16	4.78
River Chert	3	8.10	4.6
Upland Chert	34	91.89	3.9

Table A35-6
Distribution of Pleistocene Sands artifacts for selected attribute conditions by mean index of modification value.

Interpretation Free Category	Number Modified Artifacts	Percent Modified Artifacts	Mean Index of Modification Value
Flake	8	7.47	4.87
Broken Flake	9	8.41	3.11
Flake Fragment	42	39.25	4.02
Debris	38	35.51	3.5
Formless Debris	10	9.34	2.8
Pebble	0	0	0
Cortical Class			
Cortical	2	1.8	3.5
Secondary	78	70.9	3.65
Interior	30	30	3.9
Scar Directionality			
Uni	7	6.48	3.14
Bi	4	3.70	3.5
Multi	97	89.81	3.94
<10 scars	65	59.09	4.48
>10 scars	45	40.90	3.16
River Chert	0	0	-
Upland Chert	108	100	-

Table A35-7

Distribution of Pleistocene Terrace artifacts for selected attribute conditions by mean index of modification value.

Interpretation Free Category	Number Modified Artifacts	Percent Modified Artifacts	Mean Index of Modification Value
Flake	13	5.93	3.25
Broken Flake	6	2.73	2.66
Flake Fragment	48	21.91	3.7
Debris	91	41.55	2.8
Formless Debris	51	23.28	2.5
Pebble	10	4.56	2.1
Cortical Class			
Cortical	20	9.13	2.6
Secondary	137	62.55	2.9
Interior	62	28.31	2.9
Scar Directionality			
Uni	56	25.80	2.55
Bi	14	6.45	2.5
Multi	147	67.74	3.09
<10 scars	184	82.88	2.72
>10 scars	38	17.11	3.88
River Chert	0	0	0
Upland Chert	219	100	2.9

Table A35-8
Frequency of modified artifacts with Index of Modification values between 2 and 5.

Interpretation Free Artifact Category	Artifacts with IM values > 2 < 5	%	Artifacts with IM values < 2 and > 5	%
Clovis				
Flake	3	12.5	1	7.6
Broken Flake	0	0	2	15.38
Flake Fragment	18	72	7	53.84
Debris	4	16.6	2	15.38
Formless Debris	0	0	1	7.6
Pebbles	0	0	0	0
Pleistocene Sands				
Flake	5	5.37	3	17.64
Broken Flake	7	7.52	2	11.74
Flake Fragment	37	39.78	5	29.41
Debris	33	35.48	6	35.29
Formless Debris	10	10.75	1	5.88
Pebbles	0	0	0	0
Pleistocene Terrace				
Flake	10	5.6	3	7.31
Broken Flake	6	3.38	0	0
Flake Fragment	39	22.03	8	19.51
Debris	73	41.24	18	43.9
Formless Debris	42	23.72	9	21.95
Pebbles	7	3.95	3	7.31

Table A35-9
Attributes for Pleistocene Terrace bend breaks by subunit

	97.25-96.50M (43.2%)		**96.50-95.25M (56.8%)**	
	Modified	**Unmodified**	**Modified**	**Unmodified**
Weight (g)	4.81	3.25	8.72	5.29
Length (mm)	24.57	22.65	29.51	23.47
Width (mm)	19.22	17.00	22.04	18.32
Thickness (mm)	8.45	7.26	10.98	8.45
Break Angles (n)	3.22	3.09	3	3
Removal Scars (n)	2.78	2.25	3.14	3.14
% multi-dir. Scars (n)	62.5	57.74	66.12	75.36
%Cortical Bend Breaks (n)	12.50	11.2	19.35	14.49
%Interior Bend Breaks (n)	28.12	22.53	24.19	31.28
Modified Bend Breaks	32	*	62	*
%Modified	31.68	*	47.69	*
Segments of modification (n)	2.25	*	2.5	*
Retouch scars (n)	2.33	*	2.5	*
%Bi marginal retouch	0	*	4.58	*
% Formless Debris	40.62	69.01%	40.32	71.01

Table A35-10
Ratio of Tools to Debitage types for the Clovis, Pleistocene Sands and Pleistocene Terrace at the Topper Site (28AL23).

	Tool	**Debitage (Mapped)**	**Debitage (screen)**	**Ratio**
Clovis				
biface/complete flake	75	27	4538	0.02:1
Bend break/complete flake	8	27	4538	.001:1
Bend break/debris	8	17	2305	.003:1
Bend break/broken qtz.	8	10	-	.8:1
Pleistocene Sands				
biface/complete flake	1	44	5248	.0001:1
Bend break/complete flake	45	44	5248	.008:1
Bend break/debris	45	166	11261	.003:1
Bend break/broken qtz.	45	52	-	.86:1
Pleistocene Terrace				
biface/complete flake	0	122	1047	0:1
Bend break/complete flake	234	122	1047	.22:1
Bend break/debris	234	546	4862	.04:1
Bend break/broken qtz.	234	431	-	.54:1

Table A35-11
Ratio of Tools to Debitage types for the Clovis, Pleistocene Sands and Pleistocene Terrace at the Topper Site (28AL23)

	Biface/flk	**Bend break/Debris**	**Bend break/quartz**	**Bend break/flake**
Clovis	.02:1	.003:1	.8:1	.001:1
P. Sands	.0001:1	.003:1	.86:1	.008:1
P. Terrace	0:01	.04:1	.54:1	.22:1
	Flakes increase relative to tools	Debris slightly decrease relative to tools	Broken quartz pebbles increase relative to tools	Flakes significantly decrease relative to tools (no association)

.



Figure A35-1
Clovis Core tools. At bottom; Flake Core, in middle; Flake Core fragment, at top; Blade Core fragment.

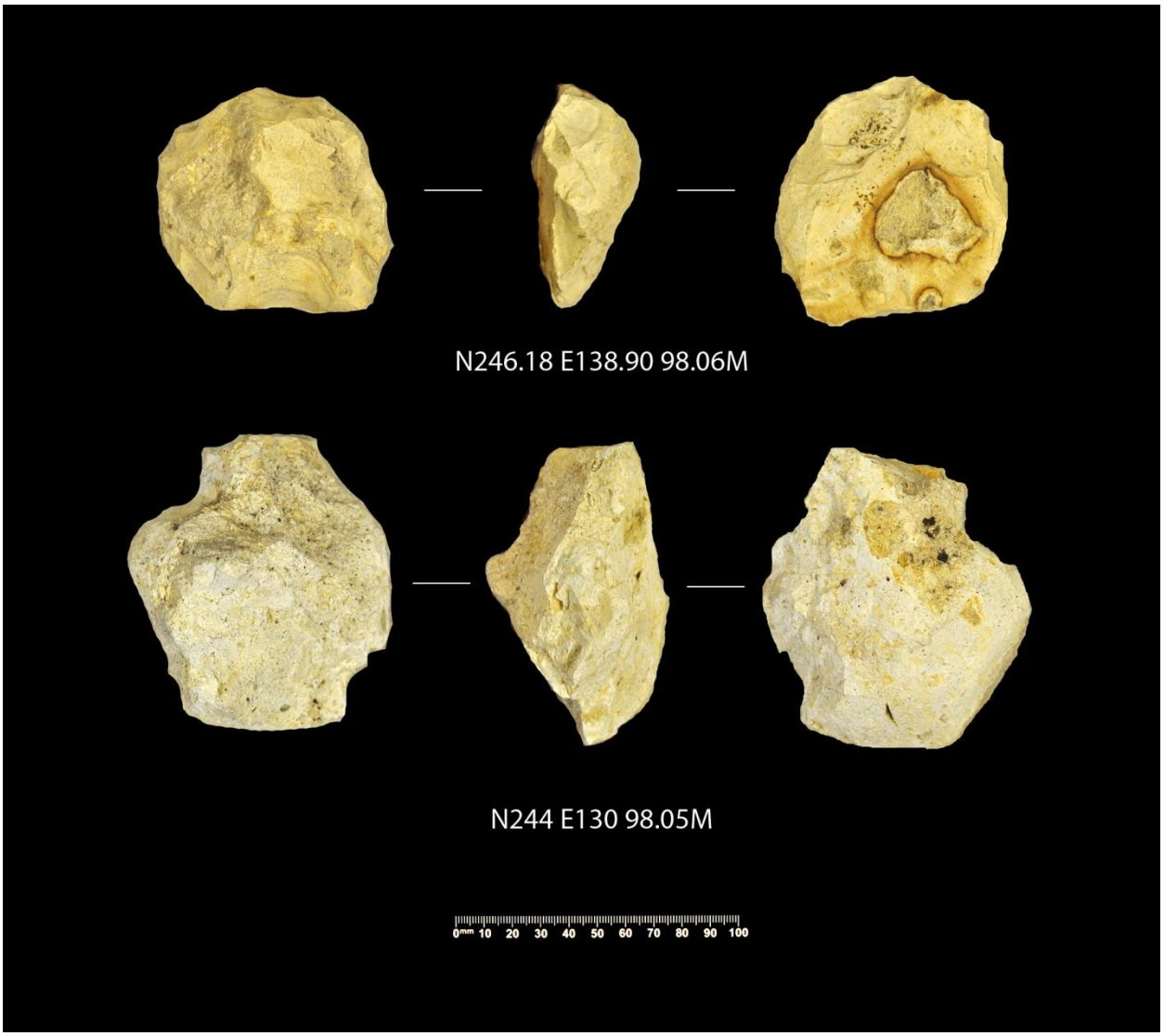


Figure A35-2
Clovis Biface Cores.



Figure A35-3
Clovis Flake Cores from unit N244 E140

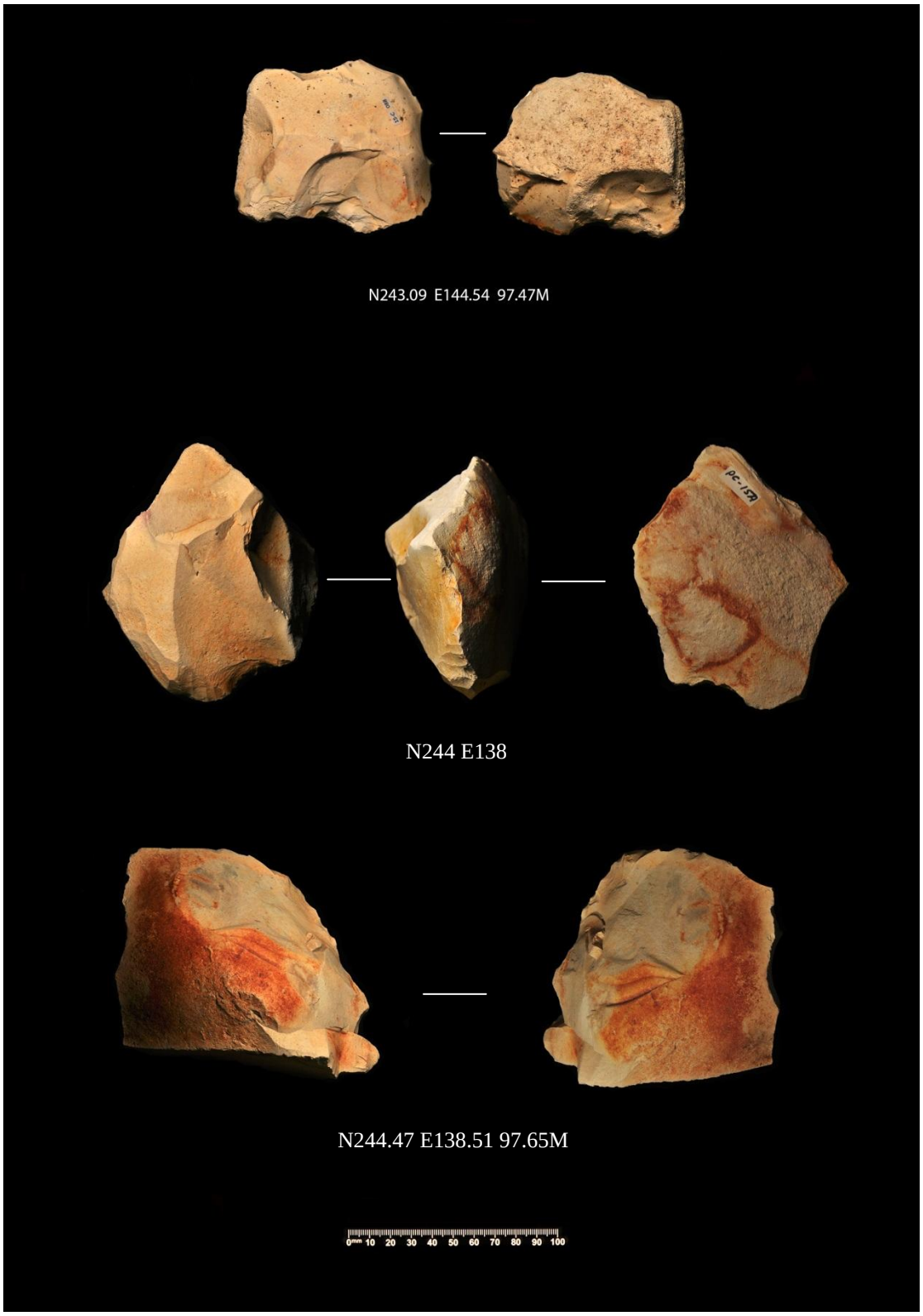


Figure A35-4A
Core Tools from the Pleistocene Sands at the Topper Site (38AL23).



Figure A35-4B
Core Tools (top and middle) and anvil (bottom) from F90 from the Pleistocene Sands at the Topper Site (38AL23).





Figure A35-5
Core Tools from the Pleistocene Sands at the Topper Site (38AL23).



Figure A35-6
Core Tool from the Pleistocene Sands at the Topper Site (38AL23). Retouch and use scars visible along lateral margin of core tool.



Figure A35-7
Flake core from the Pleistocene Terrace at the Topper Site (38AL23).



Figure A35-8
Flake core from the Pleistocene Terrace at the Topper Site (38AL23).



Figure A35-9
Flake core from the Pleistocene Terrace at the Topper Site (38AL23).

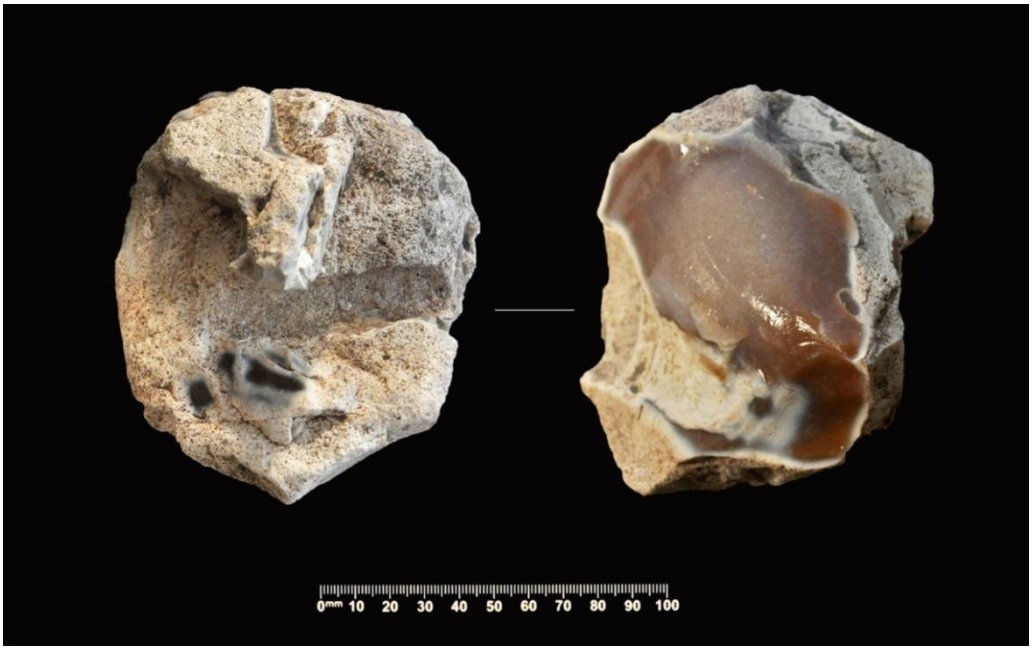


Figure A35-10
Flake core from the Pleistocene Terrace at the Topper Site (38AL23).

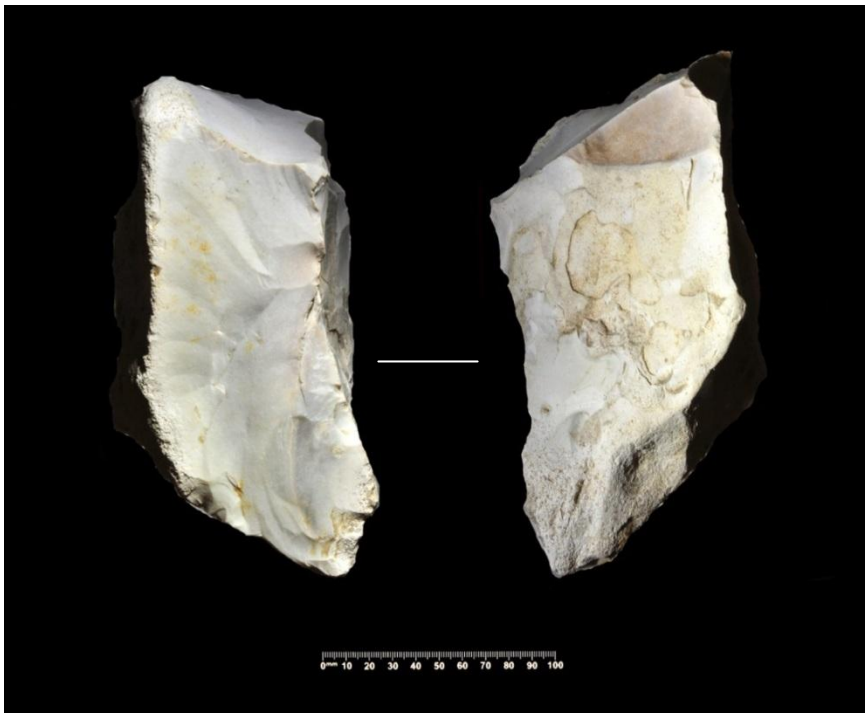


Figure A35-11
Flake core from the Pleistocene Terrace at the Topper Site (38AL23)

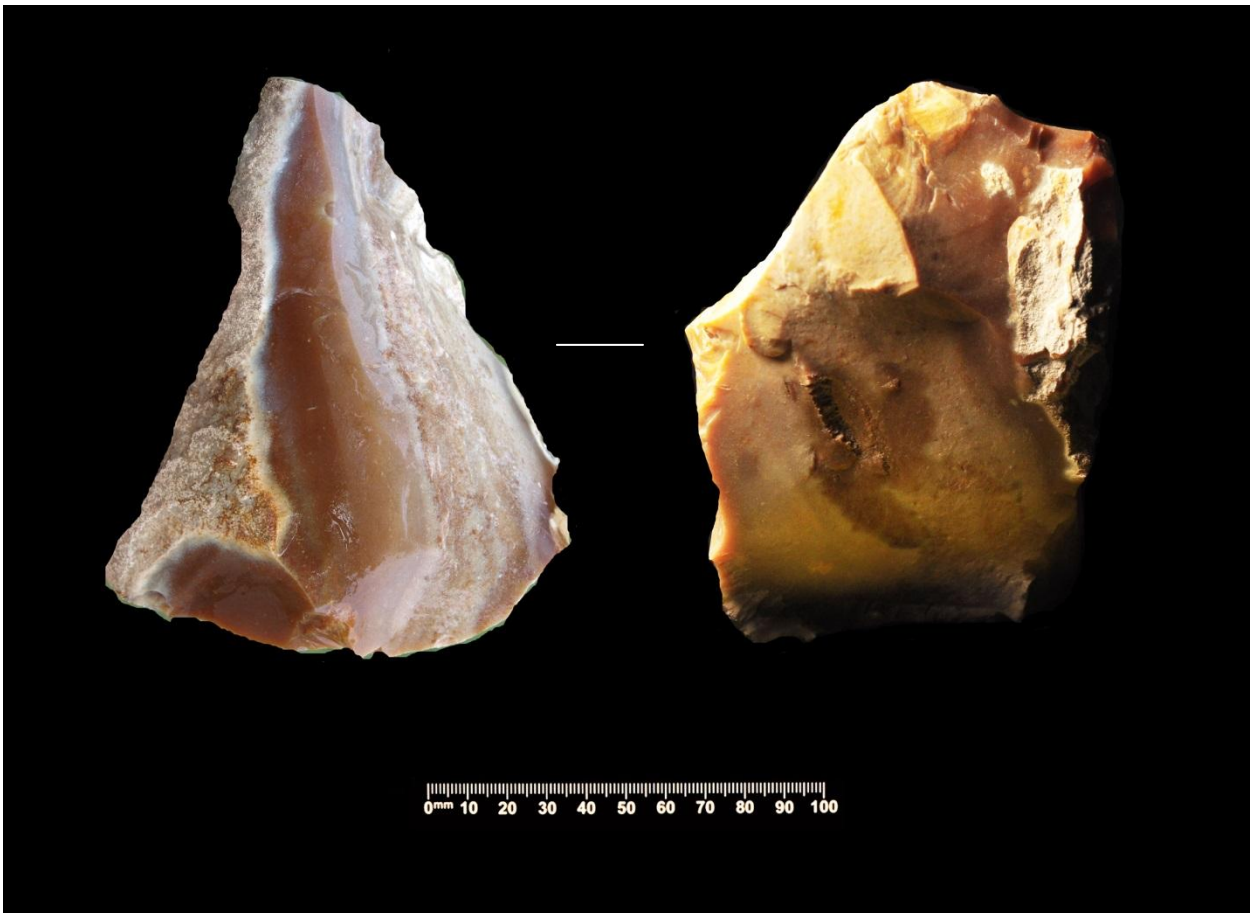


Figure A35-12
Flake core from the Pleistocene Terrace at the Topper Site (38AL23)

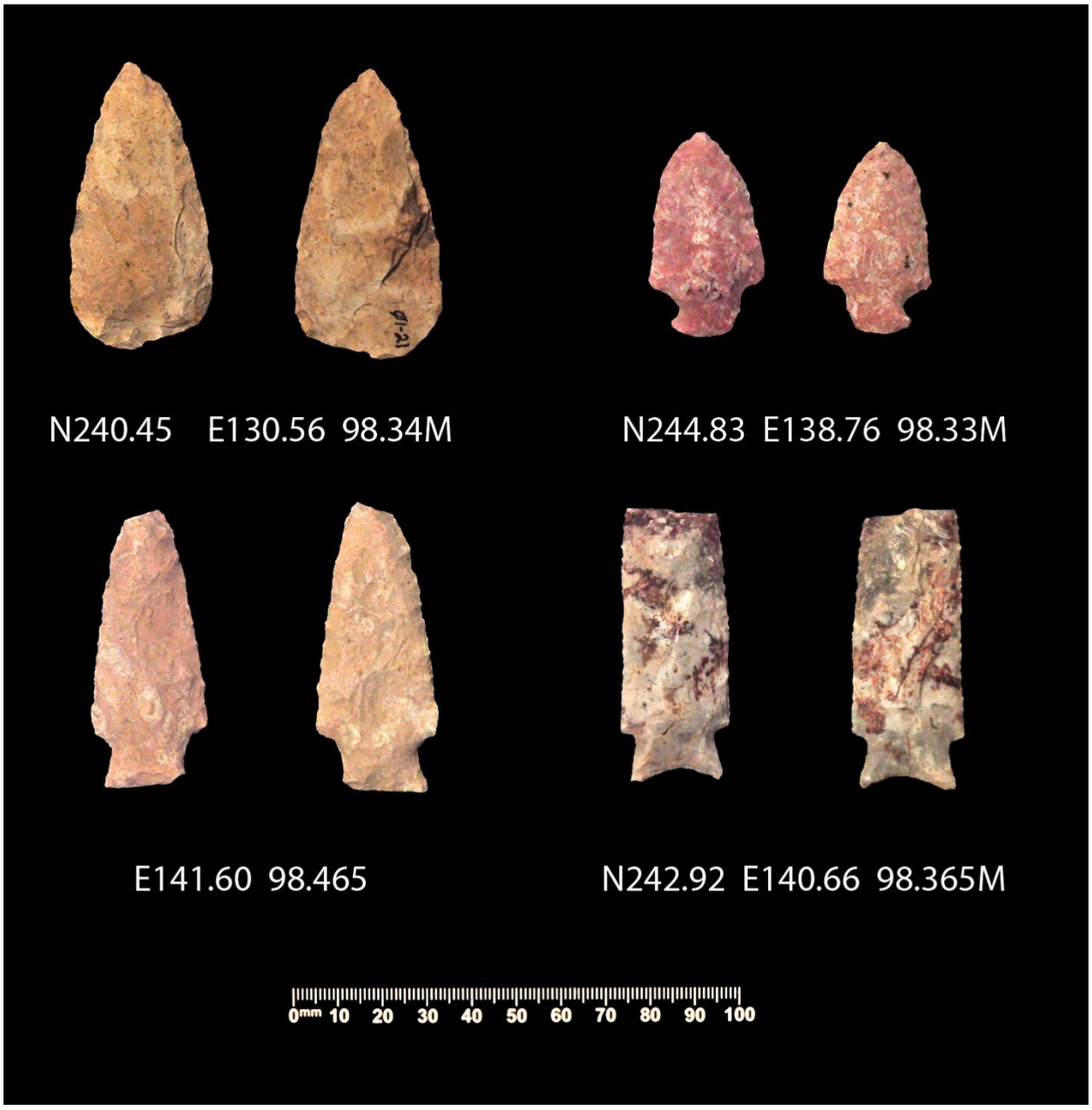


Figure A35-13
MALA points from the Holocene Sands at the Topper Site (38AL23) Top left; preform, Top right and Bottom left; MALA points with broken bases, Bottom right; Broken MALA point.

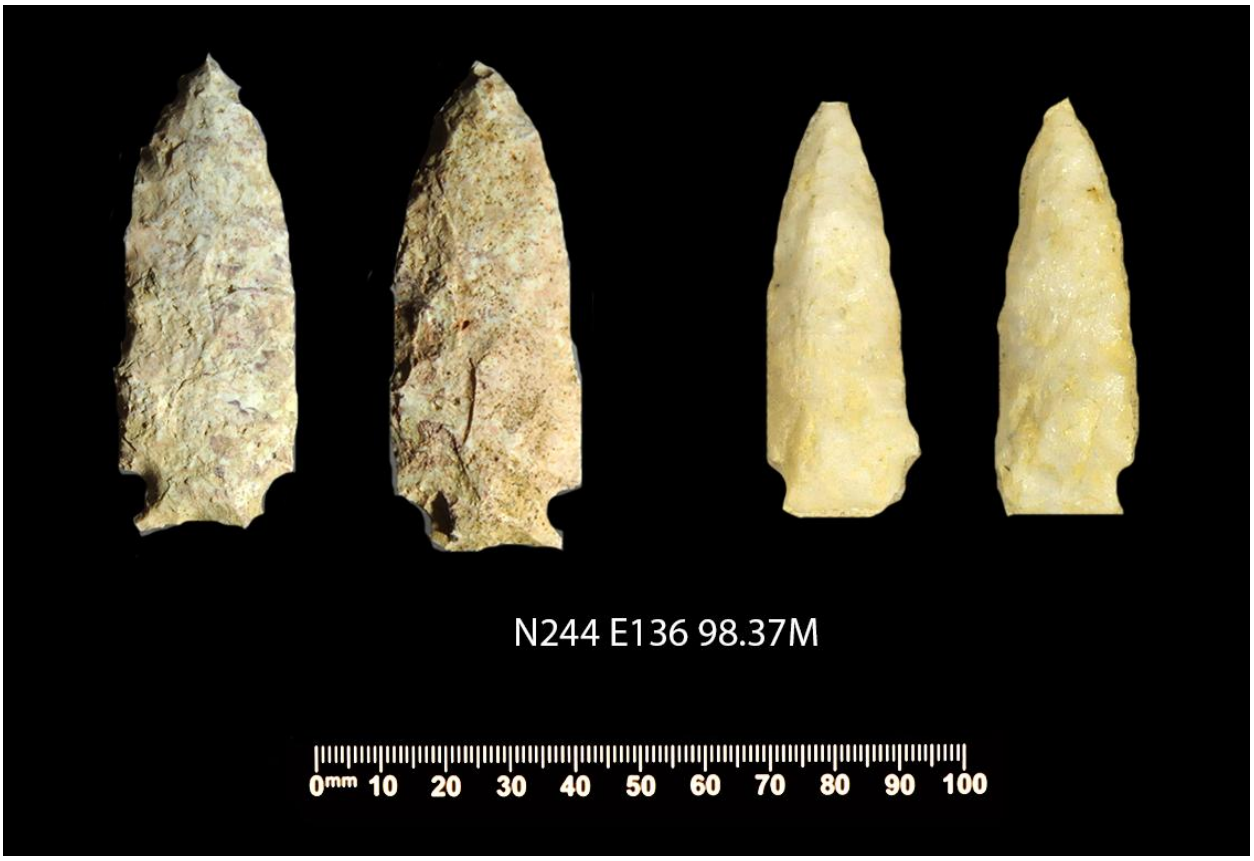


Figure A35-14
MALA points from the Holocene Sands at the Topper Site (38AL23).



Figure A35-15
Taylor points from the Holocene deposits at the Topper Site (38AL23).

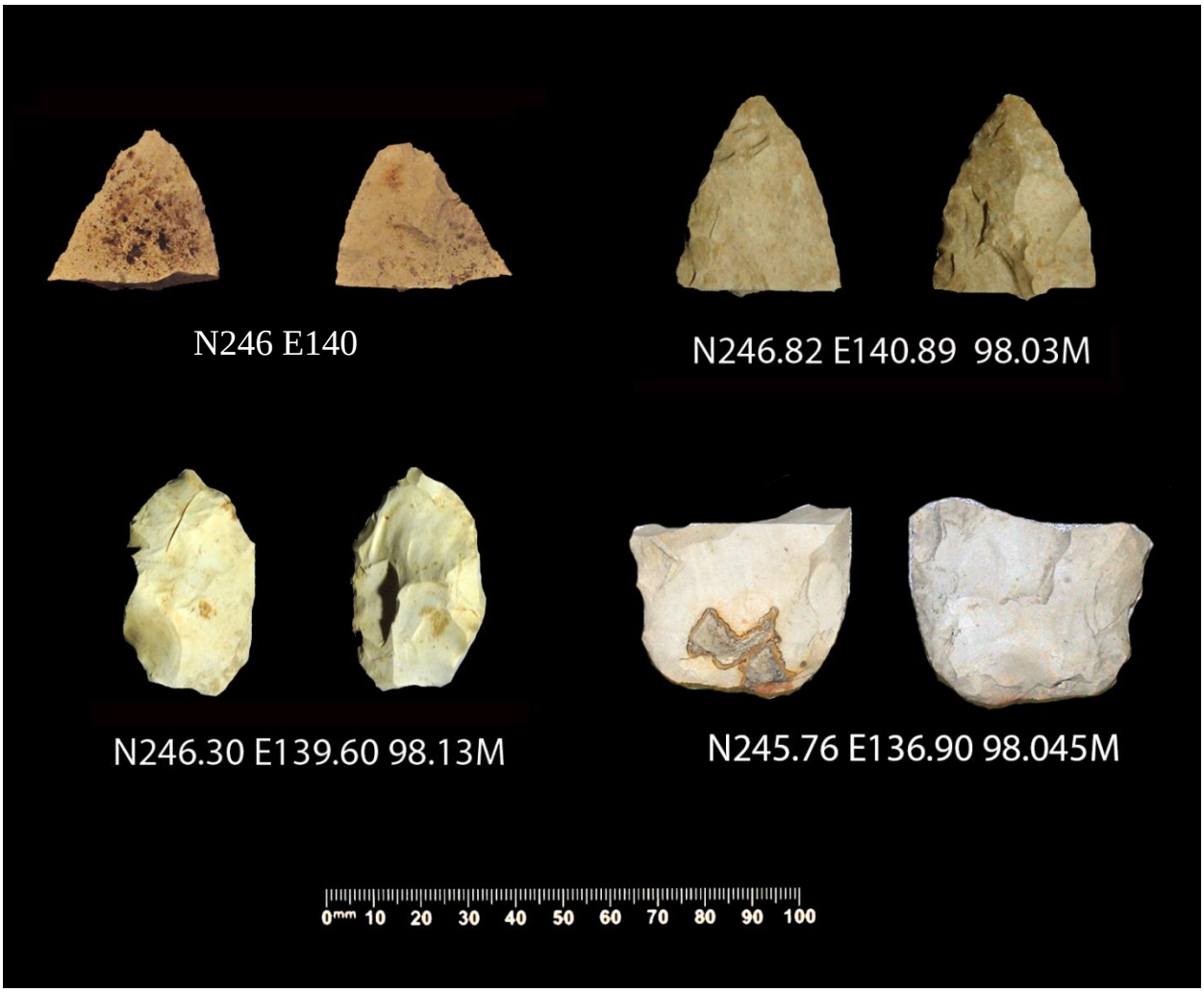


Figure A35-16
Clovis Bifaces and Biface fragments.

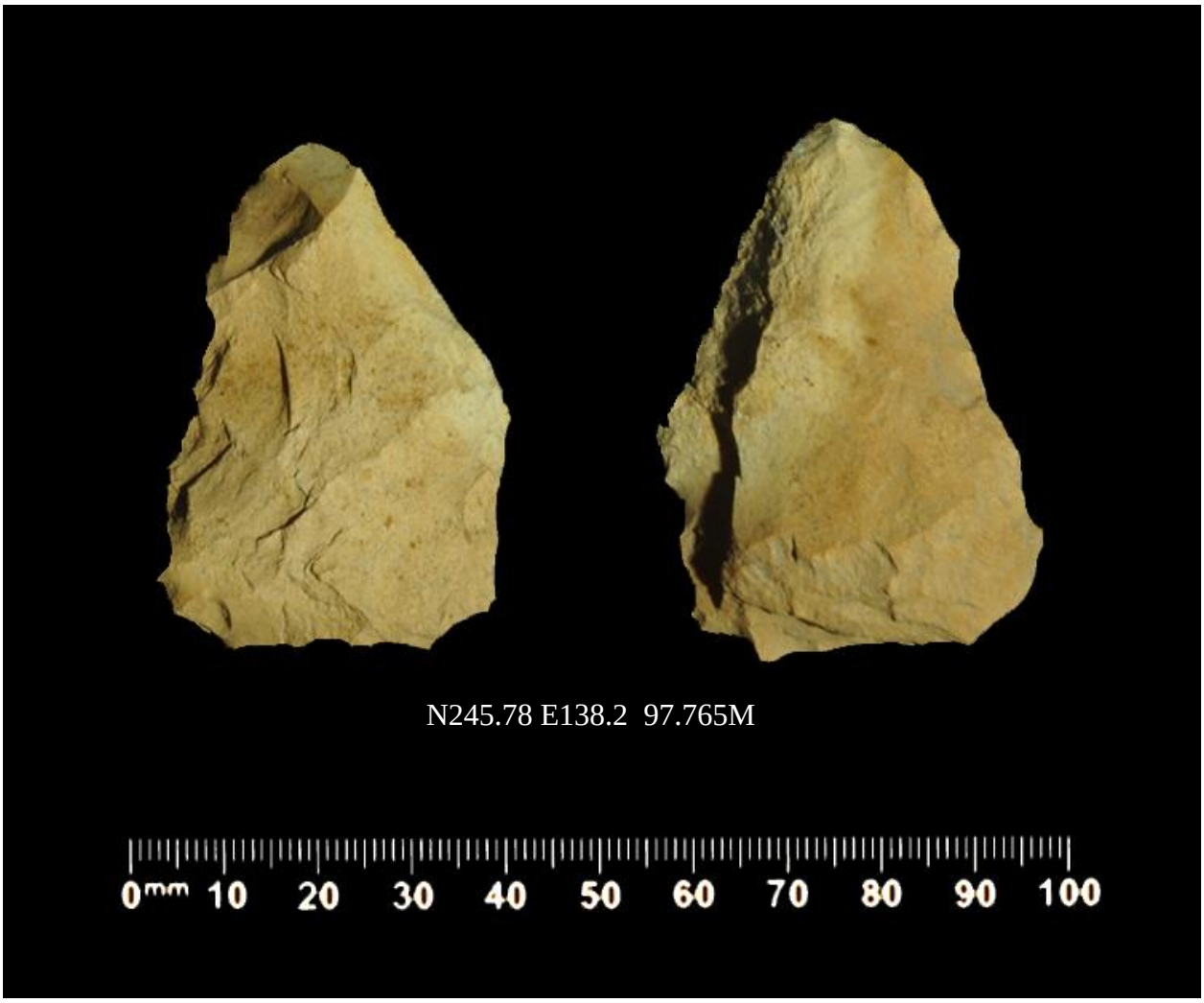


Figure A35-17
Biface from the Pleistocene Sands at the Topper Site (38AL23). N245.78 E138.2 at a depth of 97.765m

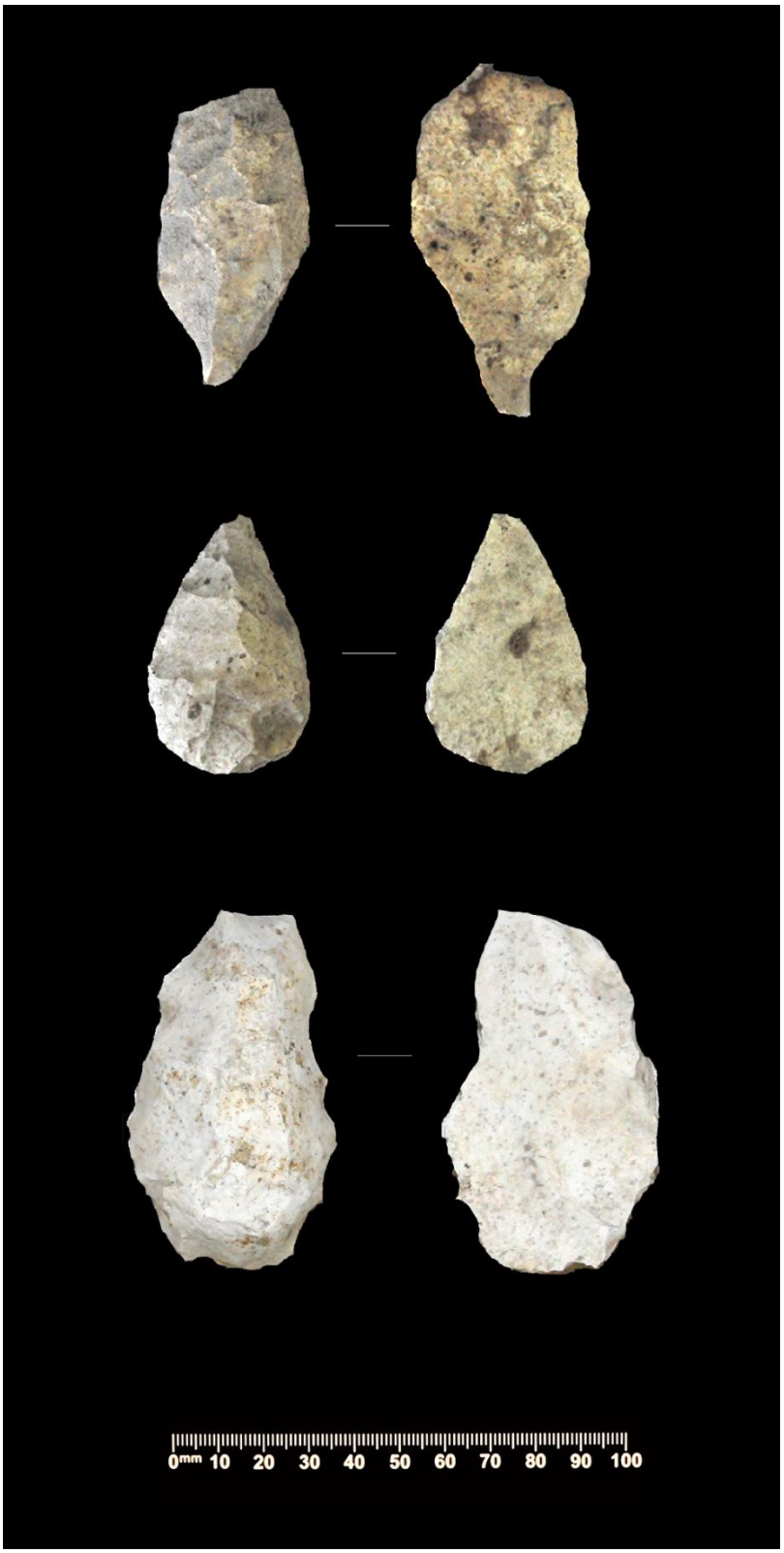


Figure A35-18
Clovis Flake tool from the Topper Site (38AL23); Scrapers
2095



Figure A35-19
Clovis Flake tools from the Topper Site (38AL23), Scrapers



Figure A35-20
Clovis Flake Tools from the Topper Site (38AL23), Blades from unit N244 E130.

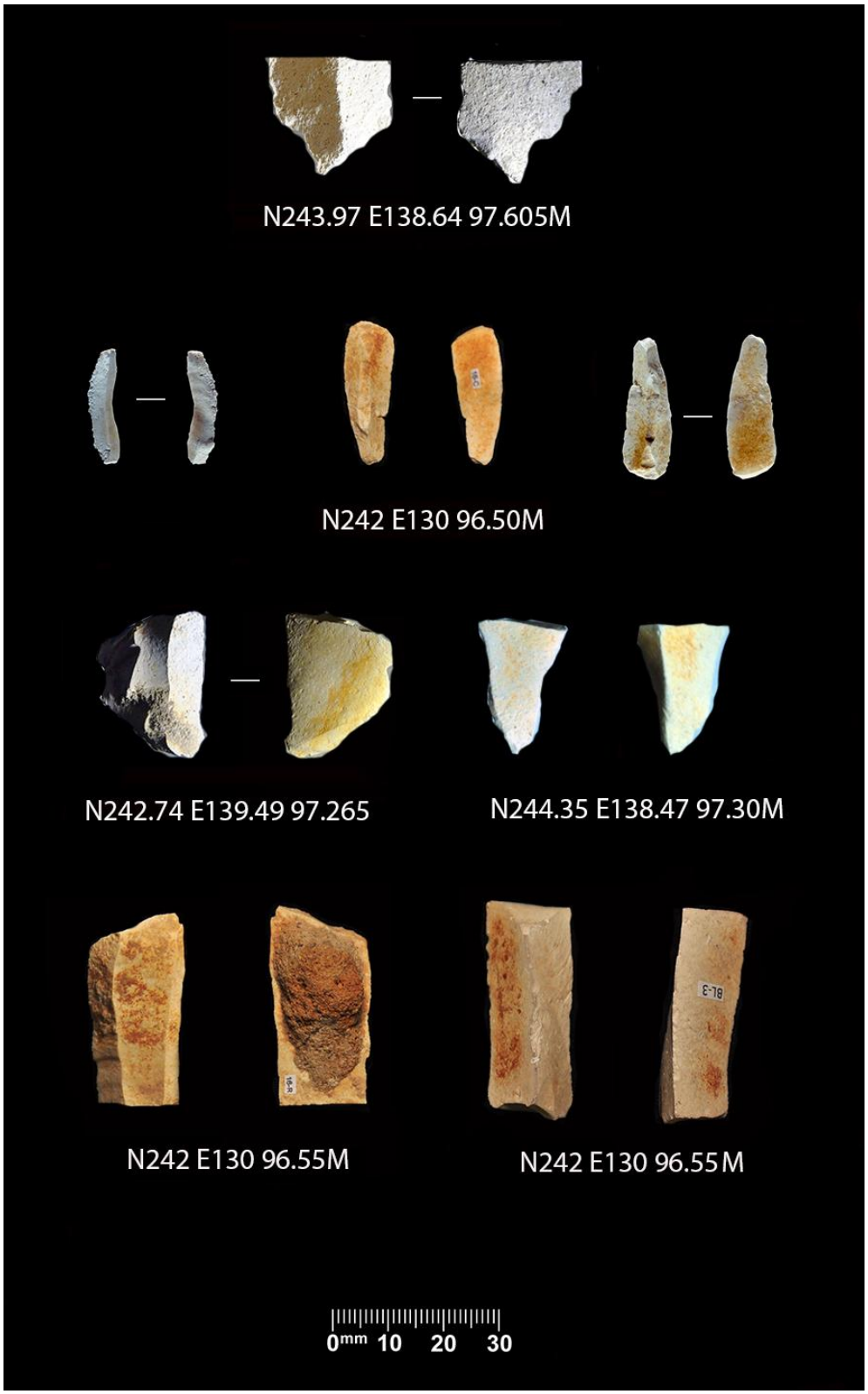


Figure A35-21
Flake Tools from the Pleistocene Sands from the Topper Site (38AL23); Piece Plotted blades.



Figure A35-22
Flake Tools from the Pleistocene Sands from the Topper Site (38AL23); Blades recovered from the screen.

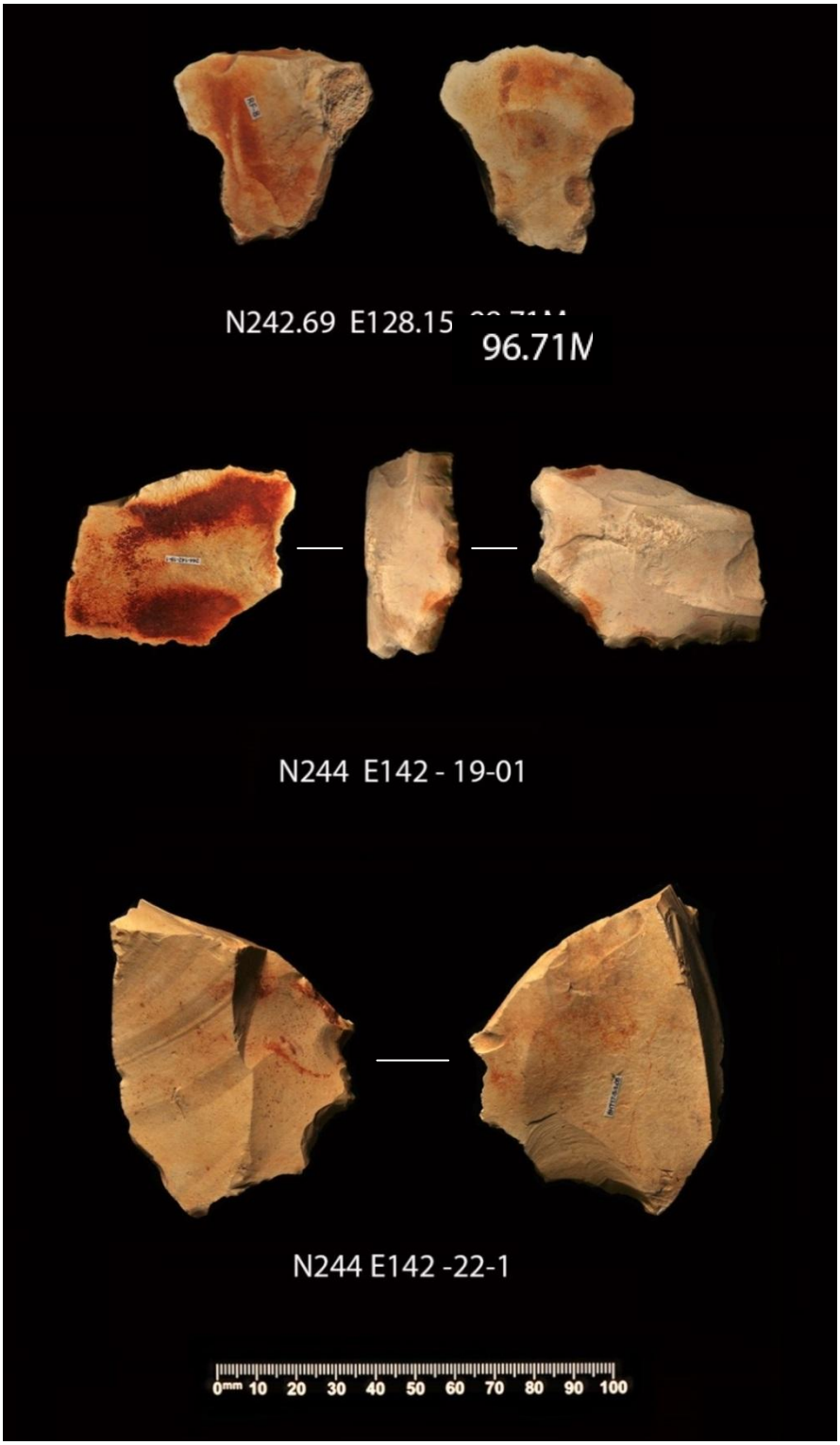


Figure A35-23
Flake Tools from the Pleistocene Sands pre Clovis deposits at the Topper Site (38AL23); Chert scrapers. Note compression rings on flake removal from tool at bottom indicative of force .



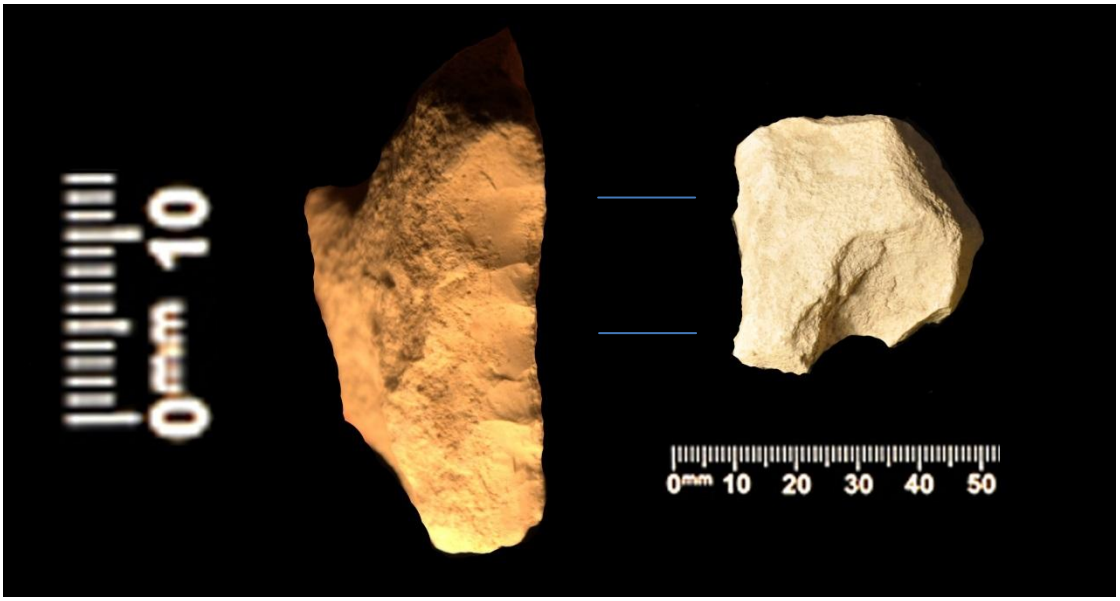


Figure A35-24
Flake Tools from the Pleistocene Sands pre Clovis deposits at the Topper Site (38AL23); Chert Scrapers showing edge modification.



Figure A35-25
Flake Tools from the Pleistocene Sands pre Clovis deposits at the Topper Site (38AL23); Chert Scrapers showing modification and utilization along end.



Figure A35-26
Flake Tools from the Pleistocene Sands pre Clovis deposits at the Topper Site (38AL23); Chert Scrapers. Artifact at center left displays evidence of retouch





Figure A35-27
Flake Tools from the Pleistocene Sands pre Clovis deposits at the Topper Site (38AL23); Chert Scrapers with evidence of modification in the form of retouch.



Figure A35-28
Flake Tool from the Pleistocene Sands pre Clovis deposits at the Topper Site (38AL23); Chert Scraper with evidence of modification in the form of retouch along the lateral margin of the artifact.



Figure A35-29
Flake Tools from the Pleistocene Sands pre Clovis deposits at the Topper Site (38AL23).
Utilized Flakes.



Figure A35-30
Flake Tools from the Pleistocene Terrace pre Clovis deposits at the Topper Site (38AL23);.
Blades



Figure A35-31
Flake Tools from the Pleistocene Terrace pre Clovis deposits at the Topper Site (38AL23); Scrapers

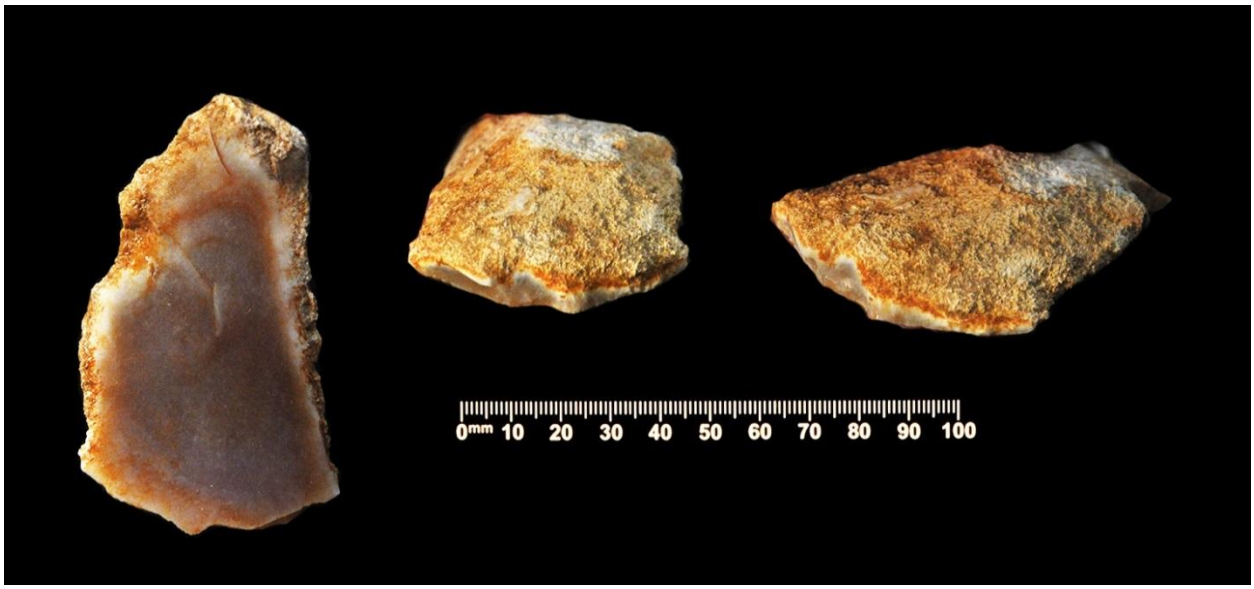


Figure A35-32
Flake Tools from the Pleistocene Terrace pre Clovis deposits at the Topper Site (38AL23); Scraper sowing evidence of modification in the form of retouch along the distal terminus of the artifact.



Figure A35-33
Flake Tools from the Pleistocene Terrace, Utilized Flakes at the Topper Site (38AL23).

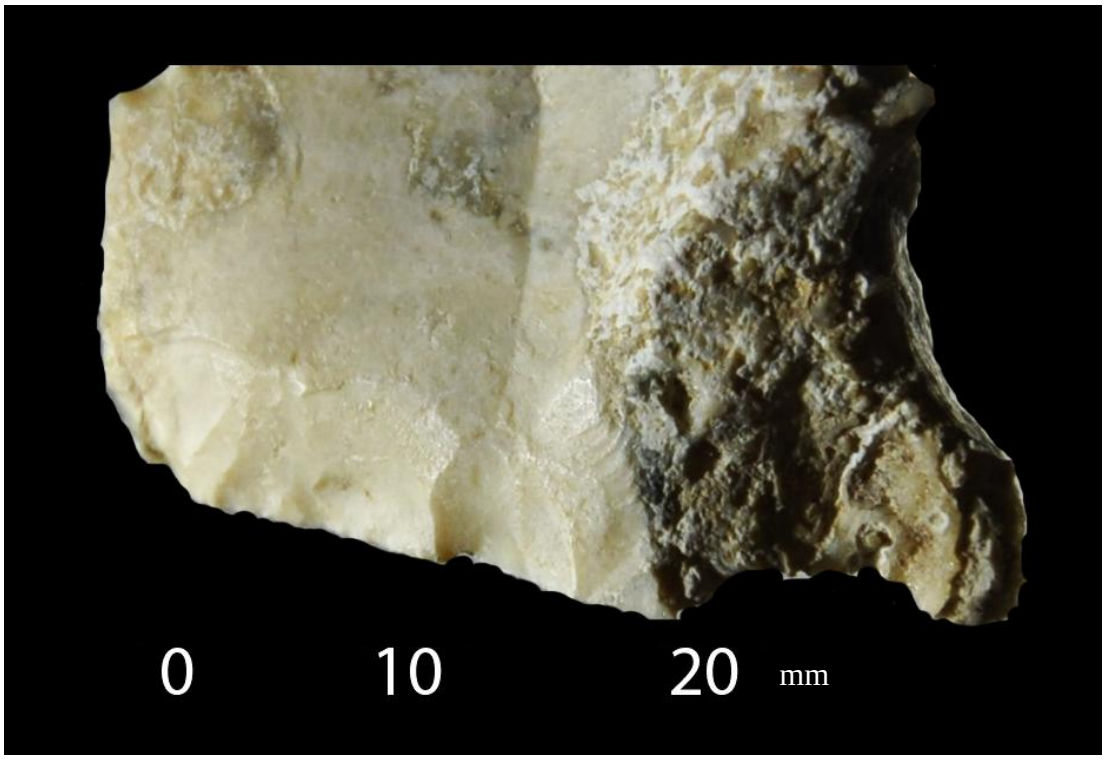


Figure A35-34
Flake Tool from the Pleistocene Terrace, Utilized Flake from the Topper Site (38AL23).
N242.23 E141.28 96.02M.



Figure A35-35
Modified Bend Breaks from Pleistocene Sands at the Topper Site (38AL23).



Figure A35-36
Bend Breaks from Pleistocene Terrace at the Topper Site (38AL23).

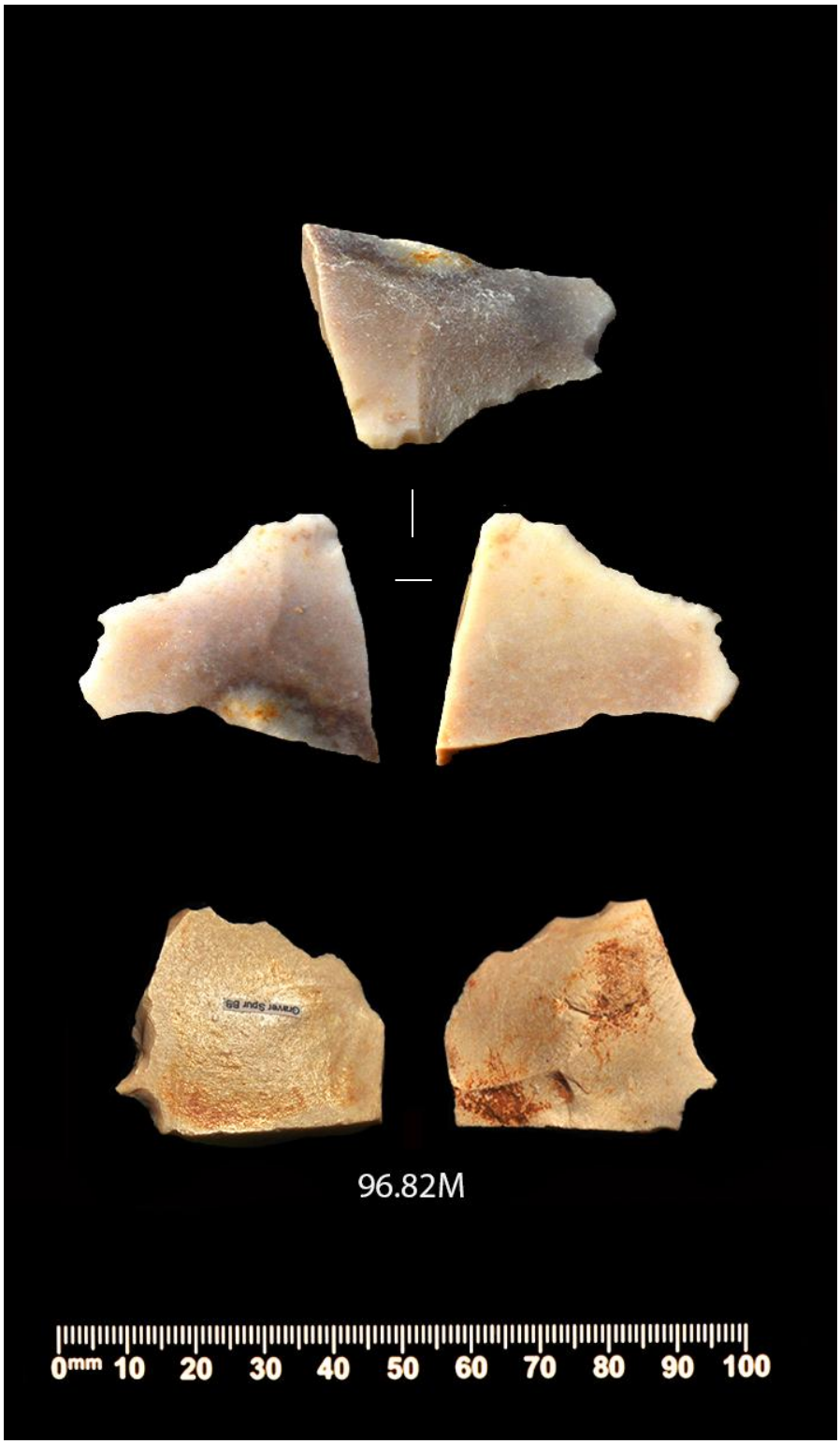


Figure A35-37
Modified Bend Breaks and bend break graver from Pleistocene Terrace at the Topper Site (38AL23). At top; N246.36 E139.91 96.87 m, at bottom; N242.68 E139.93 depth 96.82 m.

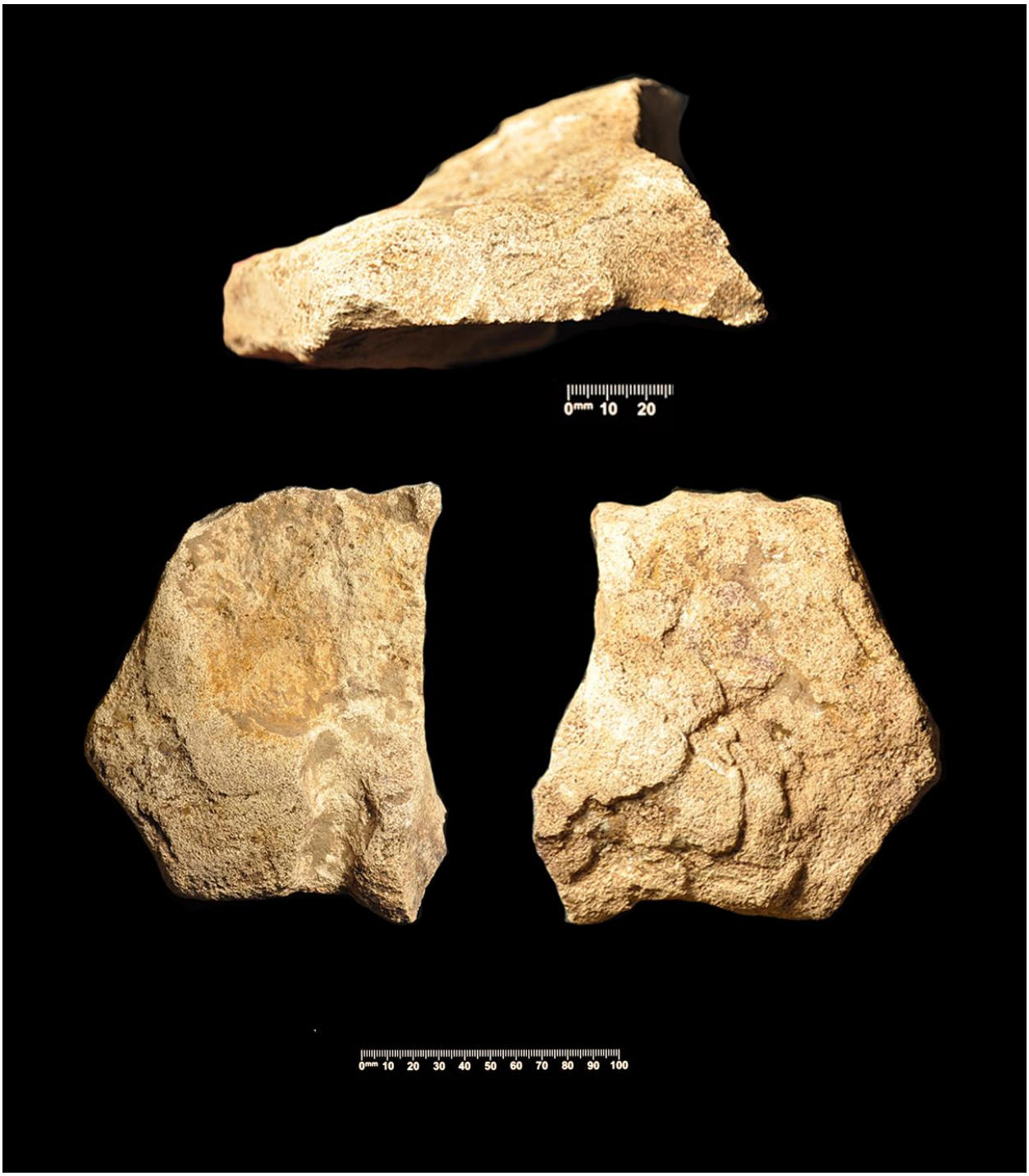


Figure A35-38
Chert Chopper from the Pleistocene Terrace at the Topper Site (38AL23).



Figure A35-39
Chert Chopper from the Pleistocene Terrace at the Topper Site (38AL23).Blue arrows indicate chipped areas on the surface of the artifact.

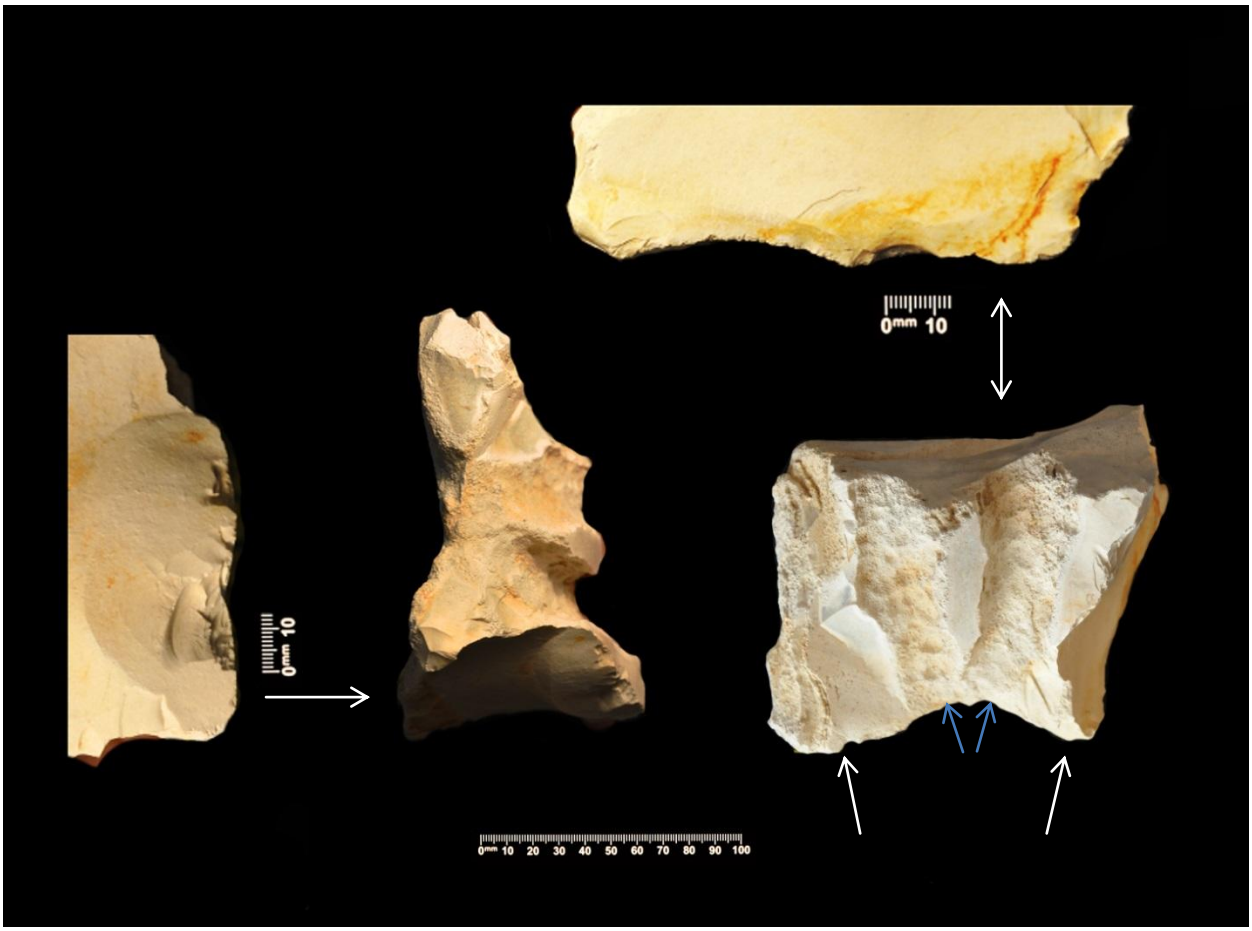


Figure A35-40
Chert Chopper from the Pleistocene Sands at the Topper Site (38AL23).Arrows point to areas with battering and flake removals.

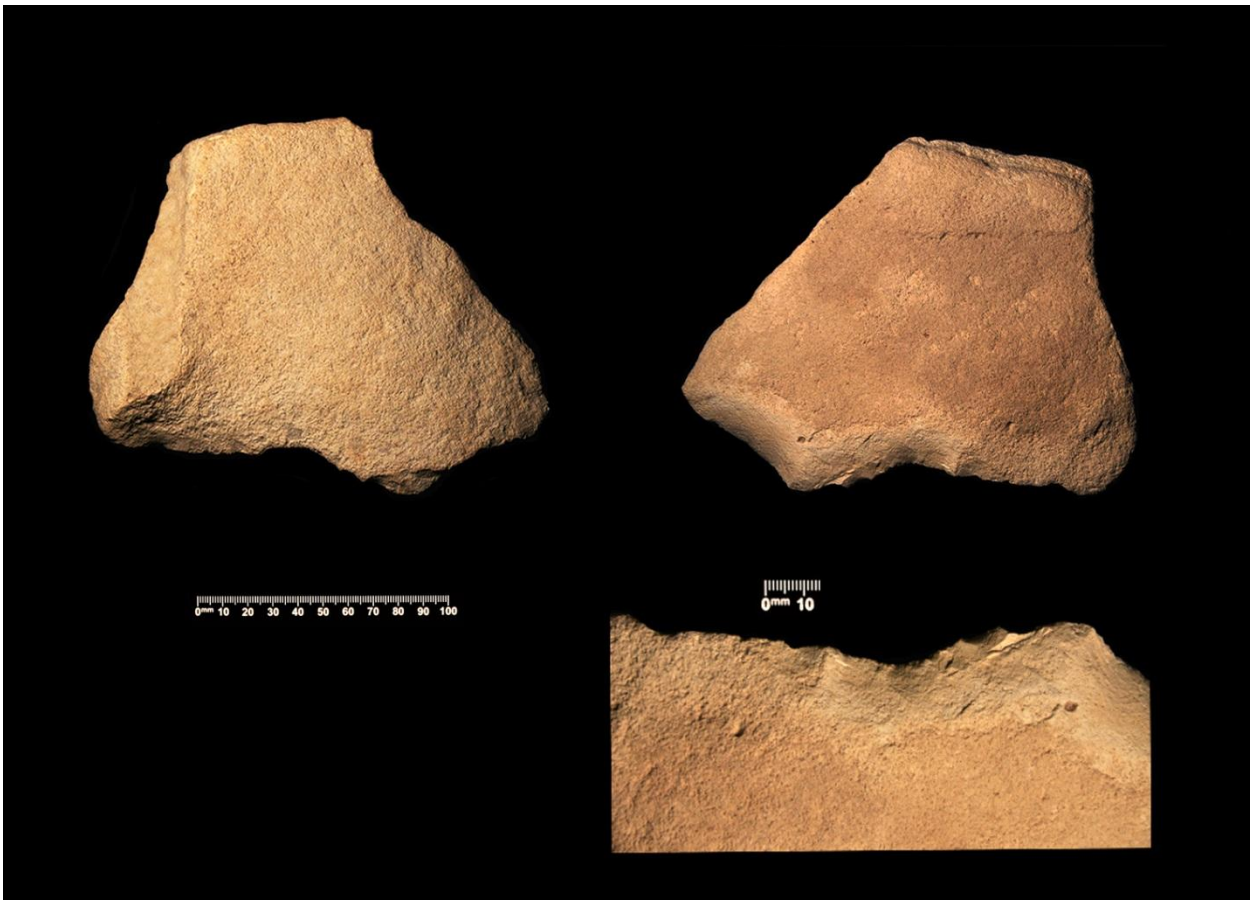


Figure A35-41
Chert Chopper from the Pleistocene Sands at the Topper Site (38AL23).



Figure A35-42
Chert Chopper from the Pleistocene Terrace at the Topper Site (38AL23). Utilization on margin of tool shown at left.



Figure A35-43
Chert Choppers from the Pleistocene Terrace at the Topper Site (38AL23).



Figure A35-44
Chert cores from the Pleistocene Terrace at the Topper Site (38AL23)



Figure A35-45
Anvil stone from the Pleistocene Sands at the Topper Site (38AL23).



Figure A35-46
Anvil stone from the Pleistocene Terrace at the Topper Site (38AL23).

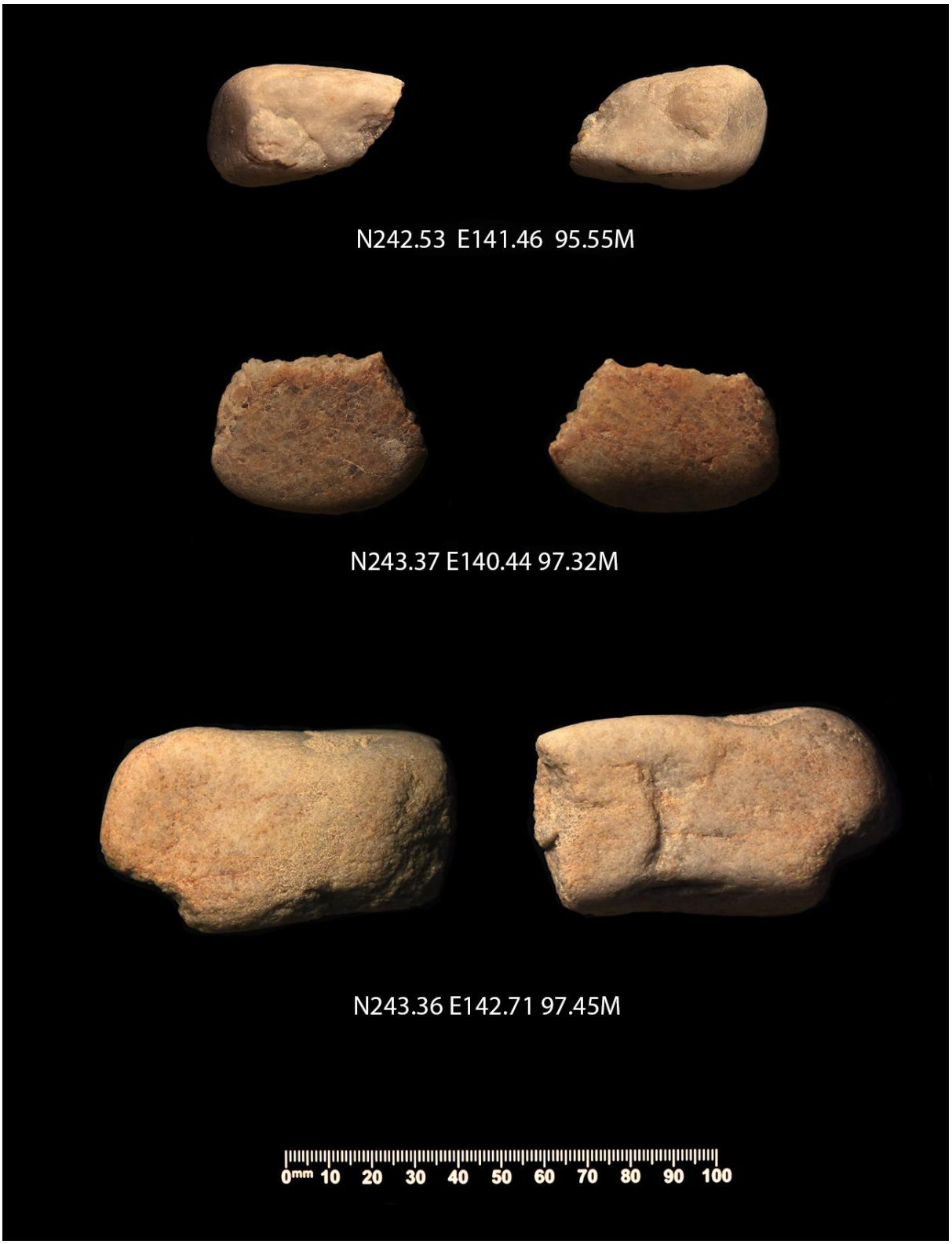


Figure A35-47
Hammerstones from the Pleistocene Sands at the Topper Site (38AL23).



Figure A35-48
Broken hammerstones from the Pleistocene Sands at the Topper Site (38AL23).

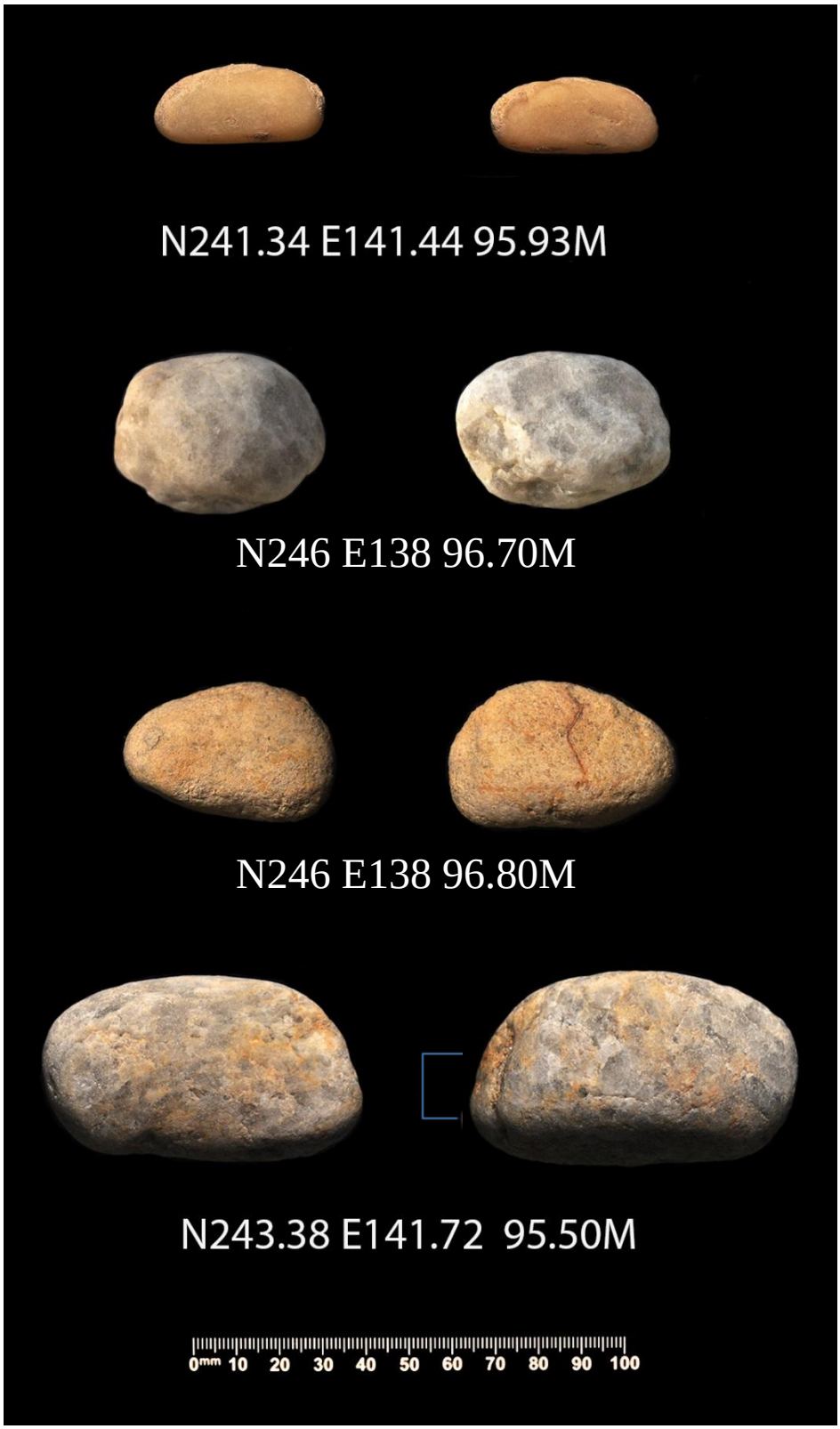


Figure A35-49
Hammerstones from the Pleistocene Terrace at the Topper Site (38AL23).

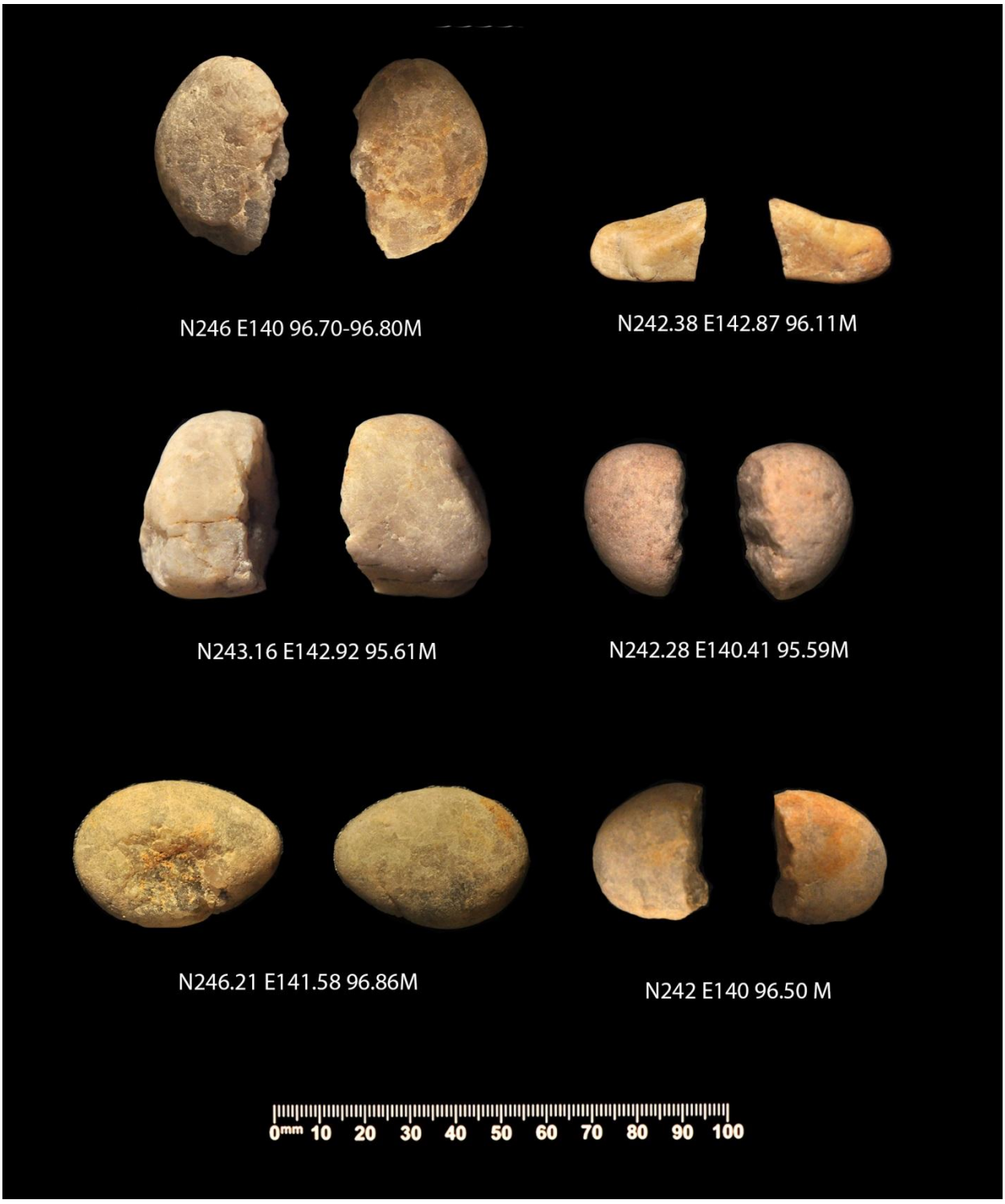


Figure A35-50
Broken quartz pebbles from the Pleistocene Terrace at the Topper Site (38AL23).



Figure A35-51
Clovis biface fragments from the Topper Site (38AL23). Image by Al Goodyear

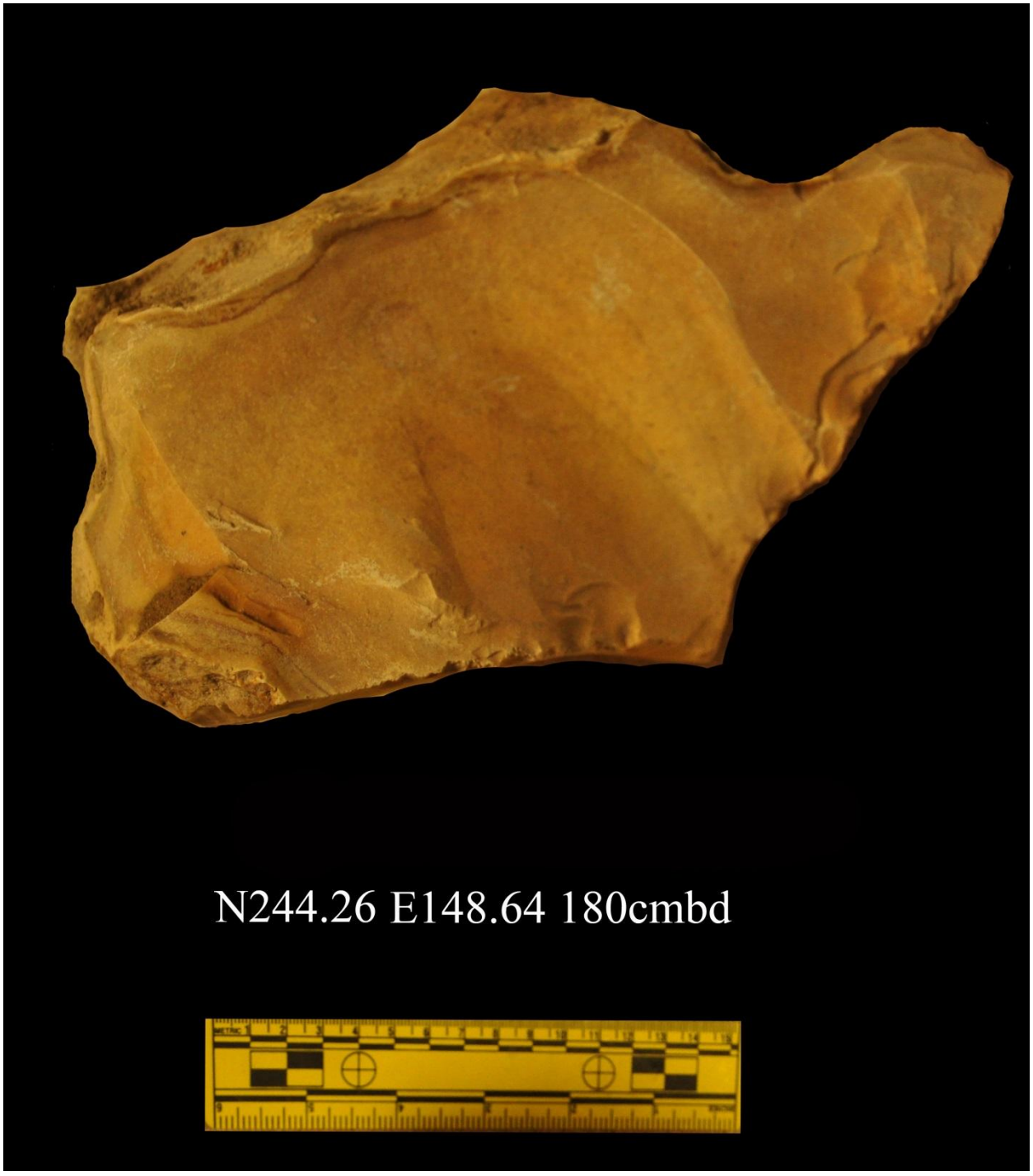


Figure A35-52
Chert Chopper from the Pleistocene Sands, Topper Site (28AL23).



Figure A35-53
Chert Chopper from the Pleistocene Terrace at the Topper Site (28AL23).

APPENDIX 36

ARTIFACT TYPOLOGY BY UNIT

Table A36-1
Artifact Typology by Unit N240 E130

Level	Core	Biface	Uniface	Bend break	Production	Total
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	0	0	1	0	0	1
4	0	0	1	0	0	1
5	0	0	1	0	0	1
6	1	1	0	0	0	2
7	0	0	0	0	0	0
8	0	0	0	0	0	0
9	0	0	0	0	0	0
10	0	0	0	0	0	0
11	0	0	0	0	0	0
12	0	0	0	0	0	0
13	0	0	0	0	0	0
14	0	0	0	0	0	0
15	0	0	0	0	0	0
16	0	0	0	0	0	0
17	0	0	0	0	0	0
18	0	0	0	0	0	0
19	0	0	0	0	0	0
20	0	0	0	0	0	0
21	0	0	1	0	0	1
22	0	0	1	0	0	1
23	0	0	1	0	0	1
24	0	0	0	0	0	0
25	2	0	2	0	0	4
Total	3	1	8	0	0	**12**

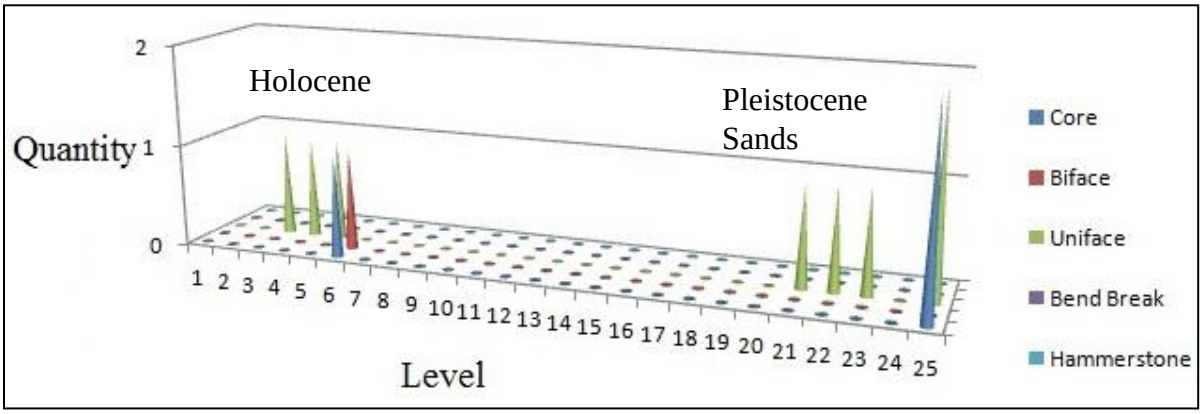


Figure A36-1
Vertical distribution of tools from Unit N240 E130

Table A36-2
Artifact Typology by Unit N240 E132

Level	Core	Biface	Flake Tool	Bend break	Production	Total
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	0	2	0	0	0	2
4	0	1	0	0	0	1
5	0	1	0	0	0	1
6	0	2	2	0	0	4
7	0	0	0	0	0	0
8	0	0	0	0	0	0
9	0	0	0	0	0	0
10	0	0	0	0	0	0
11	0	0	0	0	0	0
12	0	0	0	0	0	0
13	0	0	0	0	0	0
14	0	0	0	0	0	0
15	0	0	0	0	0	0
16	6	0	2	0	0	8
17	0	0	0	0	0	0
18	3	0	1	0	0	4
19	0	0	0	0	0	0
20	0	0	0	0	0	0
21	0	0	0	0	0	0
22	0	0	0	0	0	0
23	0	0	0	0	0	0
24	0	0	0	0	0	0
Total	9	6	5	0	0	**20**

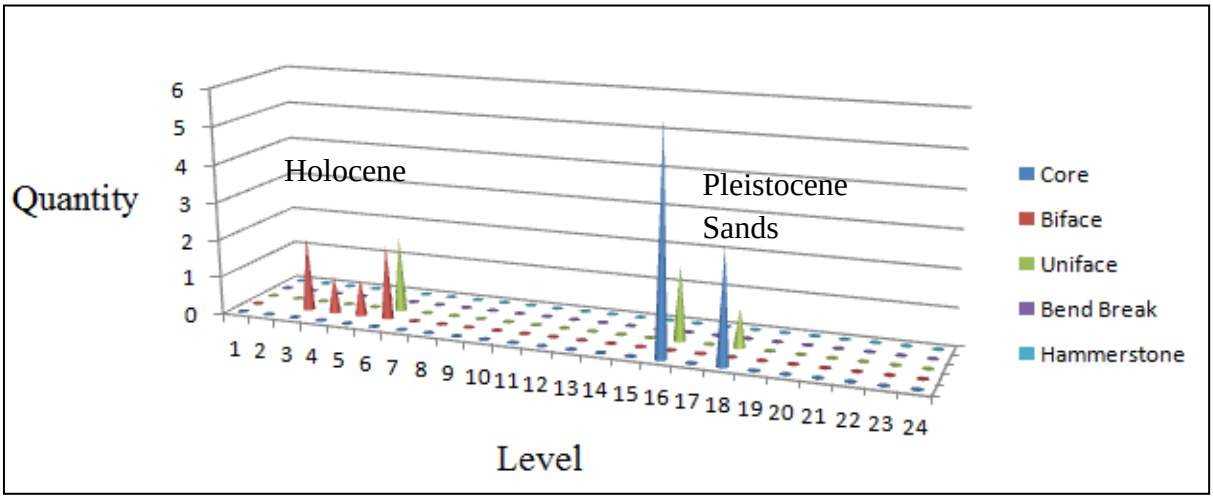


Figure A36-2
Vertical distribution of tools from Unit N240 E132

Table A36-3
Artifact Typology by Unit N242 E130

Level	Core	Biface	Flake Tool	bend break	Production	Total
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	0	0	0	0	0	0
4	0	0	0	0	0	0
5	0	0	0	0	0	0
6	0	0	0	0	0	0
7	0	0	0	0	0	0
8	0	0	0	0	0	0
9	2	0	0	0	0	2
10	1	0	1	0	0	2
11	0	0	1	0	0	1
12	0	0	0	0	0	0
13	0	0	0	0	0	0
14	0	0	0	0	0	0
15	0	0	0	0	0	0
16	0	0	0	0	0	0
17	0	0	4	0	1	5
18	1	0	0	0	0	1
19	2	0	2	0	0	4
Total	6	0	8	0	1	**15**

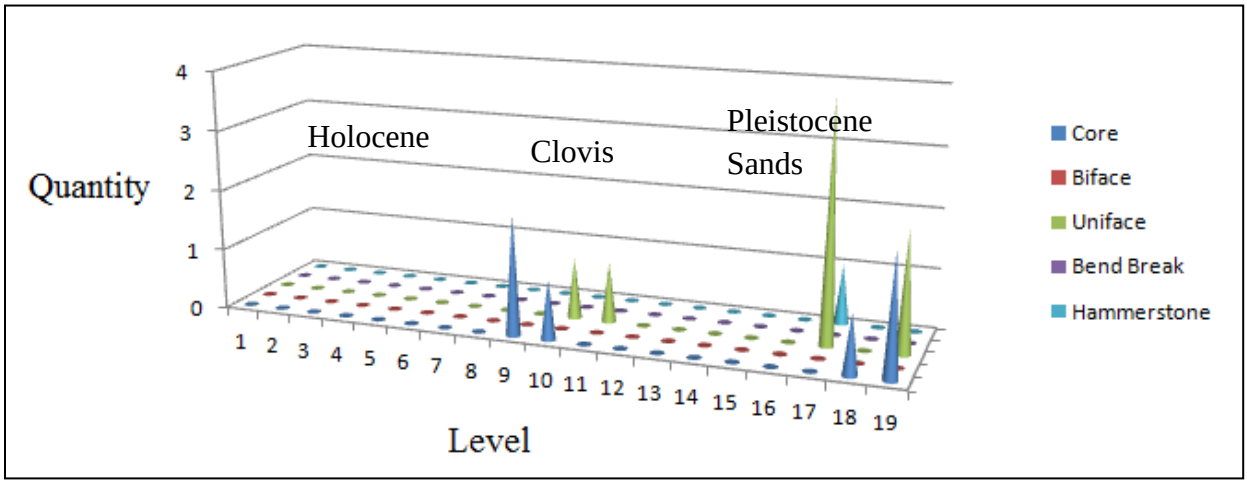


Figure A36-3
Vertical distribution of tools from Unit N242 E130

Table A36-4
Artifact Typology by Unit N242 E132

Level	Core	Biface	Flake Tool	Bend break	Production	Total
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	0	11	1	0	1	13
4	0	0	0	0	0	0
5	0	0	1	0	0	1
6	0	0	1	0	1	2
7	2	0	3	0	0	5
8	0	0	1	0	0	1
9	0	0	0	0	0	0
10	0	0	0	0	0	0
11	0	0	0	0	0	0
12	0	0	0	0	0	0
13	0	0	0	0	0	0
14	0	0	0	0	0	0
15	2	0	4	0	0	6
16	2	0	3	0	0	5
17	0	0	1	0	0	1
18	0	0	0	0	0	0
19	0	0	1	0	0	1
20	0	0	3	0	0	3
21	0	0	0	0	0	0
Total	6	11	19	0	2	38

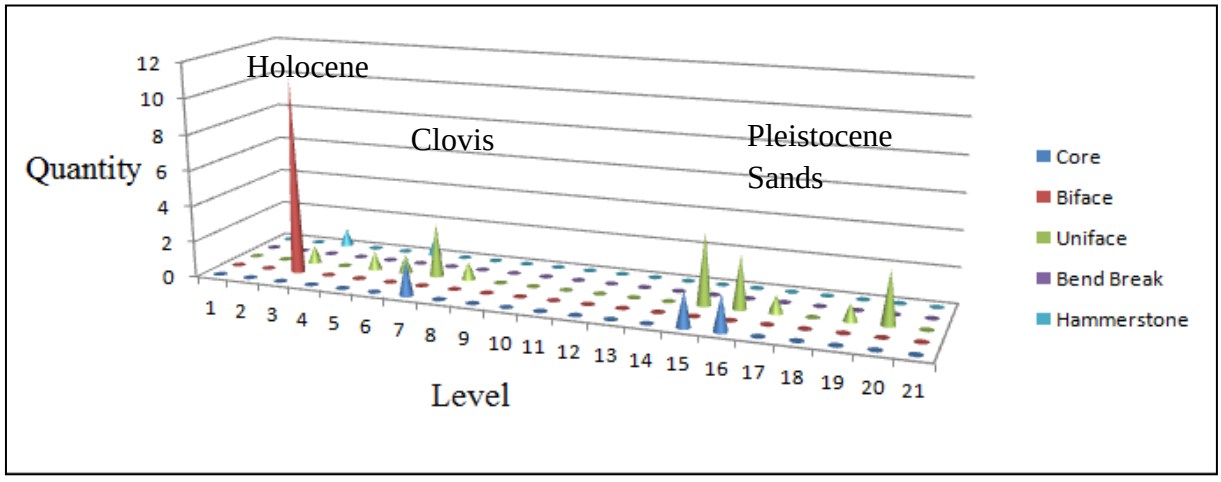


Figure A36-4
Vertical distribution of tools from Unit N242 E132

Table A36-5
Artifact Typology by Unit N242 E138

Level	Core	Biface	Flake Tool	Bend break	Production	Total
1	0	0	0	0	0	0
2	0	0	1	0	0	2
3	0	0	0	0	0	0
4	1	0	1	0	0	2
5	0	0	0	0	0	0
6	0	0	0	0	0	0
7	0	0	0	0	0	0
8	0	0	0	0	0	0
9	0	0	0	0	0	0
10	0	0	0	0	0	0
11	0	0	1	0	0	1
12	0	0	1	0	0	1
13	0	0	1	0	0	1
14	2	0	6	0	1	9
15	0	0	4	0	0	4
16	0	0	1	0	0	1
17	3	0	6	0	0	9
18	0	0	2	0	0	2
19	3	0	4	0	1	8
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	0	0	0	0	0	0
4	0	0	0	0	0	0
5	0	0	0	2	0	2
6	0	0	0	0	0	0
7	0	0	0	0	0	0
8	0	0	0	0	0	0
9	0	0	0	1	0	1
10	0	0	2	2	0	4
11	1	0	0	2	0	3
12	0	0	0	0	0	0
13	0	0	1	0	0	1
14	0	0	1	1	0	2
15	0	0	1	0	0	1
16	0	0	3	1	0	4
17	0	0	0	0	0	0
18	0	0	0	0	0	0
19	0	0	0	0	0	0
20	0	0	0	0	0	0
21	0	0	0	0	0	0

Table A36-5 continued

Level	Core	Biface	Flake Tool	Bend break	Production	Total
22	0	0	0	0	0	0
23	0	0	1	1	0	2
24	0	0	0	1	0	1
25	0	0	0	0	0	0
26	0	0	0	0	0	0
27	0	0	0	0	0	0
28	0	0	0	1	0	1
29	0	0	3	2	0	5
30	0	0	2	5	0	7
31	0	0	7	4	0	11
Total	10		49	23	2	84

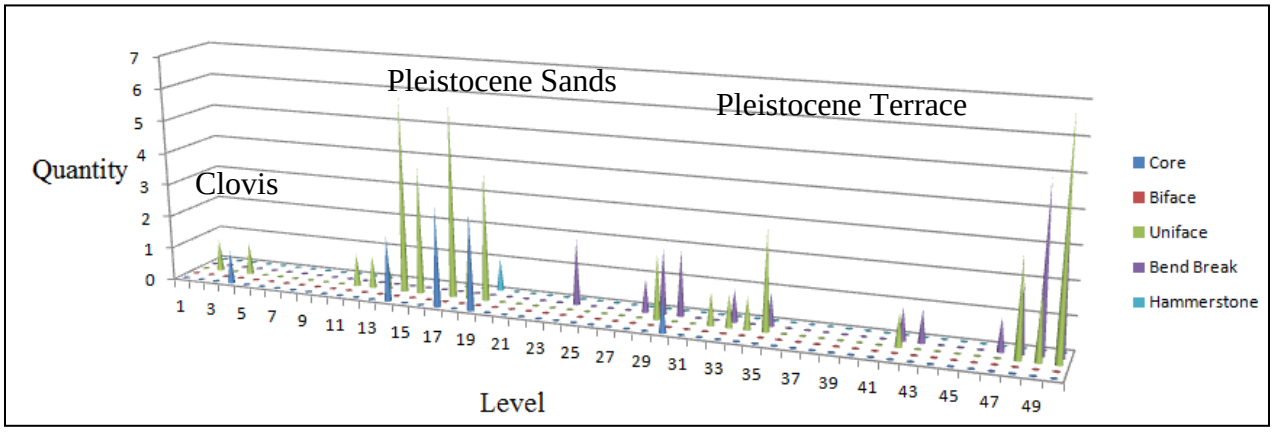


Figure A36-5
Vertical distribution of tools from Unit N242 E138

Table A36-6
Artifact Typology by Unit N242 E140

Level	Core	Biface	Flake Tool	Bend break	Production	Total
1	0	3	0	0	0	3
2	0	2	1	0	0	3
3	0	0	0	0	0	0
4	0	2	3	0	0	5
5	2	0	0	0	0	2
6	0	2	1	0	0	3
7	0	0	0	0	0	0
8	0	0	0	0	0	0
9	0	0	0	0	0	0
10	0	0	0	0	0	0
11	0	1	0	0	0	1
12	0	0	2	0	0	2
13	0	0	0	0	0	0
14	0	0	0	0	0	0
15	0	0	0	1	0	1
16	0	0	4	2	0	6
17	5	0	4	0	0	9
18	1	0	2	3	0	6
19	3	0	9	2	2	16
20	4	0	2	0	1	7
1	0	0	0	0	0	0
1	0	3	0	0	0	3
2	0	2	1	0	0	3
3	0	0	0	0	0	0
4	0	2	3	0	0	5
5	2	0	0	0	0	2
6	0	2	1	0	0	3
7	0	0	0	0	0	0
8	0	0	0	0	0	0
9	0	0	0	0	0	0
10	0	0	0	0	0	0
11	0	1	0	0	0	1
12	0	0	2	0	0	2
13	0	0	0	0	0	0
14	0	0	0	0	0	0
15	0	0	0	1	0	6
16	0	0	4	2	0	6
17	5	0	4	0	0	9
18	1	0	2	3	0	6
19	3	0	9	2	2	16

Table A36-6 continued

Level	Core	Biface	Flake Tool	Bend break	Production	Total
2	0	0	1	1	0	2
3	1	0	3	1	0	5
4	0	0	2	0	0	2
5	0	0	1	1	1	3
6	0	0	3	2	1	6
7	2	0	1	4	0	7
8	0	0	0	0	0	0
9	1	0	1	2	0	4
10	0	0	3	0	0	3
11	0	0	1	0	0	1
12	0	0	0	2	0	2
13	3	0	5	3	0	11
14	1	0	2	1	0	4
15	0	0	4	1	1	6
16	0	0	2	6	0	8
17	2	0	2	0	1	5
18	1	0	3	4	0	8
19	0	0	0	2	0	2
20	0	0	1	3	0	4
21	0	0	5	4	0	9
22	1	0	4	1	0	6
23	0	0	5	3	0	8
24	1	0	1	2	0	4
25	1	0	1	2	0	4
26	1	0	1	0	0	2
27	1	0	4	1	0	6
28	1	0	1	0	0	2
29	0	0	1	3	1	5
30	0	0	2	2	0	4
31	1	0	3	0	1	5
32	2	0	4	2	0	8
33	0	0	2	1	0	3
34	1	0	7	2	0	10
35	0	0	8	1	0	9
36	2	0	6	2	1	11
37	1	0	3	0	0	4
Total	50	18	147	75	12	302

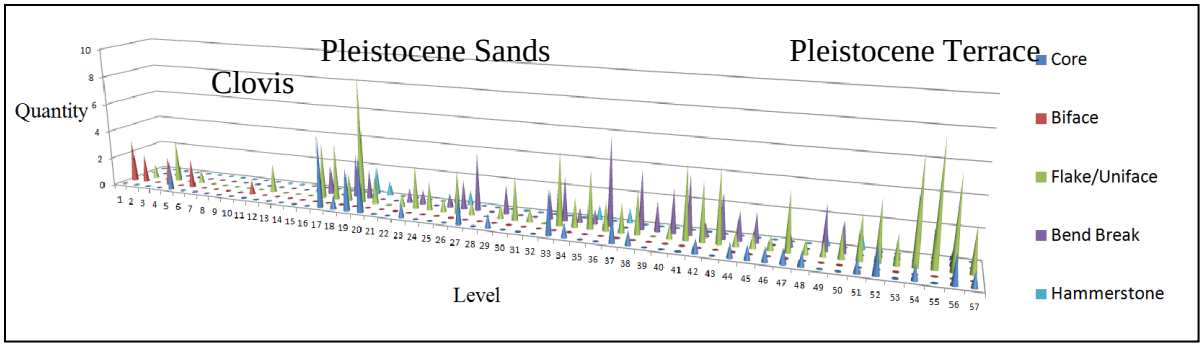


Figure A36-6
Vertical distribution of tools from Unit N242 E140

Table A36-7
Artifact Typology by Unit N242 E142

Level	Core	Biface	Flake Tool	Bend break	Production	Total
1	0	0	0	0	0	
2	0	0	0	0	0	
3	0	2	1	0	0	
4	1	0	1		0	
5	1	0	0	0	0	
6	0	0	0	0	0	
7	0	0	1	0	0	
8	0	0	1	0	0	
9	0	0	0	0	0	
10	0	0	0	0	0	
11	0	0	1	0	0	
12	0	0	1	0	0	
13	0	0	0	0	0	
14	0	0	1	0	0	
15		0	2	0	0	
16	3	0	4	0	1	
17	1	0	1	0	0	
18	1	0	0	0	3	
19	4	0	6	1	1	
1	0	0	0	0	0	
2	0	0	0	0	0	
3	0	0	0	1	0	
4	0	0	0	0	0	
5	0	0	0	0	0	
6	0	0	0	2	0	
7	0	0	1	2	0	
8	0	0	1	4	0	
9	2	0	1	3	0	
10	0	0	0	0	0	
11	0	0	1	1	0	
12	0	0	0	2	0	
13	0	0	0	2	0	
14	0	0	0	1	0	
15	0	0	1	0	0	
16	0	0	0	1	0	
17	0	0	1	0	0	
18	0	0	2	1	1	
19	0	0	4	2	0	
20	2	0	4	6	0	
21	0	0	1	5	0	

Table A36-7 continued

Level	Core	Biface	Flake Tool	Bend break	Production	Total
22	1	0	1	2	0	
23	0	0	1	6	0	
24	1	0	0	0	0	
25	0	0	2	2	0	
26	2	0	0	0	0	
27	1	0	3	1	0	
28	1	0	4	5	0	
29	2	0	2	7	0	
30	0	0	2	3	0	
31	1	0	0	9	1	
32	0	0	6	10	0	
33	0	0	2	1	0	
34	1	0	3	2	0	
Total						

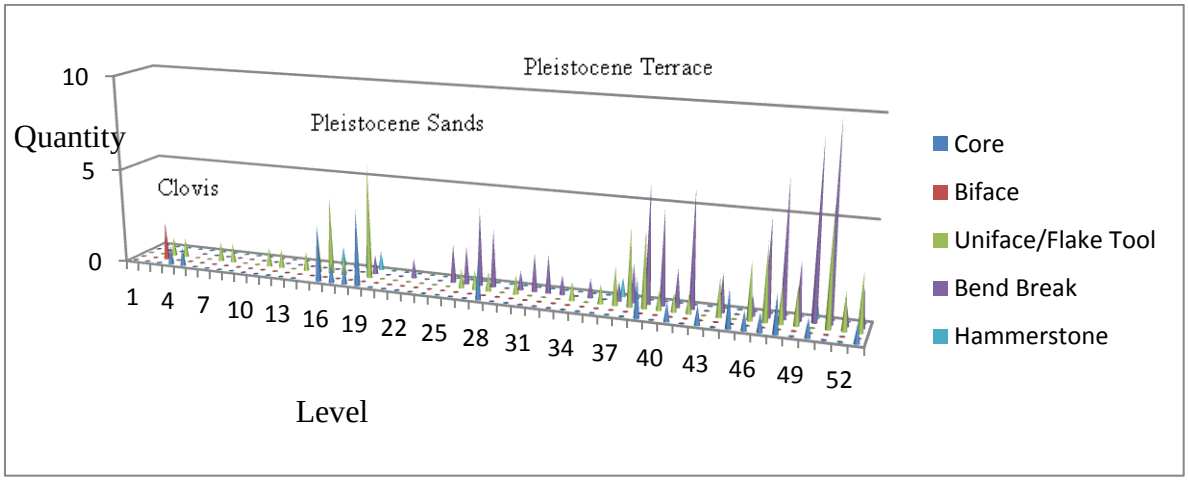


Figure A36-7
Vertical distribution of tools from Unit N242 E142

Table A36-8
Artifact Typology by Unit N244 E138

Level	Core	Biface	Flake Tool	Bend break	Production	Total
1						
2	1	1	0	0	0	2
3	1	1	0	0	0	2
4	0	1	1	0	0	2
5	0	2	0	0	0	2
6	0	0	0	0	0	0
7	0	0	0	0	0	0
8	0	1	1	0	0	2
9	0	0	1	0	0	1
10	1	0	0	0	0	1
11	0	0	0	0	0	0
12	0	0	1	0	0	1
13	0	0	1	1	0	2
14	0	0	5	0	0	5
15	1	0	2	2	0	5
16	13	0	9	3	1	26
17	4	0	6	0	0	10
18	0	0	0	0	0	0
19	0	0	0	0	0	0
20	0	0	1	0	0	1
1	0	0	0	0	0	0
2	0	0	1	1	0	2
3	0	0	0	0	0	0
4	0	0	1	1	0	**2**
5	0	0	2	1	0	**3**
6	0	0	0	1	0	**1**
7	0	0	0	0	0	**0**
8	0	0	1	0	0	1
9	2	0	0	0	0	**2**
10	2	0	1	0	0	**3**
11	1	0	0	0	0	**1**
12	0	0	1	1	0	**2**
13	0	0	3	0	0	**3**
14	0	0	0	0	0	**0**
15	0	0	8	2	0	**10**
16	0	0	1	0	0	**1**
17	0	0	0	0	0	**0**
18	0	0	0	0	0	**0**
19	0	0	0	0	0	**0**
20	0	0	1	0	0	**1**

Table A36-8 continued

Level	Core	Biface	Flake Tool	Bend break	Production	Total
21	0	0	0	0	0	0
22	0	0	0	0	0	0
23	0	0	0	0	0	0
24	0	0	0	0	0	0
25	0	0	0	1	0	1
26	0	0	0	0	0	0
27	0	0	0	0	0	0
28	0	0	0	0	0	0
29	0	0	0	0	0	0
30	0	0	0	0	0	0
31	0	0	0	1	0	1
Total	26	6	48	15	1	96

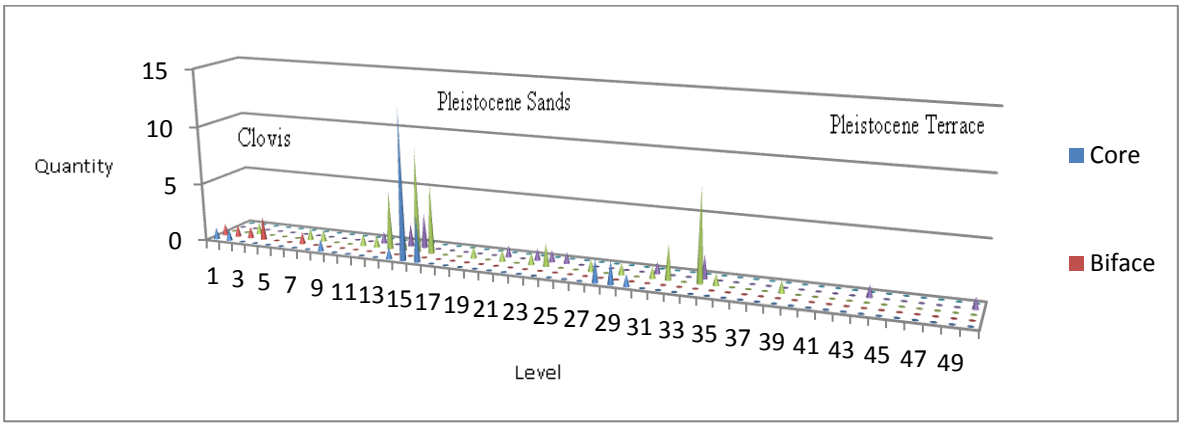


Figure A36-8
Vertical distribution of tools from Unit N244 E138

Table A36-9
Artifact Typology by Unit N244 E140

Level	Core	Biface	Flake Tool	Bend break	Production	Total
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	0	0	1	0	0	1
4	1	2	1	0	0	4
5	0	1	1	0	1	3
6	0	0	0	0	0	0
7	0	0	0	0	0	0
8	0	0	0	0	0	0
9	0	0	0	0	0	0
10	0	0	0	0	0	0
11	0	0	0	0	0	0
12	0	0	0	0	0	0
13	0	0	0	0	0	0
14	0	0	0	0	0	0
15	1	0	0	0	0	0
16	2	0	3	0	0	5
17	8	0	5	0	0	13
18	1	0	2	0	0	3
19	0	0	1	1	0	2
20	0	0	0	2	0	2
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	0	0	0	0	0	0
4	0	0	0	0	0	0
5	0	0	0	1	0	0
6	0	0	0	0	0	1
7	0	0	0	0	0	4
8	0	0	0	0	0	3
9	0	0	0	0	0	0
10	0	0	0	2	0	0
11	0	0	0	0	0	0
12	0	0	0	0	0	0
13	0	0	0	0	0	0
14	0	0	0	1	0	0
15	0	0	0	0	1	0
16	0	0	0	0	0	0
17	0	0	0	0	0	0
1	0	0	0	0	0	0
2	0	0	0	0	0	5
3	0	0	1	0	0	13

Table A36-9 continued

Level	Core	Biface	Flake Tool	Bend break	Production	Total
4	0	0	0	0	0	0
5	0	0	0	1	0	1
6	0	0	0	0	0	0
7	0	0	0	0	0	0
8	0	0	0	0	0	0
9	0	0	0	0	0	0
10	0	0	0	2	0	2
11	0	0	0	0	0	0
12	0	0	0	0	0	0
13	0	0	0	0	0	0
14	0	0	0	1	0	1
15	0	0	0	0	1	1
16	0	0	0	0	0	0
17	0	0	0	0	0	0
Total	13	3	14	7	2	39

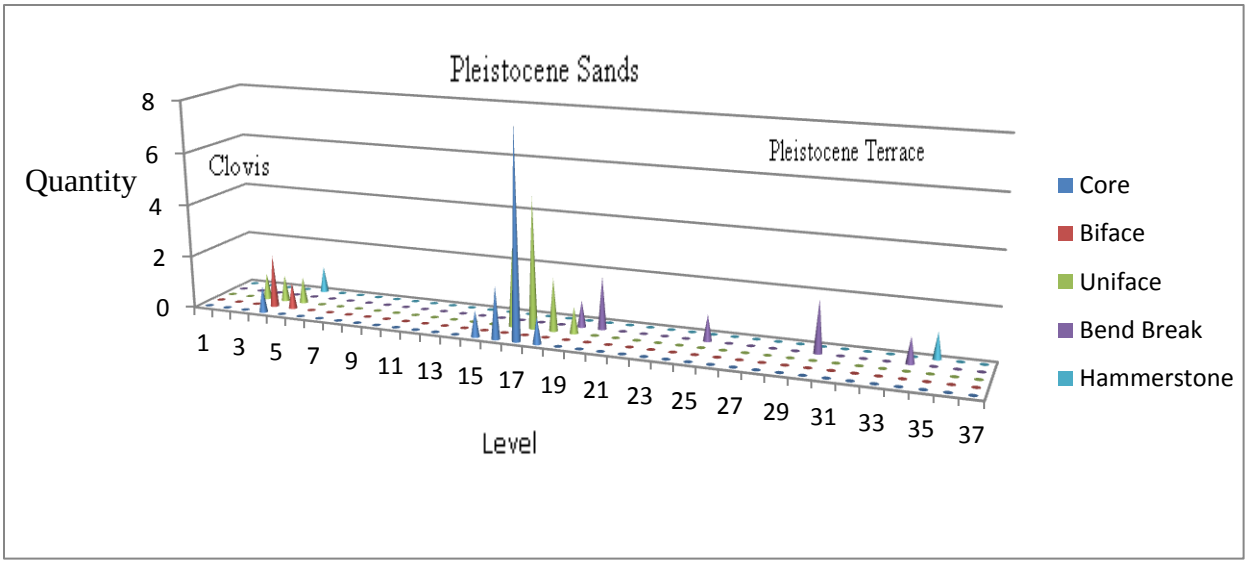


Figure A36-9
Vertical distribution of tools from Unit N244 140

Table A36-10
Artifact Typology by Unit N244 E142

Level	Core	Biface	Flake Tool	Bend break	Production	Total
1	0	0	2	0	0	2
2	0	3	0	0	0	3
3	1	0	1	0	0	2
4	0	4	1	0	0	5
5	0	3	0	0	0	3
6	0	0	0	0	0	0
7	0	0	0	0	0	0
8	0	0	0	0	0	0
9	0	0	0	0	0	0
10	0	0	0	0	0	0
11	0	0	1	0	0	1
12	0	0	1	0	0	1
13	0	0	1	0	0	1
14	1	0	1	0	0	2
15	1	0	1	0	0	2
16	0	0	1	0	0	1
17	1	0	4	2	0	7
18	1	0	5	1	0	7
19	1	0	5	0	0	6
Total	6	10	24	3	0	43

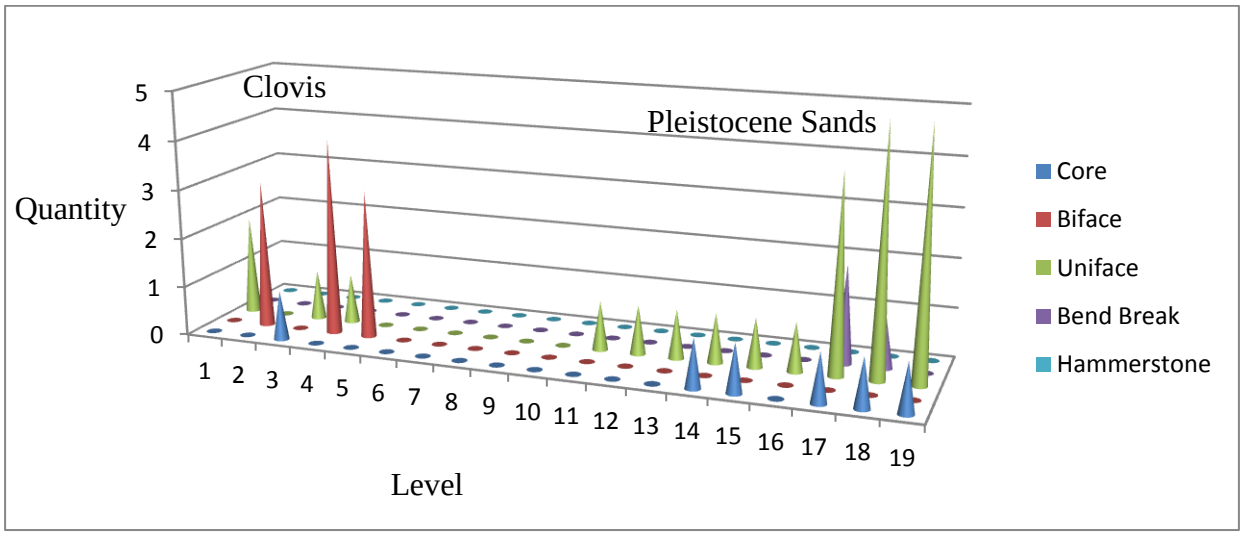


Figure A36-10
Vertical distribution of tools from Unit N244 E142

Table A36-11
Artifact Typology by Unit N246 E138

Level	Core	Biface	Flake Tool	Bend break	Production	Total
1	0	0	0	0	0	0
2	0	1	0	0	0	1
3	0	3	0	0	0	3
4	1	2	0	0	0	3
5	0	0	0	0	0	0
6	0	0	0	0	0	0
7	0	0	0	0	0	0
8	0	0	0	0	0	0
9	0	0	0	0	0	0
10	0	0	0	0	0	0
11	0	0	1	0	0	1
12	3	0	3	0	0	6
13	0	0	1	0	0	1
14	0	0	0	0	0	0
15	1	0	2	0	0	3
16	0	0	0	0	0	0
17	1	0	2	0	0	3
18	0	0	0	0	0	0
19	1	0	0	0	0	1
20	1	0	0	1	0	2
21	0	0	0	1	0	1
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	0	0	0	0	0	0
4	1	0	1	3	0	5
5	0	0	3	1	1	5
6	1	0	3	1	0	5
7	2	0	3	2	0	7
8	0	0	4	1	0	4
9	3	0	4	1	0	8
10	2	0	4	1	1	8
11	1	0	5	6	0	12
12	0	0	4	3	0	7
13	0	0	1	2	0	3
Total	18	6	41	23	2	90

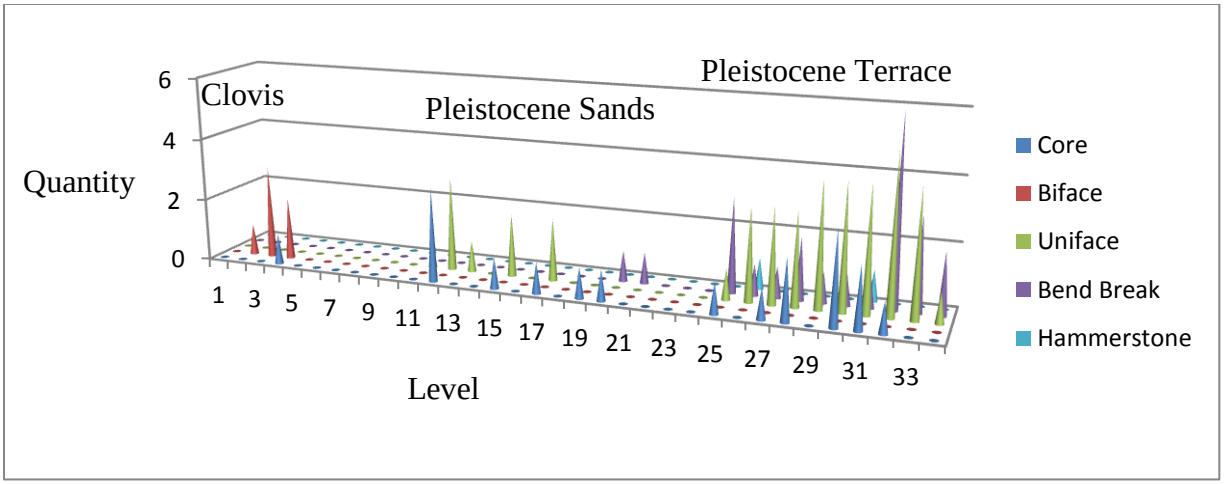


Figure A36-11
Vertical distribution of tools from Unit N246 E138

Table A36-12
Artifact Typology by Unit N246 E140

Level	Core	Biface	Flake Tool	Bend break	Production	Total
1	0	0	0	0	0	1
2	0	1	1	0	0	2
3	1	0	0	0	1	2
4	1	0	1	0	0	2
5	1	2	0	0	0	3
6	0	0	0	0	0	0
7	0	0	0	0	0	0
8	0	0	0	0	0	0
9	1	1	0	0	0	2
10	0	0	3	0	0	3
11	0	0	0	0	0	0
12	0	0	1	0	0	1
13	0	0	0	0	1	1
14	0	0	1	0	0	1
15	0	0	1	0	0	1
16	0	0	0	0	0	0
17	0	0	1	3	0	4
18	0	0	2	0	0	2
19	0	0	1	1	0	2
20	0	0	2	1	1	4
21	0	0	4	4	1	9
22	0	0	0	0	0	0
23	2	0	3	1	0	6
24	3	0	2	0	1	6
25	1	0	1	1	1	3
26	1	0	0	0	0	1
1	1	0	1	0	1	3
2	0	0	0	0	1	1
3	1	0	0	2	1	4
4	0	0	1	2	0	3
5	0	1	3	2	0	6
6	0	0	3	0	0	3
7	1	0	3	4	2	10
8	0	0	2	2	0	4
9	0	0	4	2	0	6

Table A36-12 continued

Level	Core	Biface	Flake Tool	Bend break	Production	Total
10	0	0	5	2	0	**7**
11	2	0	5	6	0	**13**
12	0	0	1	2	0	**3**
13	0	0	1	0	0	**1**
14	0	0	2	4	0	**6**
15	0	0	2	1	0	**3**
16	1	0	5	5	0	**11**
	17	5	62	45	11	**140**

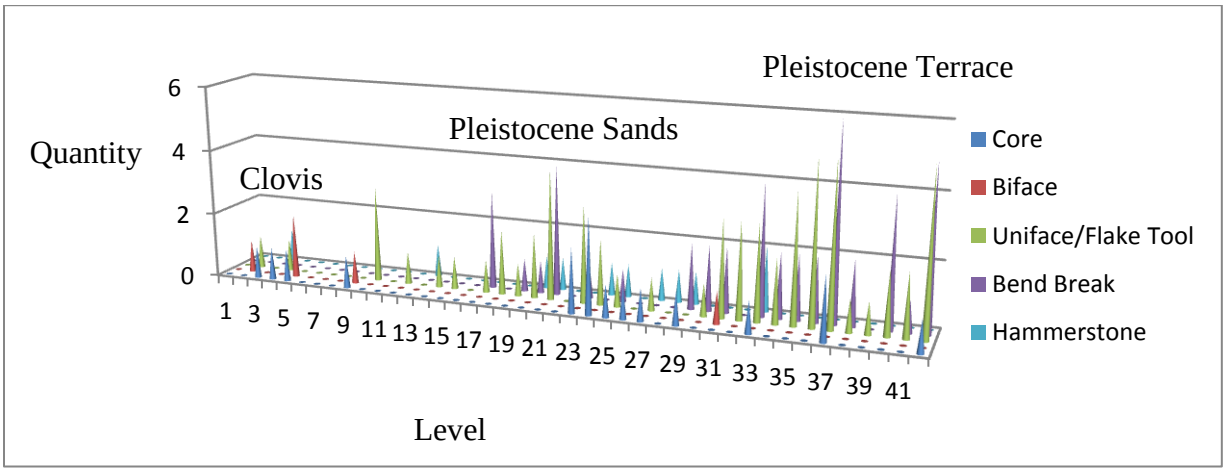


Figure A36-12
Vertical distribution of tools from Unit N246 E140

Table A36-13
Artifact Typology by Unit N248 E140

Level	Core	Biface	Flake Tool	Bend break	Production	Total
1	0	1	0	0	0	1
2	0	1	1	0	1	3
3	0	0	0	0	0	0
4	0	0	0	0	0	0
5	0	3	0	0	0	3
6	0	0	0	0	0	0
7	0	0	0	0	0	0
8	1	0	1	0	0	2
9	2	0	0	0	0	2
10	0	0	0	0	0	0
11	0	0	0	0	0	0
12	0	0	0	0	0	0
13	0	0	0	0	0	0
14	0	0	0	0	0	0
15	0	0	0	0	0	0
16	0	0	0	0	0	0
17	0	0	0	0	0	0
18	0	0	0	0	0	0
19	0	0	0	0	0	0
20	0	0	1	0	0	1
21	0	0	1	0	0	1
22	7	0	3	0	0	10
23	0	0	0	0	1	1
24	2	0	1	1	0	4
1	0	0	0	0	0	0
2	0	0	1	0	0	1
3	1	0	0	0	0	1
4	0	0	0	0	0	0
5	0	0	1	0	0	1
6	0	0	1	0	0	1
7	0	0	1	0	0	1
8	0	0	1	0	0	1
9	0	0	1	0	0	1

Table A36-13
Artifact Typology by Unit N248 E140 Continued

Level	Core	Biface	Flake Tool	Bend break	Production	Total
10	1	0	0	1	0	2
11	0	0	0	1	0	1
12	0	0	1	0	0	1
13	0	0	1	0	0	1
14	1	0	0	0	0	1
15	0	0	2	0	0	2
16	0	0	1	0	0	1
17	0	0	0	0	0	0
18	0	0	0	0	0	0
19	0	0	0	0	0	0
20	0	0	3	0	0	3
21	1	0	4	2	0	7
10	1	0	0	1	0	2
	16	5	26	5	2	54

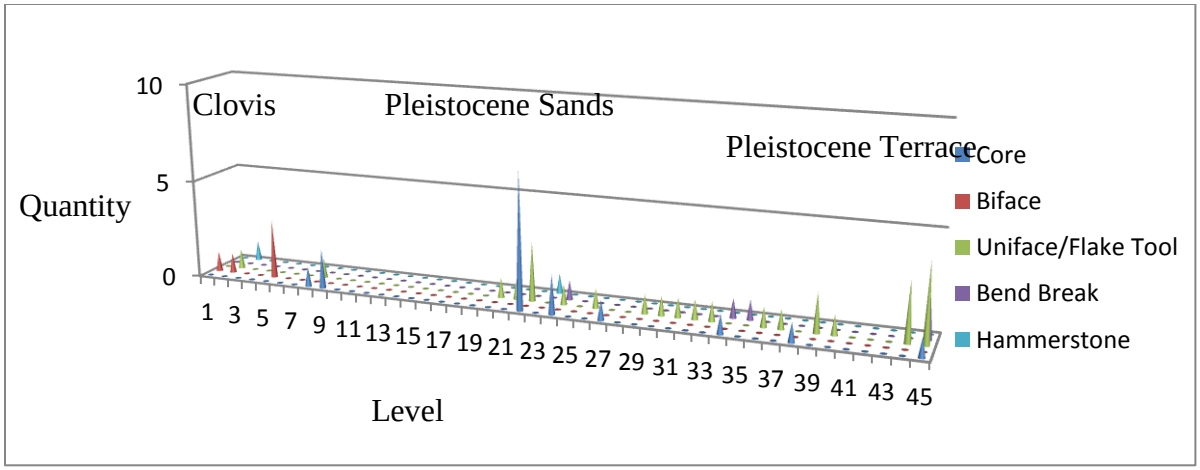


Figure A36-13
Vertical distribution of tools from Unit N248 E140

Table A36-14
Artifact Typology by Unit N263 E145

Level	Core	Biface	Flake Tool	Bend break	Production	Total
1	1	3	2	0	0	6
2	8	5	4	0	2	19
3	5	7	19	0	10	41
4	8	3	6	0	5	22
5	4	2	4	0	2	12
6	1	0	0	0	1	2
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	0	0	0	1	0	1
4	0	0	0	0	0	0
5	0	0	0	0	0	0
6	0	0	0	0	0	0
7	0	0	0	1	0	1
8	1	0	0	1	0	2
9	0	0	0	1	0	1
10	0	0	0	0	0	0
11	0	0	0	0	0	0
Total	28	20	35	4	20	107

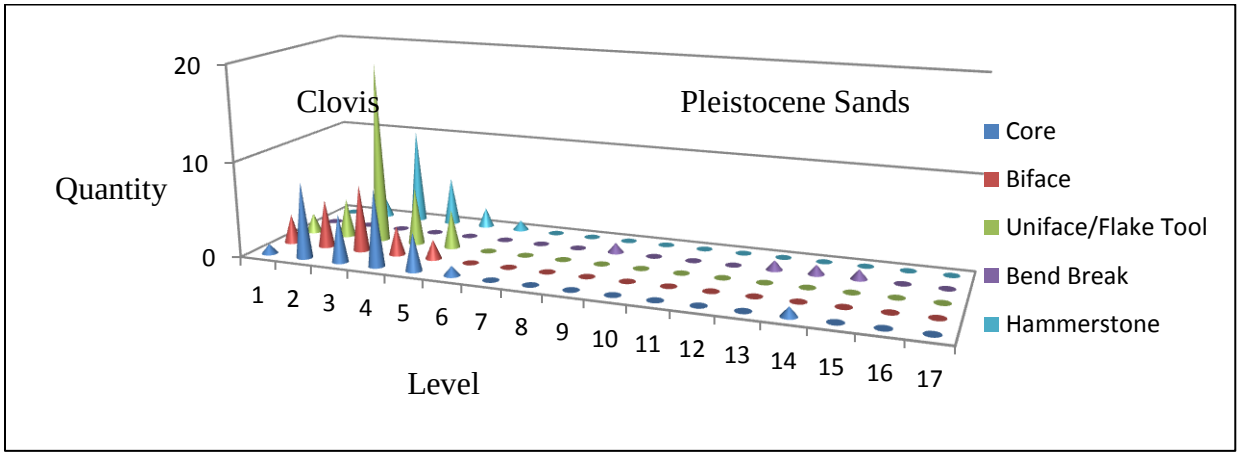
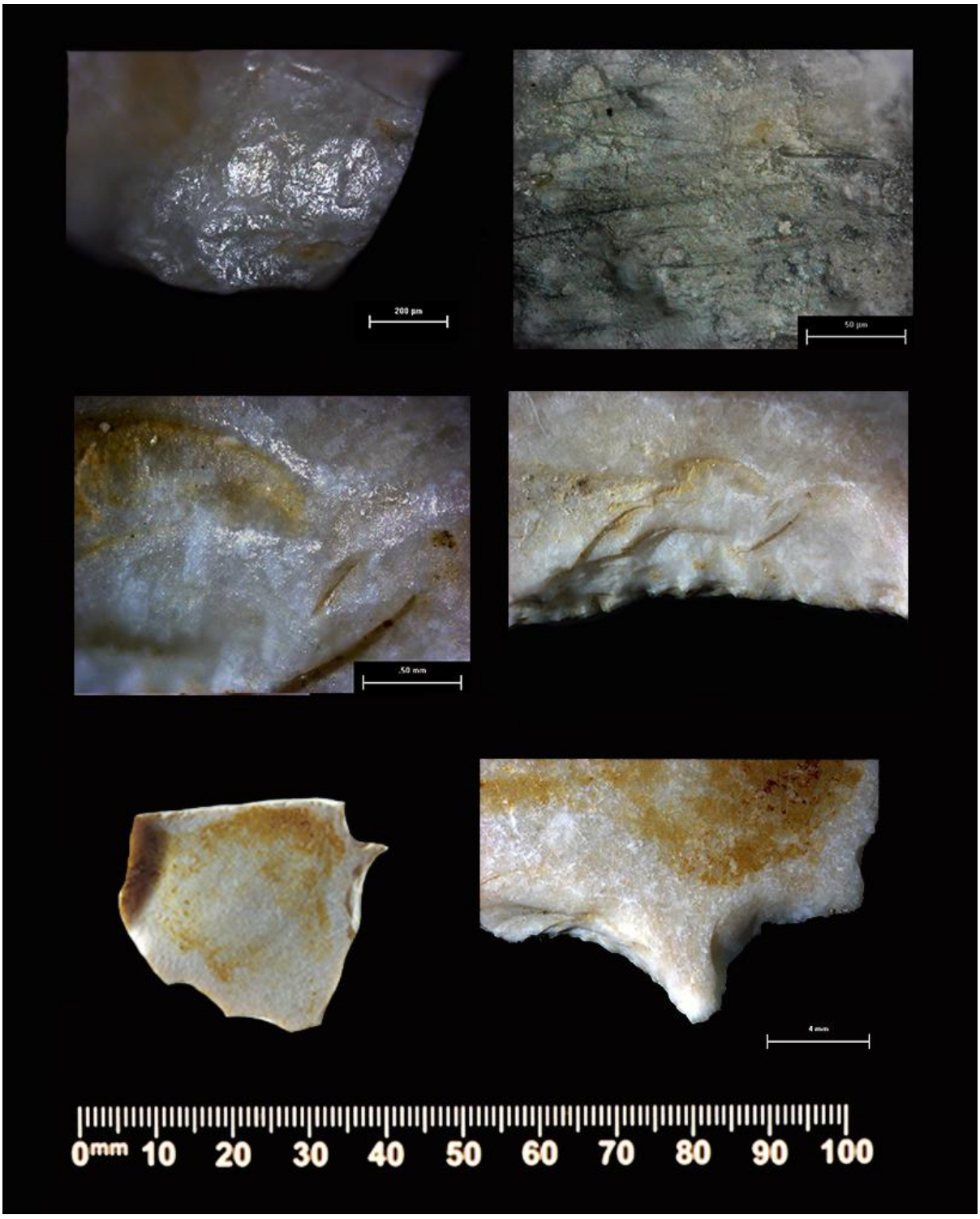


Figure A36-14
Vertical distribution of tools from Unit N263 E145

APPENDIX 37

RESULTS OF MICROWEAR ANALYSIS: ARTIFACT PHOTOGRAPHS AND PHOTOMICROGRAPHS

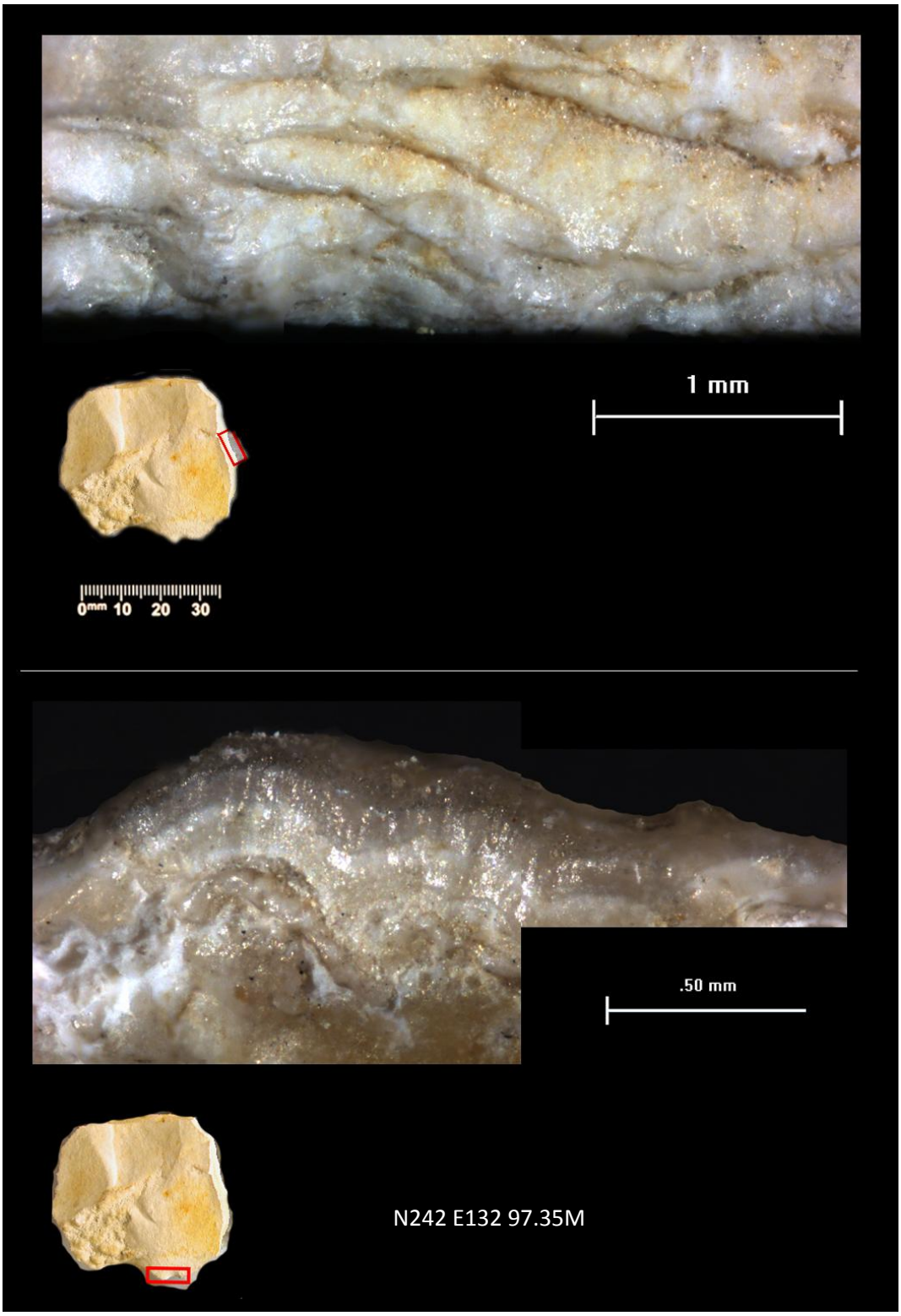


Appendix A37-1

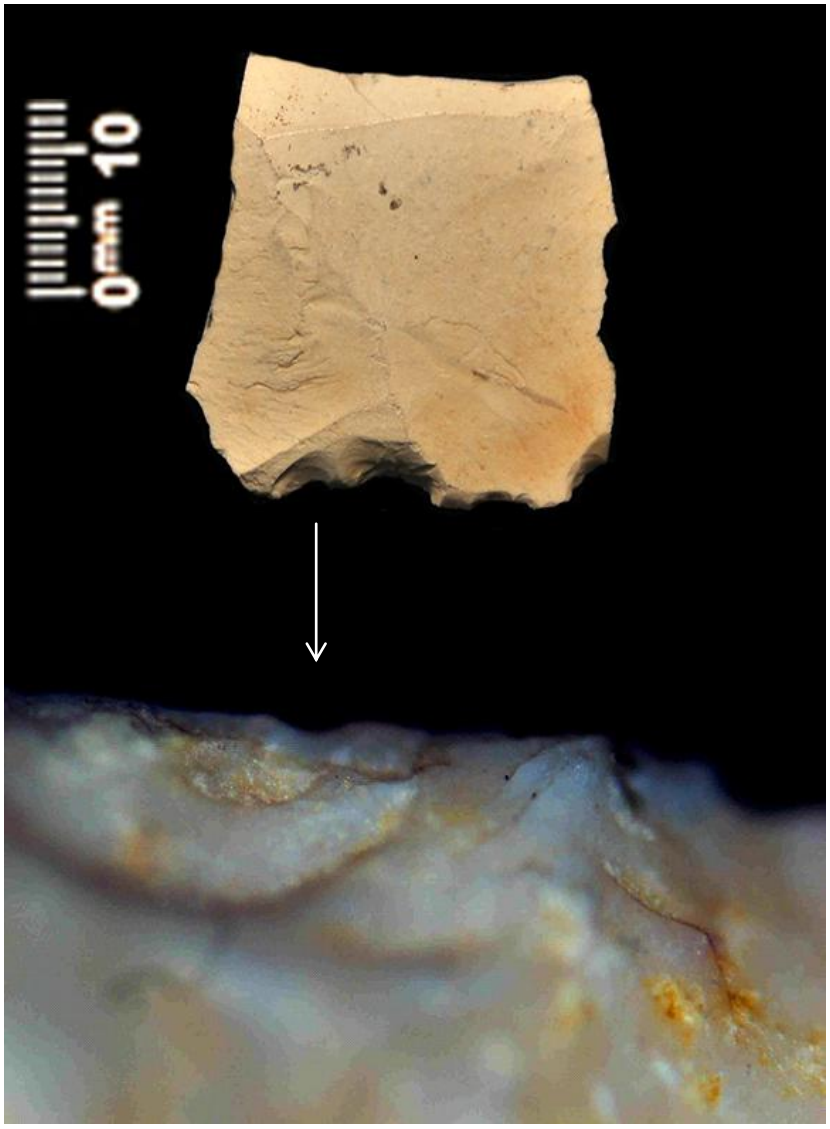
Results of prior edge-wear analysis. Edge damage and use-wear identified on Bend break graver spur from Pleistocene Terrace at Topper Site (38AL23). (Images courtesy of Albert C. Goodyear and Jim Wiederhold).



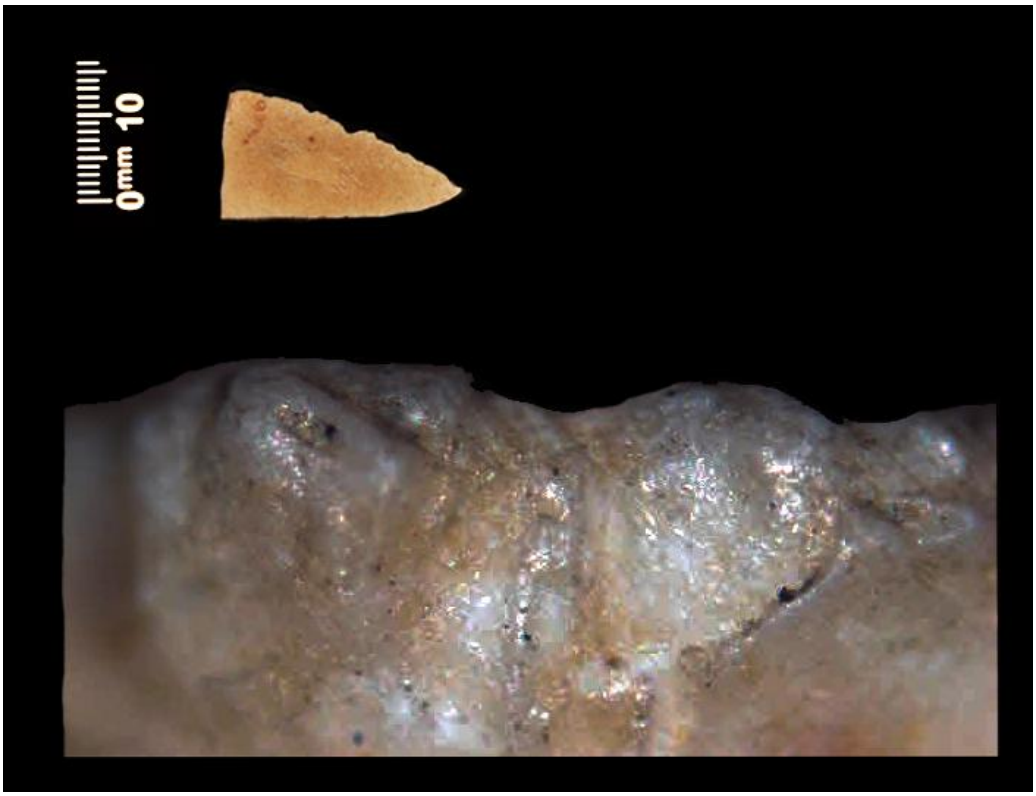
Appendix A37-2
Results of 2007 use-wear analysis showing micro-flaked edge on bend break MK20at magnification 20x. Microscopic image courtesy of Albert C. Goodyear.



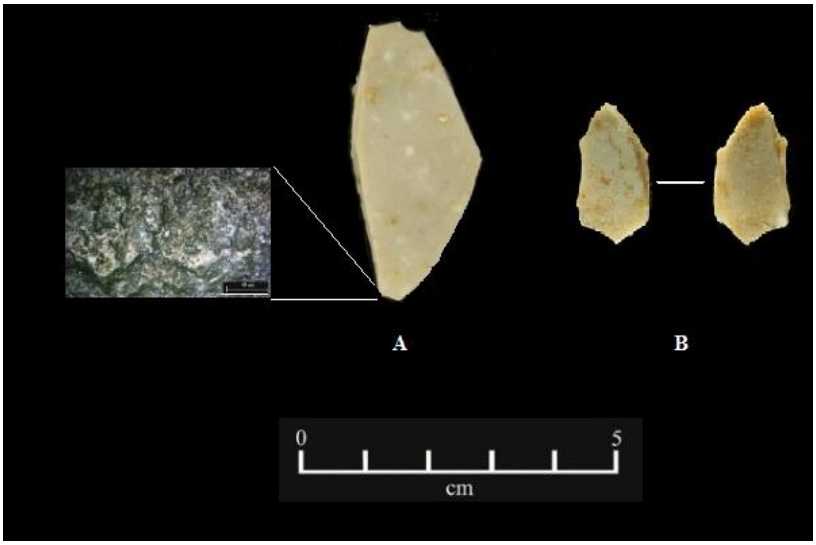
Appendix A37-3
Results of use-wear analysis showing micro-flaked edge on Utilized Flake MK06at magnification 20x. Microscopic image courtesy of Albert C. Goodyear.



Appendix A37-4
Photomicrograph showing feather termination retouch scars on a utilized flake from the Pleistocene Sands at the Topper Site (38AL23).



Appendix A37-5A
Microwear on chert bend break from the Pleistocene Sands. The “greasy” Polish on the surface of this bend break is evidence of cultural activity.

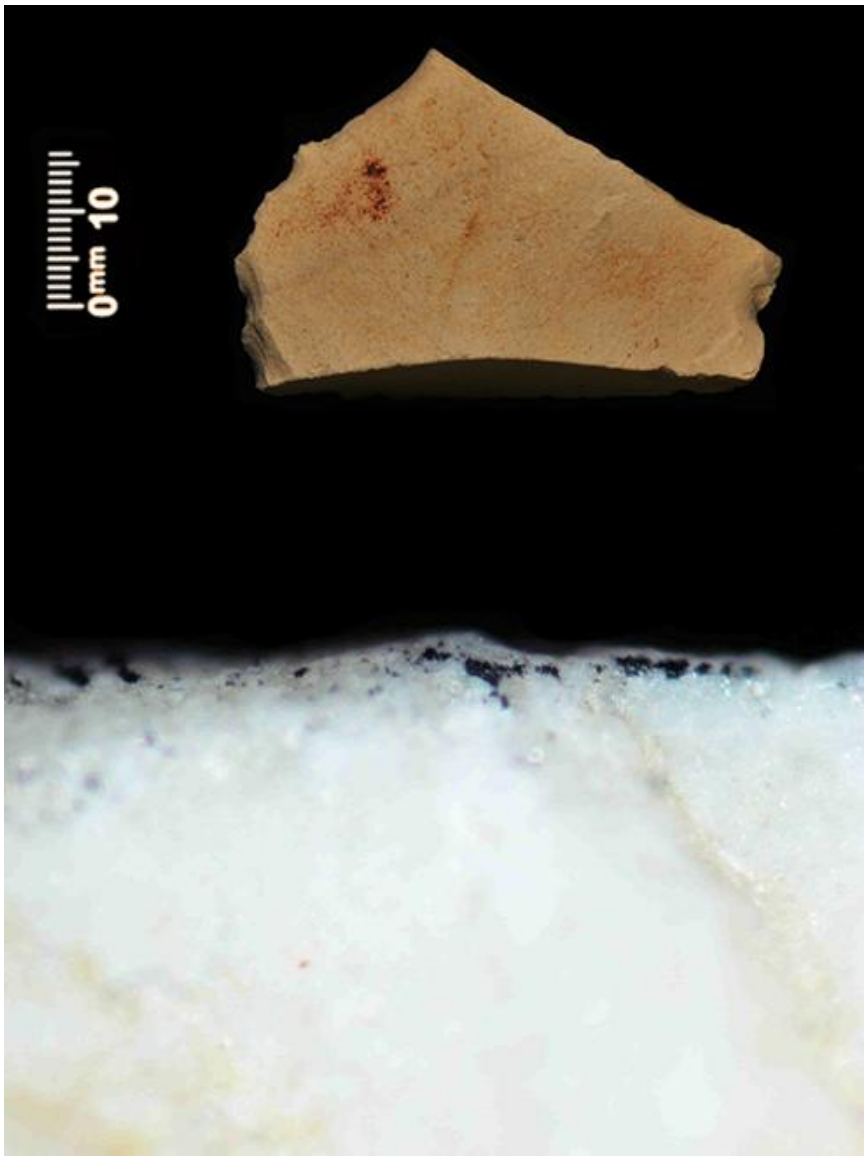


Appendix A37-5B
Microwear on chert bend break from Debra L. Friedkin Site (Left) and bend break from Topper Site (Right). (Image adapted from Weiderhold and Pevny 2014).



Appendix A37-6

Microwear on chert scraper from the Pleistocene Sands. The “bright Polish on the surface of this scraper is evidence of working soft materials such as plants or soft wood.



Appendix A37-7
Residue on distal terminus at left end of chert object at Top. Residue is visible in black in photomicrograph below. The residue on this object is likely due to natural processes.

Table A37-1
Results of Microwear Analysis

Year	Northing	Easting	Depth	Art			Level	Tool Type	Mod.	Scars	Break Ang.	IM
1998	245.14	131.93	96.72		244	130		Blade	yes	7	2	4
1998	244.09	130.88	96.74	2	244	130	S	Utilized flake	yes	4	2	4
1998	245.22	131.37	97.065	2	244	130		Flake tool	yes	5	2	5
1999	243.07	133.7	97.05	11	242	132		core fragment		0	2	0
1998	244	130.94	96.73	18	244	130	S			0	2	0
1999	243.18	133.71	97.05	10	242	132			yes	3	3	2
1999	243.8	131.05	96.9		242	130	F23	Utilized flake	yes	2	0	2
1999	243.2	132.19	97.12	5	242	132		Utilized flake	yes	2	0	2
1998	245.92	131.36	96.74	1	244	130		Utilized flake	yes	3	0	2
1999	243.8	133.91	98.31	11	242	132	F48	Scraper	yes	10	0	3
1998	244.055	131.2	96.75	12	244	130	S	Core fragment		0	0	3
1999	243.86	130.72	96.89		242	130	F23	Utilized flake	yes	2	0	4
1999	243.62	134	98.22	12	242	132	F48	Uniface	yes	5	0	4
1999	243.68	133.85	98.32	4	242	132	F48	Biface	yes	7	0	4
1998	244.17	131.64	96.84	1	244	130		Utilized flake		0	0	4
1998	245.33	131.13	96.915	2	244	130		Core	yes	4	0	4
1999	243.06	133.6	97.08	6	242	132		Utilized Flake		0	0	5
1999	243.75	133.15	97.065	10	242	132		Utilized flake	yes	12	0	5
2000	245.84	147.22	97.6	8	244	146	180	Bend break	yes	5	3	2
2000	242.02	129.59	96.74	6	242	128		Bend Break	yes	6	3	4
2000	243.82	130.53	96.665	1	242	130	190	Uniface	yes	10	0	4
2000	242.27	130.7	96.71	4	242	130	190	Core		0	0	5
2000	243.56	131.01	96.67	2	242	130		Utilized flake	yes	2	0	0
2001	241.36	131.46	96.79	1	240	130	23	Utilized flake	yes	6	2	4
2002	242.64	142	97.46	4	242	140	17	Scraper	yes	3	1	2
2002	243.75	139.99	97.2	PP8	242	138	19	Scraper	yes	3	1	4
2002	243.55	141.57	97.49	PP5	242	140	16	Bend break	yes	7	1	4
2002	242.58	141.64	97.425	1	242	140	17	Scraper	yes	6	1	6
2002	244.79	143.8	97.445	8	244	142		chert debris			1	
2002	244.82	142.74	97.45	49	244	142		Scraper			1	
2002	245.01	143.8	98.315	7	244	242	B2	biface			1	

Table A37-1 continued

Year	Northing	Easting	Depth	Art			Level	Tool Type	Mod.	Scars	Break Ang.	IM
2002	246.97	143.26	98.22	4	246	142	3	Biface			1	
2002	243.71	142.21	97.915	1	242	142	7	Scraper	yes	5	2	2
2002	244.64	138.32	97.44	30	244	138	F87	Bend Break	yes	3	2	2
2002	244.6	140.35	97.495	4	244	140	16	Scraper	yes	7	2	3
2002	245.54	138.69	97.375	2	244	138	16	Utilized Flake	yes	2	2	4
2002	244	140.12	97.49	3	242	140	16	Scraper	yes	5	2	5
2002	242	141.75	98.13	4	242	140	4	biface tip			2	
2002	242.92	140.66	98.365	6	242	140	C2	MALA	yes		2	
2002	244.25	137.52	97.945	2	244	136	5	Blade			2	
2002	243.95	137.46	97.47	9	244	136	F87	chert debris			2	
2002	244.47	139.13	97.51	6	244	138	15	Bend Break			2	
2002	244.31	139.22	97.52	5	244	138	15	Bend break			2	
2002	244.28	138	97.48	22	244	138	16	Core fragment	yes	4	2	
2002	243.95	137.43	97.47	8	244	138	F87	chert debris			2	
2002	244.9	142.48	97.455	59	244	142	F88	chert debris			2	
2002	244.58	142.93	97.45	42	244	142	F88	Utilized Flake			2	
2002	244.78	142.77	97.45	48	244	142		, bend break			2	
2002	244.8	142.47	97.48	61	244	142		Utilized Flake			2	
2002		141.8	98.52	2		140	C2	biface			2	
2002		141.9	98.48	4		140	C2	broken biface			2	
2002		141.85	98.55	2		140	C4	broken biface			2	
2002	244.13	139.71	97.51	3	244	138	13	Bend break	yes	3	3	2
2002	244.12	139.63	97.515	4	244	138	15	chert pebble	yes	5	3	3
2002	243.5	140.57	97.505	3	242	140	15	bend break,	yes	4	3	5
2002	245.5	141.27	97.435	4	244	140		Utilized Flake	yes	13	3	6
2002	243.65	141.42	97.48	PP3	242	140	16	, bend break			3	
2002	243.39	144	97.495	1	242	142	16	Utilized flake	yes	3	3	
2002	243.9	137.25	97.485	6	244	136	F87	chert debris			3	
2002	244.3	138.1	97.47	24	244	138	16	Bend break			3	
2002	244.45	143.09	97.455	5	244	142	16	bend break,			3	
2002	244.43	143.09	97.455	4	244	142	16	bend break			3	
2002	244.65	142.86	97.45	45	244	142	F 88	chert debris			3	
2002	244.62	142.88	97.45	44	244	142	F88	Utilized Flake			3	

Table A37-1 continued

Year	Northing	Easting	Depth	Art			Level	Tool Type	Mod.	Scars	Break Ang.	IM
2002	246.55	142.27	98.24	1	246	142	3	chert biface Utilized			3	
2002	243.22	139.96	97.445	PP7	242	138	14	Bend break	yes	2	4	1
2002	244.68	141.18	97.44	12	244	140	17	Scraper	yes	4	4	3
2002	244.08	140.8	97.455	4	244	140	16	Bend break	yes	10	4	6
2002	244.72	140.9	97.465	5	244	140	16	Bend break	yes	4	4	6
2002	243.1	143.77	97.495	2	242	142	16	core			4	
2002	244.14	136.69	97.135	1	244	136	20	Bend break			4	
2002	244.14	137.93	97.47	21	244	138	16	core			4	
2002	244.69	142.49	97.49	62	244	142	F88	Bend break			4	
2002	244.72	142.27	97.48	29	244	142		Utilized Flake			4	
2002	243.17	141.87	97.535	1	242	140	19					0
2002	242.26	139.59	97.59	1	242	138		Utilized flake				1
2002	245.3	142.81	97.44	25	244	142	F87	core				1
2002	245.08	143.74	97.48	9	244	142		Utilized Flake				1
2002	243.72	139.82	97.445	4	242	138	14	chert tool	yes	2		2
2002	242.14	139.39	97.3	4	242	138	17	Utilized Flake	yes	2		2
2002	242.9	139.51	97.34	3	242	138	17	Utilized Flake	yes	4		2
2002	242.75	141.97	98.115	5	242	140	4	Utilized Flake	yes	3		2
2002	243.12	140.09	97.45	4	242	140	16	Scraper	yes	3		2
2002	244.5	137.78	97.45	16	244	136	F87	Utilized Flake	yes	3		2
2002	244.38	137.58	97.45	14	244	136	F87	Utilized Flake				2
2002	244.36	137.84	97.46	18	244	136	F87	Core	yes	5		2
2002	244.46	137.5	97.49	13	244	136	F87	Core	yes	3		2
2002	245.43	138.23	97.6	1	244	138	12	Utilized Flake	yes	3		2
2002	244.35	138.47	97.3	1	244	138	17	Utilized Flake	yes	3		2
2002	244.27	138.63	97.425	64	244	138	F87	Utilized Flake				2
2002	244.75	141.2	97.445	11	244	140	17	chert scraper	yes	2		2
2002	244.29	140.85	97.415	8	244	140	17	Utilized Flake				2
2002	244.91	140.8	97.4	7	244	140		Utilized Flake				2
2002	244.17	140.86	97.46	5	244	140		Core	yes	11		2
2002	244.59	142.85	97.45	43	244	142	F88	Utilized Flake	yes	3		2
2002	246.85	143.9	98.42	6	246	142	2	Scraper	yes	2		2
2002	243.03	138.62	97.41	5	242	138	15	chert scraper	yes	4		3

Table A37-1 continued

Year	Northing	Easting	Depth	Art			Level	Tool Type	Mod.	Scars	Break Ang.	IM
2002	242.45	139.1	97.44	2	242	138		Utilized Flake	yes	6		3
2002	243.88	140.37	98.005	1	242	140	6	Utilized Flake	yes	9		3
2002	242.84	141.82	97.44	3	242	140	17	Scraper	yes	3		3
2002	243.53	140.09	97.6	1	242	140		Core	yes	4		3
2002	243.12	143.45	97.11	1	242	142	12	chert scraper	yes	5		3
2002	244.14	137.09	97.59	1	244	136	12	Utilized Flake	yes	2		3
2002	244.85	137.05	97.35	3	244	136	15	scraper	yes	5		3
2002	244.91	139.35	97.46	PP3	244	138	14	scraper	yes	4		3
2002	244.24	139.1	97.18	1	244	138	20	chert uniface	yes	3		3
2002	245.92	138.35	97.45	46	244	138	F87	chert core tool	yes	4		3
2002	243.88	138.86	97.42	47	244	138	F87	chert core tool	yes	3		3
2002	244.54	140.24	98.185	5	244	140	4	chert ut flake	yes	2		3
2002	244.78	141.78	98.135	9	244	140	4	Utilized Flake				3
2002	244.93	141.24	97.45	10	244	140	17	Utilized Flake				3
2002	244.19	140.56	97.425	9	244	140		scraper	yes	6		3
2002	245.58	141.08	97.49	3	244	140		chert core tool	yes	6		3
2002	244	142.8	97.48	15	244	142		scraper	yes	4		3
2002	246.93	142.94	98.22	2	246	142	3	scraper	yes	3		3
2002	242.5	137.55	97.32	4			17	chopper	yes	7		3
2002	242.96	138.57	98.01	1	242	138	4	Utilized Flake	yes	6		4
2002	242.77	139.2	97.45	1	242	138	14	scraper	yes	9		4
2002	242.05	139.5	97.415	3	242	138	15	Utilized Flake	yes	5		4
2002	243.16	139	97.435	1	242	138	15	Utilized Flake	yes	6		4
2002	243.14	138.64	97.34	1	242	138	17	Utilized Flake	yes	8		4
2002	242.32	138.8	97.25	1	242	138	19	chert core tool	yes	10		4
2002	242.84	141.7	97.46	2	242	140	16	chert scraper	yes	7		4
2002	242.56	141.85	97.44	5	242	140	17	scraper	yes			4
2002	243.27	145.09	97.55	2	242	142	14	Utilized Flake	yes	5		4
2002	243.7	142.91	97.535	2	242	142	15	Utilized Flake	yes	6		4
2002	243.05	143.75	97.52	12	242	142	15	Utilized Flake	yes	8		4
2002	245.48	136.03	98	1	244	136	5	scraper	yes	8		4
2002	245.74	136.94	97.375	1	244	136	15	Utilized Flake	yes	5		4
2002	244	139.8	97.49	12	244	138	14	Utilized Flake	yes	3		4

Table A37-1 continued

Year	Northing	Easting	Depth	Art			Level	Tool Type	Mod.	Scars	Break Ang.	IM
2002	244.76	139.93	97.5	2	244	138	14	Utilized Flake	yes	5		4
2002	244.46	143.85	97.705	2	244	142	11	Utilized Flake	yes	7		4
2002	245.58	143.39	97.65	3	244	142	12	Utilized Flake	yes	9		4
2002	244.24	143.07	97.49	1	244	142	16	Utilized Flake	yes	6		4
2002	244.43	143.35	97.48	2	244	142	16	Utilized Flake	yes	4		4
2002	244.91	142.39	97.46	63	244	142	F87	Utilized Flake	yes	3		4
2002	245.35	143.23	97.46	12	244	142		chopper	yes	5		4
2002	243.9	138.02	98.205	12	242	138	2	bifacial scraper	yes			5
2002	243.64	139.21	97.51	1	242	138	13	chert scraper	yes	12		5
2002	243.85	139.98	97.495	3	242	138	14	unifacial tool	yes	6		5
2002	243.2	139.64	97.365	1	242	138	16	Utilized Flake	yes	12		5
2002	242.8	138.3	97.32	6	242	138	17	utilized chert flake	yes	6		5
2002	243.03	138.87	97.29	2	242	138	18	Utilized Flake	yes	8		5
2002	243.93	138.32	97.46	7	242	138	F87	Utilized Flake	yes	4		5
2002	243.1	140.31	98.125	3	242	140	4	scraper	yes	8		5
2002	243.77	140.79	97.67	1	242	140	12	Utilized Flake	yes	6		5
2002	245.05	137.63	97.37	2	244	136	15	Utilized Flake	yes	9		5
2002	244.55	137.46	97.46	12	244	136	F87	chert scraper	yes	6		5
2002	243.63	138.19	97.51	1	244	138	13	Utilized Flake	yes	15		5
2002	245.94	139.61	97.49	4	244	138	14	Utilized Flake	yes	5		5
2002	245.01	139.95	97.39	3	244	138	16	scraper	yes	7		5
2002	244.11	138.62	97.485	43	244	138	F87	chert core tool	yes	5		5
2002	245.66	140.87	97.425	1	244	140	17	Utilized Flake	yes	16		5
2002	245.45	140.45	97.41	3	244	140		chopper	yes	11		5
2002	245.47	142.33	97.57	1	244	142	14	Utilized Flake	yes	4		5
2002	243.26	138.57	98.01	2	242	138	4	core	yes	8		6
2002	242.85	139.95	97.345	2	242	138	17	utilized chert flake	yes	8		6
2002	242.54	139.09	97.21	2	242	138	19	chert core tool	yes	13		6
2002	243.39	139.02	98.19	1	242	140	4	scraper	yes	10		6
2002	244.06	137.88	97.43	17	244	136	F87	chopper	yes	27		6
2002	244.47	138.51	97.65	1	244	138	10	chopper	yes	19		6
2002	245.7	138.72	97.31	3	244	138	17	scraper	yes	18		6
2002	245.9	137.84	97.46	18	244	138						6

Table A37-1 continued

Year	Northing	Easting	Depth	Art			Level	Tool Type	Mod.	Scars	Break Ang.	IM
2002	245.45	140.85	97.415	2	244	140	17	core	yes	8		6
2002	244.45	141.33	97.36	2	244	140	17	core	yes	9		6
2002	244.74	143.8	98.175	1	244	142	4	scraper	yes	12		6
2002	244.55	142.91	97.45	41	244	142	F88	scraper	yes	7		6
2002	244.75	140.04	98.36	5	242	140	C2	chert scraper	yes	21		7
2002	243	143.39	97.73	1	242	142	11	Utilized Flake	yes	24		7
2002	245.37	138.73	97.455	13	244	138	14	Utilized Flake	yes	15		7
2002	244.35	143.52	98.14	4	244	142	4	chert scraper	yes	13		7
2002	244.87	142.1	98.73	2	244	142	B2	chert scraper	yes	15		7
2002	244	138	98.17	1	244	138	3	chert core	yes			8
2002	245.8	138.43	97.94	1	244	138	5	MALA	yes			8
2002	243.97	138.64	97.605	1	242	138	11	Blade	yes	3		4
2003	243.54	143.26	97.21	20			19	Utilized Flake			1	
2003	244.13	140.1	97.3	2	244	140	20	chert bend break	yes	1	2	1
2003	245.03	143.14	97.3	1	244	142	19	Utilized Flake	yes	16	2	2
2003	243.25	142.91	97.22	28	242	142	19	Utilized Flake			2	
2003	245.35	143.37	97.385	7	244	142	18	Bend break	yes	2	3	5
2003	244.63	140.34	97.28	3	244	140	20	chert bend break			3	
2003	245.18	142.83	97.37	3	244	142	18	chert bend break			3	
2003	242.98	141.05	97.35	12	242	140	F 90	Bend break	yes	6	4	3
2003	242.63	140.29	97.34	3	242	140	19	chert bend break			4	
2003	245.16	143.89	97.355	10	244	142	18		yes	15		6
2003	244.24	143.43	97.32	19	244	142	19					
2003	243.08	141.59	97.345	1	242	140	19	chert end scraper	yes	6		2
2003	242.4	143.57	97.3	2	242	142	19	chert debris, tool	yes	2		2
2003	245.76	138.25	97.605	1	244	138	11	chert Blade distal	yes	3		2
2003	244.17	142.53	97.41	3	244	142	17	Utilized Flake	yes	2		2
2003	244.03	143.41	97.275	14	244	142		Utilized Flake	yes	3		2
2003	242.98	141.01	97.36	5	242	140	F 90	Utilized Flake	yes			3
2003	243.82	141.38	97.325	4	242	140		Utilized Flake	yes	7		3
2003	242.9	143.07	97.335	13	242	142	19	chert core chopper	yes	13		3
2003	245.43	140.43	97.36	1	244	140	18	chert tool	yes	7		3
2003	245.21	143.12		7	244	142	17	Utilized Flake	yes	2		3

Table A37-1 continued

Year	Northing	Easting	Depth	Art			Level	Tool Type	Mod.	Scars	Break Ang.	IM
2003	245.48	143.74	97.37	14	244	142	18	chopper	yes	3		3
2003	244.28	143.5	97.215	24	244	142	19	core	yes	5		3
2003	245.13	142.9	97.315	6	244	142		Utilized Flake	yes	3		3
2003	242.97	141.97	97.36	5	242	140	18	chert tool, chopper	yes	6		4
2003	243.08	141.59	97.345	1	242	140	19	scraper	yes	6		4
2003	243.06	140.97	97.365	7	242	140	F90	Utilized Flake				4
2003	245.71	143.63	97.42	6	244	142	17	chopper	yes	11		4
2003	245.06	143.71	97.365	8	244	142	18	scraper	yes	yes		4
2003	245.48	142.83	97.42	4	244	142		Utilized Flake	yes	5		4
2003	244.5	143.87	97.29	13	244	142		chopper	yes	12		4
2003	243.23	140.9	97.32	3	242	140	F90	core				5
2003	242.97	141.12	97.32	8	242	140	F90	core	yes	15		5
2003	243.27	140.43	97.305	7	242	140		scraper	yes	9		5
2003	242.75	143.66	97.44	5	242	142	17	Utilized Flake	yes	7		5
2003	242.89	143.57	97.335	12	242	142	19	chert debris, tool	yes	9		5
2003	242.85	142.53	97.38	1	242	142		chert scraper tool	yes	9		5
2003	244.87	142.73	97.43	2	244	142	17	scraper	yes	9		5
2003	245.42	142.85	97.315	5	244	142	19	chert scraper	yes	10		5
2003	244.2	143.42	97.29	18	244	142	19	utilized chert flake	yes	6		5
2003	242.84	140.3	97.28	8	242	140	20	Utilized Flake	yes	5		6
2003	243.12	141.15	97.315	9	242	140	F90	chert tool	yes	13		6
2003	242.47	142.82	97.28	25	242	142	19	core	yes	16		6
2003	243.35	141.21	97.285	2	242	140	F 90	core tool	yes	33		7
2004	243.595	141.42	96.345	1	242	140	4	Utilized Flake			1	
2004	242.37	140.56	97.03	4	242	140	3	Bend break			2	
2004	242.35	141.25	96.825	5	242	140	6	Bend break			2	
2004	242.92	141.71	96.82	4	242	140	7	Utilized Flake			2	
2004	242.36	141.22	96.825	7	242	140	7	Bend break			2	
2004	242.33	140.73	96.845	2	242	140	7	Bend break			2	
2004	242.33	140.2	96.69	1	242	140	10	TA chert shatter			2	
2004	243.84	141.89	95.83		242	140		Utilized Flake			2	
2004	242.38	142.84	96.825	2	242	142	7	Bend break			2	
2004	242.54	141.28	96.955	2	242	140	4	Utilized Flake	yes		3	5

Table A37-1 continued

Year	Northing	Easting	Depth	Art			Level	Tool Type	Mod.	Scars	Break Ang.	IM
2004	242.28	140.78	97.12	1	242	140	1	Bend Break			3	
2004	243.34	141.27	96.54	1	242	140	2	chert bend break			3	
2004	243.56	141.61	96.29	1	242	140	5	chert bend break			3	
2004	242.4	142.18	96.885	7	242	140	6	Utilized Flake			3	
2004	242.73	140.82	96.84	1	242	140	7	Bend break			3	
2004	242.15	142.24	97.01	4	242	142	3	chert bend break			3	
2004	242.12	140.21	96.75	1	242	140	9	quartz bend break			4	
2004	242.6	140.35	96.7	4	242	140	9	Bend break			4	
2004	242.84	142.13	96.92	1	242	142	5	chert shatter			4	
2004	242.17	142.54	96.975	3	242	142	4	chert shatter			5	
2004	242.7	141.57	96.905	2	242	140	5	scraper	yes			1
2004	242.61	140.17	96.64	1	242	140	11	Utilized Flake	yes			3
2004	242.18	140.41	97.005	2	242	140	4	scraper	yes			4
2004	242.19	140.06	96.87	1	242	140	6	scraper	yes			6
2004	242.3	140.31	96.725	3	242	140	9	chopper	yes			6
2005	244.21	140.05	96.65	2	244	140	5	Bend break			1	1
2005	246.3	141.3	97.83	3	246	140	15	chert flake fragment	yes	8	1	4
2005	247.83	143.98	98.25	2	246	142	9	biface fragment	yes		1	4
2005	146.95	141.28	97.52	3	246	140	21	chert debris			1	
2005	246.64	143.05	97.95	22	246	142	16	chert flake			1	
2005	246.78	140.12	97.5	17	246	140	21	Bend break	yes	2	2	2
2005	247.65	141.97	97.84	1	246	140	17	bend break	yes	3	2	3
2005	243.22	140.28	95.74	8	242	140	3	Utilized flake	yes	2	2	
2005	243.05	141.7	95.65	8	242	140	4	bend break			2	
2005	243.66	140.18	96.21	3	242	140	5	chert shatter			2	
2005	243.3	141.94	95.5	5	242	140	5	bend break			2	
2005	243.55	141.72	95.5	6	242	140	6	Utilized flake			2	
2005	243.51	140.08	96.175	31	242	140	6	bend break			2	
2005	243.69	140.22	96.04	20	242	140	7	chert shatter			2	
2005	243.65	140.15	96.02	21	242	140	7	chert shatter	yes	2	2	
2005	243.18	140.42	96.01	22	242	140	7	chert shatter			2	
2005	243.34	140.24	95.71	2	242	140	10	chert bend break			2	
2005	244.9	140.17	97.065	1	244	140	10	bend break			2	

Table A37-1 continued

Year	Northing	Easting	Depth	Art			Level	Tool Type	Mod.	Scars	Break Ang.	IM
2005	246.16	141.96	97.74	8	246	140	17	broken quartz			2	
2005	246.35	140.48	97.55	2	246	140	20	Amorphous Debris			2	
2005	247.27	140.93	97.56	6	246	140	20	bend break			2	
2005	246.46	141.26	97.5	8	246	140	21	chert debris cortical			2	
2005	246.92	140.53	97.53	15	246	140	21	chert debris			2	
2005	247.66	143.64	98	4	246	142	14	Amorphous Debris			2	
2005	246.84	142.12	97.86	2	246	142	17	bend break	yes	1	3	1
2005	247.285	141.38	97.51	18	246	140	21	bend break	yes	3	3	3
2005	246.5	140.29	97.53	9	246	140	21	chert debris			3	4
2005	243.5	141.86	95.46	2	242	140	6	chert flake fragment			3	
2005	243.725	140	96.14	17	242	140	6	TA chert bend break			3	
2005	243.755	140.21	96.1	18	242	140	6	bend break			3	
2005	243.2	140.60	96.06	4	242	140	7	chert shatter			3	
2005	243.585	140.15	96.05	18	242	140	7	Utilized flake			3	
2005	247.03	140.25	97.55	8	246	140	20	Utilized flake			3	
2005	146.77	141.17	97.51	5	246	140	21	bend break			3	
2005	246.3	140.57	97.53	13	246	140	21	bend break			3	
2005	247.46	142.83	97.95	7	246	142	16	bend break			3	
2005	247.76	142.8	97.93	18	246	142	16	bend break			3	
2005	247.78	143.01	97.965	20	246	142	16	bend break			3	
2005	246.15	142.01	97.85	1	246	142	18	bend break			3	
2005	247.87	142.13	97.68	2	246	142	21	bend break			3	
2005	247.91	142.25	97.57	1	246	142	23	bend break			3	
2005	246.85	143.15	97.45	7	246	142	25	bend break			3	
2005	246.21	143.07	97.4	1	246	142	26	bend break			3	
2005	247.48	141.63	97.64	4	246	140	19	chert bend break	yes	2	4	2
2005	243.56	140.36	95.58	2	242	140	12	bend break	yes	4	4	3
2005	246.76	141.93	97.75	4	246	140	17	bend break	yes	2	4	3
2005	243.54	140.13	96.16	29	242	140	6	Utilized flake			4	
2005	243.52	140.06	96.19	30	242	140	6	Bend break	yes	2	4	
2005	244.65	140.05	96.12	1	244	140	10	bend break			4	
2005	247.07	140.87	97.55	7	246	140	20	chert debris, medial			4	
2005	247.52	142.97	97.95	21	246	142	16	bend break			4	

Table A37-1 continued

Year	Northing	Easting	Depth	Art			Level	Tool Type	Mod.	Scars	Break Ang.	IM
2005	247.65	142.36	97.81	2	246	142	18	bend break			4	
2005	246.31	143.06	97.57	6	246	142	23	chert bend break			4	
2005	243.82	140.35	96.25	1	242	140	6	Utilized flake			5	
2005	247.12	142.11	98.23	3	246	142	10	Blade	yes	1		1
2005	247.38	142.74	98.19	2	246	142	11	Blade	yes	1		1
2005	243.3	140.9	95.75	3	242	140	10	Utilized flake	yes	3		2
2005	247.89	140.93	98.1	3	246	140	9	Utilized flake	yes	3		2
2005	247.38	141.19	98.12	4	246	140	9	core	yes	7		3
2005	247.49	142.66	97.95	10	246	142	16	Utilized flake	yes	4		3
2005	243.01	141.1	95.43	3	242	140	6	core	yes	8		4
2005	243.09	144.54	97.57	1	242	144	10	Retouched flake	yes			4
2005	246.2	140.96	97.65	4	246	140	18	chopper	yes	9		4
2005	246.13	141.6	97.6	1	246	140	19	broken quartz tool	yes	4		4
2005	247.81	140.09	97.5	9	246	140	20	Utilized flake				4
2005	246.28	140.07	97.53	11	246	140	21	chopper	yes	9		4
2005	246.84	142.12	97.86	2	246	142	12	chert flake fragment	yes	5		4
2005	247.69	141.7	97.49	2	246	140	22					4
2005	247.77	140.82	98.13	5	246	140	9	scraper	yes	12		5
2005	247.63	143.3	98.25	4	246	142	9	core	yes			5
2005	244.3	144.8	97.93		244	144		core	yes	yes		6
2006	242.83	141.24	96.45	2	242	140	7	Utilized Flake			1	
2006	242.97	141.63	96.03	4	242	140	16	Utilized Flake	Yes	2	1	
2006	242.47	140.79	95.96	4	242	140	13	Utilized Flake			1	
2006	242.32	140.32	95.91	4	242	140	14	Utilized Flake			2	2
2006	242.42	141.24	96.5	2	242	140	6	quartz tool	yes	3	2	3
2006	242.35	141.85	96.73	4	242	140	2	scraper	yes	6	2	4
2006	242.66	141.75	96.755	3	242	140	1	chert shatter			2	
2006	242.22	141.88	96.37	2	242	140	9	Utilized Flake			2	
2006	242.95	141.23	96.39	5	242	140	9	Utilized Flake			2	
2006	242.775	141.77	96.33	6	242	140	10	Utilized Flake	yes	3	2	
2006	242.19	141.84	96.31	11	242	140	10	Utilized Flake			2	
2006	242.64	141.68	96.31	12	242	140	10	Utilized Flake			2	
2006	242.13	141.71	96.275	7	242	140	11	Utilized Flake			2	

Table A37-1 continued

Year	Northing	Easting	Depth	Art			Level	Tool Type	Mod.	Scars	Break Ang.	IM
2006	242.53	141.92	96.185	1	242	140	13	Utilized Flake			2	
2006	242.4	141.46	96.145	4	242	140	14	Bend break			2	
2006	242.81	141.92	96.08	5	242	140	15	Utilized Flake			2	
2006	242.02	140.52	96.28	8	242	140	7	Bend break			2	
2006	242.31	140.22	96.235	5	242	140	8	Utilized Flake			2	
2006	242.95	140.22	96.07	5	242	140	11	Utilized Flake			2	
2006	242.85	140.31	96.03	1	242	140	12	Utilized Flake	yes	3	2	
2006	242.8	140.97	96	4	242	140	12	Utilized Flake			2	
2006	242.35	140.43	96	7	242	140	12	bend break			2	
2006	242.12	142.9	96.76	8	242	142	1	Blade			2	
2006	242.77	142.29	96.71	3	242	142	2	Bend break			2	
2006	242.655	142.55	96.71	4	242	142	2	Broken quartz			2	
2006	242.71	142.99	96.39	3	242	142	9	Utilized Flake			2	
2006	242.31	141.47	96.22	5	242	140	12	Bend break	yes	1	3	1
2006	242.77	141.56	96.77	1	242	140	1	Bend break	Yes	2	3	2
2006	242.15	142.32	96.77	5	242	142	1	Bend break	yes	2	3	2
2006	242.63	142.65	96.51	5	242	142	6	Bend break			3	2
2006	242.07	142.49	96.45	1	242	142	7	Bend break	yes	3	3	2
2006	242.75	142.09	96.71	2	242	142	2	Bend break			3	3
2006	242.35	140.84	96.45	3	242	140	7	Bend break			3	
2006	242.58	141.29	96.43	1	242	140	8	Bend break			3	
2006	242.7	141.11	96.35	9	242	140	9	Bend break			3	
2006	242.86	141.07	96.35	1	242	140	10	chert shatter			3	
2006	242.72	141.82	96.35	4	242	140	10	chert shatter			3	
2006	242.64	141.86	96.34	8	242	140	10	chert bend break			3	
2006	242.83	141.47	96.31	10	242	140	10	Bend break			3	
2006	242.85	141.05	96.29	3	242	140	11	Bend break	yes	2	3	
2006	242.96	141.78	96.23	2	242	140	12	Utilized Flake			3	
2006	242.28	140.12	96.53	2	242	140	2	Utilized Flake			3	
2006	242.53	140.18	96.53	6	242	140	2	Bend break			3	
2006	242.24	140.68	96.36	1	242	140	5	Bend break			3	
2006	242.53	140.3	96.24	4	242	140	8	Bend break			3	
2006	242.665	140.18	96.17	2	242	140	9	Utilized Flake	yes	4	3	

Table A37-1 continued

Year	Northing	Easting	Depth	Art			Level	Tool Type	Mod.	Scars	Break Ang.	IM
2006	242.76	140.88	96.11	7	242	140	10	Bend break			3	
2006	242.22	140.62	96.01	8	242	140	12	Bend break			3	
2006	242.63	140.38	95.95	2	242	140	13	Bend break			3	
2006	242.14	140	95.93	5	242	140	14	Bend break			3	
2006	242.7	140.17	95.82	1	242	140	16	chert shatter	yes	1	3	
2006	242.47	142.7	96.77	7	242	142	1	bend break			3	
2006	242.28	142.8	96.7	8	242	142	2	anvil			3	
2006	242.43	142.95	96.67	4	242	142	3	chert broken flake			3	
2006	242.98	142.44	96.585	3	242	142	5	Bend break			3	
2006	242.93	142.92	96.42	6	242	142	8	Bend break			3	
2006	242.48	141.77	96.35	6	242	140	9	Bend break	yes	2	4	1
2006	242.7	140.68	96.155	4	242	140	9	Bend break			4	2
2006	242.81	141.83	96.35	3	242	140	9	Bend break			4	
2006	242.83	141.27	96.34	3	242	140	10	Bend break			4	
2006	242.39	141.18	96.16	4	242	140	13	Bend break			4	
2006	242.22	140.15	96.55	1	242	140	1	Bend break			4	
2006	242.17	140.19	96.255	6	242	140	7	Bend break			4	
2006	242.33	140.8	95.8	4	242	140	16	Bend break			4	
2006	242.28	142.14	96.755	1	242	142	1	Bend break			4	
2006	242.34	142.63	96.51	4	242	142	6	Bend break			4	
2006	242.99	142.24	96.41	2	242	142	8	Utilized Flake			4	
2006	242.28	140.12	96.53	2	242	140	2	Bend break			5	
2006	242.22	140.97	96.51	4	242	140	2	Bend break			5	
2006	242.46	141.05	96.09	4	242	140	15	Utilized Flake				
2006	242.43	142.73	96.43	1	242	142	8	Utilized Flake				1
2006	242.49	141.41	96.72	1	242	140	2	Utilized Flake				2
2006	242.47	141.73	96.34	7	242	140	10	Utilized Flake	yes	5		2
2006	242.5	140.45	96.51	7	242	140	2	Utilized Flake				2
2006	242.23	141.28	96.02	6	242	140	16	Utilized Flake	yes	3		3
2007	242.38	140.27	95.73	6	242	140	18	Chert pebble			0	
2007	244.32	139.46		4	244	138	10	Bend break	yes	2	1	1
2007	242.55	141.94	95.56	33	242	140	25	Utilized flake	yes	2	1	2
2007	242.67	141.88	95.56	29	242	140	25	cortical chert			1	2

Table A37-1 continued

Year	Northing	Easting	Depth	Art			Level	Tool Type	Mod.	Scars	Break Ang.	IM
2007	242.29	140.04	95.69	18	242	140	19	Bend break			1	3
2007	242.93	141.81	95.6	17	242	140	24	Chert shatter			1	3
2007	242.89	141.72	95.47	5	242	140	26	Utilized flake	yes	3	1	3
2007	242.69	140.96	95.8	2	242	140	17	Utilized flake			1	
2007	242.76	140.6	95.74	11	242	140	18	Utilized flake			1	
2007	242.64	140.78	95.69	2	242	140	19	chert pebble			1	
2007	242.66	141.34	95.83	6	242	140	20	blocky chert pebble			1	
2007	242.59	140.72	95.62	3	242	140	20	chert shatter			1	
2007	242.38	140.49	95.64	4	242	140	20	chert pebble			1	
2007	242.25	140.88	95.65	6	242	140	20	cortical chert			1	
2007	242.99	141.95	95	2	242	140	21	chert shatter			1	
2007	242.26	141.44	95.7	19	242	140	22	Utilized flake			1	
2007	242.53	140.22	95.52	1	242	140	22	chert shatter,			1	
2007	242.945	141.22	95.69	5	242	140	**23**	chert shatter			1	
2007	242.15	141.96	95.6	27	242	140	24	chert shatter			1	
2007	242.98	141.96	95.52	3	242	140	26	cortical chert			1	
2007	242.94	141.81	95.52	4	242	140	26	Utilized flake			1	
2007	242.76	141.82	95.51	6	242	140	26	chert flake fragment			1	
2007	243.12	142.58	96.75	2	242	142	9	core			1	
2007	242.26	141.66	95.55	39	242	140	25	chert flake fragment			1	
2007	244.77	139.59	95.92	2	244	138	4	broken quartz			1	
2007	244.44	139.88	96.83	2	244	138	6	chert flake fragment			1	
2007	244.58	139.43	96.785	4	244	138	7	Amorphous Debris			1	
2007	242.24	141.32	95.76	15	242	140	21	Bend break			2	0
2007	242.59	141.98	95.55	42	242	140	25	chert shatter			2	1
2007	242.05	140.62	95.67	12	242	140	19	Amorphous Debris			2	2
2007	242.27	140.8	95.65	7	242	140	20	graver	yes	3	2	2
2007	242.12	141.41	95.71	24	242	140	22	broken flake	yes	2	2	2
2007	244.46	139.90	96.715	5	244	138	8	flake fragment	yes	2	2	2
2007	242.44	140.75	95.75	9	242	140	18	Bend break	Yes	1	2	5
2007	242.67	140.95	95.67	1	242	140	19	chert tool	yes	2	2	5
2007	242.21	141.62	95.56	6	242	140	25	Utilized flake	yes	5	2	5
2007	242.71	140.44	95.75	7	242	140	17	core			2	

Table A37-1 continued

Year	Northing	Easting	Depth	Art			Level	Tool Type	Mod.	Scars	Break Ang.	IM
2007	242.87	140.3	95.79	9	242	140	17	broken quartz			2	
2007	242.45	140.47	95.73	4	242	140	18	Bend break			2	
2007	242.07	140.7	95.73	10	242	140	18	Chert shatter			2	
2007	242.45	140.95	95.61	5	242	140	20	chert pebble,			2	
2007	242.99	141.61	95.74	7	242	140	22	chert shatter			2	
2007	242.4	141.35	95.72	16	242	140	22	chert shatter			2	
2007	242.18	141.79	95.7	21	242	140	22	chert shatter			2	
2007	242.28	141.63	95.65	13	242	140	**23**	Utilized flake			2	
2007	242.84	140.68	95.46	2	242	140	23	chert shatter			2	
2007	244.97	139.32	97.06	6	244	138	2	Utilized flake			2	
2007	244.84	139.85	96.905	1	244	138	4	Bend break			2	
2007	244.67	139.84	96.87	4	244	138	5	Bend break			2	
2007	244.67	139.84	96.86	5	244	138	5	Utilized flake			2	
2007	244.23	139.49	96.82	3	244	138	6	Utilized flake			2	
2007	244.4	139.12	96.84	5	244	138	6	Amorphous Debris			2	
2007	244.99	139.28	96.8	10	244	138	6	Chert flake fragment			2	
2007	244.765	139.66	96.72	2	244	138	8	chert debris			2	
2007	244.54	139.76	96.66	3	244	138	9	chert debris			2	
2007	242.38	141.67	95.7	12	242	140	21	graver	yes		3	1
2007	242.84	141.85	95.55	20	242	140	25	Bend Break	yes	1	3	1
2007	242.11	141	95.6	1	242	140	25	core			3	1
2007	242.27	141.44	95.52	11	242	140	26	Utilized flake	yes	3	3	2
2007	242.11	141.17	95.78	18	242	140	21	Bend break			3	3
2007	242.11	141.71	95.56	10	242	140	25	Bend break			3	3
2007	242.7	140.85	95.49	9	242	140	23	Utilized flake	yes	4	3	3
2007	242.34	141.78	95.65	12	242	140	24	Utilized flake			3	4
2007	242.4	141.79	95.56	11	242	140	25	chert bend break			3	4
2007	242.1	140.02	95.68	13	242	140	19	complete flake			3	
2007	242.05	141.92	95.83	12	242	140	20	chert shatter			3	
2007	242.56	141.32	95.71	15	242	140	22	chert shatter			3	
2007	242.13	141.79	95.7	23	242	140	22	Utilized flake			3	
2007	242.535	141.77	95	10	242	140	24	Bend Break			3	
2007	243.085	142.45	96.74	1	242	142	9	Bend break			3	

Table A37-1 continued

Year	Northing	Easting	Depth	Art			Level	Tool Type	Mod.	Scars	Break Ang.	IM
2007	242.04	140.25	95.75	8	242	140	18	chert bend break			3	
2007	244.5	139.05	97.01	2	244	138	2	Bend break			3	
2007	244.71	139.31	96.785	1	244	138	7	flake fragment			3	
2007	242.97	141.94	95.97	1	242	140	17	graver	yes	2	4	1
2007	242.93	141.36	95.7	8	242	140	22	chert bend break			4	1
2007	242.3	140.11	95	16	242	140	19	Bend break	yes	3	4	2
2007	242.16	141.72	95.77	16	242	140	21	graver			4	3
2007	242.08	141.99	95.655	16	242	140	**23**	Bend break			4	4
2007	242.2	140.54	95.74	5	242	140	18	Bend break			4	
2007	242.83	140.74	95.46	5	242	140	23	Bend break			4	
2007	243.62	142.99	96.74	3	242	142	9	chert shatter			4	
2007	244.205	139	96.81	8	244	138	6	Bend break			4	
2007	242.29	140.11	95.69	17	242	140	19	chert shatter			5	1
2007	242	141.8	95.75	20	242	140	21	chert flake			5	
2007	242.79	141.69	95.59	22	242	140	25	quartz pebble			5	
2007	244.64	139.22	96.66	1	244	138	9	chert broken flake			8	
2007	242.25	141.75	95.79	14	242	140	21	Utilized flake				1
2007	242.11	141.71	95.75	17	242	140	21	graver	yes			1
2007	242.71	141.79	95.65	8	242	140	**23**	chert shatter				1
2007	242.82	141.78	95.81	4	242	140	20	chert flake, graver	yes			2
2007	242.71	141.79	95.65	7	242	140	**23**	chert flake fragment				2
2007	242.69	141.74	95.63	13	242	140	24	chert shatter	yes	1		2
2007	242.33	141.82	95.6	26	242	140	24	graver	yes			2
2007	242.65	141.94	95.56	28	242	140	25	Utilized flake	yes	2		2
2007	242.99	140.5	95.59	1	242	140	21	core	yes	3		2
2007	242.73	141.99	95.62	6	242	140	24	Utilized flake	Yes	1		3
2007	242.95	141.22	95.57	17	242	140	25	chert shatter	yes	2		3
2007	242.54	141.77	95.72	14	242	140	22	scraper	yes	10		3
2007	244.92	139.22	96.89	1	244	138	5	chert debris, utilized	yes	4		3
2007	242.5	141.5	95.96	4	242	140	18	Chert tool				4
2007	242.8	141.17	95.61	3	242	140	24	graver				4
2007	242.29	141.42	95.88	7	242	140	19	broken quartz	yes	4		4

Table A37-1 continued

Year	Northing	Easting	Depth	Art			Level	Tool Type	Mod.	Scars	Break Ang.	IM
2008	242.772	140.77	95.398	9	242	140	25	Utilized flake	yes	3	1	2
2008	244.2025	139.65	96.21	6	244	138	20	Utilized flake			1	3
2008	243.95	139.49	96.65	1	242	138	7	Utilized flake			1	
2008	242.76	141.46	95.44	9	242	140	26	Utilized flake			1	
2008	243.89	142.97	96.6	1	242	142	12	Bend break	yes	3	1	
2008	243.28	142.7	96.54	1	242	142	13	Utilized flake			1	
2008	243.605	142.01	96.52	4	242	142	14	Utilized flake			1	
2008	243.26	142.35	96.19	2	242	142	20	Utilized flake			1	
2008	242.17	142.59	96.11	10	242	142	14	Utilized flake			1	
2008	242.36	142.33	96.025	5	242	142	16	Utilized flake			1	
2008	242.49	142.24	95.8	3	242	142	20	Utilized flake			1	
2008	244.97	139.42	96.603	10	244	138	12	Utilized flake			1	
2008	244.125	139.31	96.43	5	244	138	15	Utilized flake			1	
2008	244.49	139.19	95.67	2	244	138	30	Utilized flake			1	
2008	242.18	141.46	95.45	6	242	140	26	bend break	yes	1	2	2
2008	242.68	140.83	95.38	1	242	140	25	Utilized flake			2	2
2008	244.42	139.19	95.45	4	244	138	15	Utilized flake	yes	2	2	2
2008	244.695	139.44	96.54	4	244	138	13	Utilized flake			2	3
2008	244.26	139.03	96.48	22	244	138	15	chert debris, utilized	yes	4	2	6
2008	243.825	139.12	96.75	8	242	138	5	chert shatter			2	
2008	242.85	139.17	96.61	1	242	138	8	Chert flake			2	
2008	243.15	139.1	96.58	5	242	138	9	bend break			2	
2008	242.74	141.48	95.455	8	242	140	26	cortical chert shatter			2	
2008	242.46	141.13	95.42	4	242	140	27	Chert shatter			2	
2008	242.58	141.77	95.43	6	242	140	27	chert shatter			2	
2008	242.66	140.57	95.35	20	242	140	25	chert shatter			2	
2008	243.05	142.52	96.4	3	242	142	16	chert shatter			2	
2008	243.32	142.42	96.05	3	242	142	23	scraper			2	
2008	242.37	142.38	96.23	7	242	142	7	Broken chert flake			2	
2008	242.08	142.96	96.32	4	242	142	10	chert shatter			2	
2008	242.25	142.54	96.15	32	242	142	13	quartz shatter			2	
2008	242.14	142.64	96.15	74	242	142	13	chert shatter			2	
2008	242.48	142.72	96.165	74	242	142	13	Bend break			2	

Table A37-1 continued

Year	Northing	Easting	Depth	Art			Level	Tool Type	Mod.	Scars	Break Ang.	IM
2008	242.28	142.68	96.1	12	242	142	14	Bend break	yes	3	2	
2008	242.17	142.67	96.13	13	242	142	14	Bend break			2	
2008	242.4	142.53	96.025	7	242	142	16	chert shatter			2	
2008	242.79	142.99	96	13	242	142	16	bend break			2	
2008	242.48	142.21	96.025	17	242	142	16	bend break			2	
2008	242.82	142.72	95.7	24	242	142	22	chert shatter, cortical			2	
2008	242.57	142.1	95.71	6	242	142	22	core			2	
2008	244.53	139.24	96.57	16	244	138	12	Amorphous Debris			2	
2008	244.73	139.635	96.47	2	244	138	14	chert flake proximal			2	
2008	244.86	139.55	96.47	3	244	138	14	Amorphous Debris			2	
2008	244.31	139.12	96.47	8	244	138	14	Amorphous Debris			2	
2008	244.34	139.06	96.51	10	244	138	14	cortical chert shatter			2	
2008	244.365	139.13	96.455	9	244	138	15	chert debris, bend break			2	
2008	244.585	139.815	95.91	1	244	138	25	Amorphous Debris			2	
2008	244.58	139.63	96.15	3	244	138	25	bend break			2	
2008	244.83	139.365	96.38	4	244	138	16	graver	yes	2	3	2
2008	243.78	139.36	96.48	4	242	138	11	bend break, graver	yes	2	3	3
2008	244.83	139.33	96.42	16	244	138	15	broken quartz tool	yes	3	3	5
2008	243.225	139.085	96.6575	6	242	138	7	Amorphous Debris			3	
2008	243.86	139.385	96.515	5	242	138	10	chert bend break			3	
2008	242.105	141.88	95.485	12	242	140	26	chert bend break			3	
2008	242.95	141.51	95.43	8	242	140	27	chert shatter			3	
2008	243.245	142.38	96.67	1	242	142	11	bend break			3	
2008	243.1	142.93	96.32	1	242	142	18	chert bend break			3	
2008	243.68	142.675	96.24	6	242	142	19	chert bend break			3	
2008	243.05	142.03	96.225	3	242	142	20	chert bend break			3	
2008	243.29	142.49	96.045	4	242	142	23	chert shatter , break			3	
2008	243.29	142.76	96.025	7	242	142	23	chert debris bend break			3	
2008	242.94	142.32	96.21	3	242	142	12	Bend break			3	
2008	242.19	142.5	96.21	9	242	142		Bend break			3	
2008	242.77	142.27	96.18	8	242	142	13	bend break			3	
2008	242.31	142.46	96.17	25	242	142	13	bend break			3	
2008	242.19	142.64	96.17	47	242	142	13	Bend break			3	

Table A37-1 continued

Year	Northing	Easting	Depth	Art			Level	Tool Type	Mod.	Scars	Break Ang.	IM
2008	242.33	142.14	96.13	5	242	142	14	bend break, graver	yes		3	
2008	242.69	142.71	96.115	11	242	142	14	bend break			3	
2008	242.66	142.24	96.085	4	242	142	15	chert bend break			3	
2008	242.02	142.01	96.05	1	242	142	16	bend break			3	
2008	242.32	142.99	95.9	9	242	142	18	chert bend break			3	
2008	242.06	142.25	95.81	6	242	142	20	bend break			3	
2008	242.67	142.59	95.76	13	242	142	21	chert bend break			3	
2008	242.68	142.29	95.75	6	242	142	21	bend break	yes	1	3	
2008	242.91	142.9	95.71	28	242	142	22	bend break			3	
2008	242.38	142.31	95.74	17	242	142	22	bend break	yes	1	3	
2008	242.14	142.23	95.705	18	242	142	22	bend break burin	yes	1	3	
2008	242.72	142.55	95.7	22	242	142	22	bend break			3	
2008	242.44	142.98	95.705	30	242	142	22	chert debris, bend break			3	
2008	242.22	142.05	95.71	11	242	142	22	chert bend break			3	
2008	244.92	139.185	96.565	22	244	138	12	chert bend break, debris			3	
2008	244.54	139.695	96.45	11	244	138	15	bend break			3	
2008	244.05	139.225	96.085	2	244	138	22	chert shatter			3	
2008	243.25	139.9	96.37	15	242	138					3	
2008	242.91	141.47	95.425	12	242	140	27	bend break	yes	5	4	2
2008	243.2	139.67	96.765	1	242	138	5	chert bend break			4	
2008	243.94	139.25	96.78	6	242	138	5	chert bend break			4	
2008	242	139.565	96.65	2	242	138	8	chert flake medal			4	
2008	242.9	142.79	96.63	4	242	142	11	Utilized flake			4	
2008	242.18	142.05	96.3	1	242	142	10	chert tool, scraper	yes	exterior	4	
2008	242.75	142.93	96.18	56	242	142	13	bend break			4	
2008	242.75	142.23	96.18	7	242	142	13	broken flake fragment			4	
2008	242.14	142.53	95.7	23	242	142	22	bend break			4	
2008	243.345	139.67	96.53	7	242	138	10	chert bend break			5	
2008	243.59	139.235	96.455	5	242	138	11	Bend break			5	
2008	242.32	141.71	95.495	7	242	140	26	chert burin spall			5	
2008	242.7	141.37	95.365	12	242	140	28	Utilized flake	yes	1		1
2008	242.76	141.34	95.34	2	242	140	29	chert shatter, scraper	yes	3		1
2008	242.64	141.86	95.385	1	242	140	28	chert shatter, tool	yes	4		1

Table A37-1 continued

Year	Northing	Easting	Depth	Art			Level	Tool Type	Mod.	Scars	Break Ang.	IM
2008	243.2	139.97	96.4	17	242	138	13	chert utilized flake	yes	2		2
2008	242.743	140.454	95.393	12	242	140	25	chert cobble, debris				2
2008	242.646	140.205	95.351	1	242	140	26	chert shatter				2
2008	242.23	141.42	95.47	5	242	140	26	chert cobble, scraper	yes	3		2
2008	244.6	139.38	96.43	13	244	138	15	Utilized flake	yes	4		2
2008	243.6	139.17	96.55	1	242	138	10	chert shatter				3
2008	242.52	140.45	95.35	19	242	140	25	core				3
2008	243.18	142.61	96.27	8	242	142	19	chert retouched flake	yes	5		3
2008	244.26	139.12	96.5	11	244	138	13	utilized tool				3
2008	244.5	139.19	96.43	8	244	138	15	Chert debris, tool	yes	10		5
2008	243.52	139.16	96.97	1	242	138	1	Chert shatter				
2009	243.27	142.85	95.69	8	242	142	31	Amorphous Debris			0	
2009	243.875	142.1	95.84	2	242	142	28	graver			1	1
2009	243.15	139.82	95.5	7	242	138	31	Chert Debris, tool	yes	2	1	4
2009	243.62	139.56	95.49	16	242	138	31	chert debris	yes	2	1	4
2009	246.655	141.0325	97.15	2	246	140	5	chert shatter, graver			1	4
2009	243.61	139.77	95.77	5	242	138	25	chert shatter			1	
2009	243.26	139.56	95.56	10	242	138	29	chert pebble, weathered			1	
2009	243.04	139.93	95.465	8	242	138	31	Amorphous Debris			1	
2009	243.34	139.72	95.49	9	242	138	31	Amorphous Debris			1	
2009	243.54	142.75	95.66	15	242	142	31	broken chert shatter			1	
2009	243.73	142.3	95.46	14	242	142	35	chert shatter			1	
2009	242.35	142.12	95.7	2	242	142	23	Amorphous Debris			1	
2009	242.56	142.81	95.495	3	242	142	27	Amorphous Debris			1	
2009	246.39	138.34	97.53	3	246	138	12	complete chert flake			1	
2009	248.98	141.41	97.46	2	248	140	24	Bend break			1	
2009	243.3	142.37	95.84	6	242	142	28	chert shatter	yes	1	2	1
2009	243.64	139.79	95.815	2	242	138	24	Bend break	yes	2	2	2
2009	243.09	142.16	95.71	18	242	142	30	Chert debris, scraper			2	2
2009	243.46	142.98	95.67	12	242	142	31	graver	yes	2	2	3
2009	246.45	141.08	97.25	1	248	140	5	ut chert flake fragment	yes	3	2	3
2009	243.6	139.76	95.645	1	242	138	28	chert bend break	yes	5	2	5
2009	243.61	139.01	95.445	40	242	138	31	chert broken flake, tool	yes	6	2	5

Table A37-1 continued

Year	Northing	Easting	Depth	Art			Level	Tool Type	Mod.	Scars	Break Ang.	IM
2009	243.39	139.77	95.55	4	242	138	29	Bend break			2	
2009	243.62	139.67	95.55	7	242	138	29	Amorphous Debris			2	
2009	243.9	139.58	95.57	14	242	138	29	chert flake tool, graver	yes	2	2	
2009	243.92	139.8	95.51	7	242	138	30	chert bend break			2	
2009	243.3	139.34	95.45	26	242	138	31	Amorphous Debris			2	
2009	243.25	139.55	95.49	12	242	138	31	Amorphous Debris			2	
2009	243.14	139.9	95.5	6	242	138	31	Amorphous Debris			2	
2009	243.23	139.56	95.45	24	242	138	31	l chert TA shatter			2	
2009	243.05	142.76	95.72	6	242	142	30	chert debris			2	
2009	243.49	142.37	95.73	4	242	142	30	core fragment			2	
2009	243.13	142.66	95.69	7	242	142	31	chert shatter, proximal			2	
2009	243.62	142.46	95.45	16	242	142	35	Amorphous Debris			2	
2009	242.92	142.52	95.655	7	242	142	23	Amorphous Debris			2	
2009	242.56	142.29	95.61	8	242	142	24	chert bend break	yes	2	2	
2009	242.63	142.59	95.59	25	242	142	25	graver, bend break	yes	2	2	
2009	242.77	142.43	95.56	18	242	142	25	bend break graver	yes	2	2	
2009	242.49	142.11	95.52	2	242	142	26	bend break with graver	yes	1	2	
2009	244.406	141.31	97.48	8	246	140	F94	chert shatter			2	
2009	247.54	141.71	97.2	1	246	140	3	bend break			2	
2009	246.505	141.855	97.18	1	246	140	4	Bend break			2	
2009	246.77	141.43	97.08	4	246	140	6	Flake fragment			2	
2009	247.92	141.26	97.03	2	246	140	7	bend break			2	
2009	246.67	141.4	97.01	8	246	140	7	bend break	yes	3	2	
2009	246.46	141.36	96.88	4	246	140	10	Cortical chert pebble			2	
2009	246.717	142.76	97.35	6	246	142	2	bend break			2	
2009	246.83	142.2	97.32	7	246	142	2	chert flake proximal			2	
2009	246.305	142.9	97.283	8	246	142	3	bend break			2	
2009	246.26	142.92	97.257	10	246	142	3	chert bend break			2	
2009	248.32	140.76	97.32	1	248	140	2	Utilized flake	yes	7	2	
2009	248.26	140.36	96.97	6	248	140	9	ut chert shatter			2	
2009	243.64	139.78	95.87	2	242	138	23	Bend break	yes	2	3	2
2009	242.86	142.8	95.375	4	242	142	29	chert bend break graver	yes	2	3	2
2009	243.6	139.61	95.45	23	242	138	31	TA chert debris/tool	yes	2	3	3

Table A37-1 continued

Year	Northing	Easting	Depth	Art			Level	Tool Type	Mod.	Scars	Break Ang.	IM
2009	243.75	142.06	95.47	7	242	142	35	scraper	yes	4	3	3
2009	248.19	141.735	96.93	3	248	140	12	complete chert flake	yes	6	3	3
2009	243.7	139.37	96.2	4	242	138	16	bend break graver	yes	2	3	
2009	243.9	139.31	95.55	20	242	138	29	bend break			3	
2009	243.96	139.3	95.595	16	242	138	29	, bend break			3	
2009	243.94	139.14	95.565	18	242	138	29	Amorphous Debris			3	
2009	243.22	139.79	95.52	11	242	138	30	Amorphous Debris			3	
2009	243.22	139.12	95.455	37	242	138	31	,bend break			3	
2009	243.79	139.5	95.48	20	242	138	31	Bend break			3	
2009	243.52	139.33	95.47	25	242	138	31	debris, cortical			3	
2009	243.86	139.84	95.47	5	242	138	31	Chert Debris,			3	
2009	243.57	139.03	95.45	41	242	138	31	Amorphous Debris			3	
2009	243.42	142.95	95.56	28	242	142	33	Angular chert			3	
2009	243.22	142.28	95.57	11	242	142	33	chert debris, shatter			3	
2009	243.59	142.275	95.47	9	242	142	35	chert bend break			3	
2009	242.55	142.49	95.67	8	242	142	23	bend break graver	yes	2	3	
2009	242.39	142.52	95.68	9	242	142	23	Graver spur	yes	3	3	
2009	242.39	142.11	95.6	4	242	142	24	bend break	yes	5	3	
2009	242.26	142.5	95.61	11	242	142	24	chert bend break graver			3	
2009	242.87	142	95.63	1	242	142	24	chert bend break graver	yes	3	3	
2009	242.79	142.01	95.55	3	242	142	25	utilized flake, graver	yes	3	3	
2009	242.85	142.75	95.57	30	242	142	25	possible bend break			3	
2009	242.04	142.97	95.57	36	242	142	25	bend break graver			3	
2009	246.7	138.92	97.55	1	246	138	12	Chert flake fragment	yes	4	3	
2009	246.16	138.52	97.15	1	246	138	20	chert flake, bend break			3	
2009	246.58	141.235	97.395	19	246	140	F94	Broken Flake			3	
2009	246.4	141.63	97.15	8	246	140	5	shatter, bend break			3	
2009	246.21	142.59	97.315	3	246	142	2	Amorphous Debris			3	
2009	246.288	142.93	97.27	9	246	142	3	chert bend break			3	
2009	248.5	141.115	96.99	1	248	140	11	Chert Shatter			3	
2009	244.9	138.7	97.17		244	138		chert bend break tool	yes	2	4	1
2009	243.46	139.66	95.495	4	242	138	30	chert bend break	yes	1	4	2
2009	243.59	139.825	96.2	6	242	138	16	graver			4	

Table A37-1 continued

Year	Northing	Easting	Depth	Art			Level	Tool Type	Mod.	Scars	Break Ang.	IM
2009	243.11	139.58	95.52	21	242	138	30	shatter, bend break			4	
2009	243.28	139.68	95.5	15	242	138	30	shatter, bend break			4	
2009	243.77	139.75	95.52	9	242	138	30	Amorphous Debris			4	
2009	242.12	142.24	95.66	5	242	142	23	chert bend break			4	
2009	242.64	142.41	95.66	6	242	142	23	chert bend break			4	
2009	242.32	142.04	95.6	5	242	142	24	bend break graver	yes	3	4	
2009	242.77	142.36	95.63	7	242	142	24	chert bend break graver	yes	5	4	
2009	242.58	142.31	95.63	14	242	142	24	Bend break	yes	4	4	
2009	242.28	142.38	95.55	17	242	142	25	bend break graver	yes	1	4	
2009	242.78	142.01	95.58	2	242	142	25	bend break	yes	4	4	
2009	246.37	138.82	97.5	2	246	138	12	scraper	yes	6	4	
2009	246.89	138.14	97.07	1	246	138	21	Chert bend break	yes		4	
2009	246.995	141.86	97.115	10	246	140	5	chert shatter, weathered			4	
2009	246.34	141.01	96.87	1	246	140	10	Bend Break			4	
2009	246.56	141.14	96.895	2	246	140	10	Bend Break			4	
2009	246.457	142.18	97.3	1	246	142	3	chert bend break			4	
2009	24826	140.33	96.9	1	248	140	10	chert shatter			4	
2009	242.18	142.2	95.56	11	242	142	25	bend break graver	yes	4	5	
2009	246.465	141.43	97.15	6	246	140	4	shatter, bend break			5	
2009	243.11	142.82	95.71	19	242	142	30	Amorphous Debris			90	
2009	242.85	143.36	95.37	2	242	142	29	chert debris				2
2009	243.25	139.66	95.47	2	242	138	30	utilized tool	yes	4		3
2009	243.74	139.49	95.46	19	242	138	31	Chert Debris, Tool	yes	4		3
2009	243.6	142.48	95.58	19	242	142	33	scraper	yes	3		3
2009	248.56	140.8	128cmbs	1	248	140	20	uniface	yes	4		3
2009	248.17	141.99	139cmbd	10	248	140	22	chert scraper tool	yes	3		3
2009	248.27	141.7	97.55	2	248	140	22	chert core, tool	yes	7		4
2009	248.44	141.59	133cmbd	6	248	140	22	chert flake tool				4
2009	248.3	140.24	97.44	2	248	140	24	chert debris, tool	yes	5		4
2010	246.42	140.62	97.163	9	246	140	4	chert debris, tool	yes	3	2	4
2010	246.21	140.915	97.208	1	246	140	3	chert bend break			2	
2010	247.99	141.09	96.85	1	246	140	10	Amorphous Debris			2	
2010	263.51	146.6	97.601	4	263	145	3	weathered chert shatter			2	

Table A37-1 continued

Year	Northing	Easting	Depth	Art			Level	Tool Type	Mod.	Scars	Break Ang.	IM
2010	246.76	140.18	97.168	14	246	140	4	bend break	yes	3	3	2
2010	246.6	140.13	97.148	15	246	140	4	bend break			3	
2010	247.04	141.42	96.95	4	246	140	8	bend break			3	
2010	246.65	142.78	97.23	5	246	142	4	bend break			3	
2010	263.76	146.93	97.681	1	263	145	3	bend break			3	
2010	263.24	145.38	97.161	2	263	145	8	chert shatter			3	
2010	248.075	141.9	96.788	1	248	140	15	bend break	yes	1	4	1
2010	247.42	140.93	97.078	7	246	140	5	chert bend break			4	
2010	246.61	142.42	97.143	6	246	142	6	bend break, cortical			4	
2010	263.62	145.12	97.231	1	263	145	7	bend break	yes	2	4	
2010	263.12	145.1	97.126	3	263	145	8	Bend break			4	
2010	264.81	146.6	97.031	1	263	145	9	chert bend break			4	
2010	247.66	141.68	96.88	17	246	140	10	chert flake, modified	yes	1		1
2010	247.8	141.74	96.82	18	246	140	10	chert debris				1
2010	246.61	142.77	97.14	7	246	142	5	modified chert debris	yes	3		2
2010	248.54	141.8	96.793	10	248	140	15	chert flake fragment				2
2010	246.52	140.55	97.243	6	246	140	1	scraper	yes	6		3
2010	246.19	142.54	97.103	8	246	142	7	chert debris				3
2010	247.41	140.75	97.088	2	246	140	5	scraper	yes	6		4
2010	247.56	140.785	97.078	1	246	140	5	scraper	yes	14		5
2010	248.09	141.33	96.848	14	248	140	13	chert tool	yes	7		5
2010	248.24	141.64	96.8	9	248	140	14	core	yes	8		5
2011	246.01	140.9	96.943	14	246	140	9	Retouched chert tool	yes	2	1	
2011	247	140.65	96.958	16	246	140	8	chert pebble			1	
2011	246.61	140.99	96.788	1	246	140	12	pebble			1	
2011	246.71	142.59	96.963	18	246	142	10	chert shatter			1	
2011	246.09	142.78	96.973	25	246	142	10	broken quartz pebble			1	
2011	246.38	140.34	96.853	6	246	140	9	flake with poss retouch	yes	3	2	
2011	246.13	140.676	96.786	7	246	140	12	chert bend break			2	
2011	246.54	140.45	96.773	3	246	140	12	broken quartz pebble			2	
2011	246.33	141.01	96.888	1	246	140	9	angular chert pebble			2	
2011	246.31	140.41	97.043	13	246	140	7	chert pebble			2	
2011	247.01	140.36	96.973	24	246	140	8	bend break			2	

Table A37-1 continued

Year	Northing	Easting	Depth	Art			Level	Tool Type	Mod.	Scars	Break Ang.	IM
2011	246.38	140.19	96.938	12	246	140	9	bend break			2	
2011	246.9	140.33	96.753	16	246	140	12				2	
2011	246.22	142.57	97.003	6	246	142		Utilized flake			2	
2011	246.535	142.482	96.991	13	246	142	9	bend break			2	
2011	246.5	142.45	96.963	9	246	142	10	bend break			2	
2011	246.4	142.69	96.903	17	246	142	10	bend break			2	
2011	246.6	142.09	96.923	2	246	142	10	shatter			2	
2011	246.69	142.38	96.758	11	246	142	13	Utilized flake			2	
2011	246.355	140.88	96.777	6	246	140	12	broken quartz pebble			3	
2011	246.62	140.83	97.038	3	246	140	7	bend break			3	
2011	246.31	142.53	96.903	12	246	142	10	bend break			3	
2011	246.58	142.78	96.923	24	246	142	10	bend break			3	
2011	246.18	140.01	96.848	10	246	140	**11**	bend break			4	
2011	246.11	140.33	97.038	14	246	140	7	Bend break			4	
2011	246.69	140.05	96.838	16	246	140	11	cortical chert pebble			4	
2011	246.87	142.4	96.953	15	246	142	10	weathered bend break			4	
2011	246.01	142.85	97.023	29	246	142	10	chert bend break			4	
2011	246.84	140.8	96.988	13	246	140	8	bend break			5	
2011	246.54	140.71	97.13	3	246	140	5	bifacial tool	yes	6		
2011	246.7	140.87	97.09	3	246	140	6	Utilized flake	yes	2		
2011	246.82	140.375	97.028	16	246	140	7	Utilized flake	yes	2		
2011	246.68	140.76	96.988	9	246	140	8	Utilized flake	yes	2		
2011	246.495	140.62	96.878	11	246	140	10	broken quartz pebble	yes	2		
2011	246.65	140.54	96.888	12	246	140	10	scraper	yes	3		
2011	246.475	140.73	96.798	3	246	140	13	Utilized flake	yes	4		
2011	246.846	142.595	97.175	16	246	142	9	Utilized flake	yes	3		
2011	246.155	142.4	97.008	2	246	142	9	Utilized flake	yes	6		
2011	246.43	142.77	97.003	11	246	142	9	Utilized flake	yes	1		
2011	246.72	142.38	96.913	13	246	142	10	tool	yes	2		
2011	246.2	142.91	96.943	28	246	142	10	burin	yes	1		
2011	248.29	140.88	96.738	6	248	140	16	chert shatter	yes	2		
2012	246.21	138.45	96.98	3	246	138	6	chert shatter			1	
2012	246.97	139.67	96.78	9	246	138	11	Angular chert shatter			1	

Table A37-1 continued

Year	Northing	Easting	Depth	Art			Level	Tool Type	Mod.	Scars	Break Ang.	IM
2012	246.56	139.04	96.64	5	246	138	13	cortical chert shatter			1	
2012	246.39	140.88	96.55	19	246	140	16	chert shatter			1	
2012	246.76	140.69	96.59	26	246	140	16	chert shatter			1	
2012	246.63	140.73	96.6	18	246	140	16	chert shatter			1	
2012	248.31	141.48	96.6	5	248	140	19				1	
2012	248.09	141.17	96.58	2	248	140	19	flake			1	
2012	248.11	140.58	96.56	8	248	140	17	broken quartz pebble			1	
2012	248.39	140.6	96.585	9	248	140	17	chert shatter			1	
2012	248.68	140.92	96.595	1	248	140	17	shatter			1	
2012	248.24	140.69	96.56	4	248	140	17	chert shatter			1	
2012	246.85	139.79	96.95	13	246	138	7	Blade	yes	2	2	
2012	246.82	138.45	96.92	8	246	138	7	Bend Break	yes	2	2	
2012	248.7	141.66	96	16	248	140	21	retouch shatter	yes	2	2	
2012	246.38	139.52	97.13	8	246	138	4	bend break			2	
2012	246.55	139.68	96.94	8	246	138	8	chert flake			2	
2012	246..15	139.76	96.88	7	246	138	9	chert shatter			2	
2012	246.52	138.32	96.83	17	246	138	9	broken quartz pebble			2	
2012	246.43	139.07	96.8	2	246	138	10				2	
2012	246.37	139.98	96.76	18	246	138	11	chert shatter/bend break			2	
2012	246.52	139.59	96.78	5	246	138	11	bend break			2	
2012	246.24	139.25	96.75	5	246	138	12	angular chert shatter			2	
2012	246.17	139.45	96.86	12	246	138	13	bend break			2	
2012	246.65	139.04	96.67	14	246	138	13	chert flake proximal			2	
2012	246.68	139.17	96.68	10	246	138	13	angular chert pebble			2	
2012	246.04	140.38	96.68	7	246	140	14	bend break			2	
2012	246.89	140.38	96.69	8	246	140	14	bend break/chert shatter			2	
2012	246.34	140.52	96.65	16	246	140	14	bend break			2	
2012	247.26	141.97	96.59	4	246	140	15	bend break			2	
2012	246.95	141.27	96.62	13	246	140	16	Bend break			2	
2012	246.33	140.55	96.56	9	246	140	16	chert flake			2	
2012	246.31	142.64	96.72	24	246	142	14	chert pebble/shatter			2	
2012	248.74	141.7	96.555	15	248	140	19	chert flake fragment			2	
2012	248.64	141.23	96.57	12	248	140	19	shatter			2	

Table A37-1 continued

Year	Northing	Easting	Depth	Art			Level	Tool Type	Mod.	Scars	Break Ang.	IM
2012	248.77	141.94	96.59	14	248	140	19	grooved pebble			2	
2012	248	140.53	96.61	12	248	140	16	chert shatter			2	
2012	248.83	140.39	96.55	33	248	140	17	chert shatter			2	
2012	246.63	138.6	96.99	4	246	138	5	Blade	yes	6	3	
2012	246.42	141.15	96.61	4	246	140	16	bend break	yes	1	3	
2012	248.44	141.16	96.44	8	248	140	21	Bend break	yes	2	3	
2012	248.31	141.74	96.46	4	248	140	21	Bend break tool	yes	3	3	
2012	246.12	139.07	97.13	1	246	138	4	bend break			3	
2012	246.12	139.84	97.14	6	246	138	4	bend break			3	
2012	246.68	138.13	96.95	2	246	138	6	Bend Break			3	
2012	246.67	138.75	96.82	7	246	138	7	Bend Break			3	
2012	246.28	139.74	96.9	8	246	138	9	bend break			3	
2012	246.66	138.44	96.79	9	246	138	10	Bend break			3	
2012	246.49	138.85	96.71	14	246	138	11	chert shatter			3	
2012	246.78	138.87	96.73	22	246	138	11	Utilized flake			3	
2012	246.2	139.78	96.72	27	246	138	12	Bend Break			3	
2012	246.17	139.94	96.66	18	246	138	13	angular chert shatter			3	
2012	246.16	140.76	96.67	22	246	140	14	chert shatter/bend break			3	
2012	246.3	141.37	96.55	7	246	140	16	bend break			3	
2012	246.43	140.59	96.58	13	246	140	16	TA chert shatter			3	
2012	246.61	140.66	96.55	17	246	140	16	chert shatter			3	
2012	246.5	140.99	96.58	21	246	140	16	chert shatter			3	
2012	248.55	141.28	96.49	10	248	140	21	pebble			3	
2012	248.58	141.07	96.49	11	248	140	21				3	

Table A37-1 continued

Year	Northing	Easting	Depth	Art			Level	Tool Type	Mod.	Scars	Break Ang.	IM
2012	248.88	140.47	96.55	34	248	140	17	chert shatter			3	
2012	248.18	140.79	96.585	3	248	140	17	cortical chert shatter			3	
2012	246.23	138.13	97.07	1	246	138	5	Bend break	yes	1	4	
2012	246.99	138.78	96.8	14	246	138	9	chert shatter			4	
2012	246.55	138.27		7	246	138	10	pebble			4	
2012	246.23	138.69	96.79	8	246	138	11	chert shatter			4	
2012	246.77	139.51	96.78	6	246	138	11	bend break			4	
2012	246.22	138.37	96.72	7	246	138	11	bend break,			4	
2012	246.41	138.68	96.71	11	246	138	11	bend break			4	
2012	246.45	138.8	96.76	15	246	138	11	chert bend break			4	
2012	246.58	139.02	96.67	6	246	138	13	bend break			4	
2012	246.82	140.22	96.68	6	246	140	14	tertiary flake			4	
2012	246.76	141.07	96.54	11	246	140	16	Bend break			4	
2012	246.38	140.54	96.6	10	246	140	16	bend break			4	
2012	248.7	141.36	96.56	13	248	140	19	shatter			4	
2012	246.17	188.43	96.89	4	246	138	8	Utilized flake			5	
2012	246.205	139.15	96.75	3	246	138	12	bend beak			5	
2012	248.43	140.25	96.6	17	248	140	16	chert shatter	no			
2012	246.58	141.68	96.59	17	246	140	16		x	1		
2012	246.31	139.81	97.14	3	246	138	4	scraper	yes	4		
2012	246.61	139.81	97.05	4	246	138	5	Utilized flake	yes	4		
2012	246.41	138.7	96.78	20	246	138	9	core	yes	7		
2012	246.78	138.13	96.77	11	246	138	10	Bend break	yes	2		
2012	246.82	138.79	96.72	21	246	138	11	core	yes	3		

Table A37-1 continued

Year	Northing	Easting	Depth	Art			Level	Tool Type	Mod.	Scars	Break Ang.	IM
2012	246.07	139.71	96.73	1	246	138	12	chert tool	yes	3		
2012	246.07	139.79	96.71	2	246	138	12	bend break	yes	6		
2012	246.71	141.95	96.81	7	246	140	12	chert shatter	yes	2		
2012	246.4	141.18	96.68	25	246	140	14	chert shatter	yes			
2012	246.06	141.28	96.69	30	246	140	14	broken flake	yes			
2012	246.84	141.74	96.62	4	246	140	15	chert shatter	yes	3		
2012	247.16	140.9	96.55	3	246	140	16	chert tool	yes	3		
2012	246.97	141.56	96.59	15	246	140	16	possibly utilized	yes	4		
2012	248.22	141.99	96.45	3	248	140	21	flake	yes	1		
2012	248.65	141.1	96.46	18	248	140	21	ut debris	yes	1		
2012	248.4	141.85	96.45	5	248	140	21	chert tool with graver	yes	1		
2012	248.93	140.58	96.76	6	248	140	14	chert flake	yes	3		
2012	248.35	140	96.65	23	248	140	16	flake	yes	2		
2012	248.87	140.2	96.56	35	248	140	17	chert shatter	yes	1		
2012	248.24	140.65	96.56	6	248	140	17	chert flake	yes	1		
2012	246.06	139.76	96.73	25	246	138	12	chert shatter	yes	2		

APPENDIX 38

ATTRIBUTES OF UTILIZATION FOR MAPPED ARTIFACTS FROM THE TOPPER SITE (38AL23)

Table A38-1
Attributes of Utilization for Mapped Artifacts from the Topper Site (38AL23)

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
1999	242.94	130.85	97.677	242	130	1	9							
1999	243.01	130.95	97.63	242	130	2	10	yes	exterior	6	yes			
1999	242.31	130.76	97.51	242	130	1	11							
1999	243.75	131.93	97.407	242	130	1	12							
1999	243.61	131.68	97.41	242	130	2	12							
1999	243.78	131.56	97.41	242	130	3	12							
1999	243.4	131.2	97.187	242	130	1	14							
1999	242.8	131.46	96.95	242	130		16							
1999	243.84	131.49	96.95	242	130		16							
1999	243.725	130.86	96.9	242	130	1	17							
1999	243.61	130.485	96.845	242	130	6	17							
1999	243.565	130.535	96.89	242	130	18	17							
1999	243.885	130.49	96.885	242	130	19	17							
1999	243.775	130.695	96.87	242	130	24	17							
1999	243.83	130.69	96.89	242	130	25	17							
1999	243.86	131.275	96.92	242	130	26	17							
1999	243.89	130.82	96.875	242	130	30	17							
1999	243.88	131.285	96.91	242	130	30	17							
1999	243.88	130.865	96.9	242	130	31	17							
1999	243.88	130.865	96.9	242	130	31	17							
1999	243.81	131.045	96.9	242	130	35	17							
1999	243.86	131.035	96.9	242	130	36	17							
1999	243.85	131.155	96.9	242	130	39	17							
1999	243.54	131.23	96.86	242	130	40	17							
1999	243.76	131.8	96.91	242	130	41	17							
1999	243.85	130.95	96.9	242	130		17							
1999	243.625	130.685	96.865	242	130		17							
1999	243.825	131.02	96.9	242	130		17							
1999	243.88	130.52	96.905	242	130		17							
1999	243.8	131.05	96.9	242	130		17	yes	exterior	2	yes			
1999	243.84	131.065	96.9	242	130		17							
1999	243.715	130.745	96.87	242	130		17							
1999	243.925	130.63	96.9	242	130		17							
1999	243.86	130.72	96.89	242	130		17	yes	exterior	2	yes			
1999	243.74	130.47	96.86	242	130		17							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
1999	243.745	130.29	96.86	242	130		17							
1999	243.85	131.11	96.9	242	130		17							
1999	243.67	130.34	96.875	242	130		17							
1999	243.72	130.51	96.89	242	130		17							
1999	243.9	130.765	96.86	242	130		17							
1999	243.7	130.385	96.88	242	130		17							
1999	243.655	130.485	96.86	242	130		17							
1999	243.92	130.97	96.88	242	130		17							
1999	243.695	130.275	96.895	242	130		17							
1999	243.95	130.68	96.925	242	130		17							
1999	243.88	130.99	96.9	242	130		17							
1999	243.85	130.89	96.9	242	130		17							
1999	243.84	130.47	96.89	242	130		17							
1999	243.65	130.03	96.87	242	130		17							
1999	243.62	130.915	96.9	242	130		17							
1999	243.755	130.745	96.865	242	130		17							
1999	243.86	130.96	96.895	242	130		17							
1999	243.88	130.52	96.955	242	130		17							
1999	242.52	130.97		242	130	1								
1999	243.588	133.52	98.29	242	132	1	3							
1999	242.075	133.43	98.255	242	132	2	3							
1999				242	132	3	3							
1999	243.78	133.97	98.32	242	132	1	3							
1999	243.62	134	98.22	242	132	12	3	yes	exterior	5				
1999	243.69	133.95	98.32	242	132	5	3							
1999	243.78	133.93	98.315	242	132	7	3							
1999	243.76	133.93	98.32	242	132	2	3							
1999	243.72	133.89	98.32	242	132	3	3							
1999	243.76	133.89	98.315	242	132	6	3							
1999	243.68	133.85	98.32	242	132	4	3	yes	exterior	7				
1999	243.8	133.91	98.31	242	132	11	3	yes	exterior	10				
1999	243.7	133.83	98.315	242	132	10	3							
1999	243.64	133.9	98.32	242	132	9	3							
1999	243.72	133.84	98.315	242	132	8	3							
1999	242.25	132.45	97.23	242	132	1	14							
1999	243.145	131.545	97.12	242	132	1	15							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
1999	243.21	132.29	97.12	242	132	1	15							
1999	243.3	132.15	97.115	242	132	3	15							
1999	243.09	132.2	97.12	242	132	4	15							
1999	243.2	132.19	97.12	242	132	5	15	yes	exterior	2	YES			
1999	243.06	133.6	97.08	242	132	6	15				yes			
1999	243.2	132.15	97.11	242	132	6	15							
1999	243.33	133.18	97.09	242	132	7	15							
1999	243.23	132.24	97.12	242	132	7	15							
1999	243.71	133.15	97.15	242	132	8	15							
1999	243.21	132.23	97.12	242	132	8	15							
1999	243.73	132.73	97.07	242	132	9	15							
1999	243.75	133.15	97.065	242	132	10	15	yes	exterior	12	yes			
1999	243.29	132.13	97.01	242	132	2	16							
1999	243.43	132.08	97.03	242	132	3	16							
1999	243.57	133.47	97.005	242	132	5	16							
1999	243.9	133.27	97.02	242	132	8	16							
1999	242.88	133.45	96.96	242	132	9	16							
1999	243.18	133.71	97.05	242	132	10	16	yes	exterior	3				
1999	243.07	133.7	97.05	242	132	11	16							
1999	243	133.66	97.04	242	132	12	16							
1999	242.98	133.67	96.95	242	132	14	16							
1999	242.43	133.32	96.93	242	132	1	17							
1999	242.27	132.26	97.835	242	132	1								
1999	242.33	132.73	98.135	242	132	1								
1999	242.45	133.08	97.92	242	132	1								
1999	242.52	130.47	97.58	242	132	1								
1999	243.22	131.27	96.952	242	132	1								
1999	243.4	132.6	97.57	242	132	1								
1999	243.4	133.87	98.04	242	132	1								
1999	243.49	132.35	97.04	242	132	1								
1999	243.78	133.97	98.32	242	132	1								
1999	242.3	133.25	97.58	242	132	2								
1999	243.27	132.3	97.12	242	132	2								
1999	243.76	133.93	98.32	242	132	2								
1999	243.78	133.13	97.94	242	132	2								
1999	242.58	134	98.01	242	132	2								

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
1999	243.26	132.8	97.91	242	132	3								
1999	243.72	133.89	98.32	242	132	3								
1999	243.25	132.75	97.91	242	132	4								
1999	243.44	132.28	97	242	132	4								
1999	243.68	133.85	98.32	242	132	4								
1999	243.25	132.75	97.91	242	132	5								
1999	243.69	133.95	98.32	242	132	5								
1999	243.76	133.89	98.32	242	132	6								
1999	243.78	133.93	98.315	242	132	7								
1999	243.72	133.84	98.315	242	132	8								
1999	243.64	133.9	98.32	242	132	9								
1999	243.7	133.83	98.315	242	132	10								
1999	243.8	133.91	98.31	242	132	11								
1999	243.62	134	98.22	242	132	12								
1999	242.86	133.88	96.98	242	132	13								
1998	244.17	131.64	96.84	244	130	1	19				yes			
1998	245.33	131.13	96.915	244	130	2	19	yes	exterior	4	YES			
1998	245.92	131.36	96.74	244	130	1	21	yes	exterior	3	YES			
1998	245.14	131.93	96.72	244	130		21	yes	exterior	7	YES			
1998	244	131.04	96.75	244	130	16	21 F							
1998	244.055	131.2	96.75	244	130	12	21 F				yes			
1998	244.1	130.75	96.745	244	130	1	21 F							
1998	244.09	130.88	96.74	244	130	2	21 F	yes	exterior	4	yes	2		
1998	244.12	131.12	96.76	244	130	7	21 F							
1998	244.05	131.12	96.745	244	130	9	21 F							
1998	244.02	131.12	96.75	244	130	10	21 F							
1998	244.08	131.16	96.75	244	130	11	21 F							
1998	244.025	131.28	96.74	244	130	13	21 F							
1998	244	130.81	96.74	244	130	15	21 F							
1998	244.04	130.85	96.75	244	130	17	21 F							
1998	244	130.94	96.73	244	130	18	21 F							
1998	244	131.09	96.745	244	130	19	21 F							
1998	244	131.15	96.745	244	130	20	21 F							
1998	244.065	130.92	96.74	244	130	22	21 F							
1998	244.03	130.965	96.735	244	130	5	21 F							
1998	244.09	130.94	96.74	244	130	4	21 F							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
1998	244.08	131.12	96.76	244	130	8	21 F							
1998	244.035	131.31	96.755	244	130	14	21 F							
1998	244.02	130.89	96.74	244	130	3	21 F							
1998	244	131.19	96.75	244	130	21	21 F							
1998	244.035	131.07	96.76	244	130	6	21 F							
1998	245.36	130.92	97.075	244	130	1								
1998	245.22	131.37	97.065	244	130	2		yes	exterior	5	YES			
2000	243.56	131.01	96.67	242	130	2								
2000	243.33	131.63	96.71	242	130	2								
2000	242.02	129.59	96.74	242	128	6						3		
2000	245.84	147.22	97.6	244	146	8		yes	2	exterior		3		
2000	242.15	131.05	96.71	242	130	5								
2000	243.23	131.85	96.75	242	130	1		yes	6	exterior	yes			
2000	242.27	130.7	96.71	242	130	4		yes	exterior	5	yes			
2000	243.82	130.53	96.665	242	130	1								
2000	242.45	130.73	96.67	242	130	3								
2000	242.43	130.01	96.75	242	130	25					yes			
2000	242.86	131.9	96.83	242	130	1		yes	exterior	10				
2000	242.44	132.27	96.79	242	132	2								
2000	242.75	132.89	96.8	242	132	3								
2000	242.9	132.4	96.82	242	132	1								
2000	242.6	132.06	96.88	242	132	1								
2000	242.7	133.85	96.96	242	132	6								
2000	242.54	136.04	97.09	242	136	1								
2000	242.94	136.02	97.05	242	136	3								
2000	243.24	136.42	98.5	242	136	1								
2000	243.59	136	97.1	242	136	9								
2000	244.52	133.5	178	244	132	5								
2001	241.36	131.46	96.79	240	130	1	23	yes	6	yes				
2001	241.2	131.6	96.68	240	130	4	25							
2001	240.86	130.9	96.68	240	130	3								
2001	241.06	130.63	96.72	240	130	2								
2001	241.24	130.35	96.74	240	130	1								
2001	241.05	131.8	96.84	240	130	1								
2001	241.31	131.9	96.89	240	130	1								

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2001	240.74	131.92	96.9	240	130	2								
2001	240.84	131.54	96.91	240	130	1								
2001	240.47	131.41	97.67	240	130	2								
2001	240.51	131.44	97.67	240	130	3								
2001	240.76	130.03	97.67	240	130	1								
2001	240.36	131.59	97.75	240	130	1								
2001	240.56	131.32	97.86	240	130	2								
2001	240.57	130.19	97.89	240	130	1								
2001	241.49	131.695	97.94	240	130	1								
2001	240.45	130.56	98.34	240	130	18								
2001	240.3	132.76	98.25	240	132	19	2							
2001	240.7	132.87	97.225	240	132	1	16							
2001	240.46	132.805	97.65	240	132	9	16							
2001	240.58	132.91	97.28	240	132	4	16							
2001	240.6	132.87	97.3	240	132	3	16							
2001	240.49	132.91	97.28	240	132	6	16							
2001	240.435	132.84	97.3	240	132	8	16							
2001	240.48	132.715	97.31	240	132	12								
2001	240.55	132.82	97.3	240	132	19								
2001	240.475	132.72	97.31	240	132	11								
2001	240.58	132.795	97.315	240	132	17								
2001	240.51	132.78	97.32	240	132	16								
2001	240.605	132.8	97.3	240	132	18								
2001	240.49	132.71	97.31	240	132	14								
2001	240.51	132.935	97.26	240	132	20								
2001	240.46	132.69	97.3	240	132	15								
2001	240.52	132.9	97.24	240	132	45								
2001	240.54	132.8	97.24	240	132	46								
2001	240.65	132.87	97.285	240	132	2								
2001	240.46	132.82	97.24	240	132	41								
2001	240.51	132.96	97.26	240	132	5								
2001	240.52	132.87	97.235	240	132	44								
2001	240.45	132.68	97.24	240	132	42								
2001	240.91	132.91	97.23	240	132	49								

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2001	240.88	132.14	97.24	240	132	48								
2001	240.47	132.59	97.24	240	132	10								
2001	240.89	132.86	97.21	240	132	50								
2001	240.5	132.83	97.265	240	132	43		yes	exterior	8	yes			
2001	240.83	132.98	97.24	240	132	47								
2001	240.44	132.82	97.2	240	132	37								
2001	240.43	132.91	97.22	240	132	7								
2001	240.47	132.88	97.22	240	132	21								
2001	240.4	132.8	97.23	240	132	38								
2001	240.4	132.73	97.23	240	132	39								
2001	241.03	132.93	97.23	240	132	51								
2001	240.89	132.97	97.23	240	132	56								
2001	240.47	132.59	97.24	240	132	10								
2001	240.53	132.74	97.24	240	132	13								
2001	240.87	133.01	97.24	240	132	52								
2001	240.85	132.95	97.24	240	132	55								
2001	240.625	132.78	97.25	240	132	29								
2001	240.44	132.79	97.25	240	132	40								
2001	240.785	133.1	97.25	240	132	53								
2001	240.97	133.08	97.25	240	132	57								
2001	240.935	132.98	97.25	240	132	58								
2001	241	132.97	97.25	240	132	60								
2001	240.96	132.99	97.26	240	132	59								
2001	240.6	132.89	97.27	240	132	27								
2001	240.46	132.74	97.27	240	132	36								
2001	240.895	133.06	97.27	240	132	54								
2001	240.45	132.9	97.28	240	132	22								
2001	240.635	132.84	97.28	240	132	30								
2001	240.46	132.81	97.28	240	132	33								
2001	240.55	132.89	97.28	240	132	35								
2001	240.505	132.875	97.29	240	132	23								
2001	240.515	132.87	97.29	240	132	24								
2001	240.535	132.82	97.29	240	132	25								
2001	240.48	132.8	97.29	240	132	26								
2001	240.47	132.84	97.29	240	132	31								
2001	240.46	132.835	97.29	240	132	32								

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2001	240.56	132.87	97.29	240	132	34								
2001	240.575	132.83	97.31	240	132	28								
2001	241.12	132.58	97.22	240	132	1	18							
2001	241.3	132.6	97.17	240	132	1	18							
2001	241.27	132.62	97.15	240	132	8	18							
2001	241.3	132.54	97.12	240	132	5	18							
2001	241.17	132.47	97.16	240	132	2	18	yes	exterior	3	yes			
2001	241.20	132.56	97.14	240	132	7	18							
2001	241.29	132.47	97.16	240	132	4	18				possible			
2001	241.2	132.53	97.15	240	132	3	18							
2001	241.13	132.60	97.17	240	132	6	18							
2001	241.36	131.42	96.79	240	132									
2001	240.67	132.43	97.15	240	132	2	18							
2001	240.87	132.45	97.17	240	132	3	18							
2001	240.85	132.6	97.15	240	132	4	18							
2001	240.8	133.01	96.91	240	132	1								
2001	240.22	132.84	96.92	240	132	2								
2001	240.7	132.19	96.98	240	132	1								
2001	240.66	132.32	97	240	132	2								
2001	240.73	132.57	97.09	240	132	1	18							
2001	240.51	132.015	97.75	240	132	1								
2001	241.405	132.15	97.88	240	132	1								
2001	240.24	132.88	97.98	240	132	2								
2001	241.35	132.28	97.99	240	132	1								
2002	240.36	135.45	98.37	240	134	11	10							
2002	243.84	137.09	97.25	242	136	4	18				yes			
2002	243.2	136.88	97.255	242	136	2	18							
2002	242.42	137.85	97.25	242	136	3	18							
2002	242.33	137.52	97.27	242	136	5	18							
2002	242.96	136.9	97.265	242	136	1	18							
2002	242.9	137.1	97.12	242	136	1								
2002	242.54	136.24	97.17	242	136	1								
2002	243.42	137.25	97.215	242	136	1								
2002	242.77	137.84	97.32	242	136	1								
2002	242.78	137.45	97.32	242	136	2								
2002	242.5	137.55	97.32	242	136	4								

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2002	242.54	137.7	97.33	242	136	5								
2002	243.49	137.67	97.33	242	136	6								
2002	242.9	137.21	97.34	242	136	3								
2002	243.7	137.19	97.4	242	136	2								
2002	243.615	136.8	97.415	242	136	1								
2002	242.9	137.69	97.91	242	136	2								
2002	242.085	136.64	97.99	242	136	1								
2002	242.77	138	98	242	136	1								
2002	243.97	136.34	98.035	242	136	2								
2002	243.6	136.73	98.1	242	136	2								
2002	242.65	137.09	98.145	242	136	1								
2002	243.9	138.02	98.205	242	138	12	2	yes						
2002	242.96	138.57	98.01	242	138	1	4	yes	exterior	6	yes			
2002	243.26	138.57	98.01	242	138	2	4	yes	exterior	8				
2002	243.97	138.64	97.605	242	138	1	11	yes	exterior	3	yes			
2002	242.34	139.78	97.535	242	138	3	12							
2002	242.95	139.34	97.535	242	138	2	12							
2002	243.64	139.21	97.51	242	138	1	13	yes	exterior	12	yes			
2002	243.22	139.965	97.445	242	138	PP7	14	yes	exterior	2	yes	4		
2002	243.26	139.97	97.45	242	138	PP6	14							
2002	243.75	139.89	97.45	242	138	PP1	14							
2002	243.85	139.9	97.44	242	138	PP1	14							
2002	243.49	139.965	97.445	242	138	PP8	14							
2002	243.5	139.9	97.48	242	138	PP9	14							
2002	243.4	139.855	97.44	242	138	PP1	14							
2002	243.29	139.15	97.445	242	138	PP4	14							
2002	242.77	139.2	97.45	242	138	1	14	yes	exterior	9	yes			
2002	242.64	139.33	97.445	242	138	2	14							
2002	243.72	139.82	97.445	242	138	4	14	yes	exterior	2	yes			
2002	243.87	139.7	97.44	242	138	5	14							
2002	242.61	139.3	97.45	242	138	PP1	14							
2002	243.3	139.215	97.445	242	138	PP5	14							
2002	242.75	139.86	97.465	242	138	PP3	14							
2002	243.85	139.98	97.495	242	138	3	14	yes	exterior	6	yes			
2002	242.75	139.74	97.45	242	138	PP2	14							
2002	242.05	139.5	97.415	242	138	3	15	yes	exterior	5	yes			

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2002	243.16	139	97.435	242	138	1	15	yes	exterior	6	yes			
2002	243.48	138.34	97.55	242	138	4	15							
2002	243.03	138.62	97.41	242	138	5	15	yes	exterior	4	yes			
2002	242.3	139.97	97.425	242	138	4	15							
2002	243.32	138.98	97.41	242	138	6	15							
2002	243.43	138.16	97.42	242	138	PP1	15							
2002	243.2	139.64	97.365	242	138	1	16	yes	exterior	12	yes			
2002	243.14	138.64	97.34	242	138	1	17	yes	exterior	8				
2002	242.14	139.39	97.3	242	138	4	17	yes	interior	2	yes			
2002	242.85	139.95	97.345	242	138	2	17	yes	exterior	8	yes			
2002	242.7	138.43	97.31	242	138	8	17							
2002	242.9	139.51	97.34	242	138	3	17	yes	exterior	4				
2002	242.09	139.3	97.31	242	138	2	17							
2002	242.8	138.3	97.32	242	138	6	17	yes	exterior	6	yes			
2002	242.87	138.93	97.32	242	138	7	17							
2002	242.23	138.63	97.3	242	138	5	17							
2002	242.27	139.94	97.35	242	138	1	17							
2002	242.96	139.14	97.3	242	138	3	17							
2002	243.74	139.09	97.265	242	138	1	18							
2002	243.08	138.18	97.295	242	138	4	18							
2002	243.03	138.87	97.29	242	138	2	18	yes	exterior	8	yes			
2002	242.5	139.09	97.28	242	138	1	18							
2002	242.96	139.11	97.29	242	138	2	18							
2002	243.45	138.98	97.285	242	138	5	18							
2002	243.09	139.2	97.32	242	138	3	18							
2002	243.14	139.87	97.2	242	138	PP7	19							
2002	243.09	139.64	97.2	242	138	PP6	19							
2002	243.3	139.97	97.2	242	138	PP9	19							
2002	242.74	139.5	97.2	242	138	PP4	19							
2002	243.75	139.99	97.2	242	138	PP8	19	yes	exterior	3	yes	1		
2002	242.95	138.92	97.2	242	138	PP2	19							
2002	242	138.78	97.215	242	138	PP1	19							
2002	242.1	139.34	97.215	242	138	PP3	19							
2002	242.54	139.09	97.21	242	138	2	19	yes	NA	13	yes			
2002	242.46	139.08	97.23	242	138	PP5	19							
2002	242.32	138.8	97.25	242	138	1	19	yes	exterior	10	yes			

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2002	243.93	138.32	97.46	242	138	7	F87	yes	exterior	4	yes			
2002	242.45	139.1	97.44	242	138	2		yes	exterior/interior	6	yes			
2002	242.26	139.59	97.59	242	138	1					possible			
2002	242.32	138.97	98.025	242	138	1								
2002	242	141.75	98.13	242	140	4	4					2		
2002	242.63	141.88	98.85	242	140	2	4							
2002	243.39	139.02	98.19	242	140	1	4	yes	exterior	10	yes			
2002	242.75	141.97	98.115	242	140	5	4	yes	exterior	3	yes			
2002	243.1	140.31	98.125	242	140	3	4	yes	exterior	8				
2002	243.55	140.58	97.98	242	140	2	6							
2002	243.88	140.37	98.005	242	140	1	6	yes	exterior	9	yes			
2002	243.63	140.23	97.7	242	140	1	11							
2002	243.77	140.79	97.67	242	140	1	12	yes	exterior	6				
2002	243.5	140.57	97.505	242	140	3	15	yes	exterior	4	yes	3		
2002	243.53	141.04	97.51	242	140	6	15							
2002	243.6	141.02	97.51	242	140	5	15							
2002	243.23	141.4	97.51	242	140	12	15							
2002	243.18	141.323	97.52	242	140	10	15							
2002	243.63	141.14	97.55	242	140	8	15							
2002	243.65	141.42	97.48	242	140	PP3	16					3		
2002	242.84	141.7	97.46	242	140	2	16	yes	exterior	7	yes			
2002	244	140.12	97.49	242	140	3	16	yes	exterior	5	yes	2		
2002	242.84	141.76	97.47	242	140	1	16							
2002	243.55	141.57	97.49	242	140	PP5	16	yes	exterior/interior	7	yes	1		
2002	243.6	141.4	97.485	242	140	PP2	16							
2002	243.5	141.57	97.475	242	140	PP6	16							
2002	243.12	141.28	97.49	242	140	PP1	16							
2002	243.74	141.44	97.47	242	140	PP4	16							
2002	243.45	141.69	97.48	242	140	PP&	16							
2002	243.12	140.09	97.45	242	140	4	16	yes	exterior	3	possible			
2002	242.64	142	97.46	242	140	4	17	yes	exterior	3		1		
2002	242.84	141.82	97.44	242	140	3	17	yes	exterior	3				
2002	242.58	141.64	97.425	242	140	1	17	yes	exterior	6		1		
2002	242.56	141.85	97.44	242	140	5	17	yes	exterior/interior		6			
2002	242.8	141.65	97.44	242	140	2	17							
2002	242.6	141.89	97.4	242	140	6	17							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2002	243.06	140.05	97.405	242	140	7	17				yes			
2002	243.54	141.95	97.38	242	140	PP2	17							
2002	243.85	141.9	97.445	242	140	PP3	17							
2002	243.12	141.12	97.435	242	140	PP4	17							
2002	242.67	141.86	97.44	242	140	PP1	17							
2002	243.17	141.87	97.535	242	140	1	19							
2002		141.6	98.405	242	140	3	C2	yes	exterior/interior	31	yes			
2002	242.92	140.66	98.365	242	140	6	C2	yes	exterior			2		
2002	244.75	140.04	98.36	242	140	5	C2	yes	exterior	21	yes			25
2002	243.53	140.09	97.6	242	140	1		yes	exterior	4	yes			
2002	243.21	141.08	97.51	242	140	7								
2002	243.29	141.12	97.525	242	140	9								
2002	243.56	141.02	97.525	242	140	2								
2002	243.39	141.64	97.505	242	140	11								
2002	242.12	140.79	97.67	242	140	1								
2002	242.7	141.37	98.09	242	140	1								
2002	242.72	141.14	98.01	242	140	2								
2002	243.98	141	98.06	242	140	3								
2002	243.86	141.03	97.51	242	140	4								
2002	242.65	140.14	98.03	242	140	4								
2002	242.94	142	98.015	242	140	5								
2002	243.71	142.21	97.915	242	142	1	7	yes	exterior	5	yes	2		
2002	243.65	143.06	97.72	242	142	2	11							
2002	243	143.39	97.73	242	142	1	11	yes	exterior	24	yes			
2002	243.12	143.45	97.11	242	142	1	12	yes	exterior	5	yes			
2002	243.27	145.09	97.55	242	142	2	14	yes	exterior	5	yes			
2002	243.28	142.98	97.525	242	142	3	15							
2002	242.81	143.9	97.5	242	142	10	15							
2002	243.68	143.74	97.53	242	142	9	15							
2002	243.33	142.72	97.5	242	142	4	15							
2002	243.7	142.91	97.535	242	142	2	15	yes	exterior	6	yes			
2002	243.05	143.75	97.52	242	142	12	15	yes	exterior, interior	8	yes			
2002	243	142.09	97.52	242	142	6	15							
2002	243.34	143.59	97.5	242	142	11	15							
2002	243.975	142.4	97.55	242	142	1	15							
2002	242.95	142.38	97.51	242	142	7	15							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2002	243.61	142.72	97.44	242	142	6	16	yes	exterior	4	yes			
2002	243.39	144	97.495	242	142	1	16	yes	exterior	3	yes	3		
2002	243.57	142.72	97.44	242	142	7	16	yes	exterior	3				
2002	243.1	143.77	97.495	242	142	2	16					4		
2002	243.21	143.23	97.52	242	142	5	16							
2002	242	142	97.465	242	142	1	16							
2002	243.4	142.54	97.445	242	142	3	16	yes	exterior	5	yes			
2002	243.36	142.31	97.45	242	142	5	16							
2002	243.1	142.46	97.495	242	142	4	16							
2002	243.58	145.62	97.57	242	142	1								
2002	242.51	142.2	97.9	242	142	1								
2002	243.91	144	98.09	242	142	1								
2002	243.62	142.73	98.155	242	142	1								
2002	242.52	142.63	98.3	242	142	1								
2002	243.83	142.58	98.075	242	142	2								
2002	243.7	143.6	98.29	242	142	2								
2002	243.93	143.2	98.32	242	142	3								
2002	244.05	142.44	97.51	242	142	8								
2002	244.06	144.07	98.065	242	144	1								
2002	244.3	144.02	98.16	242	144	1								
2002	244.25	144.06	98.285	242	144	1								
2002	244.53	144.18	98.04	242	144	2								
2002	244.64	144.85	98.21	242	144	2								
2002	244.26	144.29	98.28	242	144	2								
2002	244.22	144.98	98.16	242	144	3								
2002	243.85	144.18	98.27	242	144	3								
2002	244.25	137.525	97.945	244	136	2	5					2		
2002	245.48	136.03	98	244	136	1	5	yes	exterior	8	yes			
2002	244.14	137.09	97.59	244	136	1	12	yes	exterior	2				
2002	245.74	136.94	97.375	244	136	1	15	yes	exterior	5	yes			
2002	244.85	137.05	97.35	244	136	3	15	yes	exterior	5				
2002	245.05	137.63	97.37	244	136	2	15	yes	exterior/interior	9	yes			
2002	244.14	136.69	97.135	244	136	1	20					4		
2002	244.5	137.78	97.45	244	136	16	F87	yes	external	3	yes			
2002	243.95	137.46	97.47	244	136	9	F87					2		
2002	244.38	137.58	97.45	244	136	14	F87				yes			

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2002	243.9	137.25	97.485	244	136	6	F87					3		
2002	244.55	137.46	97.46	244	136	12	F87	yes	exterior	6	yes			
2002	244.36	137.84	97.46	244	136	18	F87	yes	exterior	5				
2002	243.85	137.1	97.45	244	136	4	f87							
2002	244.46	137.5	97.49	244	136	13	F87	yes	exterior	3	yes			
2002	244.37	137.93	97.47	244	136	21	F87							
2002	243.92	137.18	97.45	244	136	5	f87							
2002	243.47	137.95	97.445	244	136	2	F87							
2002	243.42	137.77	97.47	244	136	3	F87							
2002	244.59	137.91	97.465	244	136	19	F87							
2002	244.17	137.4	97.45	244	136	11	F87							
2002	244.06	137.88	97.43	244	136	17	F87	yes	external	27	yes			
2002	244.35	137.76	97.455	244	136	15								
2002	244.8	136.05	97.2	244	136	1								
2002	244.56	136.15	97.31	244	136	1								
2002	244.07	136.3	98.03	244	136	5								
2002	244.73	136.34	98.03	244	136	6								
2002	245.4	136.43	98.01	244	136	12								
2002	245.54	136.5	98.03	244	136	8								
2002	245.65	136.58	98.02	244	136	10								
2002	245.98	136.71	97.87	244	136	2								
2002	245.03	136.83	97.875	244	136	1								
2002	244.75	136.87	97.72	244	136	1								
2002	245.76	136.9	98.045	244	136	7								
2002	245.68	137.05	98.06	244	136	1								
2002	245.44	137.06	98.04	244	136	9								
2002	244.17	137.07	98.065	244	136	3								
2002	245.25	137.07	98.035	244	136	4								
2002	244.98	137.1	98.03	244	136	5								
2002	244.97	137.15	98.03	244	136	6								
2002	245.3	137.2	98.045	244	136	3								
2002	244.9	137.2	98.01	244	136	7								
2002	244.36	137.2	97.195	244	136	2								
2002	245.05	137.26	97.22	244	136	5								
2002	245.07	137.27	98.045	244	136	12								
2002	245.38	137.32	98.045	244	136	13								

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2002	245	137.35	98.055	244	136	8								
2002	244.97	137.38	98.06	244	136	9								
2002	245.44	137.4	98.035	244	136	14								
2002	244.92	137.42	98.035	244	136	11								
2002	245.16	137.42	98.05	244	136	19								
2002	244.18	137.43	98.015	244	136	11								
2002	244.46	137.45	98.045	244	136	2								
2002	245.6	137.45	98.055	244	136	2								
2002	245.12	137.45	98.045	244	136	20								
2002	245.08	137.45	98.015	244	136	22								
2002	244.88	137.46	98.06	244	136	10								
2002	245.22	137.47	98.045	244	136	21								
2002	245.15	137.48	98.045	244	136	18								
2002	244.24	137.49	98.05	244	136	4								
2002	245.36	137.5	98.045	244	136	15								
2002	245.2	137.57	98.05	244	136	17								
2002	245.27	137.59	98.03	244	136	16								
2002	244.69	137.6	98.06	244	136	1								
2002	245.2	137.89	97.25	244	136	4								
2002	245.2	137.95	97.27	244	136	3								
2002	243.93	137.32	97.46	244	136	7								
2002	244.15	137.35	97.45	244	136	50								
2002	244.05	137.42	97.42	244	136	10								
2002	243.95	137.43	97.47	244	136	8								
2002	243.94	137.45	97.45	244	136	49								
2002	244.64	137.5	97.44	244	136	13								
2002	243.82	137.7	97.41	244	136	48								
2002	244.19	137.9	97.425	244	136	51								
2002	244.27	137.96	97.365	244	136	52								
2002	244.93	139.12	98.455	244	138	2	2							
2002	245.38	138.18	98.08	244	138	2	3							
2002	244	138	98.17	244	138	1	3	yes	exterior		yes			
2002	245.67	138.91	97.995	244	138	1	4							
2002	245.24	138.61	98.01	244	138	2	4	yes						
2002	244.03	139.61	98.01	244	138	4	4							
2002	244.59	139.46	98.05	244	138	3	4							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2002	245.8	138.43	97.94	244	138	1	5	yes	exterior/interior					
2002	245.94	138.44	97.925	244	138	2	5	yes	exterior/interior					
2002	245.78	138.2	97.765	244	138	1	8							
2002	246	138.42	97.72	244	138	1	9							
2002	244.47	138.51	97.65	244	138	1	10	yes	exterior/interior	19	yes			
2002	245.43	138.23	97.6	244	138	1	12	yes	exterior	3	yes			
2002	245.61	138.12	97.58	244	138	2	12							
2002	243.63	138.19	97.51	244	138	1	13	yes	exterior	15				
2002	244.13	139.71	97.51	244	138	3	13	yes	exterior	3	yes	3		
2002	244.82	139.91	97.505	244	138	7	13							
2002	244	139.8	97.49	244	138	12	14	yes	exterior	3	yes			
2002	244.67	139.555	97.44	244	138	PP2	14							
2002	245.42	138.78	97.45	244	138	PP5	14							
2002	245.56	139.62	97.475	244	138	6	14							
2002	245.11	139.82	97.46	244	138	10	14							
2002	244.76	139.93	97.5	244	138	2	14	yes	exterior	5	yes			
2002	245.2	139.52	97.48	244	138	8	14							
2002	244.955	139.86	97.445	244	138	PP4	14							
2002	245.57	139.56	97.48	244	138	5	14							
2002	245.03	139.84	97.47	244	138	11	14							
2002	245.94	139.18	97.49	244	138	3	14							
2002	245.99	139.49	97.48	244	138	PP1	14							
2002	245.94	139.61	97.49	244	138	4	14	yes	exterior	5	yes			
2002	245.21	139.89	97.46	244	138	9	14							
2002	244.91	139.35	97.46	244	138	PP3	14	yes	exterior	4	yes			
2002	245.58	139.93	97.46	244	138	7	14							
2002	245.7	139.68	97.49	244	138	1	14							
2002	245.37	138.73	97.455	244	138	13	14	yes	exterior/interior	15	yes			
2002	244.47	139.13	97.51	244	138	6	15					2		
2002	244.31	139.22	97.52	244	138	5	15					2		
2002	244.12	139.63	97.515	244	138	4	15	yes	exterior	5	yes	3		
2002	244.37	139.59	97.53	244	138	2	15	yes	exterior	3				
2002	245.7	139.93	97.5	244	138	2	15							
2002	244.73	139.68	97.49	244	138	1	15							
2002	245.54	138.69	97.375	244	138	2	16	yes	exterior	2	yes	2		
2002	245.01	139.95	97.39	244	138	3	16	yes	exterior	7	yes			

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2002	244.54	139.05	97.39	244	138	1	16				yes			
2002	244.19	138.21	97.36	244	138	25	16							
2002	244.37	138.01	97.485	244	138	20	16							
2002	244.14	137.93	97.47	244	138	21	16					4		
2002	244.19	138.04	97.46	244	138	23	16							
2002	244.3	138.1	97.47	244	138	24	16					3		
2002	244.28	138	97.48	244	138	22	16	yes	exterior	4	yes	2		
2002	245.59	138.1	97.46	244	138	26	16				yes			
2002	244.35	138.47	97.3	244	138	1	17	yes	exterior	3	yes			
2002	245.5	138.85	97.34	244	138	2	17				yes			
2002	245.7	138.72	97.31	244	138	3	17	yes	exterior/interior	18				
2002	245.52	138.74	97.31	244	138	4	17				yes			
2002				244	138	1	19							
2002	244.24	139.1	97.18	244	138	1	20	yes	exterior	3	yes			
2002	244	138		244	138	3	20							
2002	244	138		244	138	2	20							
2002	244	138		244	138	1	20							
2002	244.83	138.76	98.33	244	138	7	D2							
2002	244.64	138.32	97.44	244	138	30	F87	yes	exterior	3	yes	2		
2002	243.95	137.43	97.47	244	138	8	F87					2		
2002	244.14	138.63	97.475	244	138	44	F87							
2002	244.19	137.9	97.425	244	138	51	F87							
2002	244.35	138.51	97.48	244	138	62	F87							
2002	244.23	138.38	97.45	244	138	57	F87							
2002	244.36	138.58	97.51	244	138	41	F87							
2002	244.27	138.63	97.425	244	138	64	F87				yes			
2002	244.3	138.11	97.44	244	138	54	F87							
2002	244.26	138.34	97.44	244	138	32	F87							
2002	244.13	138.57	97.48	244	138	65	F87							
2002	244.4	138.53	97.5	244	138	40	F87							
2002	244.2	138.53	97.49	244	138	38	F87							
2002	244.23	138.46	97.475	244	138	36	F87							
2002	244.34	138.42	97.45	244	138	58	F87							
2002	244.46	138.38	97.45	244	138	56	F87							
2002				244	138	9	F87							
2002	244.26	138.41	97.45	244	138	59	F87							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2002	244.19	138.62	97.49	244	138	42	F87							
2002	244.27	138.51	97.44	244	138	66	F87							
2002	244.16	138.1	97.47	244	138	24	F87							
2002	243.94	137.45	97.45	244	138	49	F87							
2002				244	138	6	F87							
2002	244.25	138.51	97.43	244	138	67	F87							
2002				244	138	8	F87							
2002	244.53	138.49	97.43	244	138	63	F87							
2002	243.5	139.46	98.05	244	138	3	F87							
2002				244	138	3	F87							
	244.73	138.01	97.485	244	138	20	F87							
2002				244	138	10	F87							
2002	244.55	138.23	97.445	244	138	55	F87							
2002	244.11	138.62	97.485	244	138	43	F87	yes	exterior	5	yes			
2002	244.34	138.47	97.47	244	138	61	F87							
2002				244	138	4	F87							
2002	244.15	137.35	97.45	244	138	50	F87							
2002				244	138	11	F87							
2002	244.36	138.09	97.435	244	138	53	F87							
2002	244.15	138.53	97.48	244	138	37	F87							
2002	244.22	138.26	97.445	244	138	33	F87							
2002				244	138	2	F87							
2002	244.15	138.45	97.46	244	138	60	F87							
2002	245.92	138.35	97.45	244	138	46	F87	yes	exterior	4	yes			
2002				244	138	5	F87							
2002	244.31	138.53	97.49	244	138	39	F87							
2002	243.82	137.7	97.41	244	138	48	F87							
2002	244.34	138.13	97.43	244	138	27	F87							
2002	244.14	138.04	97.46	244	138	23	F87							
2002	244.28	138	97.48	244	138	22	F87							
2002	243.5	138.6	97.46	244	138	1	F87							
2002	244.53	138.25	97.44	244	138	29	F87							
2002	243.88	138.86	97.42	244	138	47	F87	yes	exterior	3	yes			
2002	244.64	137.5	97.44	244	138	13	F87							
2002	243.5	138.6	97.46	244	138	1	F87							
2002	244.3	138.21	97.43	244	138	28	F87							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2002	243.47	137.95	97.445	244	138	2	F87							
2002	244.28	138.1	97.46	244	138	26								
2002	243.32	138.32	97.45	244	138	31								
2002	244.3	138.39	97.46	244	138	35								
2002	244.15	138.73	97.48	244	138	45								
2002	244.27	137.96	97.365	244	138	52								
2002	245.69	138.14	97.52	244	138									
2002	243.95	137.46	97.47	244	138	9								
2002	243.92	137.42	97.42	244	138	10								
2002	244.17	137.88	97.43	244	138	17								
2002	244.55	137.1	97.45	244	138	4								
2002	244.36	137.18	97.45	244	138	5								
2002	244.3	137.4	97.45	244	138	11								
2002	244.59	137.58	97.45	244	138	14								
2002	243.42	137.78	97.45	244	138	16								
2002	244	138.39	97.45	244	138	34								
2002	243.9	137.76	97.455	244	138	15								
2002	245.69	137.32	97.46	244	138	7								
2002	245.76	137.46	97.46	244	138	12								
2002	245.9	137.84	97.46	244	138	18								
2002	245.94	137.91	97.465	244	138	19								
2002	245.8	137.77	97.47	244	138	3								
2002	245.24	139.8	97.47	244	138	12								
2002	245.38	137.25	97.485	244	138	6								
2002	244	138.25	97.605	244	138	1								
2002	244.03	138.28	97.89	244	138	3								
2002	244.6	140.16	98.185	244	140	6	4							
2002	244.54	140.24	98.185	244	140	5	4	yes	exterior	2				
2002	245.63	140.27	98.175	244	140	1	4							
2002	245.81	141.12	98.14	244	140	2	4							
2002	244.78	141.78	98.135	244	140	9	4				yes			
2002	245.11	140.3	98.165	244	140	4	4							
2002	244.24	140.22	98.085	244	140	3	5							
2002	244.11	140.48	98.075	244	140	1	5	yes	exterior	8	yes			
2002	245.67	140.7	98.115	244	140	2	5							
2002	245.18	141.73	98.02	244	140	5	5							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2002	245.82	140.73	98.05	244	140	4	5							
2002	245.38	141.38	97.6	244	140	1	13							
2002	245.22	141.47	97.56	244	140	2	14							
2002	245.54	140.7	97.55	244	140	1	14							
2002	245.93	141.38	97.54	244	140	1	15							
2002	244.08	140.8	97.455	244	140	4	16	yes	exterior	10	yes	4		
2002	244.72	140.9	97.465	244	140	5	16	yes	exterior	4	yes	4		
2002	244.43	140.44	97.53	244	140	2	16							
2002	244.1	141.81	97.45	244	140	15	16							
2002	244.6	140.35	97.495	244	140	4	16	yes	exterior	7	yes	2		
2002	245.2	141.2	97.485	244	140	13	16							
2002	244.27	140.76	97.495	244	140	2	16							
2002	245.51	141.58	97.5	244	140	8	16							
2002	245.93	141.15	97.505	244	140	10	16							
2002	245.93	141.08	97.5	244	140		16							
2002	244.52	140.6	97.51	244	140	5	16							
2002	245.73	141.88	97.49	244	140	12	16							
2002	244.4	140.96	97.45	244	140	14	16							
2002	245.21	141.15	97.5	244	140	6	16							
2002	244.3	140.46	97.515	244	140	1	16							
2002	245.66	141.84	97.5	244	140	11	16							
2002	244.32	140.6	97.51	244	140	5	16							
2002	245.13	141.16	97.505	244	140	7	16							
2002	244.68	141.18	97.44	244	140	12	17	yes	exterior	4	yes	4		
2002	244.93	141.24	97.45	244	140	10	17				yes			
2002	244.75	141.2	97.445	244	140	11	17	yes	exterior	2	yes			
2002	244.25	140.62	97.42	244	140	10	17							
2002	244.8	141.11	97.44	244	140	11	17							
2002	244.27	141.07	97.45	244	140	6	17							
2002	244.16	140.63	97.41	244	140	9	17							
2002	245.66	140.87	97.425	244	140	1	17	yes	exterior/interior	16	yes			
2002	244.69	141.06	97.455	244	140	7	17							
2002	244.19	141.29	97.445	244	140	4	17							
2002	244.09	141.5	97.435	244	140	1	17							
2002	244.29	140.85	97.415	244	140	8	17				possible			
2002	245.45	140.85	97.415	244	140	2	17	yes	exterior	8	yes			

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2002	244.45	141.33	97.36	244	140	2	17	yes	exterior	9	yes			
2002	244.7	141.23	97.44	244	140	3	17							
2002	244.9	141.2	97.43	244	140	5	17							
2002	244.51	141.54	97.365	244	140	1	18							
2002	245.5	141.27	97.435	244	140	4		yes	exterior/interior	13	yes	3		
2002	244.19	140.56	97.425	244	140	9		yes	exterior	6	yes			
2002	244.91	140.8	97.4	244	140	7					yes			
2002	244.1	140.82	97.435	244	140	8								
2002	244.17	140.86	97.46	244	140	5		yes	exterior	11	yes			
2002	244.87	141.08	97.42	244	140	6								
2002	245.58	141.08	97.49	244	140	3		yes	exterior	6	yes			
2002	245.45	140.45	97.41	244	140	3		yes	exterior/interior	11	yes			
2002	244.7	140.7	97.47	244	140	1								
2002	245.44	146.28	97.555	244	140	3								
2002	245.2	140.39	98.165	244	140	3								
2002	244.64	140.04	98.195	244	140	7								
2002	244.82	140.17	98.185	244	140	8								
2002	244.7	143.05	98.235	244	142	1	3							
2002	245.27	142.57	97.545	244	142	3	3							
2002	244.66	142.25	98.15	244	142	5	4							
2002	244.9	142.18	98.175	244	142	1	4							
2002	244.74	143.8	98.175	244	142	1	4	yes	exterior	12	yes			
2002	244.35	143.52	98.14	244	142	4	4	yes	exterior	13	yes			
2002	245.65	142.53	98.15	244	142	3	4				yes			
2002	244.35	143.77	98.025	244	142	1	5							
2002	245.16	143.3	97.73	244	142	1	10							
2002	244.46	143.85	97.705	244	142	2	11	yes	exterior/interior	7	yes			
2002	245.58	143.39	97.65	244	142	3	12	yes	exterior	9	yes			
2002	245.48	143.29	97.65	244	142	5	12							
2002	245.6	143.45	97.65	244	142	4	12							
2002	245.4	143.8	97.686	244	142	1	12							
2002	245.65	143.88	97.65	244	142	2	13							
2002	245.2	143.4	97.63	244	142	1	13							
2002	245.68	143.92	97.625	244	142	3	13							
2002	245.6	142.95	97.56	244	142	4	14							
2002	245.43	142.08	97.6	244	142	2	14							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2002	245.47	142.33	97.57	244	142	1	14	yes	exterior	4	yes			
2002	244.46	143.5	97.5	244	142	5	15							
2002	245.96	143.43	97.51	244	142	4	15							
2002	244.62	143.78	97.71	244	142	1	15							
2002	245.55	142.94	97.5	244	142	2	15							
2002	244.58	142.51	97.505	244	142	6	15							
2002	245.89	143.14	97.5	244	142	3	15							
2002	244.83	142.25	97.505	244	142	7	15							
2002	245.06	142.05	97.51	244	142	8	15							
2002	244.45	143.09	97.455	244	142	5	16					3		
2002	244.43	143.09	97.455	244	142	4	16					3		
2002	244.24	143.07	97.49	244	142	1	16	yes	exterior	6	yes			
2002	244.43	143.35	97.48	244	142	2	16	yes	exterior	4	yes			
2002	244.16	143.28	97.47	244	142	1	16							
2002	244.35	143.15	97.45	244	142	3	16							
2002	244.87	142.1	98.73	244	142	2	B2	yes	exterior	15	yes			
2002	244.87	142.1	98.73	244	142	2	B2	yes	exterior	10				
2002	244.65	142.86	97.45	244	142	45	F 88					3		
2002	244.91	142.39	97.46	244	142	63	F87	yes	exterior	3	yes			
2002	244.86	142.66	97.44	244	142	65	F87							
2002	245.1	142.39	97.455	244	142	27	F87							
2002	244.68	142.17	97.435	244	142	30	F87							
2002	245.3	142.81	97.44	244	142	25	F87				possible			
2002	245	143.9	97.69	244	142	12	F87							
2002	244.6	143.33	97.475	244	142	7	F87							
2002	244.81	142.42	97.49	244	142	23	F87							
2002	244.84	142.62	97.445	244	142	64	F88							
2002	244.38	142.98	97.45	244	142	37	F88							
2002	244.9	142.48	97.455	244	142	59	F88					2		
2002	244.69	142.49	97.49	244	142	62	F88					4		
2002	244.92	142.49	97.455	244	142	58	F88							
2002	244.96	142.7	97.45	244	142	53	F88							
2002	244.44	142.99	97.45	244	142	38	F88							
2002	244.72	142.76	97.45	244	142	47	F88							
2002	244.58	142.93	97.45	244	142	42	F88					2		
2002	244.59	142.85	97.45	244	142	43	F88	yes	exterior	3	yes			

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2002	244.68	142.77	97.45	244	142	46	F88							
2002	244.62	142.88	97.45	244	142	44	F88					3		
2002	244.84	142.49	97.46	244	142	67	F88							
2002	244.78	142.72	97.44	244	142	50	F88							
2002	244.49	142.87	97.45	244	142	40	F88							
2002	244.78	142.45	97.46	244	142	68	F88							
2002	244.88	142.62	97.44	244	142	66	F88							
2002	244.55	142.91	97.45	244	142	41	F88	yes	exterior	7	yes			
2002	244.79	142.68	97.45	244	142	51	F88							
2002	244.81	142.62	97.48	244	142	56	F88							
2002	244.91	142.52	97.455	244	142	57	F88							
2002	244.87	142.62	97.465	244	142	55	F88							
2002	244.86	142.49	97.48	244	142	60	F88							
2002	244.47	142.98	97.45	244	142	39	F88							
2002	244.87	142.69	97.43	244	142	52	F88							
2002	244.93	142.65	97.45	244	142	54	F88							
2002	244.79	143.8	97.445	244	142	8						1		
2002	244.78	142.77	97.45	244	142	48						2		
2002	244.72	142.27	97.48	244	142	29					yes	4		
2002	244.82	142.74	97.45	244	142	49					yes	1		
2002	243.88	142.96	97.48	244	142	16								
2002	244.83	142.78	97.48	244	142	35								
2002	243.82	142.95	97.45	244	142	14								
2002	244.46	142.45	97.485	244	142	21								
2002	244.35	143.15	97.45	244	142	3								
2002	244	142.8	97.48	244	142	15		yes	exterior	4	yes			
2002	244.02	142.98	97.47	244	142	17								
2002	244.52	143.08	97.45	244	142	6								
2002	244.8	142.47	97.48	244	142	61						2		
2002	244.56	142.77	97.47	244	142	33								
2002	244.5	142.82	97.46	244	142	34								
2002	244.27	142.63	97.47	244	142	19								
2002	244.38	142.9	97.455	244	142	32								
2002	244.28	142.49	97.47	244	142	20								
2002	245.28	142.77	97.45	244	142	26								
2002	244.51	142.59	97.45	244	142	31								

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2002	245.32	143.88	97.475	244	142	11								
2002	244.02	142.9	97.48	244	142	13								
2002	244.62	142.4	97.495	244	142	22								
2002	244.6	143.33	97.475	244	142	7								
2002	245.08	143.74	97.48	244	142	9					possible			
2002	244.96	143.2	97.46	244	142	10								
2002	244.45	142.72	97.385	244	142	18								
2002	245.35	143.23	97.46	244	142	12		yes	exterior	5	yes			
2002	245.18	142.89	97.605	244	142	4								
2002	244.83	142.36	97.43	244	142	28								
2002	245.1	143.85	98.42	244	142	4		yes	exterior					0
2002	244.13	143.68	97.505	244	142	1								
2002	245.4	143.36	97.67	244	142	1								
2002	245.78	143.43	97.65	244	142	2								
2002	245.38	143.54	97.7	244	142	2								
2002	244.9	144.18	98.155	244	142	2								
2002	245.68	143.65	97.715	244	142	3								
2002	245.57	143.72	97.75	244	142	4								
2002	244.35	144.52	98.14	244	142	4								
2002	245.42	143.8	97.76	244	142	5								
2002	244.38	142.57	97.505	244	142	6								
2002	245.36	143.8	97.745	244	142	6								
2002	245.47	143.7	97.7	244	142	7								
2002	245.46	143.83	97.77	244	142	8								
2002	245.54	143.91	97.76	244	142	9								
2002	245.4	143.96	97.765	244	142	10								
2002	245.17	143.76	97.69	244	142	11								
2002	245.45	144	97.75	244	142	13								
2002	245.03	142.54	97.47	244	142	24								
2002	244.24	142.96	97.45	244	142	36								
2002	245.01	143.8	98.315	244	242	7	B2					1		
2002	246	137.6	98.25	246	136		E7							
2002	246.3	139.6	98.13	246	138	1	3							
2002	246.8	138.78	98.01	246	138	2	4							
2002	246.18	138.9	98.06	246	138	1	4							
2002	246.9	139.75	98.09	246	138	5	4							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2002	246.6	139.2	98.055	246	138	3	4							
2002	246.85	139.65	98.06	246	138	4	4							
2002	246.8	139.65	98.265	246	138	9	D12							
2002	246.14	142	98.2	246	140	1	3							
2002	246.82	140.89	98.03	246	140	1								
2002	246.83	140.04	98.1	246	140	1								
2002	246.47	141.21	98	246	140	2								
2002	246.93	140.37	98.105	246	140	2								
2002	246.5	141.27	97.97	246	140	3								
2002	246.85	143.9	98.42	246	142	6	2	yes	exterior	2				
2002	246.55	142.27	98.24	246	142	1	3					3		
2002	246.97	143.26	98.22	246	142	4	3					1		
2002	246.91	142.3	98.2	246	142	3	3							
2002	246.93	142.94	98.22	246	142	2	3	yes	exterior	3				
2002	246.7	142.35	98.19	246	142	3	4							
2002	246.9	142.78	98.205	246	142	4	4							
2002	246.7	142.25	98.17	246	142	2	4							
2002	246.65	142.1	98.17	246	142	1								
2002	246.16	142.11	98.165	246	142	5								
2002	246.74	143.28	98.1	246	142	6								
2002		141.8	98.52		140	2	C2					2		
2002		141.9	98.48		140	4	C2					2		
2002		141.85	98.55		140	2	C4					2		
2002	242.5	137.55	97.32			4	17	yes	exterior	7	yes			
2003	242.97	141.97	97.36	242	140	5	18	yes	exterior	6	yes			
2003	243.3	140.73	97.3	242	140	10	19							
2003	242.6	141.73	97.325	242	140	12	19							
2003	243.76	141.95	97.3	242	140	6	19							
2003	243.42	141.32	97.315	242	140	5	19							
2003	242.3	141.16	97.3	242	140	13	19							
2003	243.37	140.44	97.32	242	140	8	19							
2003	243.49	140.8	97.32	242	140	9	19							
2003	242.63	140.29	97.34	242	140	3	19					4		
2003	243.08	141.59	97.345	242	140	1	19	yes	exterior	6	yes			
2003	243.08	141.59	97.345	242	140	1	19	yes	exterior	6	yes			
2003	242.86	140.18	97.275	242	140	10	20							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2003	243.65	140.79	97.215	242	140	6	20							
2003	242.65	140.35	97.23	242	140	3	20							
2003	242.6	140.13	97.295	242	140	1	20							
2003	242.3	140.67	97.255	242	140	4	20							
2003	242.88	140.38	97.26	242	140	9	20							
2003	242.58	140.22	97.29	242	140	2	20							
2003	242.07	140.6	97.235	242	140	7	20							
2003	242.8	140.07	97.29	242	140	5	20	yes	exterior	5	yes			
2003	242.84	140.3	97.28	242	140	8	20	yes	exterior/interior	5	yes			
2003	243	140.23	97.23	242	140	11	20							
2003	243.28	141.03	97.335	242	140	11	F90							
2003	243.1	141.03	97.355	242	140	10	F90							
2003	243.04	141.06	97.355	242	140	6	F90							
2003	243.13	141.03	97.32	242	140	13	F90							
2003	242.95	140.93	97.345	242	140	1	F90							
2003	243.19	141	97.36	242	140	4	F90							
2003	243.06	140.97	97.365	242	140	7	F90							
2003	242.98	141.01	97.36	242	140	5	F90	yes	exterior		yes			
2003	242.98	141.05	97.35	242	140	12	F90	yes	exterior	6	yes	4		
2003	243.23	140.9	97.32	242	140	3	F90				yes			
2003	243.12	141.15	97.315	242	140	9	F90	yes	exterior	13	yes			
2003	242.97	141.12	97.32	242	140	8	F90	yes	exterior/interior	15	yes			
2003	243.35	141.21	97.285	242	140	2	F90	yes	exterior/interior	33	yes			
2003	242.49	140.12	97.32	242	140	11								
2003	243.82	141.38	97.325	242	140	4		yes	exterior	7	yes			
2003	243.27	140.43	97.305	242	140	7		yes	exterior	9	yes			
2003	242.71	142.03	97.41	242	142	3	17							
2003	242.75	143.66	97.44	242	142	5	17	yes	exterior	7	yes			
2003	242.9	143	97.4	242	142	5	18							
2003	243	143.25	97.37	242	142	3	18							
2003	243.17	143.98	97.37	242	142	4	18							
2003	242.8	142.72	97.365	242	142	2	18							
2003	243.28	143.51	97.255	242	142	15	19							
2003	243.54	143.89	97.34	242	142	7	19							
2003	242.6	143.96	97.275	242	142	19	19							
2003	243.64	143.07	97.33	242	142	16	19							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2003	243.16	143.45	97.2	242	142	21	19							
2003	242.6	143.35	97.295	242	142	3	19							
2003	242.42	143.29	97.305	242	142	4	19							
2003	242.54	143.9	97.355	242	142	10	19							
2003	243.6	143.86	97.34	242	142	8	19							
2003	243.2	143.92	97.22	242	142	22	19							
2003	242.3	142.27	97.155	242	142	26	19							
2003	243.65	143.85	97.22	242	142	23	19							
2003	242.46	142.25	97.1	242	142	27	19							
2003	243.48	143.89	97.315	242	142	5	19							
2003	243.25	142.91	97.22	242	142	28	19					2		
2003	242.73	143.03	97.325	242	142	1	19							
2003	243.74	143	97.335	242	142	24	19							
2003	243.66	143.99	97.27	242	142	18	19							
2003	243.07	143.04	97.26	242	142	14	19							
2003	243.79	143.84	97.355	242	142	6	19							
2003	243.67	143.79	97.36	242	142	9	19							
2003	242.4	143.57	97.3	242	142	2	19	yes	exterior	2	yes			
2003	242.89	143.57	97.335	242	142	12	19	yes	exterior	9	yes			
2003	242.6	143.78	97.33	242	142	11	19							
2003	242.47	142.82	97.28	242	142	25	19	yes	exterior/interior	16	yes			
2003	242.9	143.07	97.335	242	142	13	19	yes	exterior	13	yes			
2003	242.85	142.53	97.38	242	142	1		yes	exterior	9	yes			
2003	245.76	138.25	97.605	244	138	1	11	yes	exterior	3	yes			
2003	245.76	140.65	97.37	244	140	2	18							
2003	245.43	140.43	97.36	244	140	1	18	yes	exterior	7				
2003	245.8	140.44	97.27	244	140	1	20							
2003	244.13	140.1	97.3	244	140	2	20	yes	exterior	1		2		
2003	244.63	140.34	97.28	244	140	3	20				yes	3		
2003	245.21	143.12		244	142	7	17	yes	exterior	2	yes			
2003	244.17	142.53	97.41	244	142	3	17	yes	exterior	2				
2003	245.71	143.63	97.42	244	142	6	17	yes	exterior	11	yes			
2003	244.87	142.73	97.43	244	142	2	17	yes	exterior	9	yes			
2003	245.75	142.7	97.395	244	142	1	18							
2003	245.62	142.78	97.395	244	142	2	18							
2003	244.89	142.29	97.395	244	142	4	18							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2003	245.8	143.19	97.395	244	142	6	18							
2003	244.16	142.69	97.375	244	142	5	18							
2003	245.54	143.94	97.36	244	142	13	18	yes	exterior	3				
2003	245.26	143.94	97.365	244	142	11	18							
2003	245.06	143.97	97.36	244	142	9	18							
2003	245.18	142.83	97.37	244	142	3	18					3		
2003	245.48	143.74	97.37	244	142	14	18	yes	exterior	3	yes			
2003	245.35	143.37	97.385	244	142	7	18	yes	exterior	2		3		
2003	245.06	143.71	97.365	244	142	8	18	yes	exterior	yes	yes			
2003	245.35	143.91	97.36	244	142	12	18				possible			
2003	245.16	143.89	97.355	244	142	10	18	yes	exterior	15	yes			
2003	245.35	142.82	97.26	244	142	10	19							
2003	244.21	143.68	97.22	244	142	20	19							
2003	245.78	142.55	97.265	244	142	8	19							
2003	245.8	142.54	97.245	244	142	9	19							
2003	245.4	143.75	97.355	244	142	21	19							
2003	244.24	143.43	97.32	244	142	19	19							
2003	244.8	143.63	97.315	244	142	12	19							
2003	245.9	142.6	97.27	244	142	7	19							
2003	245.32	143.3	97.255	244	142	22	19							
2003	244.2	143.3	97.295	244	142	15	19							
2003	245.07	143.73	97.315	244	142	3	19							
2003	245.42	142.85	97.315	244	142	5	19	yes	exterior/interior	10	yes			
2003	244.2	143.42	97.29	244	142	18	19	yes	exterior	6				
2003	244.28	143.5	97.215	244	142	24	19	yes	exterior	5	yes			
2003	245.03	143.14	97.3	244	142	1	19	yes	exterior	16	yes			
2003	244.92	142.66	97.35	244	142	23	19				yes			
2003	244	142.58	97.275	244	142	17								
2003	245.13	143.14	97.295	244	142	2					yes			
2003	245.13	142.9	97.315	244	142	6		yes	exterior	3	yes			
2003	244.03	143.41	97.275	244	142	14		yes	exterior	3	yes			
2003	244.77	143.15	97.22	244	142	11								
2003	245.48	142.83	97.42	244	142	4		yes	exterior	5	yes			
2003	244.5	143.87	97.29	244	142	13		yes	exterior/interior	12	yes			
2003	243.54	143.26	97.21			20	19					1		
2003	243.25	143.6	97.195	242	142	17	19	yes	exterior	6	yes			

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2003	245.58	140.17	97.14	244	140	2	21							
2003	243.63	141.84	97.4	242	140	1	18							
2003	243.9	141.79	97.345	242	140	2								
2003	243.25	141.29	97.36	242	140	2	18							
2003	243.79	140.2	97.395	242	140	3	18							
2003	243.38	140.59	97.4	242	140	4	18							
2003	243.9	142.64	97.42	242	142	1	17							
2003	242.56	142.1	97.4	242	142	2	17							
2003	243.09	142.4	97.445	242	142	4	17	yes	exterior	6	yes			
2003	243.2	143.08	97.42	242	142	6	17	yes	exterior	6	yes			
2003	243.54	143.26	97.21	242	142	20								
2003	243.25	143.6	97.195	244	140	1								
2003	245.58	140.17	97.14	244	140	1								
2003	243.63	141.84	97.4	244	140	2								
2003	243.9	141.79	97.345	244	140	3								
2003	243.25	141.29	97.36	244	142	1								
2003	243.79	140.2	97.395	244	142	4								
2003	243.38	140.59	97.4	244	142	5								
2003	243.9	142.64	97.42	244	142	16		yes	exterior	5	yes			
2003	242.56	142.1	97.4	242	140	5	18	yes	exterior/interior	5	yes			
2003	243.09	142.4	97.445	242	140	10	19							
2003	243.2	143.08	97.42	242	140	12	19							
2003	243.54	143.26	97.21	242	140	6	19							
2003	245.84	140.24	97.24	242	140	5	19							
2003	245.23	141.46	97.32	242	140	13	19							
2003	244.94	141.02	97.315	242	140	8	19							
2003	244.13	141.3	97.27	242	140	9	19							
2003	245.08	142.84	97.43	242	140	3	19					4		
2003	245.04	143.14	97.195	242	140	1	19	yes	exterior		yes			
2003	245.11	142.54	97.41	242	140	1	19	yes	exterior	6	yes			
2003	244.2	143	97.22	242	140	10	20				yes			
2004	242.28	140.78	97.12	242	140	1	1					3		
2004	242.54	142.64	97.06	242	140	1	2							
2004	243.34	141.27	96.54	242	140	1	2					3		
2004	243.39	141.73	96.415	242	140	2	3							
2004	242.52	141.5	97.025	242	140	2	3							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2004	242.55	140.82	97.025	242	140	5	3							
2004	242.16	140.36	97.043	242	140	6	3							
2004	242.37	140.56	97.03	242	140	4	3					2		
2004	242.3	140.66	97.005	242	140	2	3							
2004	242.26	140.83	97.025	242	140	1	3							
2004	242.3	140.78	97	242	140	3	3							
2004	243.39	141.74	96.44	242	140	1	3							
2004	243.595	141.425	96.345	242	140	1	4					1		
2004	242.54	141.28	96.955	242	140	2	4	yes	exterior	8	yes	3		
2004	242.92	141.9	96.99	242	140	1	4							
2004	242.11	140.42	97.005	242	140	1	4							
2004	242.24	140.74	96.95	242	140	3	4							
2004	242.18	140.41	97.005	242	140	2	4	yes	exterior	7	yes			
2004	243.56	141.61	96.29	242	140	1	5					3		
2004	242.04	140.34	96.925	242	140	2	5							
2004	242.63	140.56	96.945	242	140	1	5							
2004	242.7	141.57	96.905	242	140	2	5	yes	exterior	2				
2004	242.69	141.65	96.905	242	140	1	5							
2004	242.4	142.18	96.885	242	140	7	6					3		
2004	242.35	141.25	96.825	242	140	5	6					2		
2004	242.74	141.02	96.885	242	140	6	6							
2004	242.65	141.67	96.87	242	140	2	6							
2004	242.56	141.15	96.85	242	140	9	6							
2004	242.11	141.78	96.86	242	140	8	6							
2004	242.69	141.12	96.88	242	140	4	6							
2004	242.76	141.15	96.85	242	140	10	6							
2004	242.12	141.88	96.885	242	140	1	6							
2004	242.78	141.18	96.87	242	140	3	6							
2004	242.19	140.06	96.87	242	140	1	6	yes	interior/exterior	8	yes			
2004	242.54	141.16	96.8	242	140	9	7							
2004	242.92	141.71	96.82	242	140	4	7					2		
2004	242.78	141.64	96.83	242	140	1	7							
2004	242.36	141.22	96.825	242	140	7	7					2		
2004	242.51	141.33	96.815	242	140	6	7							
2004	242.93	141.72	96.8	242	140	5	7							
2004	242.87	141.57	96.805	242	140	2	7							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2004	242.22	141.75	96.8	242	140	10	7							
2004	242.93	141.65	96.83	242	140	3	7							
2004	242.41	140.5	96.85	242	140	11	7							
2004	242.31	141.12	96.87	242	140	8	7							
2004	242.73	140.82	96.84	242	140	1	7					3		
2004	242.07	140.82	96.805	242	140	3	7							
2004	242.33	140.73	96.845	242	140	2	7					2		
2004	243.06	141.165	95.975	242	140	2	8							
2004	243.185	141.22	95.9	242	140	1	8							
2004	242.15	140.09	96.785	242	140	1	8							
2004	242.12	140.21	96.75	242	140	1	9					4		
2004	242.14	140.25	96.705	242	140	2	9							
2004	242.6	140.35	96.7	242	140	4	9					4		
2004	242.3	140.31	96.725	242	140	3	9	yes	exterior, interior	16	yes			
2004	242.31	140.21	96.67	242	140	3	10							
2004	242.32	140.35	96.67	242	140	4	10							
2004	242.33	140.2	96.69	242	140	1	10					2		
2004	242.27	140.3	96.68	242	140	2	10							
2004	242.61	140.17	96.64	242	140	1	11	yes	exterior	3				
2004	242.37	140.21	96.63	242	140	2	11							
2004	242.55	140.17	96.64	242	140	4	11							
2004	242.36	140.18	96.61	242	140	3	11							
2004	243.84	141.89	95.83	242	140							2		
2004	243.29	141.69	96.12	242	140	1								
2004	242.6	141.8	97	242	140	1								
2004	242.24	142.69	96.83	242	142	1	1							
2004	242.66	142.01	97	242	142	2	3							
2004	242.39	142.08	97.01	242	142	3	3							
2004	242.15	142.24	97.01	242	142	4	3					3		
2004	242.71	142.06	97.03	242	142	1	3							
2004	242.75	142.75	96.975	242	142	5	4							
2004	242.41	142.64	96.955	242	142	2	4							
2004	242.17	142.54	96.975	242	142	3	4					5		
2004	242.67	142.11	96.96	242	142	1	4							
2004	242.51	142.08	96.98	242	142	4	4							
2004	242.84	142.13	96.92	242	142	1	5					4		

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2004	242.92	143	96.85	242	142	6	6							
2004	242.18	142.46	96.86	242	142	4	6							
2004	242.14	142.62	96.86	242	142	3	6							
2004	242.67	142.77	96.9	242	142	2	6							
2004	242.92	142.88	96.87	242	142	5	6							
2004	242.52	142.81	96.885	242	142	1	6							
2004	242.59	142.64	96.8	242	142	6	7							
2004	242.39	142.8	96.81	242	142	3	7				yes			
2004	242.38	142.84	96.825	242	142	2	7					2		
2004	242.64	142.77	96.82	242	142	5	7							
2004	242.78	142.79	96.815	242	142	9	7							
2004	242.17	142.01	96.795	242	142	11	7							
2004	242.91	142.86	96.84	242	142	10	7							
2004	242.64	142.8	96.82	242	142	12	7							
2004	242.79	142.94	96.8	242	142	8	7							
2004	242.49	142.93	96.83	242	142	4	7							
2004	242.7	142.92	96.835	242	142	7	7							
2004	242.42	142.55	97.055	242	142	1								
2004	244.13	142.25	95	244	142									
2005	243.08	141.84	95.95	242	140	1	1							0
2005	243.08	141.87	95.95	242	140	2	1							0
2005	243.27	141.92	95.91	242	140	3	1	yes	exterior	3				
2005	243.23	141.92	95.9	242	140	4	1							0
2005	243.1	141.96	95.89	242	140	1	2							0
2005	243.34	141.84	95.86	242	140	2	2							0
2005	243.18	140.18	96.21	242	140	2	2							0
2005	243.31	141.745	95.87	242	140	3	2							0
2005	243.965	141.89	95.89	242	140	4	2							
2005	243.38	141.65	95.83	242	140	5	2							0
2005	243.03	141.27	95.8	242	140	6	2							0
2005	243.18	141.42	95.8	242	140	7	2							0
2005	243.39	141.73	95.861	242	140	8	2							0
2005	243.35	141.69	95.83	242	140	9	2							
2005	243.1	141.61	95.86	242	140	10	2							0
2005	243.22	141.49	95.8	242	140	11	2							0
2005	243.47	141.74	95.85	242	140	12	2							0

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2005	243.29	141.74	95.84	242	140	14	2							0
2005	243.09	141.57	95.83	242	140	16	2							0
2005	243.34	140.77	95.81	242	140	17	2							
2005	243.1	142	95.82	242	140	18	2							0
2005	243.13	141.74	95.79	242	140	1	3							0
2005	243.43	140.21	96.49	242	140	1	3							0
2005	243.41	141.75	95.79	242	140	2	3							0
2005	243.75	140.1	96	242	140	2	3							
2005	243.12	141.77	95.75	242	140	3	3							0
2005	243.42	141.75	95.74	242	140	4	3							
2005	243.18	141.75	95.72	242	140	5	3							
2005	243.49	141.95	95.71	242	140	6	3							0
2005	243.66	140.28	96.3	242	140	6	3							0
2005	243.5	141.54	95.72	242	140	7	3							0
2005	243.22	140.28	95.74	242	140	8	3	yes	exterior	2		2		80
2005	243.23	141.4	95.7	242	140	9	3							0
2005	243.89	140.12	96.31	242	140	9	3							0
2005	243.22	141.1	95.77	242	140	10	3	yes	exterior	1				0
2005	243	141.91	95.79	242	140	11	3							
2005	243.16	141.17	95.7	242	140	12	3							0
2005	243.78	140.07	96.35	242	140	12	3							0
2005	243.91	140	96.3	242	140	13	3							45
2005	243.5	141.7	95.69	242	140	1	4							0
2005	243.77	140.365	96.3	242	140	1	4							0
2005	243.25	141.8	95.66	242	140	2	4							
2005	243.79	140.33	96.31	242	140	2	4							0
2005	243.05	141.94	95.66	242	140	3	4							0
2005	243.82	140.335	96.3	242	140	3	4							0
2005	243.17	141.35	95.68	242	140	4	4							0
2005	243.74	140.37	96.3	242	140	4	4							0
2005	243.15	141.92	95.65	242	140	5	4							0
2005	243.78	140.36	96.3	242	140	5	4							0
2005	243.57	141.8	95.63	242	140	6	4							0
2005	243.48	141.57	95.64	242	140	7	4							
2005	243.79	140.2	96.3	242	140	7	4							0
2005	243.05	141.7	95.65	242	140	8	4					2		

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2005	243.77	140.33	96.3	242	140	8	4							0
2005	243.42	141.82	95.62	242	140	9	4							0
2005	243.47	141.84	95.61	242	140	10	4							0
2005	243.88	140.2	96.3	242	140	10	4							0
2005	243.37	141.64	95.61	242	140	11	4							0
2005	243.67	140.05	96.35	242	140	11	4							0
2005	243.3	141.19	95.695	242	140	12	4							0
2005	243.34	141.2	95.68	242	140	13	4							
2005	243.25	141.35	95.6	242	140	14	4							0
2005	243.93	140.05	96	242	140	14	4							0
2005	243.35	141.09	95.67	242	140	15	4							
2005	243.38	141.72	95.48	242	140	1	5							40
2005	243.05	141.92	95.5	242	140	2	5							
2005	243.17	141.29	95.5	242	140	3	5							
2005	243.66	140.18	96.21	242	140	3	5					2		45
2005	243.07	141.4	95.5	242	140	4	5							
2005	243.52	140.275	96.215	242	140	4	5							45
2005	243.3	141.94	95.5	242	140	5	5					2		
2005	243.89	140.21	96.24	242	140	5	5							0
2005	243.77	140.145	96.2	242	140	6	5							0
2005	243.8	140.16	96.22	242	140	7	5							0
2005	243.84	140.23	96.21	242	140	8	5							0
2005	243.85	140.125	96.22	242	140	9	5							0
2005	243.94	140.14	96.23	242	140	10	5							0
2005	242.82	140.05	96.2	242	140	11	5							
2005	243.38	141.55	95.47	242	140	1	6							
2005	243.55	140.19	96.17	242	140	1	6							80
2005	243.82	140.35	96.25	242	140	1	6					5		40
2005	243.5	141.86	95.46	242	140	2	6					3		
2005	243.37	140.2	96.17	242	140	2	6							0
2005	243.01	141.1	95.43	242	140	3	6	yes	exterior	8				
2005	243.41	140.22	96.15	242	140	4	6							0
2005	243.79	140.02	96.16	242	140	5	6							0
2005	243.55	141.72	95.5	242	140	6	6					2		45
2005	243.6	140.255	96.11	242	140	7	6							0
2005	243.53	140.24	96.18	242	140	8	6							0

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2005	243.53	140.23	96.13	242	140	9	6							40
2005	243.52	140.2	96.15	242	140	10	6							0
2005	243.71	140.08	96.1	242	140	11	6							45
2005	243.77	140.175	96.18	242	140	12	6							0
2005	243.75	140.14	96.16	242	140	13	6							0
2005	243.74	140.09	96.18	242	140	14	6							
2005	243.92	140.15	96.15	242	140	15	6							0
2005	243.825	140.02	96.19	242	140	16	6							0
2005	243.725	140	96.14	242	140	17	6					3		0
2005	243.755	140.21	96.1	242	140	18	6					3		30
2005	243.515	140.15	96.18	242	140	19	6							0
2005	243.415	140.21	96.12	242	140	20	6							
2005	243.325	140.29	96.19	242	140	21	6							45
2005	243.3	140.37	96.17	242	140	22	6							90
2005	243.53	140.11	96.195	242	140	23	6							30
2005	243.5	140.1	96.18	242	140	24	6							45
2005	243.29	140.34	96.16	242	140	25	6							0
2005	243.38	140.12	96.115	242	140	26	6							45
2005	243.38	140.15	96.17	242	140	27	6							25
2005	243.54	140.13	96.15	242	140	28	6							0
2005	243.54	140.13	96.16	242	140	29	6	yes	exterior	2		4		0
2005	243.52	140.06	96.19	242	140	30	6					4		25
2005	243.51	140.08	96.175	242	140	31	6					2		40
2005	243.54	140.07	96.16	242	140	32	6							30
2005	243.345	140.15	95.19	242	140	33	6							0
2005	243.54	140.04	96.19	242	140	34	6							0
2005	243.52	140.08	96.125	242	140	35	6							45
2005	243.56	140.04	96.11	242	140	36	6							0
2005	243.52	140.08	96.145	242	140	37	6							45
2005	243.06	140.69	96.1	242	140	38	6							
2005	243	140.64	96.14	242	140	39	6							0
2005	243.15	140.88	96.115	242	140	40	6							0
2005	243.735	140.41	96.08	242	140	1	7							0
2005	243.16	140.255	96.085	242	140	2	7							0
2005	243.11	140.485	96.08	242	140	3	7							0
2005	243.2	140.605	96.06	242	140	4	7					3		90

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2005	243.22	140.69	96.06	242	140	5	7							0
2005	243.195	140.67	96.07	242	140	6	7							0
2005	243.17	140.71	96.08	242	140	7	7							0
2005	243.095	140.58	96.06	242	140	8	7							90
2005	243.08	140.71	96.075	242	140	9	7							0
2005	243.22	140.875	96.09	242	140	10	7				yes			0
2005	243.08	140.55	96	242	140	11	7							45
2005	243.08	140.83	96.055	242	140	12	7							0
2005	243.18	140.89	96.015	242	140	13	7							0
2005	243.15	140.88	96	242	140	14	7							0
2005	243.07	140.26	96.09	242	140	15	7							0
2005	243.58	140.23	96.025	242	140	16	7							0
2005	243.56	140.18	96.04	242	140	17	7							
2005	243.585	140.15	96.05	242	140	18	7					3		40
2005	243.585	140.12	96.05	242	140	19	7							50
2005	243.69	140.22	96.04	242	140	20	7	yes	exterior	2	possible	2		40
2005	243.65	140.15	96.02	242	140	21	7					2		0
2005	243.18	140.425	96.01	242	140	22	7					2		0
2005	243.4	140.64	95.74	242	140	1	10				yes			80
2005	243.34	140.24	95.71	242	140	2	10	yes	exterior/interior	3	yes	2		
2005	243.3	140.9	95.75	242	140	3	10							35
2005	243.07	140.88	95.75	242	140	4	10							
2005	243.3	140.66	95.74	242	140	5	10							
2005	243.7	140.56	95.6	242	140	1	11							0
2005	243.52	140.14	95.65	242	140	2	11							75
2005	243.68	140.09	95.62	242	140	3	11	yes	exterior	4	yes			
2005	243.56	140.36	95.58	242	140	2	12					4		
2005	243.58	140.18	95.57	242	140	3	12							0
2005	243.88	140.37	95.53	242	140	4	12							
2005	243.59	140.27	95.5	242	140	5	12							
2005	243.61	140.19	95.5	242	140	6	12							
2005	243.38	140.91	95.47	242	140	2	13							
2005	243	140.55	95.495	242	140	2	13				Yes			
2005	243	140.55	95.495	242	140	2	13				yes			
2005	243.09	144.54	97.57	242	144	1	10	yes	Exterior/interior	4	yes		yes	
2005	244.31	140.02	96.74	244	140	1	4							0

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2005	244.64	140.07	96.75	244	140	2	4							45
2005	244.7	140.15	96.72	244	140	3	4							
2005	244.44	140.3	96.6	244	140	1	5							
2005	244.21	140.05	96.65	244	140	2	5							
2005	244.28	140.03	96.62	244	140	3	5							
2005	244.87	140.87	96.55	244	140	1	6							
2005	244.875	140.635	96.55	244	140	2	6							
2005	244.375	140.145	96.55	244	140	3	6							
2005	244.46	140.04	96.5	244	140	4	6							
2005	244.51	140.08	96.55	244	140	5	6							
2005	244.46	140.37	96.46	244	140	1	7							
2005	244.48	140.08	96.41	244	140	2	7							
2005	244.9	140.17	97.065	244	140	1	10					2		60
2005	244.65	140.05	96.12	244	140	1	10					4		
2005	244.43	140.53	95.96	244	140	1	12							70
2005	244.23	140.14	123.5	244	140	2	12							
2005	244.9	140.44	95.67	244	140	1	14				yes			
2005	244.9	140.3	95.7	244	140	2	14							
2005	244.84	140.16	95.74	244	140	3	14							0
2005	244.42	140.49	95.64	244	140	1	15							90
2005	244.35	140.41	95.6	244	140	2	15							0
2005	244.11	140.1	95.57	244	140	1	16							
2005	244.5	140.17	95.58	244	140	2	16							
2005	244.28	140.24	95.505	244	140	3	16							
2005	244.21	140.1	95	244	140	1	17							
2005	244.3	144.8	97.93	244	144			yes	exterior	yes	15			
2005	247.62	141.48	98.72	246	140	1	1							
2005	247.6	140.26	98.71	246	140	2	1							
2005	247.96	141	98.15	246	140	1	9							
2005	247.89	140.93	98.1	246	140	3	9	yes	exterior	3				
2005	247.38	141.19	98.12	246	140	4	9	yes	exterior	7				
2005	247.77	140.82	98.13	246	140	5	9	yes	exterior	12	yes			
2005	247.92	140.32	98.1	246	140	6	9							
2005	247.3	140.32	98.09	246	140	1	10	yes	exterior	8	yes			
2005	247.49	141.69	98.08	246	140	2	10				yes			
2005	247.96	140.43	98.06	246	140	3	10							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2005	247.95	140.25	97.99	246	140	1	12							
2005	247.1	141.85	97.92	246	140	1	13							
2005	246.85	141.56	97.88	246	140	1	14							
2005	246.84	141.67	97.87	246	140	2	14							
2005	246.69	141.73	97.89	246	140	3	14							
2005	246.5	141.76	97.89	246	140	4	14							
2005	246.46	141.25	97.87	246	140	5	14							
2005	247.71	140.88	97.81	246	140	1	15							
2005	246.28	141.4	97.83	246	140	2	15							
2005	246.3	141.3	97.83	246	140	3	15	yes	exterior	8	yes	1		
2005	246.8	141.42	97.81	246	140	4	15							
2005	246.37	141.46	97.8	246	140	5	15							
2005	246.28	141.46	97.8	246	140	6	15							
2005	247.65	141.97	97.84	246	140	1	17	yes	exterior	3	yes	2		
2005	246.62	141.53	97.84	246	140	2	17							
2005	246.7	141.3	97.73	246	140	3	17							
2005	246.76	141.93	97.75	246	140	4	17	yes	exterior	2	yes	4		
2005	246.5	141.41	97.75	246	140	5	17							
2005	246.46	141.26	97.73	246	140	6	17							
2005	246.25	141.4	97.75	246	140	7	17							
2005	246.16	141.96	97.74	246	140	8	17					2		
2005	246.33	141.4	97.73	246	140	9	17							
2005	246.93	141.35	97.72	246	140	10	17							
2005	246.76	141.43	97.73	246	140	11	17							
2005	246.64	141.25	97.73	246	140	12	17							
2005	246.8	140.9	97.7	246	140	13	17							
2005	246.25	141.74	97.71	246	140	14	17				yes			
2005	246.68	141.92	97.65	246	140	1	18	yes	exterior	8	yes			
2005	246.36	141.54	97.69	246	140	2	18							
2005	246.15	141.58	97.66	246	140	3	18							
2005	246.2	140.96	97.65	246	140	4	18	yes	exterior/interior	9	yes			
2005	247.1	140.18	140.18	246	140	5	18							
2005	247.06	141.68	141.68	246	140	6	18							
2005	246.13	141.6	97.6	246	140	1	19	yes	exterior	4	yes			
2005	247.2	140.65	97.62	246	140	2	19							
2005	247.3	141.25	97.62	246	140	3	19							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2005	247.48	141.63	97.64	246	140	4	19	yes	exterior	2		4		
2005	246.8	141.96	97.56	246	140	1	20							
2005	246.35	140.48	97.55	246	140	2	20					2		
2005	246.26	140.92	97.6	246	140	3	20							
2005	246.24	140.03	97.55	246	140	4	20				yes			
2005	246.12	140.8	97.58	246	140	5	20							
2005	247.27	140.93	97.56	246	140	6	20					2		
2005	247.07	140.87	97.55	246	140	7	20					4		
2005	247.03	140.25	97.55	246	140	8	20					3		
2005	247.81	140.09	97.5	246	140	9	20				yes			
2005	247.23	141.23	97.55	246	140	10	20							
2005	247.31	141.44	97.555	246	140	11	20							
2005	247.08	141.28	97.57	246	140	12	20							
2005	246.18	141.33	97.52	246	140	1	21							
2005	246.57	141.3	97.54	246	140	2	21							
2005	146.95	141.28	97.52	246	140	3	21					1		
2005	246.22	141.08	97.5	246	140	4	21							
2005	146.77	141.17	97.51	246	140	5	21					3		
2005	146.49	141.04	97.53	246	140	6	21							
2005	143.37	141.29	97.52	246	140	7	21							
2005	246.46	141.26	97.5	246	140	8	21					2		
2005	246.5	140.295	97.53	246	140	9	21				yes	3		
2005	246.38	140.33	97.52	246	140	10	21							
2005	246.28	140.07	97.53	246	140	11	21	yes	exterior	9	yes			
2005	246.36	140.41	97.52	246	140	12	21							
2005	246.3	140.57	97.53	246	140	13	21					3		
2005	246.36	140.92	97.52	246	140	14	21							
2005	246.92	140.53	97.53	246	140	15	21					2		
2005	246.3	140.28	97.53	246	140	16	21							
2005	246.78	140.12	97.5	246	140	17	21	yes	exterior	2		2		
2005	247.285	141.38	97.51	246	140	18	21	yes	exterior	3	yes	3		
2005	247.66	141.79	98.65	246	140	1								
2005	247.6	140.3	97.85	246	140	1								
2005	246.5	141.2	97.75	246	140	2	16							
2005	247.76	142.25	98.53	246	142	1	5							
2005	247.66	143.18	98.41	246	142	1	6							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2005	247.5	143.5	98.49	246	142	2	6				yes			
2005	247.58	143.98	98.42	246	142	3	6							
2005	247.19	142.35	98.31	246	142	1	8							
2005	247.68	143.63	98.27	246	142	1	9							
2005	247.83	143.98	98.25	246	142	2	9	yes	exterior/interior					
2005	247.2	143.45	98.24	246	142	3	9							
2005	247.63	143.3	98.25	246	142	4	9	yes	exterior/interior					
2005	247.72	143.16	98.27	246	142	6	9	yes	exterior/interior					
2005	247.63	143.86	98.23	246	142	1	10							
2005	247.12	142.11	98.23	246	142	3	10	yes	exterior	1				
2005	247.5	143.85	98.205	246	142	1	11							
2005	247.38	142.74	98.19	246	142	2	11	yes	exterior	1				
2005	247.91	142.83	98.17	246	142	3	11							
2005	247.96	143.15	98.09	246	142	1	12							
2005	246.84	142.12	97.86	246	142	2	12	yes	exterior	5				
2005	247.3	143.25	98.05	246	142	2	13							
2005	247.96	143.17	98.05	246	142	1	14							
2005	247.4	143.08	98.02	246	142	2	14							
2005	247.28	143	98.03	246	142	3	14							
2005	247.66	143.64	98	246	142	4	14					2		
2005	247.1	143.09	98.04	246	142	5	14							
2005	246.96	142.25	97.95	246	142	1	15							
2005	246.36	143.73	97.95	246	142	2	15							
2005	246.83	143.44	97.96	246	142	3	15							
2005	247.15	143.3	97.99	246	142	4	15							
2005	246.76	142.33	97.95	246	142	1	16							
2005	246.77	142.6	97.95	246	142	2	16							
2005	247.05	142.85	97.92	246	142	3	16							
2005	247.66	142.33	97.94	246	142	4	16							
2005	247.07	142.86	97.93	246	142	5	16							
2005	247.64	142.78	97.93	246	142	6	16							
2005	247.46	142.83	97.95	246	142	7	16					3		
2005	247.13	142.74	97.95	246	142	8	16							
2005	247.77	142.67	97.92	246	142	9	16							
2005	247.49	142.66	97.95	246	142	10	16	yes	exterior	4	yes			
2005	247.38	142.66	97.95	246	142	11	16							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2005	247.49	142.53	97.92	246	142	12	16							
2005	247.2	142.49	97.95	246	142	13	16				yes			
2005	247.1	142.28	97.95	246	142	14	16							
2005	247.8	142.2	97.95	246	142	15	16							
2005	247.06	142.1	97.95	246	142	16	16							
2005	247.24	142.86	97.93	246	142	17	16							
2005	247.76	142.8	97.93	246	142	18	16					3		
2005	247.06	142.1	97.91	246	142	19	16							
2005	247.78	143.01	97.965	246	142	20	16					3		
2005	247.52	142.97	97.95	246	142	21	16					4		
2005	246.64	143.05	97.95	246	142	22	16					1		
2005	246.21	143.39	97.95	246	142	23	16							
2005	246.21	143.26	97.92	246	142	24	16							
2005	246.48	142.66	97.9	246	142	1	17							
2005	246.84	142.12	97.86	246	142	2	17					3		
2005	246.73	142.89	97.88	246	142	3	17							
2005	247.12	142.4	97.88	246	142	4	17							
2005	247.06	142.19	97.88	246	142	5	17							
2005	246.15	142.01	97.85	246	142	1	18					3		
2005	247.65	142.36	97.81	246	142	2	18					4		
2005	247.39	142.14	97.72	246	142	1	20							
2005	247.84	142.12	97.72	246	142	2	20	yes	exterior	1	yes			
2005	247.6	142.31	97.65	246	142	1	21							
2005	247.87	142.13	97.68	246	142	2	21					3		
2005	246.8	142.375	97.67	246	142	3	21							
2005	246.63	143.15	97.66	246	142	4	21							
2005	246.37	143.07	97.65	246	142	5	21							
2005	246.44	143.19	97.65	246	142	6	21							
2005	246.64	143.88	97.6	246	142	1	22							
2005	246.67	143.02	97.62	246	142	2	22							
2005	246.66	143.01	97.62	246	142	3	22							
2005	246.64	143.25	97.63	246	142	4	22							
2005	247.55	142.34	97.6	246	142	5	22							
2005	247.91	142.25	97.57	246	142	1	23					3		
2005	247.64	142.03	97.57	246	142	2	23							
2005	246.44	142.04	97.55	246	142	3	23							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2005	246.2	142.04	97.55	246	142	4	23							
2005	246.57	142.69	97.55	246	142	5	23							
2005	246.31	143.06	97.57	246	142	6	23					4		
2005	246.24	142.02	97.52	246	142	1	24							
2005	246.09	142.39	97.52	246	142	2	24							
2005	246.18	142.4	97.52	246	142	3	24	yes	exterior	7	yes			
2005	246.4	142.71	97.51	246	142	4	24							
2005	246.34	142.72	97.51	246	142	5	24							
2005	246.205	142.45	97.5	246	142	6	24							
2005	246.28	143.37	97.5	246	142	1	25							
2005	246.31	142.76	97.47	246	142	2	25							
2005	246.27	142.56	97.47	246	142	4	25							
2005	246.22	142.74	97.47	246	142	5	25							
2005	246.74	142.15	97.45	246	142	6	25							
2005	246.85	143.15	97.45	246	142	7	25					3		
2005	246.79	142.1	97.45	246	142	8	25							
2005	246.81	142.18	97.45	246	142	9	25							
2005	246.72	142.11	97.45	246	142	10	25							
2005	247.04	142.29	97.45	246	142	11	25							
2005	247.1	142.33	97.45	246	142	12	25							
2005	247.15	142.34	97.45	246	142	13	25							
2005	247.2	142.42	97.45	246	142	14	25							
2005	247.01	142.39	97.45	246	142	16	25							
2005	246.21	143.07	97.4	246	142	1	26					3		
2005	248.93	142.9	98.6	246	142	1								
2005	247.36	142.4	98.13	246	142	2								
2005	248.6	141	98.15	248	140	1	8							
2005	248.4	140.7	98.15	248	140	2	8							
2005	248	140.9	98.15	248	140	3	8							
2005	248.65	141.1	98.17	248	140	4	8							
2005	248.9	140.85	98.1	248	140	2	9							
2005	243.22	141.75	95.85	242	140	12								
2005	243.35	141.6	95.84	242	140	14								
2005	243.2	140.68	95.59	242	140	1								
2005	243.53	140.07	96.17	242	140	3								
2005	243.55	140.24	96.15	242	140	6								

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2005	243.45	140.26	96.04	242	140	23								
2005	245	140	96.75	244	140	4								
2005	246.4	140.575	97.48	246	140	4	22							
2005	246.4	140.575	97.48	246	140	24								
2005	247.74	141.11	97.49	246	140	1	22							
2005	247.69	141.7	97.49	246	140	2	22							
2005	247.57	141.9	97.49	246	140	3	22							
2005	247.74	141.11	97.49	246	140	20								
2005	247.69	141.7	97.49	246	140	22								
2005	247.57	141.9	97.49	246	140	23								
2005	247.7	141.58	97.5	246	140	21								
2005	247.55	140.42	97.51	246	140	19								
2005	247.6	140.3	97.75	246	140	1	16							
2005	247.65	141.2	97.75	246	140	2								
2005	247.84	140.59	98.12	246	140	2								
2005	247.58	140.72	98.15	246	140	1								
2005	247.61	142.15	97.45	246	142	15								
2005	246.25	142.65	97.47	246	142	3								
2005	247.17	142.47	97.91	246	142	19								
2005	247.66	143.68	98.02	246	142	4								
2005	247.9	142.12	98.14	246	142	1								
2005	247.16	143.16	98.23	246	142	2								
2005	247.55	143.37	98.25	246	142	2								
2005	248.1	141.3	98.67	248	140	1								
2005	248.45	140.3	98.46	248	140	1								
2005	248.75	140.1	98.1	248	140	1								
2005	248.85	140.09	98.77	248	140	1								
2005	248.38	140.24		248	140	2								
2005	248.82	141.4	98.44	248	140	2								
2005	248.25	140.3	98.67	248	140	3								
2005	248.88	141.65	98.41	248	140	3								
2005	248.92	140.6	98.1	248	140	3								
2005	248.17	140.34	98.41	248	140	4								
2005	248.64	141.94	98.71	248	140	4								
2005	248.31	140.25	98.4	248	140	5								
2006	242.57	141.37	96.77	242	140	2	1							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2006	242.66	141.75	96.755	242	140	3	1					2		
2006	242.78	141.6	96.75	242	140	4	1							
2006	242.82	141.63	96.78	242	140	5	1							
2006	242.83	141.64	96.745	242	140	6	1							
2006	242.855	141.635	96.78	242	140	7	1							
2006	242.8	141.58	96.745	242	140	8	1							
2006	242.655	141.325	96.75	242	140	9	1							
2006	242.77	141.56	96.77	242	140	1	1	Yes	exterior	2	yes	3		
2006	242.31	141.66	96.71	242	140	2	2							35
2006	242.3	141.68	96.71	242	140	3	2							0
2006	242.49	141.41	96.72	242	140	1	2				yes			0
2006	242.35	141.85	96.73	242	140	4	2	yes	exterior	6	yes	2		0
2006	242.35	141.63	96.7	242	140	1	3							0
2006	242.15	141.6	96.7	242	140	2	3							
2006	242.33	141.7	96.7	242	140	3	3							0
2006	242.3	141.56	96.63	242	140	4	3							0
2006	242.11	141.89	96.65	242	140	5	3							0
2006	242.75	141.8	96.65	242	140	1	4							
2006	242.52	141.32	96.61	242	140	3	4	yes	exterior	1				
2006	242.29	141.47	96.65	242	140	4	4							
2006	242.96	141.76	96.61	242	140	2	4	yes	exterior	3				
2006	242.82	141.73	96.56	242	140	1	5							90
2006	242.12	141.33	96.5	242	140	1	6							
2006	242.4	141.05	96.5	242	140	3	6							
2006	242.65	141.31	96.5	242	140	4	6							
2006	242.98	141.89	96.5	242	140	5	6							
2006	242.98	141.56	96.5	242	140	6	6							
2006	242.49	141.2	96.502	242	140	7	6							
2006	242.562	141.23	96.55	242	140	8	6							
2006	242.602	141.22	96.5	242	140	9	6							
2006	242.84	141.08	96.45	242	140	1	7							0
2006	242.83	141.24	96.45	242	140	2	7					1		20
2006	242.92	141.69	96.45	242	140	4	7							45
2006	242.35	140.84	96.45	242	140	3	7					3		0
2006	242.58	141.29	96.43	242	140	1	8				possible	3		
2006	242.99	141.35	96.4	242	140	1	9							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2006	242.22	141.88	96.37	242	140	2	9					2		
2006	242.81	141.83	96.35	242	140	3	9					4		
2006	242.48	141.25	96.375	242	140	4	9							
2006	242.95	141.23	96.39	242	140	5	9					2		
2006	242.8	141.32	96.4	242	140	7	9							
2006	242.19	141.21	96.37	242	140	8	9							
2006	242.7	141.11	96.35	242	140	9	9					3		
2006	242.86	141.07	96.35	242	140	1	10					3		
2006	242.78	141.13	96.35	242	140	2	10							
2006	242.72	141.82	96.35	242	140	4	10					3		
2006	242.98	141.13	96.32	242	140	5	10							
2006	242.775	141.77	96.33	242	140	6	10	yes	exterior	3	yes	2		
2006	242585	141.76	96.335	242	140	9	10							
2006	242.19	141.84	96.31	242	140	11	10					2		
2006	242.64	141.68	96.31	242	140	12	10					2		
2006	242.47	141.73	96.34	242	140	7	10	yes	exterior	5	yes			
2006	242.64	141.865	96.34	242	140	8	10					3		
2006	242.83	141.27	96.34	242	140	3	10					4		
2006	242.83	141.47	96.31	242	140	10	10					3		
2006	242.97	141.09	96.29	242	140	1	11							
2006	242.42	141.59	96.29	242	140	2	11							
2006	242.85	141.05	96.29	242	140	3	11	yes	exterior	2	yes	3		
2006	242.45	141.52	96.27	242	140	4	11							
2006	242.15	141.54	96.28	242	140	5	11							
2006	242.14	141.39	96.255	242	140	6	11							
2006	242.13	141.71	96.275	242	140	7	11					2		
2006	242.03	141.84	96.25	242	140	8	11	yes	exterior	4	yes			
2006	242.315	141.79	96.255	242	140	9	11							
2006	242.9	141.38	96.24	242	140	1	12							45
2006	242.96	141.78	96.23	242	140	2	12					3		
2006	242.83	141.23	96.21	242	140	3	12							
2006	242.61	141.24	96.22	242	140	4	12	yes	exterior	1	yes			
2006	242.33	141.82	96.21	242	140	6	12				possible			
2006	242.98	141.7	96.2	242	140	7	12							
2006	242.09	141.81	96.22	242	140	8	12							
2006	242.15	141.43	96.24	242	140	9	12							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2006	242.12	141.33	96.22	242	140	11	12	yes	exterior	3	yes			
2006	242.03	141.265	96.22	242	140	12	12							
2006	242.31	141.47	96.22	242	140	5	12	yes	exterior	1		3		
2006	242.04	141.71	96.21	242	140	10	12	yes	exterior	6				
2006	242.53	141.92	96.185	242	140	1	13					2		
2006	242.33	141.92	96.15	242	140	2	13							
2006	242.12	141.9	96.15	242	140	3	13							
2006	242.11	141.19	96.15	242	140	5	13							
2006	242.39	141.18	96.16	242	140	4	13					4		
2006	242.99	141.97	96.1	242	140	1	14							
2006	242.9	141.99	96.13	242	140	2	14							
2006	242.99	141.22	96.145	242	140	3	14							
2006	242.4	141.07	96.14	242	140	5	14							
2006	242.43	141.71	96.14	242	140	6	14							
2006	242.54	141.18	96	242	140	7	14							90
2006	242.26	141.21	96.14	242	140	8	14							
2006	242.68	141.35	96.1	242	140	9	14							
2006	242.4	141.46	96.145	242	140	4	14					2		
2006	242.83	141	96.05	242	140	1	15							
2006	242.57	141.15	96.05	242	140	2	15	yes	interior	1	yes			
2006	242.56	141.03	96.09	242	140	3	15							
2006	242.46	141.05	96.09	242	140	4	15							
2006	242.81	141.92	96.08	242	140	5	15					2		
2006	242.45	141.75	96.07	242	140	6	15							
2006	242.07	141.71	96.06	242	140	7	15							
2006	242.82	141.82	96	242	140	1	16							40
2006	242.9	141.82	96.04	242	140	2	16							
2006	242.82	141.97	96.04	242	140	3	16	Yes	exterior	2				
2006	242.97	141.63	96.03	242	140	4	16	Yes	exterior	2		1		
2006	242.8	141.1	96.03	242	140	5	16							
2006	242.2	141.5	96.02	242	140	7	16							
2006	242.28	142.185	96.02	242	140	8	16	Yes	exterior	2				
2006	242.23	141.28	96.02	242	140	6	16	yes	exterior/interior	3	yes			
2006	242.22	140.15	96.55	242	140	1	1				possible	4		
2006	242.54	140.18	96.55	242	140	2	1							
2006	242.12	140.11	96.55	242	140	3	1							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2006	242.2	140.35	96.55	242	140	4	1							
2006	242.32	140.72	96.52	242	140	1	2							
2006	242.32	140.72	96.52	242	140	1	2							
2006	242.28	140.12	96.53	242	140	2	2				possible	5		
2006	242.28	140.12	96.53	242	140	2	2					3		
2006	242.38	140.5	96.54	242	140	3	2							
2006	242.22	140.97	96.51	242	140	4	2					5		
2006	242.91	140.3	96.53	242	140	5	2							
2006	242.53	140.18	96.53	242	140	6	2					3		
2006	242.12	140.2	96.54	242	140	8	2							
2006	242.48	140.3	96.54	242	140	9	2							
2006	242.07	140.51	96.5	242	140	10	2							
2006	242.5	140.45	96.51	242	140	7	2							
2006	242.13	140.28	96.49	242	140	1	3							
2006	242.37	140.2	96.42	242	140	1	4	Yes	Exterior	6				
2006	242.44	140.68	96.4	242	140	2	4							
2006	242.09	140.27	96.45	242	140	3	4							
2006	242.14	140.25	96.45	242	140	4	4	possible	exterior	2				
2006	242.24	140.68	96.36	242	140	1	5					3		
2006	242.5	140.45	96.37	242	140	2	5							
2006	242.75	140.2	96.33	242	140	1	6							
2006	242.46	140.68	96.33	242	140	2	6							
2006	242.42	141.24	96.5	242	140	2	6	yes	exterior	3	yes	2		
2006	242.86	140.93	96.27	242	140	1	7	yes	exterior	4	yes			
2006	242.74	140.24	96.28	242	140	2	7							
2006	242.27	140.45	96.27	242	140	3	7							
2006	242.4	140.53	96.28	242	140	4	7							
2006	242.04	140.29	96.29	242	140	7	7							
2006	242.02	140.52	96.28	242	140	8	7				yes	2		
2006	242.94	140.23	96.3	242	140	9	7							
2006	242.9	140.32	96.295	242	140	10	7							
2006	242.17	140.19	96.255	242	140	6	7					4		
2006	242.31	140.68	96.25	242	140	5	7							
2006	242.95	140.7	96.22	242	140	1	8							
2006	242.95	140.7	96.22	242	140	2	8							
2006	242.79	140.19	96.285	242	140	3	8							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2006	242.53	140.3	96.24	242	140	4	8					3		
2006	242.31	140.225	96.235	242	140	5	8					2		
2006	242.98	140.8	96.19	242	140	1	9							
2006	242.665	140.185	96.17	242	140	2	9	yes	exterior	4	yes	3		
2006	242.93	140.61	96.19	242	140	3	9							
2006	242.68	140.66	96.13	242	140	5	9							
2006	242.7	140.68	96.155	242	140	4	9				yes	4		
2006	242.8	140.68	96.14	242	140	1	10							
2006	242.92	140.6	96.15	242	140	2	10							
2006	242.82	140.72	96.1	242	140	3	10							
2006	242.96	140.21	96.12	242	140	5	10							
2006	242.93	140.18	96.115	242	140	6	10	yes	exterior, interior	5	yes			
2006	242.025	140.09	96.11	242	140	8	10							
2006	242.76	140.88	96.11	242	140	7	10					3		
2006	242.99	140.39	96.1	242	140	9	10							
2006	242.84	140.535	96.085	242	140	1	11							
2006	242.19	140.58	96.085	242	140	2	11							
2006	242.96	140.65	96.07	242	140	3	11							
2006	242.74	140.665	96.06	242	140	4	11							
2006	242.92	140.24	96.105	242	140	4	11							
2006	242.95	140.22	96.07	242	140	5	11					2		
2006	242.93	140.13	96.06	242	140	6	11							
2006	242.85	140.85	96.06	242	140	7	11							
2006	242.72	140.67	96.05	242	140	8	11							
2006	242.98	140.99	96.06	242	140	10	11				yes			
2006	242.63	140.7	96.06	242	140	11	11							
2006	242.59	140.91	96.075	242	140	13	11	yes	exterior	1	possible			
2006	242.58	140.8	96.055	242	140	14	11							
2006	242.54	140.84	96.06	242	140	15	11							
2006	242.04	140.37	96.085	242	140	16	11							
2006	242.13	140.9	96.07	242	140	17	11							
2006	242.12	140.41	96.005	242	140	18	11							
2006	242.04	140.55	96.06	242	140	19	11				possible			
2006	242.85	140.31	96.03	242	140	1	12	yes	exterior	3	yes	2		
2006	242.79	140.29	96.01	242	140	2	12				Possible			
2006	242.93	140.38	96	242	140	3	12							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2006	242.8	140.97	96	242	140	4	12					2		
2006	242.35	140.43	96	242	140	5	12							
2006	242.25	140.77	96	242	140	6	12							
2006	242.35	140.43	96	242	140	7	12					2		
2006	242.22	140.62	96.01	242	140	8	12					3		
2006	242.89	140.23	95.95	242	140	1	13							
2006	242.63	140.38	95.95	242	140	2	13				possible	3		
2006	242.38	140.63	95.95	242	140	3	13				yes			
2006	242.47	140.79	95.96	242	140	4	13					1		
2006	242.42	140.1	95.95	242	140	5	13							
2006	242.7	140.88	95.95	242	140	7	13							
2006	242.4	140.44	95.95	242	140	6	13							
2006	242.93	140.36	95.9	242	140	1	14							
2006	242.55	140.36	95.9	242	140	2	14							
2006	242.56	140.34	95.9	242	140	3	14							
2006	242.32	140.32	95.91	242	140	4	14				yes	2		
2006	242.14	140	95.93	242	140	5	14					3		
2006	242.86	140.29	95.87	242	140	1	15							
2006	242.16	140.9	95.85	242	140	2	15							
2006	242.7	140.17	95.82	242	140	1	16	yes	exterior	1	yes	3		
2006	242.8	140.94	95.81	242	140	3	16							
2006	242.73	140.36	95.8	242	140	2	16							
2006	242.33	140.8	95.8	242	140	4	16					4		
2006	242.15	142.32	96.77	242	142	5	1	yes	exterior	2		3		
2006	242.28	142.14	96.755	242	142	1	1					4		
2006	242.47	142.7	96.77	242	142	7	1					3		
2006	242.12	142.9	96.76	242	142	8	1					2		
2006	242.9	142.17	96.73	242	142	1	2							
2006	242.77	142.29	96.71	242	142	3	2					2		
2006	242.29	142.55	96.72	242	142	5	2							
2006	242.28	142.8	96.7	242	142	8	2					3		
2006	242.75	142.09	96.71	242	142	2	2				yes	3		
2006	242.655	142.55	96.71	242	142	4	2					2		
2006	242.82	142.88	96.7	242	142	9	2							
2006	242.43	142.95	96.67	242	142	4	3					3		
2006	242.69	142.195	96.67	242	142	1	3							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2006	242.86	142.16	96.68	242	142	2	3							
2006	242.98	142.44	96.585	242	142	3	5					3		
2006	242.34	142.635	96.51	242	142	4	6					4		
2006	242.63	142.65	96.51	242	142	5	6				possible	3		
2006	242.07	142.49	96.45	242	142	1	7	yes	exterior	3	yes	3		
2006	242.43	142.73	96.43	242	142	1	8				yes			
2006	242.41	142.41	96.625	242	142	1	4							
2006	242.5	142.87	96.52	242	142	1	6							
2006	242.93	142.925	96.42	242	142	6	8					3		
2006	242.4	142.025	96.35	242	142	2	9							
2006	242.54	142.95	96.39	242	142	4	9							
2006	242.37	142.435	96.36	242	142	6	9							
2006	242.48	141.77	96.35	242	140	6	9	yes	exterior	2	yes	4		
2006	242.37	142.06	96.355	242	142	1	9							
2006	242.48	142.12	96.7	242	142	6	2							
2006	242.38	142.825	96.66	242	142	3	3							
2006	242.745	142.895	96.58	242	142	2	5							
2006	242.19	142.815	96.53	242	142	3	3							
2006	242.205	142.58	96.5	242	142	2	6							
2006	242.62	142.58	96.52	242	142	6	6							
2006	242.44	142.94	96.45	242	142	2	7							
2006	242.26	142.68	96.78	242	142	2	1							
2006	242.03	142.32	96.605	242	142	2	4							
2006	242.72	142.77	96.31	242	142	7	6							
2006	242.99	142.24	96.41	242	142	2	8					4		
2006	242.71	142.99	96.39	242	142	3	9					2		
2006	242.45	142.35	96.38	242	142	5	9							
2006	242.42	141.24	96.5	242	140	2	6							
2006	242.01	140.57	96.47	242	140	2	3							
2006	242.86	140.62	96.085	242	140	10	10							
2006	242.5	140.35	96.06	242	140	9	11							
2006	242.29	140.12	96.06	242	140	12	11							
2006	242.14	142.04	96.7	242	142	7	2							
2006	242.12	142.91	96.8	242	142	3	1							
2006	242.08	142.92	96.79	242	142	4	1							
2006	242.46	142.94		242	142	6	1							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2006	242.23	142.77	96.75	242	142	9	1							
2006	242.88	142.35	96.76	242	142	10	1							
2006	242.89	142.36	96.77	242	142	11	1							
2006	242.71	142.22	96.75	242	142	12	1							
2006	242.85	142.73	96.755	242	142	13	1							
2006	242.27	142.19	96.415	242	142	3	8							
2006	242	142.35	96.4	242	142	4	8							
2006	242.76	142.67	96.4	242	142	5	8							
2006	243.195	142.44	96.95	242	142	1	5							
2006	243.23	142.69	97.02	242	142	1	4							
2006	243.24	142.875	96.945	242	142	2	5							
2007	242.97	141.94	95.97	242	140	1	17	yes	exterior	2	yes	4		0
2007	242.86	140.93	95.8	242	140	1	17							0
2007	242.69	140.96	95.8	242	140	2	17					1		0
2007	242.48	140.85	95.8	242	140	3	17							0
2007	242.11	140.7	95.76	242	140	4	17							0
2007	242.08	140.26	95.8	242	140	5	17							0
2007	242.32	140.12	95.8	242	140	6	17							0
2007	242.71	140.44	95.75	242	140	7	17					2		
2007	242.77	140.4	95.8	242	140	8	17							flat
2007	242.87	140.3	95.79	242	140	9	17					2		0
2007	242.91	140.03	95.8	242	140	10	17							
2007	242.37	141.9	95.93	242	140	2	18							
2007	241.37	141.9	95.93	242	140	2	18							
2007	242.34	141.44	95.93	242	140	3	18							
2007	241.34	141.44	95.93	242	140	3	18							
2007	242.5	141.5	95.96	242	140	4	18				Yes			
2007	242.84	140.29	95.74	242	140	2	18						0	0
2007	242.84	140.08	95.71	242	140	3	18						0	10
2007	242.45	140.47	95.73	242	140	4	18					2		
2007	242.2	140.54	95.74	242	140	5	18					4	0	0
2007	242.38	140.27	95.73	242	140	6	18					0	0	0
2007	242.5	140.94	95.73	242	140	7	18						0	0
2007	242.44	140.75	95.75	242	140	9	18	Yes	Exterior	1	yes	2		
2007	242.07	140.7	95.73	242	140	10	18					2		
2007	242.76	140.6	95.74	242	140	11	18					1		

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2007	242.34	141.85	95.87	242	140	1	19							
2007	242.66	141.3	95.9	242	140	2	19						0	0
2007	242.11	141.66	95.88	242	140	4	19							
2007	242.65	141.37	95.86	242	140	5	19							
2007	242.54	141.4	95.88	242	140	6	19						0	90
2007	242.31	141.49	95.89	242	140	8	19							
2007	242.67	140.95	95.67	242	140	1	19	yes	exterior	2	yes	2	0	30
2007	242.64	140.78	95.69	242	140	2	19					1		
2007	242.99	140.76	95.69	242	140	3	19						0	0
2007	242.47	140.72	95.67	242	140	4	19						0	0
2007	242.44	140.48	95.7	242	140	5	19							
2007	242.44	140.79	95.67	242	140	6	19							
2007	242.49	140.82	95.69	242	140	7	19						0	0
2007	242.6	140.21	95.7	242	140	8	19							
2007	242.59	140.24	95.7	242	140	9	19							
2007	242.48	140.19	95.68	242	140	10	19							
2007	242.05	140.62	95.67	242	140	12	19				possible	2		
2007	242.1	140.02	95.68	242	140	13	19					3		
2007	242.2	140.24	95.69	242	140	14	19							
2007	242.25	140.2	95.67	242	140	15	19							
2007	242.3	140.11	95	242	140	16	19	yes	exterior	3	yes	4		
2007	242.29	140.11	95.69	242	140	17	19				yes	5		
2007	242.29	140.04	95.69	242	140	18	19				yes	1		
2007	242.52	141.95	95.83	242	140	1	20							0
2007	242.67	141.97	95.83	242	140	2	20						0	0
2007	242.84	141.42	95.82	242	140	3	20						0	20
2007	242.82	141.78	95.81	242	140	4	20	yes	2				0	0
2007	242.88	141.29	95.82	242	140	5	20						0	0
2007	242.66	141.34	95.83	242	140	6	20					1	0	30
2007	242.59	141.36	95.82	242	140	7	20							70
2007	242.94	141.12	95.82	242	140	8	20							0
2007	242.44	141.64	95.8	242	140	9	20						0	0
2007	242.05	141.92	95.83	242	140	12	20					3		0
2007	242.25	141.82	95.81	242	140	13	20						0	0
2007	242.43	141.36	95.81	242	140	14	20							0
2007	242.3	141.64	95.8	242	140	15	20						0	0

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2007	242.79	140.85	95.6	242	140	1	20							
2007	242.66	140.74	95.64	242	140	2	20							
2007	242.59	140.72	95.62	242	140	3	20					1		
2007	242.38	140.49	95.64	242	140	4	20					1		
2007	242.45	140.95	95.61	242	140	5	20					2		
2007	242.25	140.88	95.65	242	140	6	20					1		
2007	242.27	140.8	95.65	242	140	7	20	yes	exterior	3	yes	2		
2007	242.09	141.67	95.79	242	140	1	21							
2007	242.99	141.95	95	242	140	2	21					1		0
2007	242.99	141.87	95.77	242	140	2	21							0
2007	242.81	141.8	95.75	242	140	3	21							0
2007	242.82	141.52	95.77	242	140	4	21							45
2007	242.75	141.44	95.79	242	140	5	21							0
2007	242.71	141.93	95.8	242	140	6	21							0
2007	242.71	141.22	95.76	242	140	7	21							0
2007	242.71	141.13	95.77	242	140	8	21							45
2007	242.56	141.8	95.77	242	140	9	21							0
2007	242.49	141.93	95.77	242	140	10	21							0
2007	242.44	141.86	95.76	242	140	11	21							0
2007	242.38	141.67	95.7	242	140	12	21	yes				3		0
2007	242.25	141.75	95.79	242	140	14	21				yes			0
2007	242.24	141.32	95.76	242	140	15	21				yes	2		
2007	242.16	141.72	95.77	242	140	16	21				yes	4		
2007	242.11	141.71	95.75	242	140	17	21	yes						0
2007	242.11	141.17	95.78	242	140	18	21				yes	3		
2007	242.06	141.98	95.78	242	140	19	21							40
2007	242	141.8	95.75	242	140	20	21					5		45
2007	242.61	140.96	95.59	242	140	3	21							0
2007	242.08	140.75	95.59	242	140	4	21							0
2007	242.28	140.41	95.59	242	140	5	21							0
2007	242.3	140.04	95.59	242	140	6	21							0
2007	242.64	140.08	95.6	242	140	7	21							30
2007	242.99	141.88	95.72	242	140	1	22							0
2007	242.26	141.26	95.7	242	140	3	22							0
2007	242.15	141.11	95.74	242	140	4	22							
2007	242.99	141.7	95.7	242	140	5	22							0

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2007	242.98	141.74	95.71	242	140	6	22							45
2007	242.99	141.61	95.74	242	140	7	22					2		0
2007	242.93	141.36	95.7	242	140	8	22				Possible	4		0
2007	242.9	141.65	95.73	242	140	9	22							50
2007	242.87	141.93	95.72	242	140	10	22							
2007	242.89	141.93	95.7	242	140	11	22							0
2007	242.7	140.52	95.705	242	140	12	22							56
2007	242.7	141.09	95.73	242	140	13	22							
2007	242.56	141.32	95.71	242	140	15	22					3		0
2007	242.4	141.35	95.72	242	140	16	22					2		80
2007	242.38	141.62	95.72	242	140	17	22							40
2007	242.28	141.7	95.72	242	140	18	22							0
2007	242.26	141.44	95.7	242	140	19	22					1		0
2007	242.28	141.18	95.72	242	140	20	22							
2007	242.18	141.79	95.7	242	140	21	22					2		0
2007	242.18	141.73	95.71	242	140	22	22							
2007	242.13	141.79	95.7	242	140	23	22					3		0
2007	242.12	141.41	95.71	242	140	24	22	yes	exterior	2		2		0
2007	242.53	140.22	95.52	242	140	1	22					1		0
2007	242.54	141.99	95.67	242	140	1	23							40
2007	242.88	141.6	95.65	242	140	2	23							45
2007	242.92	141.35	95.68	242	140	3	23							0
2007	242.875	141.29	95.65	242	140	4	23							0
2007	242.945	141.22	95.69	242	140	5	23					1		0
2007	242.785	141.28	95.67	242	140	6	23							
2007	242.71	141.79	95.65	242	140	7	23				yes			0
2007	242.71	141.79	95.65	242	140	8	23				yes			0
2007	242.58	141.26	95.67	242	140	9	23							
2007	242.4	141.88	95.66	242	140	10	23							0
2007	242.36	141.74	95.65	242	140	11	23							45
2007	242.26	141.71	95.65	242	140	12	23							0
2007	242.28	141.63	95.65	242	140	13	23					2		0
2007	242.13	141.91	95.66	242	140	14	23							0
2007	242.1	141.79	95.66	242	140	15	23							0
2007	242.08	141.99	95.655	242	140	16	23				yes	4		40
2007	242	141.8	95.69	242	140	17	23							40

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2007	2242.67	140.45	95.45	242	140	1	23							
2007	242.84	140.68	95.46	242	140	2	23					2		0
2007	242.87	140.46	95.4	242	140	3	23							
2007	242.92	140.8	95.48	242	140	4	23							0
2007	242.83	140.74	95.46	242	140	5	23					4		
2007	242.83	140.63	95.45	242	140	6	23							
2007	242.74	140.67	95.48	242	140	7	23							45
2007	242.75	140.76	95.48	242	140	8	23							
2007	242.5	141.13	95.64	242	140	1	24							0
2007	242.5	141.84	95.61	242	140	2	24						0	0
2007	242.8	141.17	95.61	242	140	3	24				yes			45
2007	242.99	141.87	95.62	242	140	4	24							30
2007	242.465	141.52	95.63	242	140	5	24							0
2007	242.73	141.99	95.62	242	140	6	24	Yes	exterior	1	yes			35
2007	242.77	141.71	95.64	242	140	7	24							0
2007	242.24	141.96	95.61	242	140	8	24							90
2007	242.8	141.28	95.6	242	140	9	24							0
2007	242.535	141.77	95	242	140	10	24					3		
2007	242.4	141.8	95.63	242	140	11	24							
2007	242.34	141.78	95.65	242	140	12	24				possible	3	0	0
2007	242.69	141.74	95.63	242	140	13	24	yes	exterior	1				45
2007	242.32	141.93	95.6	242	140	14	24							0
2007	242.94	141.8	95.63	242	140	15	24							
2007	242.28	141.95	95.6	242	140	16	24							0
2007	242.93	141.81	95.6	242	140	17	24				yes	1		40
2007	242.95	141.85	95.62	242	140	18	24							
2007	242.23	141.71	95.64	242	140	19	24							0

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2007	242.14	141.91	95.63	242	140	20	24							40
2007	242.16	141.13	95.64	242	140	21	24							30
2007	242.13	141.46	95.64	242	140	22	24							
2007	242.18	141.75	95.64	242	140	23	24							0
2007	242.14	141.78	95.65	242	140	24	24							0
2007	242.12	141.86	95.64	242	140	25	24							0
2007	242.695	141.485	95.71	242	140	25	24							0
2007	242.33	141.82	95.6	242	140	26	24	yes					0	0
2007	242.15	141.96	95.6	242	140	27	24					1		0
2007	242.07	141.03	95.6	242	140	28	24							45
2007	242.08	141.94	95.6	242	140	29	24							0
2007	242.25	141.93	95.59	242	140	12	25							
2007	242.79	141.69	95.59	242	140	22	25					5		
2007	242.53	141.46	95.55	242	140	3	25							
2007	242.98	141.02	95.55	242	140	14	25							
2007	242.37	141.98	95.585	242	140	34	25							
2007	242.29	141.88	95.55	242	140	38	25							
2007	242.11	141.71	95.56	242	140	10	25				possible	3		
2007	242.99	141.97	95.6	242	140	16	25							
2007	242.98	141.54	95.59	242	140	18	25							
2007	242.84	141.85	95.55	242	140	20	25	yes	exterior	1	yes	3		
2007	242.82	141.96	95.58	242	140	21	25							
2007	242.71	141.92	95.56	242	140	24	25							
2007	242.55	141.94	95.56	242	140	33	25	yes	exterior	2	yes	1		
2007	242.35	141.85	95.555	242	140	35	25							
2007	242.33	141.83	95.55	242	140	36	25							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2007	242.26	141.61	95.56	242	140	40	25							
2007	242.07	141.71	95.57	242	140	9	25							
2007	242.22	141.89	95.55	242	140	41	25							
2007	242.62	141.77	95.59	242	140	37	25							
2007	242.11	141	95.6	242	140	1	25				possible	3		
2007	242.39	141.21	95.59	242	140	2	25							
2007	242.58	141.51	95.57	242	140	4	25							
2007	242.34	141.68	95.58	242	140	7	25							
2007	242.4	141.79	95.56	242	140	11	25				yes	3		
2007	242.99	141.86	95.57	242	140	15	25							
2007	242.95	141.22	95.57	242	140	17	25	yes	exterior	2	yes			
2007	242.88	141.94	95.55	242	140	19	25							
2007	242.8	141.62	95.55	242	140	23	25							
2007	242.73	141.69	95.59	242	140	25	25							
2007	242.77	141.62	95.55	242	140	26	25							
2007	242.73	141.6	95.55	242	140	27	25							
2007	242.5	141.7	95.58	242	140	30	25							
2007	242.65	141.94	95.56	242	140	28	25	yes	Interior, Exterior	2	yes			
2007	242.67	141.88	95.56	242	140	29	25				possible	1		
2007	242.59	141.98	95.55	242	140	42	25				possible	2		
2007	242.21	141.62	95.56	242	140	6	25	yes	exterior/interior	5	yes	2		
2007	242.99	141.68	95.55	242	140	13	25							
2007	242.27	141.6	95.58	242	140	5	25							
2007	242.18	141.68	95.57	242	140	8	25							
2007	242.99	141.53	95.55	242	140	1	26							0
2007	242.93	141.48	95	242	140	2	26							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2007	242.98	141.96	95.52	242	140	3	26					1		0
2007	242.94	141.81	95.52	242	140	4	26					1		0
2007	242.76	141.82	95.51	242	140	6	26					1		
2007	242.62	141.43	95.5	242	140	7	26							0
2007	242.57	141.34	95.5	242	140	8	26							0
2007	242.43	141.86	95.51	242	140	9	26							45
2007	242.37	141.37	95.49	242	140	10	26							83
2007	243.12	142.25	96.81	242	142	1	8							
2007	243.12	142.2	96.81	242	142	2	8							
2007	243.085	142.45	96.74	242	142	1	9					3		
2007	243.12	142.58	96.75	242	142	2	9					1		
2007	243.62	142.99	96.74	242	142	3	9					4		
2007	242.04	140.25	95.75	242	140	8	18				possible	3		
2007	242.31	140.42	95.67	242	140	11	19							
2007	242.29	141.42	95.88	242	140	7	19	yes	exterior	4				
2007	242.46	141.92	95.84	242	140	11	20							
2007	242.99	140.59	95.59	242	140	2	21							
2007	242.99	140.5	95.59	242	140	1	21	yes	exterior	3				
2007	242.39	141.6	95.77	242	140	13	21							
2007	242.54	141.77	95.72	242	140	14	22	yes	exterior	10			yes	
2007	242.71	141.22	95.57	242	140	32	25							
2007	242.97	141.59	95.55	242	140	31	25							
2007	242.26	141.66	95.55	242	140	39	25					1		
2007	242.27	141.44	95.52	242	140	11	26	yes	exterior	3		3		
2007	242.89	141.72	95.47	242	140	5	26	yes	exterior/interior	3	yes	1		
2007	244.77	139.84	97.05	244	138	1	2							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2007	244.5	139.05	97.01	244	138	2	2					3		
2007	244.62	139.53	97.005	244	138	3	2							
2007	244.97	139.32	97.06	244	138	6	2					2		
2007	244.52	139.54	97.03	244	138	4	2				yes			
2007	244.85	139.51	96.97	244	138	1	3							
2007	244.47	139.59	97	244	138	2	3							
2007	244.97	139.4	96.995	244	138	3	3							
2007	244.845	139.235	96.965	244	138	5	3							
2007	244.265	139.145	96.97	244	138	7	3							
2007	244.89	139.29	96.9	244	138	4	4							
2007	244.09	139.49	96.93	244	138	3	4							
2007	244.89	139.27	96.9	244	138	7	4							
2007	244.67	139.41	96.91	244	138	8	4							
2007	244.3	139.22	96.9	244	138	6	4							
2007	244.84	139.85	96.905	244	138	1	4					2		
2007	244.77	139.59	95.92	244	138	2	4					1		
2007	244.165	139.18	96.905	244	138	5	4							
2007	244.67	139.37	96.88	244	138	2	5							
2007	244.76	139.31	96.865	244	138	3	5							
2007	244.67	139.84	96.87	244	138	4	5					2		
2007	244.67	139.84	96.86	244	138	5	5					2		
2007	244.225	139.83	96.87	244	138	6	5							
2007	244.44	139.19	96.86	244	138	7	5							
2007	244.92	139.22	96.89	244	138	1	5	yes	exterior	4				
2007	244.44	139.88	96.83	244	138	2	6					1		
2007	244.23	139.49	96.82	244	138	3	6					2		

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2007	244.76	139.85	96.815	244	138	4	6							
2007	244.4	139.12	96.84	244	138	5	6					2		
2007	234.34	139.025	96.82	244	138	7	6							
2007	244.205	139	96.81	244	138	8	6					4		
2007	244.53	139.53	96.8	244	138	9	6							
2007	244.99	139.28	96.8	244	138	10	6					2		
2007	244.295	139.48	96.855	244	138	6	6							
2007	244.6	139.7	96.85	244	138	1	6							
2007	244.71	139.31	96.785	244	138	1	7					3		
2007	244.47	139.88	96.76	244	138	2	7							
2007	244.32	139.48	96.79	244	138	3	7							
2007	244.58	139.43	96.785	244	138	4	7					1		
2007	244.3	139.355	96.74	244	138	1	8							
2007	244.765	139.66	96.72	244	138	2	8					2		
2007	244.39	139.55	96.74	244	138	3	8							
2007	244.39	139.76	96.7	244	138	4	8							
2007	244.46	139.905	96.715	244	138	5	8	yes	exterior	2		2		
2007	244.64	139.22	96.66	244	138	1	9					85		
2007	244.48	139.26	96.7	244	138	2	9							
2007	244.54	139.76	96.66	244	138	3	9					2		
2007	244.3	139.66	96.68	244	138	4	9							
2007	244.15	139.63	96.665	244	138	5	9							0
2007	244.17	139.93	96	244	138	6	9							24
2007	244.15	139.95	96.66	244	138	7	9							
2007	244.21	139.93	96.6	244	138	9	9							
2007	244.29	139.91	96.62	244	138	3	10							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2007	244.32	139.46		244	138	4	10	yes	exterior	2		1		
2007	244.42	139.42	96.63	244	138	5	10				possible			
2007	244.2	139.74	96.62	244	138	2	10							
2007	244	139	95.62	244	138	2	10							
2007	244.29	139.82	96.62	244	138	1	10							
2007	244.51	139.58	96.56	244	138	1	11							
2007	244.69	139.31	96.58	244	138	2	11							
2007	244.7	139.34	96.58	244	138	3	11							
2007	244.71	139.42	96.55	244	138	4	11							
2007	244.29	139.99	96.67	244	138	8								0
2007	242.67	140.8	95.75	242	140	1	18							
2007	242.44	141.78	95.84	242	140	10	20							
2007	242.85	141.72	95.74	242	140	12	22							
2007	242.7	140.85	95.49	242	140	9	23	yes	exterior	4		3	yes	
2007	242.76	141.82	95.51	242	140	6	26							
2007	242.98	141.96	95.52	242	140	3	26							
2007	244.32	139.48	96.79	244	138	3								
2007	244.46	139.29	96.99	244	138	4								
2007	244.3	139.7	97.03	244	138	5								
2007	244.67	139.44	96.6	244	138	6								
2007	244.58	139.43	96.785	244	138	4								
2007	244.71	139.31	96.785	244	138	1								
2007	244	139		244	138	6								
2007	244.47	139.88	96.76	244	138	2								
2008	243.52	139.16	96.97	242	138	1	1							
2008	243.81	139.56	96.92	242	138	1	2							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2008	243.01	139.16	96.92	242	138	1	3							
2008	243.76	139.335	96.865	242	138	2	3							
2008	243.06	139.31	96.81	242	138	1	4							
2008	243.29	139.395	96.82	242	138	2	4							
2008	243.36	139.5	96.8	242	138	3	4							
2008	243.68	139.26	96.8	242	138	4	4							
2008	243.87	139.4	96.815	242	138	5	4							
2008	243.2	139.67	96.765	242	138	1	5							4
2008	242	139.565	96.65	242	138	2	5							
2008	243	139.625	96.825	242	138	2	5							
2008	243.95	139.68	96.74	242	138	4	5							
2008	243.85	139.355	96.78	242	138	5	5							
2008	243.885	139.16	96.775	242	138	7	5							
2008	243.825	139.12	96.75	242	138	8	5							2
2008	243.94	139.25	96.78	242	138	6	5							4
2008	242.215	139.89	96.705	242	138	1	6							
2008	242.085	139.68	96.695	242	138	2	6							
2008	242.38	139.365	96.735	242	138	4	6							
2008	242.47	139.375	96.725	242	138	5	6							
2008	242.475	139.345	96.71	242	138	6	6							
2008	242.055	139.63	96.73	242	138	3	6							
2008	243.95	139.49	96.65	242	138	1	7							1
2008	243.655	139.405	96.65	242	138	2	7							
2008	243.685	139.395	96.68	242	138	3	7							
2008	243.66	139.295	96.65	242	138	4	7							
2008	243.025	139.665	96.685	242	138	5	7							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2008	243.225	139.085	96.6575	242	138	6	7							3
2008	242.85	139.17	96.61	242	138	1	8							2
2008	242	139.565	96.65	242	138	2	8							4
2008	243.105	139.595	96.5625	242	138	3	9							
2008	243.895	139.902	96.59	242	138	1	9							
2008	243.865	139.37	96.56	242	138	2	9							
2008	243.215	139.29	96.54	242	138	4	9							
2008	243.15	139.1	96.58	242	138	5	9							2
2008	243.6	139.17	96.55	242	138	1	10				possible			
2008	243.6	139.17	96.55	242	138	1	10				yes			
2008	243.855	139.075	96.535	242	138	2	10							
2008	243.13	139.295	96.505	242	138	3	10							
2008	243.79	139.35	96.515	242	138	4	10							
2008	243.86	139.385	96.515	242	138	5	10							3
2008	243.315	139.615	96.53	242	138	6	10							
2008	243.345	139.67	96.53	242	138	7	10							5
2008	243.6	139.17	96.53	242	138	8	10							
2008	243.95	139.88	96.47	242	138	1	11							
2008	243.16	139.74	96.48	242	138	2	11							
2008	243.76	139.46	96.465	242	138	3	11							
2008	243.78	139.36	96.48	242	138	4	11	yes	exterior	2				3
2008	243.59	139.235	96.455	242	138	5	11							5
2008	243.725	139.86	96.4	242	138	1	12							
2008	243.7	139.82	96.4	242	138	2	12							
2008	243.545	139.83	96.4	242	138	3	12							
2008	243.57	139.7	96.37	242	138	4	12							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2008	243.45	139.63	96.4	242	138	5	12							
2008	243.15	139.59	96.41	242	138	6	12							
2008	243.72	139.25	96.42	242	138	7	12							
2008	243.145	139.93	96.36	242	138	1	13							
2008	243.15	139.905	96.385	242	138	2	13							
2008	243.13	139.295	96.505	242	138	3	13							
2008	243.17	139.86	96.355	242	138	4	13							
2008	243.71	139.82	96.42	242	138	5	13							
2008	243.945	139.81	96.365	242	138	6	13							
2008	243.49	139.65	96.355	242	138	7	13							
2008	243.89	139.56	96.35	242	138	8	13							
2008	243.73	139.47	96.355	242	138	9	13							
2008	243.485	139.5	96.36	242	138	10	13							
2008	243.41	139.46	96.41	242	138	11	13							
2008	243.55	139.325	96.385	242	138	12	13							
2008	243.505	139.175	96.35	242	138	13	13							
2008	243.2	139.97	96.4	242	138	17	13	yes	exterior	2	yes			
2008	243.51	139.15	96.36	242	138	14	14							
2008	242.16	141.28	95.48	242	140	1	26							
2008	242.17	141.38	95.46	242	140	3	26							
2008	242.18	141.47	95.45	242	140	4	26							
2008	242.18	141.46	95.45	242	140	6	26	possible	exterior	1	yes			2
2008	242.74	141.48	95.455	242	140	8	26							2
2008	242.76	141.46	95.44	242	140	9	26							1
2008	242.88	141.49	95.47	242	140	10	26							
2008	242.104	141.34	95.475	242	140	11	26							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2008	242.105	141.88	95.485	242	140	12	26							3
2008	242.05	141.31	95.4	242	140	1	27							
2008	242.04	141.74	95.402	242	140	2	27							
2008	242.115	141.78	95.43	242	140	3	27							
2008	242.46	141.13	95.42	242	140	4	27							2
2008	242.53	141.12	95.4	242	140	5	27							
2008	242.58	141.77	95.43	242	140	6	27							2
2008	242.88	141.69	95.41	242	140	7	27							
2008	242.95	141.51	95.43	242	140	8	27							3
2008	242.93	141.62	95.41	242	140	9	27							
2008	242.83	141.52	95.995	242	140	10	27							
2008	242.85	141.47	95.42	242	140	11	27							
2008	242.91	141.47	95.425	242	140	12	27	yes	exterior	5	yes			4
2008	242.83	141.42	95.415	242	140	13	27							
2008	242.82	141.5	95.405	242	140	14	27							
2008	242.9	141.6	95.41	242	140	15	27							
2008	242.65	141.89	95.405	242	140	2	28							
2008	242.56	141.78	95.36	242	140	3	28							
2008	242.95	141.73	95.38	242	140	4	28							
2008	242.87	141.72	95.4	242	140	5	28							
2008	242.65	141.61	95.395	242	140	7	28							
2008	242.67	141.67	95.38	242	140	8	28							
2008	242.8	141.53	95.37	242	140	9	28							
2008	242.84	141.38	95.36	242	140	11	28							
2008	242.7	141.37	95.365	242	140	12	28	yes	exterior	1	yes			
2008	242.91	141.17	95.36	242	140	13	28							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2008	242.76	141.13	95.39	242	140	14	28							
2008	242.88	141.23	95.38	242	140	15	28							
2008	242.37	141.56	95.37	242	140	16	28							
2008	242.31	141.24	95.35	242	140	17	28							
2008	242.65	141.82	95.35	242	140	19	28							
2008	242.96	141.64	95.34	242	140	6	28							
2008	242.76	141.45	95.39	242	140	10	28							
2008	242.76	141.34	95.34	242	140	2	29	yes	exterior	3	yes			
2008	242.49	140.14	95.365	242	140	17	17							
2008	242.527	140.925	95.404	242	140	1	24							
2008	242.808	140.94	95.41	242	140	2	24							
2008	242.779	140.915	95.412	242	140	3	24							
2008	242.752	140.796	95.417	242	140	4	24							
2008	242.766	140.865	95.417	242	140	5	24							
2008	242.78	140.882	95.406	242	140	6	24							
2008	242.688	140.582	95.406	242	140	7	24							
2008	242.834	140.636	95.404	242	140	8	24							
2008	242.68	140.83	95.38	242	140	1	25				yes			2
2008	242.576	140.828	95.382	242	140	2	25							
2008	242.692	140.298	95.388	242	140	3	25							
2008	242.654	140.792	95.394	242	140	4	25							
2008	242.637	140.464	95.378	242	140	5	25							
2008	242.656	140.76	95.365	242	140	6	25							
2008	242.748	140.742	95.39	242	140	7	25							
2008	242.732	140.705	95.39	242	140	8	25							
2008	242.806	140.592	95.39	242	140	11	25							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2008	242.726	140.948	95.382	242	140	13	25							
2008	242.632	140.405	95.354	242	140	14	25							
2008	242.882	140.1	95.384	242	140	15	25							
2008	242.47	140.03	95.375	242	140	16	25							
2008	242.64	140.1	95.37	242	140	18	25							
2008	242.52	140.45	95.35	242	140	19	25				yes			
2008	242.66	140.57	95.35	242	140	20	25							2
2008	242.654	140.585	95.392	242	140	10	25							
2008	242.743	140.454	95.393	242	140	12	25				possible			
2008	242.646	140.205	95.351	242	140	1	26				yes			
2008	242.35	140.416	95.341	242	140	2	26							
2008	242.754	140.416	95.33	242	140	3	26							
2008	242.542	140.529	95.342	242	140	4	26							
2008	242.593	140.762	95.338	242	140	5	26							
2008	242.662	140.862	95.342	242	140	6	26							
2008	243.99	140	95.8	242	140	2					possible			
2008	243.99	140	95.8	242	140	1								
2008	243.37	142.36	96.71	242	142	1	10							
2008	243.37	142.36	96.71	242	142	2	10							
2008	243.09	142.21	96.72	242	142	3	10							
2008	243.395	142.25	96.7	242	142	4	10							
2008	243.38	142.22	96.7	242	142	5	10							
2008	243.68	142.9	96.7	242	142	6	10							
2008	243.245	142.38	96.67	242	142	1	11							3
2008	243.74	142.26	96.63	242	142	2	11							
2008	242.77	142.355	96.63	242	142	3	11							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2008	242.9	142.79	96.63	242	142	4	11							4
2008	243.89	142.97	96.6	242	142	1	12	yes	exterior	3	yes			1
2008	243.28	142.7	96.54	242	142	1	13							1
2008	243.59	142.01	96.54	242	142	2	13							
2008	243.12	142.325	96.57	242	142	3	13							
2008	243.21	142.2	96.57	242	142	4	13							
2008	243.37	142.275	96.555	242	142	5	13							
2008	243.71	142.29	96.555	242	142	6	13							
2008	243.69	142.02	96.53	242	142	7	13							
2008	243.5	142.165	96.54	242	142	8	13							
2008	243.05	142.04	96.51	242	142	1	14							
2008	243.9	142	96.5	242	142	2	14							
2008	243.62	142.03	96.53	242	142	3	14							
2008	243.605	142.01	96.52	242	142	4	14							1
2008	243.11	142.24	96.5	242	142	5	14							
2008	243.93	142.44	96.47	242	142	1	15							
2008	243.91	142.36	96.435	242	142	2	15							
2008	243.86	142.28	96.455	242	142	3	15							
2008	243.48	142.14	96.46	242	142	4	15							
2008	243.59	142.62	96.38	242	142	1	16							
2008	243.085	142.71	96.39	242	142	2	16							
2008	243.05	142.52	96.4	242	142	3	16							2
2008	243.07	142.445	96.42	242	142	4	16							
2008	243.07	142.42	96.425	242	142	5	16							
2008	243.345	142.55	96.41	242	142	6	16							
2008	243.6	142.135	96.39	242	142	7	16							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2008	243.43	142.79	96.33	242	142	1	17							
2008	243.47	142.79	96.35	242	142	2	17							
2008	243.27	142.265	96.34	242	142	3	17							
2008	243.1	142.93	96.32	242	142	1	18							3
2008	243.63	142.84	96.29	242	142	2	18							
2008	243.635	142.77	96.28	242	142	3	18							
2008	243.1	142.94	96.32	242	142	4	18							
2008	243.66	142.955	96.26	242	142	1	19							
2008	243.63	142.87	96.26	242	142	2	19							
2008	243.53	142.94	96.25	242	142	3	19							
2008	243.69	142.71	96.25	242	142	5	19							
2008	243.68	142.675	96.24	242	142	6	19				possible			3
2008	243.44	142.725	96.25	242	142	7	19							
2008	243.345	142.93	96.18	242	142	1	20							
2008	243.26	142.35	96.19	242	142	2	20							1
2008	243.05	142.03	96.225	242	142	3	20							3
2008	243.61	142.635	96.13	242	142	1	21							
2008	243.26	142.67	96.13	242	142	2	21							
2008	243.27	142.69	96.13	242	142	3	21							
2008	243.03	142.07	96.13	242	142	4	21							
2008	243.02	142.79	95.085	242	142	1	22							
2008	243.04	142.44	95.1	242	142	2	22							
2008	243.27	142.7	95.11	242	142	3	22							
2008	243.27	142.71	95.085	242	142	4	22							
2008	243.99	142.87	95.2	242	142	5	22							
2008	243.24	142.28	96.04	242	142	2	23							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2008	243.32	142.42	96.05	242	142	3	23				yes			2
2008	243.29	142.49	96.045	242	142	4	23							3
2008	243.1	142.61	96.035	242	142	5	23							
2008	243.11	142.7	96.03	242	142	6	23							
2008	243.29	142.76	96.025	242	142	7	23							3
2008	243.34	142.7	96.04	242	142	8	23							
2008	243.48	142.69	96.02	242	142	9	23				possible			
2008	243.71	142.65	96.04	242	142	10	23							
2008	243.42	142.52	96.05	242	142	11	23							
2008	243.68	142.73	96.245	242	142	4								
2008	242.37	142.38	96.23	242	142	7	7							2
2008	242.18	142.05	96.3	242	142	1	10	yes	6	exterior	test			4
2008	242.61	142.31	96.34	242	142	2	10							
2008	243.05	142.99	96.345	242	142	3	10							
2008	242.08	142.96	96.32	242	142	4	10							2
2008	243.81	139.56	96.96	242	142	1	11							
2008	242.6	142.4	96.265	242	142	1	11							
2008	242.55	142.41	96.255	242	142	2	11		interior		yes			
2008	242.53	142.57	96.265	242	142	3	11							
2008	242.34	142.74	96.285	242	142	4	11							
2008	242.06	142.69	96.26	242	142	5	11							
2008	242.29	142.94	96.29	242	142	6	11							
2008	242.17	142.99	96.29	242	142	7	11							
2008	242.65	142.91	96.27	242	142	8	11	yes	exterior	6	yes			
2008	242.81	142.13	96.23	242	142	1	12							
2008	242.94	142.26	96.24	242	142	2	12							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2008	242.94	142.32	96.21	242	142	3	12				possible			3
2008	242.72	142.35	96.23	242	142	4	12							
2008	242.62	142.35	96.22	242	142	5	12							
2008	242.62	142.4	96.21	242	142	6	12							
2008	242.29	142.47	96.2	242	142	8	12							
2008	242.19	142.5	96.21	242	142	9	12							3
2008	242.16	142.56	96.225	242	142	10	12							
2008	242.15	142.62	96.235	242	142	11	12							
2008	242.08	142.72	96.23	242	142	12	12							
2008	242.11	142.71	96.2	242	142	13	12							
2008	242.73	142.73	96.24	242	142	14	12							
2008	242.18	142.55	96.205	242	142	16	12							
2008	242.19	142.49	96.2	242	142	17	12							
2008	242.11	142.72	96.2	242	142	18	12							
2008	242.44	142.81	96.235	242	142	19	12							
2008	242.43	142.85	96.21	242	142	20	12							
2008	242.25	142.87	96.235	242	142	21	12							
2008	242.662	142.99	96.21	242	142	22	12							
2008	242.38	142.99	96.245	242	142	23	12							
2008	242.22	142.96	96.23	242	142	24	12							
2008	242.27	142.1	96.2	242	142	25	12							
2008	242.02	142.48	96.21	242	142	26	12							
2008	242.22	142.97	96.23	242	142	27	12							
2008	242.25	142.54	96.169	242	142	30	13							
2008	242.25	142.54	96.15	242	142	32	13							2
2008	242.89	142.67	96.17	242	142	37	13							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2008	242.25	142.51	96.15	242	142	71	13							
2008	242.24	142.55	96.15	242	142	73	13							
2008	242.62	142.27	96.15	242	142	9	13							
2008	242.68	142.37	96.155	242	142	12	13							
2008	242.31	142.37	96.115	242	142	13	13							
2008	242.29	142.41	96.17	242	142	22	13							
2008	242.47	142.54	96.15	242	142	27	13							
2008	242.27	142.54	96.169	242	142	29	13							
2008	242.09	142.59	96.15	242	142	36	13							
2008	242.15	142.66	96.15	242	142	49	13							
2008	242.06	142.78	96.19	242	142	54	13							
2008	242.77	142.99	96.16	242	142	64	13							
2008	242.4	142.45	96.16	242	142	69	13							
2008	242.13	142.68	96.175	242	142	75	13							
2008	242.44	142.11	96.14	242	142	5	13			possible				
2008	242.75	142.11	96.15	242	142	3	13	yes	interior	1				
2008	242.2	142.55	96.15	242	142	34	13							
2008	242.07	142.79	96.17	242	142	55	13							
2008	242.22	142.87	96.14	242	142	62	13							
2008	242.15	142.82	96.15	242	142	53	13							
2008	242.61	142.06	96.15	242	142	4	13	yes	exterior	3	yes			
2008	242.09	142.35	96.165	242	142	16	13							
2008	242.07	142.57	96.15	242	142	35	13							
2008	242.56	142.75	96.14	242	142	41	13							
2008	242.18	142.67	96.17	242	142	46	13							
2008	242.45	142.37	96.16	242	142	68	13							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2008	242.14	142.64	96.15	242	142	74	13							2
2008	242.87	142.76	96.15	242	142	77	13							
2008	242.38	142.9	96.17	242	142	59	13							
2008	242.12	142.72	96.15	242	142	51	13							
2008	242.77	142.27	96.18	242	142	8	13							3
2008	242.89	142	96.2	242	142	2	13							
2008	242.92	142.2	96.15	242	142	6	13							
2008	242.3	142.5	96.15	242	142	26	13							
2008	242.56	142.8	96.15	242	142	1	13							
2008	242.46	142.35	96.18	242	142	11	13							
2008	242.77	142.43	96.15	242	142	18	13							
2008	242.36	142.41	96.15	242	142	21	13							
2008	242.39	142.48	96.19	242	142	24	13							
2008	242.26	142.55	96.18	242	142	28	13							
2008	242.2	142.52	96.15	242	142	33	13							
2008	242.75	142.66	96.155	242	142	39	13							
2008	242.47	142.72	96.18	242	142	42	13							
2008	242.22	142.59	96.18	242	142	44	13							
2008	242.75	142.93	96.18	242	142	56	13							4
2008	242.16	142.9	96.17	242	142	63	13							
2008	242.39	142.46	96.17	242	142	70	13							
2008	242.55	142.3	96.15	242	142	67	13							
2008	242.42	142.41	96.19	242	142	19	13							
2008	242.41	140.43	96.155	242	142	20	13							
2008	242.42	142.89	96.19	242	142	58	13							
2008	243.27	142.89	96.15	242	142	60	13							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2008	242.25	142.55	96.17	242	142	31	13							
2008	242.05	142.77	96.16	242	142	76	13							
2008	242.75	142.23	96.18	242	142	7	13							4
2008	242.13	142.35	96.15	242	142	15	13							
2008	242.06	142.33	96.18	242	142	17	13							
2008	242.64	142.61	96.19	242	142	40	13							
2008	242.56	142.81	96.15	242	142	52	13							
2008	242.24	142.53	96.16	242	142	72	13							
2008	242.37	142.69	96.15	242	142	43	13							
2008	242.21	142.36	96.175	242	142	14	13							
2008	242.58	142.99	96.19	242	142	66	13							
2008	242.16	142.72	96.16	242	142	50	13							
2008	242.31	142.46	96.17	242	142	25	13							3
2008	242.67	142.99	96.19	242	142	65	13							
2008	242.82	142.69	96.15	242	142	38	13							
2008	242.19	142.62	96.165	242	142	45	13							
2008	242.56	142.3	96.18	242	142	10	13							
2008	242.48	142.72	96.165	242	142	74	13							2
2008	242.54	142.93	96.185	242	142	57	13							
2008	242.24	142.42	96.17	242	142	23	13							
2008	242.19	142.64	96.17	242	142	47	13							3
2008	242.24	142.93	96.15	242	142	61	13							
2008	242.43	142.38	96.15	242	142	78	13	yes	exterior	3				
2008	242.77	142.015	96.14	242	142	1	14							
2008	242.32	142.01	96.1	242	142	2	14							
2008	242.73	142.14	96.11	242	142	3	14							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2008	242.58	142.095	96.12	242	142	4	14							
2008	242.33	142.14	96.13	242	142	5	14	yes						3
2008	242.82	142.29	96.11	242	142	6	14							
2008	242.65	142.31	96.13	242	142	7	14							
2008	242.55	142.3	96.165	242	142	8	14							
2008	242.49	142.36	96.13	242	142	9	14							
2008	242.17	142.59	96.11	242	142	10	14							1
2008	242.69	142.71	96.115	242	142	11	14							3
2008	242.28	142.68	96.1	242	142	12	14	yes	exterior	3	yes			2
2008	242.17	142.67	96.13	242	142	13	14							2
2008	242.75	142.78	96.13	242	142	14	14	yes						
2008	242.69	142.91	96.13	242	142	15	14							
2008	242.48	142.84	96.1	242	142	16	14							
2008	242.28	142.87	96.11	242	142	17	14							
2008	242.25	142.94	96.13	242	142	18	14	yes	exterior	2	yes			
2008	242.8	142	96.08	242	142	1	15							
2008	242.79	142.02	96.09	242	142	2	15							
2008	242.3	142.11	96.055	242	142	3	15							
2008	242.66	142.24	96.085	242	142	4	15							3
2008	242.67	142.27	96.05	242	142	5	15							
2008	242.15	142.43	96.08	242	142	6	15							
2008	242.73		96.08	242	142	7	15							
2008	242.1	142.625	96.05	242	142	8	15							
2008	242.82	142.89	96.08	242	142	9	15							
2008	242.58	142.91	96.06	242	142	10	15							
2008	242.19	142.96	96.08	242	142	11	15							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2008	242.73	142.84	96.22	242	142		15							
2008	242.02	142.01	96.05	242	142	1	16							3
2008	242.48	142.17	96.035	242	142	2	16							
2008	242.21	142.13	96.01	242	142	3	16							
2008	242.74	142.29	96.02	242	142	4	16							
2008	242.36	142.33	96.025	242	142	5	16							1
2008	242.34	142.3	96.03	242	142	6	16							
2008	242.4	142.53	96.025	242	142	7	16							2
2008	242.12	142.55	96.035	242	142	8	16							
2008	242.08	142.53	96	242	142	9	16							
2008	242.59	142.67	96.02	242	142	10	16							
2008	242.59	142.65	96.02	242	142	11	16							
2008	242.29	142.65	96.045	242	142	12	16							
2008	242.79	142.99	96	242	142	13	16							2
2008	242.22	142.98	96.065	242	142	15	16							
2008	242.95	142.79	96.04	242	142	16	16				possible			
2008	242.48	142.21	96.025	242	142	17	16							2
2008	242.38	142.02	95.95	242	142	1	17							
2008	242.76	142.46	95.965	242	142	2	17							
2008	242.3	142.5	95.965	242	142	3	17							
2008	242.23	142.49	95.97	242	142	4	17							
2008	242.56	142.62	95.97	242	142	5	17							
2008	242.18	142.6	95.97	242	142	6	17							
2008	242.55	142.69	95.95	242	142	7	17							
2008	242.37	142.67	95.96	242	142	8	17							
2008	242.9	142.99	95.975	242	142	9	17							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2008	242.53	142.37	95.91	242	142	1	18							
2008	242.72	142.49	95.925	242	142	2	18							
2008	242.03	142.42	95.91	242	142	4	18							
2008	242.8	142.67	95.92	242	142	5	18				possible			
2008	242.65	142.72	95.94	242	142	6	18							
2008	242.62	142.93	95.94	242	142	7	18							
2008	242.37	142.99	95.93	242	142	8	18							
2008	242.32	142.99	95.9	242	142	9	18							3
2008	242.17	142.49	95.9	242	142	3	18				yes			
2008	242.67	142.05	95.85	242	142	1	19							
2008	242.75	142.36	95.85	242	142	2	19							
2008	242.15	142.3	95.885	242	142	3	19	yes	exterior	3	yes			
2008	242.52	142.63	95.865	242	142	4	19							
2008	242.9	142.72	95.88	242	142	6	19							
2008	242.66	142.88	95.87	242	142	7	19							
2008	242.66	142.99	95.85	242	142	8	19							
2008	242.47	142.02	95.83	242	142	1	20	yes	exterior	2	possible			
2008	242.71	142.08	95.8	242	142	2	20							
2008	242.49	142.24	95.8	242	142	3	20							1
2008	242.34	142.31	95.825	242	142	4	20							
2008	242.18	142.23	95.82	242	142	5	20							
2008	242.06	142.25	95.81	242	142	6	20							3
2008	242.26	142.36	95.81	242	142	7	20				yes			
2008	242.1	142.4	95.8	242	142	8	20							
2008	242.15	142.5	95.83	242	142	9	20							
2008	242.22	142.55	95.83	242	142	10	20							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2008	242.9	142.8	95.8	242	142	11	20							
2008	242.64	142.8	95.805	242	142	12	20							
2008	242.96	142.93	95.84	242	142	13	20							
2008	242.41	142.32	95.75	242	142	7	21							
2008	242.89	142.65	95.76	242	142	15	21							
2008	242.55	142.06	95.77	242	142	1	21							
2008	242.55	142.06	95.77	242	142	1	21							
2008	242.51	142.13	95.77	242	142	3	21							
2008	242.56	142.17	95.17	242	142	5	21							
2008	242.41	141.32	95.75	242	142	7	21							
2008	242.15	142.45	95.75	242	142	12	21							
2008	242.22	142.78	95.75	242	142	16	21							
2008	242.04	142.79	95.78	242	142	17	21							
2008	242.04	142.79	95.78	242	142	17	21							
2008	242.15	142.09	95.775	242	142	4	21							
2008	242.53	142.09	95.75	242	142	2	21							
2008	242.33	142.34	95.75	242	142	8	21	yes	interior	2				
2008	242.33	142.34	95.75	242	142	8	21	yes	exterior	2				
2008	242.67	142.59	95.76	242	142	13	21							
2008	242.67	142.59	95.76	242	142	13	21							3
2008	242.81	142.43	95.785	242	142	11	21							
2008	242.53	142.09	95.75	242	142	2	21							
2008	242.14	142.25	95.75	242	142	14	21							
2008	242.14	142.25	95.75	242	142	10	21							
2008	242.68	142.29	95.75	242	142	6	21	yes	exterior	1				
2008	242.15	142.09	95.775	242	142	4	21							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2008	242.93	142.68	95.77	242	142	14	21							
2008	242.89	142.65	95.76	242	142	15	21							
2008	242.27	142.34	95.75	242	142	9	21							
2008	242.22	142.28	95.75	242	142	16	21							
2008	242.81	142.93	95.785	242	142	11	21							
2008	242.68	142.29	95.75	242	142	6	21	possible	exterior	1				3
2008	242.79	142.69	96.69	242	142	18	21							
2008	242.91	142.9	95.71	242	142	28	22							3
2008	242.71	142.52	95.7	242	142	35	22							
2008	242.25	142.12	95.72	242	142	9	22							
2008	242.64	142.725	95.71	242	142	25	22							
2008	242.34	142.97	95.7	242	142	31	22							
2008	242.22	142.09	95.71	242	142	32	22							
2008	242.38	142.31	95.74	242	142	17	22	yes	exterior	1	yes			3
2008	242.14	142.23	95.705	242	142	18	22	yes	NA	1				3
2008	242.72	142.55	95.7	242	142	22	22							3
2008	242.44	142.98	95.705	242	142	30	22							3
2008	242.16	142.055	95.705	242	142	12	22							
2008	242.74	142.43	95.72	242	142	20	22							
2008	242.22	142.59	95.7	242	142	33	22							
2008	242.24	142.11	95.71	242	142	34	22							
2008	242.89	142.78	95.7	242	142	36	22							
2008	242.77	142.28	95.73	242	142	14	22							
2008	242.57	142.32	95.73	242	142	16	22							
2008	242.71	142.095	95.715	242	142	5	22							
2008	242.78	142.205	95.7	242	142	4	22							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2008	242.88	142.22	95.71	242	142	2	22							
2008	242.54	142.99	95.73	242	142	29	22							
2008	242.31	142.08	95.73	242	142	8	22							
2008	242.07	142.01	95.705	242	142	13	22							
2008	242.72	142.52	95.72	242	142	21	22							
2008	242.14	142.53	95.7	242	142	23	22							4
2008	242.82	142.72	95.7	242	142	24	22							2
2008	242.63	142.81	95.72	242	142	26	22							
2008	242.22	142.07	95.72	242	142	10	22							
2008	242.22	142.05	95.71	242	142	11	22							3
2008	242.77	142.32	95.725	242	142	15	22							
2008	242.05	142.195	95.7	242	142	19	22							
2008	242.78	142.17	95.7	242	142	3	22							
2008	242.21	142.69	95.72	242	142	27	22							
2008	242.89	142.125	95.75	242	142	1	22							
2008	242.57	142.1	95.71	242	142	6	22							2
2008	242.3	142.03	95.75	242	142	7	22							
2008	243.48	142.1	96.46	242	142	5								
2008	242.772	140.77	95.398	242	140	9	25	yes	exterior/interior	3				1
2008	242.27	141.26	95.47	242	140	2	26				cobble			
2008	242.23	141.42	95.47	242	140	5	26	yes	exterior	3				
2008	242.32	141.71	95.495	242	140	7	26							5
2008	242.64	141.86	95.385	242	140	1	28	yes	exterior	4				
2008	242.725	141.26	95.282	242	140	1	29							
2008	243.18	142.61	96.27	242	142	8	19	yes	exterior	5				
2008	244.45	139.425	96.575	244	138	2	12							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2008	244.63	139.235	96.59	244	138	3	12							
2008	244.46	139.655	96.57	244	138	4	12							
2008	244.585	139.49	96.595	244	138	5	12							
2008	244.53	139.37	96.58	244	138	6	12							
2008	244.185	139.32	96.575	244	138	7	12							
2008	244.11	139.245	96.605	244	138	8	12							
2008	244.055	139.2	96.57	244	138	9	12							
2008	244.97	139.42	96.603	244	138	10	12							1
2008	244.775	139.545	96.63	244	138	11	12							
2008	244.79	139.5	96.592	244	138	12	12							
2008	244.59	139.27	96.595	244	138	13	12							
2008	244.62	139.265	96.57	244	138	14	12							
2008	244.66	139.26	96.575	244	138	15	12							
2008	244.53	139.24	96.57	244	138	16	12							2
2008	244.365	139.095	96.575	244	138	17	12							
2008	244.605	139.21	96.593	244	138	18	12							
2008	244.63	139.225	96.58	244	138	19	12							
2008	244.77	139.245	96.585	244	138	20	12							
2008	244.77	139.205	96.57	244	138	21	12							
2008	244.92	139.185	96.565	244	138	22	12				possible			3
2008	244.29	139.035	96.58	244	138	23	12							
2008	244.64	139.22	96.563	244	138	24	12							
2008	244.36	139.1	96.56	244	138	26	12							
2008	244.44	139.7	96.515	244	138	2	13							
2008	244.56	139.585	96.56	244	138	3	13							
2008	244.695	139.44	96.54	244	138	4	13				yes			2

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2008	244.465	139.34	96.53	244	138	5	13							
2008	244.61	139.25	96.545	244	138	6	13							
2008	244.52	139.21	96.525	244	138	7	13							
2008	244.61	139.19	96.55	244	138	8	13							
2008	244.67	139.2	96.52	244	138	9	13							
2008	244.295	139.12	96.525	244	138	10	13							
2008	244.4	139.09	96.51	244	138	12	13							
2008	244.62	139.2	96.51	244	138	13	13							
2008	244.26	139.12	96.5	244	138	11	13				yes			
2008	244.46	139.63	96.5	244	138	1	14							
2008	244.73	139.635	96.47	244	138	2	14							2
2008	244.86	139.55	96.47	244	138	3	14							2
2008	244.73	139.44	96.49	244	138	4	14							
2008	244.4	139.16	96.475	244	138	5	14							
2008	244.375	139.15	96.48	244	138	6	14							
2008	244.35	139.14	96.47	244	138	7	14							
2008	244.31	139.12	96.47	244	138	8	14							2
2008	244.38	139.11	96.48	244	138	9	14							
2008	244.34	139.06	96.51	244	138	10	14							2
2008	244.31	139.03	96.49	244	138	11	14							
2008	244.29	139.055	96.47	244	138	12	14							
2008	244.7	139.44	96.45	244	138	1	15							
2008	244.545	139.31	96.455	244	138	2	15							
2008	244.495	139.24	96.43	244	138	3	15							
2008	244.42	139.19	95.45	244	138	4	15	yes	exterior	2	yes			2
2008	244.125	139.31	96.43	244	138	5	15							1

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2008	244.405	139.22	96.42	244	138	6	15							
2008	244.22	139.13	96.44	244	138	7	15							
2008	244.5	139.19	96.43	244	138	8	15	yes	exterior	10	yes			
2008	244.365	139.13	96.455	244	138	9	15				possible			2
2008	244.535	139.66	96.445	244	138	10	15							
2008	244.54	139.695	96.45	244	138	11	15							3
2008	244.665	139.78	96.42	244	138	12	15							
2008	244.785	139.805	96.41	244	138	14	15							
2008	244.11	139.63	96.4	244	138	15	15							
2008	244.83	139.33	96.42	244	138	16	15	yes	exterior	3				3
2008	244.32	139.11	96.405	244	138	17	15							
2008	244.17	139.75	96.41	244	138	18	15							
2008	244.18	139.25	96.46	244	138	19	15							
2008	244.385	139.097	96.44	244	138	20	15				possible			
2008	244.15	139.047	96.145	244	138	21	15							
2008	244.26	139.03	96.48	244	138	22	15	yes	exterior	4	yes			2
2008	244.405	139.08	96.47	244	138	23	15							
2008	244.6	139.38	96.43	244	138	13	15	yes	exterior	4				
2008	244.355	139.44	96.39	244	138	1	16							
2008	244.375	139.12	96.385	244	138	2	16							
2008	244.145	139.02	96.405	244	138	3	16							
2008	244.83	139.365	96.38	244	138	4	16	yes	exterior	2				3
2008	244.9	139.51	96.36	244	138	1	17							
2008	244.97	139.26	96.34	244	138	2	17							
2008	244.21	139.64	96.252	244	138	1	18							
2008	244.3	139.33	96.257	244	138	2	18							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2008	244.37	139.35	96.26	244	138	3	18							
2008	244.365	139.3	96.301	244	138	4	18							
2008	244.032	139.255	96.262	244	138	5	18							
2008	244.165	139.125	96.255	244	138	6	18							
2008	244.2	139.11	96.25	244	138	7	18							
2008	244.175	139.055	96.255	244	138	8	18							
2008	244.185	139.41	96.22	244	138	9	18							
2008	244.4	139.325	96.1775	244	138	1	20							
2008	244.3	139.3	96.1775	244	138	2	20							
2008	244.045	139.455	96.26	244	138	3	20							
2008	244.61	139	96.17	244	138	4	20							
2008	244.35	139.145	96.16	244	138	5	20							
2008	244.202	139.65	96.21	244	138	6	20				possible			1
2008	244.02	139.765	96.15	244	138	1	21							
2008	244.145	139.665	96.1	244	138	2	21							
2008	244.03	139.625	96.12	244	138	3	21							
2008	244.545	139.125	96.05	244	138	1	22							
2008	244.05	139.225	96.085	244	138	2	22							3
2008	244.035	139.56	96.09	244	138	3	22							
2008	244.155	139.655	96	244	138	4	22							
2008	244.455	139.845	95.985	244	138	1	24							
2008	244.585	139.815	95.91	244	138	1	25							2
2008	244.625	139.725	95.945	244	138	2	25							
2008	244.1	139.635	95.95	244	138	5	25							
2008	244.58	139.63	96.15	244	138	3	25							2
2008	244.32	139.775	95.845	244	138	1	26							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2008	244.25	139.24	95.85	244	138	2	26							
2008	244.245	139.35	95.86	244	138	3	26							
2008	244.09	139.655	95.82	244	138	1	27							
2008	244.73	139.795	95.75	244	138	1	28							
2008	244.46	139.615	95.67	244	138	1	30							
2008	244.49	139.19	95.67	244	138	2	30							1
2008	244.435	139.735	95.625	244	138	1	31							
2008	244.32	139.3	95.61	244	138	2	31							
2008	244.01	139.14	95.645	244	138	3	31							
2008	244.01	139.16	95.6	244	138	4	31							
2008	243.9	139.6	96.395	242	138	8								
2008	243.25	139.9	96.37	242	138	15								3
2008	243.675	139.47	96.375	242	138	16								
2008	243.69	143.99	96.44	242	138	1								
2009	243.03	139.77	95.67	242	138	1								
2008	243.265	139.565	96.78	242	138	3								
2008	243.13	139.905	96.37	242	138	3								
2008	242.1	141.84	95.35	242	140	18	28							
2008	243.24	142.8	96.04	242	142	1								
2008	243.55	142.57	96.715	242	142	2								
2008	242.09	142.99	96.345	242	142	3								
2008	242.24	142.64	95.85	242	142	5								
2008	242.21	142.93	96.025	242	142	14								
2008	242.79	142.69	95.75	242	142	18								
2008	242.14	142.64	96.15	242	142	48								
2008	244.66	139.72	96.52	244	138	1								

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2008	244.705	139.49	95.95	244	138	4								
2008	244.665	139.27	96.563	244	138	25								
2009	242.03	139.77	95.67	242	138	1	1							
2009	243.53	139.56	95.75	242	138	6	6							
2009	243.69	139.68	96.11	242	138	2	14							45
2009	243.45	139.78	96.3	242	138	1	14							0
2009	243.84	139.53	96.32	242	138	4	14	yes	exterior	1	possible			30
2009	243.44	139.55	96.35	242	138	3	14							0
2009	243.23	139.15	96.235	242	138	3	15							0
2009	243.73	139.17	96.26	242	138	2	15	yes	exterior	5				
2009	243.85	1339.43	96.26	242	138	1	15							0
2009	243.85	139.035	96.265	242	138	4	15							15
2009	243.59	139.825	96.2	242	138	6	16	possible				4		0
2009	243.7	139.37	96.2	242	138	4	16	yes	exterior	2		3		0
2009	243.03	139.03	96.2	242	138	5	16							0
2009	243.41	139.775	96.2	242	138	7	16							90
2009	243.75	139.66	96.205	242	138	2	16	possible						0
2009	243.78	139.64	96.225	242	138	3	16	possible						0
2009	243.69	139.91	96.25	242	138	1	16							15
2009	243.72	139.36	95.91	242	138	1	22							
2009	243.14	139.08	95.91	242	138	2	22							
2009	243.08	139.56	95.51	242	138	22	23							
2009	243.36	139.59	95.865	242	138	4	23							
2009	243.64	139.78	95.87	242	138	2	23	yes	exterior	2		3		
2009	243.25	139.87	95.88	242	138	1	23							
2009	243.01	139.16	95.885	242	138	5	23							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2009	243.11	139.01	95.89	242	138	6	23							
2009	243.64	139.79	95.815	242	138	2	24	yes	exterior	2		2		
2009	243.11	139.08	95.83	242	138	3	24							
2009	243.91	139.81	95.85	242	138	1	24							
2009	243.42	139.87	95.76	242	138	4	25							
2009	243.38	139.73	95.76	242	138	3	25							
2009	243.61	139.77	95.77	242	138	5	25					1		
2009	243.73	139.13	95.775	242	138	7	25							
2009	243.3	139.73	95.78	242	138	2	25							
2009	243.21	139.79	95.78	242	138	1	25							
2009	243.61	139.76	95.7	242	138	1	26							
2009	243.86	139.52	95.7	242	138	2	26							
2009	243.58	139.77	95.66	242	138	2	27							
2009	243.6	139.58	95.66	242	138	3	27							
2009	243.1	139.6	95.62	242	138	2	28							
2009	243.27	139.375	95.62	242	138	4	28							
2009	243.17	139.5	95.62	242	138	3	28							
2009	243.21	139.27	95.63	242	138	5	28							
2009	243.6	139.76	95.645	242	138	1	28	yes	exterior	5	yes	2		
2009	243.39	139.77	95.55	242	138	4	29					2		
2009	243.62	139.67	95.55	242	138	7	29					2		
2009	243.42	139.72	95.55	242	138	5	29							
2009	243.9	139.31	95.55	242	138	20	29					3		
2009	243.57	139.65	95.55	242	138	6	29							
2009	243.26	139.56	95.56	242	138	10	29					1		
2009	243.3	139.23	95.57	242	138	17	29							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2009	243.65	139.74	95.575	242	138	1	29							
2009	243.33	139.52	95.58	242	138	11	29							
2009	243.2	139.6	95.59	242	138	9	29							
2009	243.96	139.3	95.595	242	138	16	29					3		
2009	243.65	139.67	95.55	242	138	8	29							
2009	243.69	139.56	95.55	242	138	13	29							
2009	243.94	139.14	95.565	242	138	18	29					3		
2009	243.9	139.58	95.57	242	138	14	29	yes	exterior	2	yes	2		
2009	243.21	139.91	95.58	242	138	2	29							
2009	243.66	139.53	95.58	242	138	12	29							
2009	243.93	139.38	95.58	242	138	15	29							
2009	243.96	139.17	95.58	242	138	19	29							
2009	243.11	139.58	95.52	242	138	21	30					4		
2009	243.46	139.66	95.495	242	138	4	30	yes	exterior	1		4		
2009	243.25	139.84	95.5	242	138	10	30							30
2009	243.25	139.66	95.47	242	138	2	30	yes	exterior	4	yes			45
2009	243.22	139.79	95.52	242	138	11	30					3		30
2009	243.18	139.08	95.5	242	138	27	30							0
2009	243.78	139.47	95.53	242	138	17	30							0
2009	243.23	139.11	95.55	242	138	26	30							45
2009	243.46	139.63	95.5	242	138	14	30							45
2009	243.56	139.63	95.52	242	138	13	30							0
2009	243.11	139.71	95.53	242	138	16	30							0
2009	243.75	139.16	95.5	242	138	23	30							10
2009	243.32	139.59	95.505	242	138	20	30							0
2009	243.28	139.68	95.5	242	138	15	30					4		45

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2009	243.93	139.86	95.51	242	138	6	30							0
2009	243.44	139.55	95.51	242	138	19	30							10
2009	243.6	139.105	95.52	242	138	25	30							25
2009	243.76	139.62	95.53	242	138	12	30							30
2009	243.77	139.75	95.52	242	138	9	30					4		
2009	243.55	139.53	95.52	242	138	18	30							0
2009	243.99	139.735	95.51	242	138	5	30							45
2009	243.39	139.73	95.5	242	138	3	30							0
2009	243.92	139.8	95.51	242	138	7	30					2		0
2009	243.21	139	95.54	242	138	28	30							45
2009	243.23	139.56	95.45	242	138	24	30							0
2009	243.79	139.72	95.53	242	138	8	30							0
2009	243.41	139.79	95.53	242	138	1	30							
2009	243.9	139.2	95.48	242	138	31	31							0
2009	243.54	139.61	95.48	242	138	14	31							0
2009	243.015	139.47	95.48	242	138	30	31							45
2009	243.58	139.62	95.49	242	138	15	31							45
2009	243.22	139.12	95.455	242	138	37	31					3		30
2009	243.89	139.78	95.5	242	138	4	31							
2009	243.79	139.5	95.48	242	138	20	31				possible	3		0
2009	243.04	139.93	95.465	242	138	8	31					1		45
2009	243.2	139.48	95.47	242	138	28	31							0
2009	243.1	139.37	95.48	242	138	29	31							35
2009	243.7	139.53	95.45	242	138	18	31							48
2009	243.95	139.85	95.49	242	138	3	31							0
2009	243.3	139.34	95.45	242	138	26	31					2		0

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2009	243.52	139.33	95.47	242	138	25	31					3		0
2009	243.34	139.72	95.49	242	138	9	31					1		45
2009	243.25	139.55	95.49	242	138	12	31					2		0
2009	243.15	139.82	95.5	242	138	7	31	yes	exterior	2		1		0
2009	243.1	139.62	95.47	242	138	11	31							
2009	243.3	139.64	95.475	242	138	10	31							0
2009	243.6	139.03	95.455	242	138	35	31							30
2009	243.14	139.9	95.5	242	138	6	31					2		45
2009	243.85	139.22	95.45	242	138	39	31							40
2009	243.32	139.01	95.45	242	138	36	31							90
2009	243.86	139.84	95.47	242	138	5	31					3		45
2009	243.52	139.49	95.48	242	138	17	31							15
2009	243.74	139.49	95.46	242	138	19	31	yes	exterior	4				0
2009	243.6	139.61	95.45	242	138	23	31	yes	exterior	2	yes	3		0
2009	243.23	139.56	95.45	242	138	24	31					2		0
2009	243.92	139.79	95.435	242	138	38	31							30
2009	243.68	139.36	95.46	242	138	21	31							30
2009	243.6	139.38	95.465	242	138	22	31							45
2009	243.25	139.43	95.45	242	138	27	31							15
2009	243.69	139.05	95.46	242	138	34	31							0
2009	243.61	139.01	95.445	242	138	40	31	yes	Exterior/Interior	6	yes	2		0
2009	243.62	139.56	95.49	242	138	16	31	yes	exterior	2	yes	1		0
2009	243.5	139.62	95.48	242	138	13	31							40
2009	243.57	139.03	95.45	242	138	41	31					3		0
2009	243.92	139.04	95.48	242	138	33	31							0
2009	243.86	139.18	95.49	242	138	32	32							30

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2009	243.63	139.14	95.51	242	138	24								
2009	243.21	139.82	95.55	242	138	3								
2009	243.08	139.56	95.51	242	142	22	30							39
2009	243.77	142.7	96.01	242	142	1	24							
2009	243.18	142.06	96.03	242	142	2	24							
2009	243.22	142.33	95.95	242	142	3	25							
2009	243.44	142.31	95.95	242	142	4	25							
2009	243.58	142.08	95.96	242	142	2	25							
2009	243.85	142	95.97	242	142	1	25							
2009	243.57	142.56	95.97	242	142	5	25							
2009	243.675	142.725	95.97	242	142	6	25							
2009	243.39	142.39	95.97	242	142	7	25							
2009	243.445	142.14	95.045	242	142	2	26							70
2009	243.22	142.62	95.9	242	142	4	26							0
2009	243.09	142.82	95.915	242	142	6	26							30
2009	243.28	142.22	95.92	242	142	3	26							30
2009	243.37	142.82	95.93	242	142	5	26							45
2009	243.36	142.15	95.94	242	142	1	26							0
2009	243.33	142.23	95.86	242	142	2	27							90
2009	243.825	142.43	95.86	242	142	3	27							0
2009	243.61	142.15	95.88	242	142	1	27							0
2009	243.84	142.87	95.88	242	142	5	27							10
2009	243.8	142.39	95.89	242	142	4	27							5
2009	243.51	142.23	95.89	242	142	6	27							40
2009	243.69	142.1	95.81	242	142	3	28							
2009	243.83	242.34	95.82	242	142	1	28							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2009	243.38	142.34	95.83	242	142	7	28							
2009	243.17	142.32	95.83	242	142	5	28							
2009	243.3	142.37	95.84	242	142	6	28	yes	exterior	1		2		
2009	243.56	142.14	95.84	242	142	4	28							
2009	243.875	142.1	95.84	242	142	2	28				yes	1		
2009	243.25	142.125	95.75	242	142	3	29							
2009	243.85	142.65	95.75	242	142	5	29							
2009	243.05	142.89	95.78	242	142	4	29							
2009	243.82	242.12	95.79	242	142	1	29							
2009	243.04	142.27	95.79	242	142	2	29							
2009	243.45	142.92	95.7	242	142	11	30							0
2009	243.42	142.07	95.72	242	142	10	30							15
2009	243.43	142.68	95.745	242	142	12	30							0
2009	243.76	142.76	95.73	242	142	14	30							0
2009	243.27	142.655	95.71	242	142	7	30							0
2009	243.19	142.69	95.71	242	142	8	30							0
2009	243.87	142.95	95.71	242	142	13	30							0
2009	243.71	142.63	95.71	242	142	15	30							70
2009	243.09	142.16	95.71	242	142	18	30				yes	2		20
2009	243.05	142.76	95.72	242	142	6	30					2		
2009	243.64	142.47	95.72	242	142	17	30							90
2009	243.34	142.8	95.73	242	142	9	30							0
2009	243.62	142.52	95.73	242	142	16	30							0
2009	243.01	142.145	95.74	242	142	1	30							0
2009	243.32	142.29	95.74	242	142	3	30							20
2009	243.53	142.37	95.7	242	142	5	30							0

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2009	243.49	142.37	95.73	242	142	4	30					2		
2009	243.4	142.05	95.75	242	142	2	30							0
2009	243.11	142.82	95.71	242	142	19	30					90		
2009	243.72	142.69	95.66	242	142	14	31							0
2009	243.34	142.81	95.67	242	142	16	31							85
2009	243.47	142.915	95.67	242	142	11	31							0
2009	243.46	142.98	95.67	242	142	12	31	yes	exterior	2		2		
2009	243.79	142.08	95.69	242	142	1	31							20
2009	243.5	142.87	95.69	242	142	10	31							0
2009	243.54	142.75	95.66	242	142	15	31					1		45
2009	243.71	142.44	95.67	242	142	13	31							45
2009	243.83	142.67	95.67	242	142	16	31							0
2009	243.13	142.66	95.69	242	142	7	31					2		0
2009	243.27	142.85	95.69	242	142	8	31					0		
2009	243.05	142.09	95.66	242	142	2	31							0
2009	243.12	142.32	95.66	242	142	5	31							10
2009	243.295	142.12	95.68	242	142	4	31							0
2009	243.08	142.395	95.65	242	142	6	31							0
2009	243.22	142.1	95.66	242	142	3	31							0
2009	243.38	142.89	95.69	242	142	9	31							0
2009	243.06	142.75	95.6	242	142	25	32							
2009	243.33	142.18	95.62	242	142	4	32							
2009	243.15	142.15	95.63	242	142	3	32							
2009	243.32	142.54	95.63	242	142	13	32							
2009	243.06	142.96	95.63	242	142	18	32							
2009	243.49	142.56	95.64	242	142	15	32							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2009	243.03	142.48	95.65	242	142	16	32							
2009	243.71	142.69	95.63	242	142	21	32							
2009	243.09	142.035	95.62	242	142	1	32							
2009	243.21	142.5	95.61	242	142	12	32							
2009	243.64	142.945	95.68	242	142	22	32							
2009	243.19	142.71	95.6	242	142	24	32							
2009	243.51	142.1	95.6	242	142	2	32							
2009	243.63	142.89	95.64	242	142	23	32							
2009	243.29	142.34	95.6	242	142	8	32							
2009	243.32	142.27	95.62	242	142	7	32							
2009	243.09	142.38	95.62	242	142	9	32							
2009	243.255	142.48	95.64	242	142	11	32							
2009	243.39	142.19	95.6	242	142	10	32							
2009	243.21	142.79	95.63	242	142	17	32							
2009	243.27	142.28	95.62	242	142	6	32							
2009	243.33	142.225	95.61	242	142	5	32							
2009	243.36	142.575	95.61	242	142	14	32							
2009	243.16	142.92	95.61	242	142	19	32							
2009	243.49	142.79	95.64	242	142	20	32							
2009	243.42	142.95	95.56	242	142	28	33					3		
2009	243.16	142.93	95.57	242	142	40	33							
2009	243.06	142.36	95.58	242	142	8	33							
2009	243.03	142.455	95.58	242	142	10	33							
2009	243.12	142.88	95.59	242	142	26	33							
2009	243.13	142.96	95.59	242	142	27	33							
2009	243.35	142.75	95.57	242	142	34	33							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2009	243.05	142.43	95.58	242	142	7	33							
2009	243.1	142.33	95.59	242	142	6	33							
2009	243.38	142.65	95.59	242	142	31	33							
2009	243.01	142.92	95.59	242	142	25	33							
2009	243.13	142.75	95.59	242	142	35	33							
2009	243.18	142.73	95.595	242	142	29	33							
2009	243.24	142.27	95.56	242	142	12	33							
2009	243.17	142.185	95.57	242	142	1	33							0
2009	243.44	142.44	95.57	242	142	18	33							
2009	243.07	142.9	95.57	242	142	38	33							
2009	243.285	142.38	95.58	242	142	14	33							
2009	243.6	142.48	95.58	242	142	19	33	yes	exterior	3	yes			
2009	243.17	142.64	95.59	242	142	22	33							
2009	243.02	142.6	95.59	242	142	17	33							
2009	243.14	142.64	95.59	242	142	21	33							
2009	243.06	142.8	95.59	242	142	24	33							
2009	243.28	142.71	95.595	242	142	33	33							
2009	243.65	142.52	95.59	242	142	20	33							
2009	243.22	142.33	95.56	242	142	15	33							
2009	243.36	142.175	95.56	242	142	2	33							
2009	243.52	142.17	95.59	242	142	3	33							
2009	243.035	142.32	95.59	242	142	5	33							
2009	243.22	142.71	95.59	242	142	30	33							
2009	243.27	142.68	95.595	242	142	32	33							
2009	243.02	142.74	95.56	242	142	36	33							
2009	243.21	142.39	95.59	242	142	13	33							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2009	243.22	142.28	95.57	242	142	11	33					3		
2009	243.1	142,35	95.58	242	142	16	33							
2009	243.1	142.74	95.59	242	142	23	33							
2009	243.03	142.27	95.58	242	142	4	33							
2009	243.82	142.625	95.5	242	142	12	34							
2009	243.59	142.235	95.51	242	142	4	34							
2009	243.54	142.52	95.51	242	142	9	34							
2009	243.79	142.92	95.51	242	142	13	34							
2009	243.3	142.08	95.52	242	142	2	34							
2009	243.41	142.145	95.52	242	142	3	34							
2009	243.3	142.5	95.52	242	142	7	34							
2009	243.54	142.44	95.52	242	142	8	34							
2009	243.52	142.59	95.52	242	142	10	34							
2009	243.462	142.71	95.52	242	142	11	34							
2009	243.21	142.1	95.53	242	142	1	34							
2009	243.05	142.57	95.53	242	142	5	34							
2009	243.01	142.49	95.54	242	142	6	34							
2009	243.64	142.31	95.445	242	142	12	35							
2009	243.29	142.165	95.45	242	142	2	35							
2009	243.155	142.22	95.45	242	142	6	35							
2009	243.67	142.32	95.45	242	142	13	35							
2009	243.62	142.46	95.45	242	142	16	35					2		
2009	243.69	142.455	95.45	242	142	17	35							
2009	243.275	142.17	95.46	242	142	1	35							
2009	243.55	142.36	95.46	242	142	10	35							
2009	243.73	142.3	95.46	242	142	14	35					1		

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2009	243.825	142.34	95.46	242	142	15	35							
2009	243.34	142.12	95.47	242	142	3	35							
2009	243.75	142.06	95.47	242	142	7	35	yes	exterior	4	yes	3		
2009	243.59	142.275	95.47	242	142	9	35					3		
2009	243.56	142.4	95.47	242	142	11	35							
2009	243.41	142.16	95.48	242	142	5	35							
2009	243.37	142.1	95.49	242	142	4	35							
2009	243.43	142.095	95.49	242	142	8	35							
2009	243.02	142.92	95.58	242	142	37	37							
2009	243.11	142.88	95.57	242	142	39	39							
2009	242.54	142.42	95	242	142	10	23							
2009	242.92	142.52	95.655	242	142	7	23					2		
2009	242.12	142.24	95.66	242	142	5	23					4		
2009	242.64	142.41	95.66	242	142	6	23					4		
2009	242.105	142.17	95.665	242	142	4	23							
2009	242.33	142.86	95.665	242	142	12	23							
2009	242.07	142.74	95.665	242	142	14	23							
2009	242.1	142.075	95.67	242	142	3	23							
2009	242.55	142.49	95.67	242	142	8	23	yes	interior	2	yes	3		
2009	242.39	142.52	95.68	242	142	9	23	yes	interior	3	yes	3		
2009	242.49	142.65	95.68	242	142	11	23							
2009	242.38	142.35	95.68	242	142	13	23							
2009	242.35	142.12	95.7	242	142	2	23					1		
2009	242.88	142.13		242	142	1	23							
2009	242.85	142.11	95.6	242	142	2	24							
2009	242.39	142.11	95.6	242	142	4	24	yes	exterior/interior	5	yes	3		

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2009	242.32	142.04	95.6	242	142	5	24	yes	exterior	3	yes	4		
2009	242.23	142.05	95.6	242	142	6	24							
2009	242.62	142.95	95.6	242	142	9	24							
2009	242.47	142.43	95.6	242	142	10	24	yes	exterior	3	yes			
2009	242.34	142.62	95.6	242	142	15	24							
2009	242.74	142.86	95.6	242	142	18	24							
2009	242.86	142.15	95.61	242	142	3	24							
2009	242.56	142.29	95.61	242	142	8	24	yes	exterior/interior	2		2		
2009	242.26	142.5	95.61	242	142	11	24				yes	3		
2009	242.11	142.54	95.62	242	142	16	24							
2009	242.87	142	95.63	242	142	1	24	yes	exterior	3	yes	3		
2009	242.77	142.36	95.63	242	142	7	24	yes	exterior	5	yes	4		
2009	242.9	142.57	95.63	242	142	12	24							
2009	242.58	142.31	95.63	242	142	14	24	yes	exterior	4	yes	4		
2009	242.85	142.72	95.63	242	142	17	24							
2009	242.29	142.99	95.65	242	142	19	24	yes	exterior	3				
2009	242.79	142.01	95.55	242	142	3	25	yes	exterior	3	yes	3		
2009	242.77	142.02	95.55	242	142	5	25							
2009	242.7	142.01	95.55	242	142	6	25							
2009	242.2	142.41	95.55	242	142	19	25						0	0
2009	242.86	142.58	95.55	242	142	24	25							
2009	242.85	142.23	95.56	242	142	8	25							35
2009	242.71	142.61	95.57	242	142	26	25							45
2009	242.69	142.8	95.57	242	142	32	25							
2009	242.7	142.01	95.58	242	142	6	25							
2009	242.63	142.65	95.58	242	142		25							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2009	242.28	142.38	95.55	242	142	17	25	yes	exterior	1	yes	4		
2009	242.58	142.19	95.57	242	142	10	25	possible						
2009	242.23	142.26	95.57	242	142	13	25							0
2009	242.85	142.75	95.57	242	142	30	25				possible	3		
2009	242.86	142.78	95.58	242	142	31	25							0
2009	242.59	142.34	95.56	242	142	14	25							0
2009	242.4	142.75	95.57	242	142	34	25	yes						
2009	242.04	142.97	95.57	242	142	36	25				possible	3		
2009	242.88	142.55	95.55	242	142	23	25							
2009	242.65	142.59	95.58	242	142	27	25							
2009	242.63	142.59	95.59	242	142	25	25	yes	exterior	2	yes	2		
2009	242.23	142.51	95.55	242	142	22	25						0	0
2009	242.41	142.31	95.575	242	142	16	25							0
2009	242.45	142.53	95.575	242	142	21	25							90
2009	242.66	142.87	95.55	242	142		25	yes	exterior	2				
2009	242.79	142.06	95.56	242	142	4	25	yes	EXTERIOR					0
2009	242.64	142.14	95.56	242	142	9	25	possible						
2009	242.18	142.2	95.56	242	142	11	25	yes	exterior	4	yes	5		
2009	242.54	142.07	95.57	242	142	7	25							0
2009	242.09	142.7	95.57	242	142	33	25							
2009	242.78	142.01	95.58	242	142	2	25	yes	exterior	4	yes	4		
2009	242.48	142.37	95.58	242	142	15	25	yes	exterior/interior	5	yes			
2009	242.87	142.05	95.59	242	142	1	25							
2009	242.54	142.51	95.59	242	142	20	25						0	0
2009	242.35	142.14	95.57	242	142	12	25	yes	exterior	2				
2009	242.77	142.43	95.56	242	142	18	25	yes		2	possible	2	0	0

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2009	242.59	142.6		242	142	29	25							0
2009	242.49	142.23	95.5	242	142	3	26							0
2009	242.5	142.52	95.5	242	142	5	26						15	45
2009	242.57	142.39	95.51	242	142	4	26				yes			0
2009	242.69	142.51	95.51	242	142	7	26							40
2009	242.62	142.72	95.51	242	142	11	26							45
2009	242.49	142.11	95.52	242	142	2	26	yes	interior	1	yes	2		0
2009	242.3	142.67	95.52	242	142	6	26							0
2009	242.56	142.72	95.52	242	142	12	26							0
2009	242.7	142.8	95.52	242	142	14	26							30
2009	242.83	142.91	95.52	242	142	17	26		interior					45
2009	242.82	142.2	95.53	242	142	1	26							
2009	242.84	142.71	95.53	242	142	9	26							
2009	242.67	142.76	95.53	242	142	10	26							0
2009	242.68	142.81	95.53	242	142	13	26							45
2009	242.79	142.83	95.53	242	142	15	26							0
2009	242.85	142.81	95.53	242	142	16	26							30
2009	242.72	142.62	95.54	242	142	8	26							
2009	242.53	142.65	95.47	242	142	2	27				possible			45
2009	242.77	142.07	95.485	242	142	4	27	yes	exterior	5	yes			45
2009	242.68	142.8	95.49	242	142	1	27				yes			0
2009	242.56	142.81	95.495	242	142	3	27					1		90
2009	242.85	143.36	95.37	242	142	2	29				yes			
2009	242.86	142.8	95.375	242	142	4	29	yes	exterior	2	yes	3		
2009	243.01	142.45		242	142	9								
2009	242.65	142.67	95.62											

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2009	246.54	138.86	97.65	246	138	1	10							
2009	246.91	138.99	97.56	246	138	1	11						NA	NA
2009	246.58	138.68	97.56	246	138	1	11						NA	NA
2009	246.4	138.7	97.56	246	138	2	11						NA	NA
2009	246.39	138.87	97.49	246	138	1	12						0	0
2009	246.7	138.92	97.55	246	138	1	12	yes	Exterior	4	yes	3	NA	NA
2009	246.37	138.82	97.5	246	138	2	12	yes	Exterior	6	yes	4	0	0
2009	246.4	138.55	97.53	246	138	2	12						NA	NA
2009	246.42	138.5	97.52	246	138	3	12							
2009	246.39	138.34	97.53	246	138	3	12					1	NA	NA
2009	246.95	138.9	97.52	246	138	4	12							
2009	246.39	138.1	97.53	246	138	4	12						BA	NA
2009	246.71	138.16	97.52	246	138	5	12						NA	NA
2009	246.94	138.1	97.55	246	138	6	12						NA	NA
2009	246.82	138.36	97.54	246	138	7	12				yes		NA	NA
2009	246.96	138.77	97.5	246	138	1	13						0	0
2009	246.97	139.05	97.47	246	138	1	13				yes		NA	NA
2009	246.34	138.55	97.5	246	138	1	13							0
2009	246.47	139.53	97.43	246	138	1	**14**							
2009	246.54	139.53	97.42	246	138	2	14							
2009	246.26	139.13	97.35	246	138	1	15	yes	exterior/interior	15	yes		NA	NA
2009	246.7	138.28	97.42	246	138	1	15	yes	Exterior	4	yes		0	0
2009	246.6	139.38	97.35	246	138	2	15						NA	NA
2009	246.9	138.76	97.34	246	138	2	15						0	0
2009	246.67	139.62	97.32	246	138	1	16						0	0
2009	246.97	139.36	97.32	246	138	2	16						o	o

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2009	246.92	139.55	97.32	246	138	1	17						0	0
2009	246.45	138.83	97.3	246	138	1	17	yes	exterior	3	yes			
2009	246.83	139.36	97.29	246	138	2	17						0	0
2009	246.37	138.47	97.29	246	138	2	17							
2009	246.83	139.36	97.22	246	138	1	18						0	
2009	246.79	139.1	97.2	246	138	2	18						0	0
2009	246.13	139.88	97.16	246	138	1	19						NA	NA
2009	247	139.86	97.1	246	138	1	20						0	0
2009	246.16	138.52	97.15	246	138	1	20					3		
2009	246.89	138.14	97.07	246	138	1	21	possible			yes	4		
2009	247.55	141.66	97.44	246	140	1	23						NA	NA
2009	247.65	141.5	97.48	246	140	2	23				yes		NA	NA
2009	247.67	141.76	97.43	246	140	3	23							
2009	247.36	141.1	97.4	246	140	4	23	yes	exterior/interior	4	yes		NA	NA
2009	247.9	141.65	97.4	246	140	5	23							
2009	247.95	141.63	97.4	246	140	6	23				Yes		NA	NA
2009	247.96	141.76	97.46	246	140	7	23						NA	NA
2009	247.98	141.74	97.45	246	140	8	23						NA	NA
2009	247.55	140.4	97.49	246	140	1	23						NA	NA
2009	247.12	140.58	97.39	246	140	2	23						x	x
2009	247.12	140.76	97.39	246	140	3	23						x	x
2009	247.52	140.99	97.39	246	140	4	23							
2009	247.9	140.68	97.43	246	140	5	23						x	x
2009	247.74	141.98	97.4	246	140	1	24						NA	NA
2009	247.88	141.8	97.4	246	140	2	24						NA	NA
2009	247.61	141.79	97.47	246	140	3	24						NA	NA

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2009	247.37	141.81	97.39	246	140	4	24				yes		NA	NA
2009	247.22	141.69	97.36	246	140	5	24						NA	NA
2009	247.17	141.08	97.4	246	140	6	24						NA	NA
2009	246.68	141.24	97.4	246	140	1	24							
2009	246.8	141.05	97.37	246	140	2	24							
2009	246.63	141.16	97.4	246	140	3	24							
2009	246.42	141.31	97.39	246	140	4	24	yes	Interior	2	yes			
2009	246.24	141.64	97.38	246	140	5	24							
2009	246.33	141.61	97.39	246	140	6	24							
2009	246.36	141.61	97.37	246	140	7	24							
2009	247.27	141.77	97.34	246	140	1	25						0	0
2009	246.7	140.77	97.35	246	140	1	25						0	0
2009	245.43	140.97	97.35	246	140	2	25				yes			
2009	246.3	142.6	97.33	246	140	3	25						0	90
2009	246.42	140.64	97.3	246	140	1	26						0	0
2009	246.56	141.34	97.4	246	140	1	F107						NA	NA
2009	246.79	141.46	97.215	246	140	2	F107						0	0
2009	246.65	141.645	97.247	246	140	3	F107						NA	NA
2009	246.58	141.68	97.275	246	140	4	F107						NA	NA
2009	246.38	141.52	97.278	246	140	5	F107						NA	NA
2009	246.27	141.64	97.26	246	140	6	F107						NA	NA
2009	246.3	141.56	97.22	246	140	7	F107						NA	NA
2009	246.53	141.745	97.212	246	140	8	F107						0	0
2009	246.92	141.505	97.275	246	140	9	F107						NA	NA
2009	246.455	141.4	97.202	246	140	10	F107						NA	NA
2009	246.625	141.48	97.155	246	140	11	F107						NA	NA

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2009	246.33	141.31	97.47	246	140	1	F94						NA	NA
2009	246.31	141.41	97.46	246	140	2	F94				yes		NA	NA
2009	246.27	141.24	97.33	246	140	3	F94						NA	NA
2009	246.92	141.06	97.46	246	140	4	F94						NA	NA
2009	246.66	141.43	97.36	246	140	5	F94						NA	NA
2009	246.2	141.3	97.5	246	140	6	F94						NA	NA
2009	246.2	141.45	97.49	246	140	7	F94						NA	NA
2009	244.406	141.31	97.48	246	140	8	F94					2		
2009	246.56	141.1	97.44	246	140	9	F94	yes	exterior	4	yes		NA	NA
2009	246.45	141.45	97.45	246	140	10	F94						NA	NA
2009	246.2	141.57	97.43	246	140	11	F94						NA	NA
2009	246.48	141.18	97.44	246	140	12	F94						NA	NA
2009	246.405	141.14	97.47	246	140	13	F94						NA	45
2009	246.48	141.3	97.435	246	140	14	F94						NA	NA
2009	246.295	141.29	97.46	246	140	15	F94						NA	NA
2009	246.445	141.245	97.47	246	140	16	F94						NA	NA
2009	246.4	141.3	97.44	246	140	17	F94						NA	NA
2009	246.33	141.33	97.44	246	140	18	F94						NA	NA
2009	246.58	141.235	97.395	246	140	19	F94					3	NA	NA
2009	246.65	141.305	97.395	246	140	20	F94						NA	NA
2009	246.68	141.27	97.38	246	140	21	F94						NA	NA
2009	246.xx	140.xx	97.3	246	140			yes	exterior/interior	4	yes		NA	NA
2009	246.2	142.97	97.45	246	142	1	27							25
2009	246.55	142.91	97.36	246	142	2	27							0
2009	248.16	141.35	97.36	248	140	1	3							0
2009	248.56	140.8	128cmbs	248	140	1	20	yes	exterior	4	yes			

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2009	248.73	140.88	97.59	248	140	1	21						0	0
2009	248.3	140.82	97.64	248	140	2	21						25	0
2009	248.55	140.26	97.59	248	140	3	21						0	0
2009	248.35	140.24	97.6	248	140	4	21				yes		0	0
2009	248.27	140.78	97.6	248	140	5	21						30	0
2009	248.34	140.64	97.59	248	140	6	21						0	0
2009	248.93	140.8	97.56	248	140	7	21						0	0
2009	248.17	140.34	97.6	248	140	8	21						0	0
2009	248.18	141.13	97.51	248	140	1	22				possible		0	30
2009	248.45	141.01	97.67	248	140	2	22						0	0
2009	248.27	141.7	97.55	248	140	2	22	yes	exterior	7				0
2009	248.62	141.02	97.52	248	140	3	22				yes		0	0
2009	248.87	141.01	97.51	248	140	4	22						0	0
2009	248.38	141.75	129cmbd	248	140	5	22							30
2009	248.71	141.59	97.52	248	140	5	22						0	0
2009	248.44	141.59	133cmbd	248	140	6	22				possible			0
2009	248.88	141.6	97.51	248	140	6	22						0	0
2009	248.44	141.77	131cmbd	248	140	7	22							35
2009	248.12	141.68	135cmbd	248	140	8	22							
2009	248.1	141.74	134cmbd	248	140	9	22							32
2009	248.17	141.99	139cmbd	248	140	10	22	yes	exterior	3	possible			0
2009	248.57	141.6	135cmbd	248	140	12	22							0
2009	248.07	140.78	97.5	248	140	1	22						0	0
2009	248.55	140.09	97.53	248	140	1	22						0	0
2009	248.82	140.06	97.52	248	140	2	22						0	0
2009	248.89	140.22	97.41	248	140	3	22						0	0

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2009	248.01	141.86	97.49	248	140	1	23						30	0
2009	248.05	140.47	97.48	248	140	1	23						0	0
2009	248.49	140.84		248	140	2	23						0	0
2009	248.81	140.84	97.49	248	140	3	23						0	0
2009	248.6	141.38	97.39	248	140	1	24							
2009	248.98	141.41	97.46	248	140	2	24					1	0	0
2009	248.57	140.92	97.5	248	140	1	24							0
2009	248.3	140.24	97.44	248	140	2	24	yes	exterior	5				0
2009	248.77	140.89	97.4	248	140	3	24							0
2009	248.58	140.63	97.42	248	140	4	24							0
2009	248.91	140.28	97.48	248	140	5	24						0	0
2009	248.12	140.57	97.44	248	140	6	24						0	30
2009	248.39	140.41	97.41	248	140	7	24						0	0
2009	248.06	141.67	97.52	248	140	3	F105	yes	exterior	5	yes		NA	NA
2009	248.58	141.6	140cmbd	248	140	11	F105						0	0
2009	247.32	141.875	97.324	246	140	1	1						0	0
2009	247.1	141.42	97.21	246	140	2	3						0	0
2009	247.54	141.71	97.2	246	140	1	3					2	0	0
2009	247.02	141.48	97.2	246	140	3	3						NA	NA
2009	246.18	141.18	97.24	246	140	1	3						45	0
2009	246.18	141.18	97.24	246	140	1	3							0
2009	246.35	141.19	97.31	246	140	2	3						45	0
2009	247.06	141.12	97.17	246	140	1	4						45	0
2009	247	141.47	97.2	246	140	1	4						0	50
2009	246.465	141.43	97.15	246	140	6	4					5		0
2009	246.15	141.43	97.195	246	140	3	4							0

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2009	246.978	141.27	97.19	246	140	9	4							0
2009	246.505	141.855	97.18	246	140	1	4					2		0
2009	246.235	141.05	97.197	246	140	5	4						0	
2009	246.13	141.42	97.185	246	140	4	4							
2009	246.05	141.55	97.185	246	140	2	4							45
2009	246.935	141.35	97.16	246	140	8	4							
2009	246.4	141.31	97.155	246	140	7	4							
2009	246.19	141.38	97.1	246	140	1	5						NA	NA
2009	246.07	141.26	97.1	246	140	2	5						0	0
2009	246.92	141.8	97.135	246	140	9	5						0	45
2009	246.532	141.12	97.14	246	140	4	5						0	0
2009	246.37	141.39	97.1	246	140	5	5						0	0
2009	246.06	141.8	97.15	246	140	7	5						0	0
2009	246.995	141.86	97.115	246	140	10	5					4	0	0
2009	246.4	141.63	97.15	246	140	8	5					3	0	0
2009	246.15	141.665	97.125	246	140	6	5							0
2009	246.515	141.03	97.15	246	140	1	5						0	45
2009	246.673	141.12	97.11	246	140	3	5						0	0
2009	246.655	141.0325	97.15	246	140	2	5				yes	1	0	0
2009	246.28	141.86	97.08	246	140	3	6						0	0
2009	246.11	141.83	97.08	246	140	2	6						0	0
2009	246.85	141.27	97.07	246	140	5	6						30	0
2009	246.82	141.15	97.07	246	140	6	6				yes		0	0
2009	246.77	141.43	97.08	246	140	4	6				Possible	2	0	0
2009	247.92	141.26	97.03	246	140	2	7					2	NA	0
2009	247.88	141.73	96.99	246	140	3	7						NA	0

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2009	247.73	141.73	97	246	140	1	7						NA	0
2009	247.07	141.205	97.04	246	140	4	7						NA	0
2009	246.835	141.44	97.04	246	140	9	7						0	45
2009	246.05	141.16	97.04	246	140	1	7						0	20
2009	246.27	141.8	97.04	246	140	11	7						0	15
2009	246.37	141.19	97.03	246	140	4	7						0	0
2009	246.63	141.13	97.01	246	140	6	7						0	0
2009	246.8	141.43	97	246	140	10	7						0	10
2009	246.67	141.4	97.01	246	140	8	7	yes	exterior	3	yes	2	0	0
2009	246.5	141.33	97.01	246	140	5	7						0	0
2009	246.7	141.235	97.03	246	140	7	7						0	20
2009	246.14	141.22	97	246	140	2	7						0	0
2009	246.2	141.74	97	246	140	12	7						0	45
2009	246.34	141.06	97.02	246	140	3	7						0	30
2009	246.87	141.05	96.965	246	140	6	8							0
2009	246.74	141.58	96.96	246	140	10	8							0
2009	246.91	141.35	96.98	246	140	9	8							10
2009	246.26	141.02	97	246	140	1	8							0
2009	246.88	141.06	96.97	246	140	5	8							20
2009	246.59	141.91	96.96	246	140	11	8							20
2009	246.13	141.87	96.98	246	140	7	8							45
2009	246.13	141.28	96.98	246	140	3	8							0
2009	246.21	141.17	97	246	140	2	8							0
2009	246.83	141.37	96.95	246	140	8	8							45
2009	246.59	141.27	96.91	246	140	9	9						0	0
2009	246.05	141.91	96.91	246	140	1	9						20	20

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2009	246.88	141.38	96.92	246	140	10	9						0	0
2009	246.15	141.71	96.91	246	140	4	9						0	0
2009	246.15	141.39	96.98	246	140	4	9							0
2009	246.4	141.91	96.92	246	140	2	9						20	20
2009	246.31	141.6	96.92	246	140	5	9				0		0	
2009	246.35	141.4	96.92	246	140	7	9						45	0
2009	246.72	141.75	96.92	246	140	6	9						30	0
2009	246.15	141.76	96.9	246	140	3	9	Possible					30	0
2009	246.63	141.1	96.94	246	140	11	9						45	0
2009	246.07	141.45	96.9	246	140	8	9							0
2009	246.34	141.01	96.87	246	140	1	10					4	0	45
2009	246.56	141.14	96.895	246	140	2	10					4	20	0
2009	246.48	141.2	96.86	246	140	3	10						40	0
2009	246.64	141.385	96.88	246	140	5	10						0	0
2009	246.52	141.48	96.89	246	140	6	10							0
2009	246.46	141.36	96.88	246	140	4	10					2	0	0
2009	246.11	141.69	96.89	246	140	8	10				yes		50	30
2009	246.68	141.58	96.86	246	140	7	11						x	x
2009	246.74	142	97.38	246	142	1	1							
2009	246.37	142.1	97.41	246	142	1	1						0	30
2009	246.717	142.76	97.35	246	142	6	2					2		
2009	246.21	142.59	97.315	246	142	3	2					3		
2009	246.27	142.9	97.32	246	142	4	2							
2009	246.045	142.19	97.32	246	142	1	2							
2009	246.58	142.45	97.302	246	142	5	2							
2009	246.19	142.4	97.3	246	142	2	2							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2009	246.83	142.2	97.32	246	142	7	2					2		
2009	246.59	142.215	97.282	246	142	5	3							
2009	246.288	142.93	97.27	246	142	9	3					3		15
2009	246.305	142.9	97.283	246	142	8	3					2		0
2009	246.26	142.92	97.257	246	142	10	3					2		0
2009	246.457	142.18	97.3	246	142	1	3					4		0
2009	246.79	142.46	97.3	246	142	3	3							0
2009	246.1	142.63	97.261	246	142	7	3							
2009	246.142	142.6	97.296	246	142	6	3							0
2009	246.8	142.392	97.26	246	142	4	3							0
2009	246.427	142.573	97.26	246	142	3	3							0
2009	248.32	140.76	97.32	248	140	1	2	yes	Exterior	7	yes	2	0	0
2009	248.39	140.1	97.33	248	140	2	2						0	0
2009	248.2	140.26	97.25	248	140	1	3						0	0
2009	248.65	140.89	97.29	248	140	4	3						0	0
2009	248.94	140.13	97.3	248	140	3	3						0	0
2009	248.28	140.14	97.3	248	140	2	3						0	0
2009	248.48	140.82	97.22	248	140	2	4						0	0
2009	248.46	140.82	97.22	248	140	1	4						0	0
2009	246.45	141.08	97.25	248	140	1	5	yes	exterior	3		2		
2009	248.24	140.4	97.15	248	140	1	5						NA	NA
2009	248.1	140.12	97.15	248	140	2	5						NA	NA
2009	248.03	141.08	97.2	248	140	1	6						NA	NA
2009	248.68	141.88	97.2	248	140	2	6						NA	NA
2009	248.565	140.36	97.145	248	140	1	6				yes		15	0
2009	248.74	140.235	97.155	248	140	2	6				yes		0	0

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2009	248.835	141.8	97.21	248	140	2	7						0	0
2009	248.83	141.18	97.175	248	140	1	7						0	0
2009	248.67	140.335	97.09	248	140	1	7				yes		0	0
2009	248.92	141.11	97.16	248	140	2	8						0	45
2009	248.233	141.255	97.135	248	140	1	8						0	45
2009	248.945	141.13	97.16	248	140	3	8						0	0
2009	248.67	141.555	97.12	248	140	4	8						0	0
2009	248.615	141.615	97.1	248	140	5	8						0	30
2009	248.42	140.75	97.01	248	140	1	8				yes		90	0
2009	248.46	141.44	97.1	248	140	2	9						0	0
2009	248.215	141.11	97.1	248	140	1	9						0	0
2009	248.67	141.67	97.07	248	140	4	9	yes	exterior	4	yes		0	30
2009	248.75	141.57	97.06	248	140	3	9						0	0
2009	248.18	140.05	96.95	248	140	1	9						0	0
2009	248.41	140.08	96.95	248	140	7	9						0	0
2009	248.49	140.3	96.95	248	140	4	9						0	0
2009	248.26	140.36	96.97	248	140	6	9				yes	2	0	0
2009	248.175	140.235	96.96	248	140	3	9						0	0
2009	248.41	140.19	96.99	248	140	2	9						0	0
2009	248.665	141.13	97.05	248	140	4	10						0	0
2009	248.55	141.645	97.03	248	140	5	10						0	0
2009	248.86	141.22	97.05	248	140	3	10						0	0
2009	248.95	141.21	97.04	248	140	2	10				yes		0	0
2009	248.435	141.29	97.015	248	140	1	10						0	0
2009	248.3	140.11	96.9	248	140	2	10						0	0
2009	248.15	140.245	96.94	248	140	4	10						0	0

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2009	248.54	140.19	96.92	248	140	3	10						0	0
2009	248.23	140.3	96.92	248	140	5	10						0	0
2009	248.26	140.05	96.9	248	140	6	10						0	30
2009	24826	140.33	96.9	248	140	1	10					4	0	0
2009	248.5	141.115	96.99	248	140	1	11					3	45	0
2009	248.89	141.3	97	248	140	3	11						0	0
2009	248.69	141.23	96.97	248	140	2	11						0	0
2009	248.46	141.545	97	248	140	4	11						0	0
2009	248.19	141.735	96.93	248	140	3	12	yes	exterior	6	yes	3	0	0
2009	248.27	141.1	96.91	248	140	2	12						0	45
2009	248.26	141.16	96.915	248	140	1	12						0	0
2009	246.57	142.43	97.26	246	142	2	3							
2009	248.115	140.32	96.95	248	140	5	9							
2009	243.08	139.71	95.88	242	138	3								
2009	243.78	139.27	95.45	242	138	1								
2009	243.54	139.08	95.46	242	138	2								
2009	244.9	138.7	97.17	244	138			yes	exterior	2	yes	4		
2010	246.52	140.55	97.243	246	140	6	1	yes	exterior	6			71	1
2010	246.36	140.635	97.258	246	140	4	1						40	1
2010	247.01	140.955	97.378	246	140	1	1							
2010	246.5	140.44	97.238	246	140	3	1						80	0
2010	247.945	140.81	97.25	246	140	2	1							
2010	246.94	140.63	97.238	246	140	2	1						329	2
2010	247.745	140.55	97.253	246	140	3	1							
2010	246.91	140.98	97.253	246	140	5	1						71	1
2010	246.66	140.925	97.283	246	140	1	1						4	10

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2010	247.45	140.78	97.238	246	140	1	2							
2010	246.66	140.8	97.258	246	140	1	2							
2010	247.18	140.87	97.208	246	140	2	2							
2010	246.6	140.61	97.198	246	140	3	3							
2010	246.21	140.915	97.208	246	140	1	3					2		
2010	247.69	140.77	97.178	246	140	1	3							
2010	246.46	140.92	97.208	246	140	2	3							
2010	246.42	140.62	97.163	246	140	9	4	yes	exterior	3		2		
2010	246.76	140.18	97.168	246	140	14	4	yes	exterior	3		3		
2010	246.17	140.95	97.168	246	140	3	4							
2010	247.635	140.97	97.108	246	140	2	4							
2010	247.07	140.95	97.098	246	140	5	4							
2010	247.659	140.54	97.128	246	140	7	4							
2010	247.905	140.965	97.098	246	140	1	4							
2010	247.13	140.72	97.068	246	140	6	4							
2010	247.05	140.97	97.118	246	140	3	4							
2010	247.08	140.88	97.118	246	140	4	4							
2010	247.11	140.12	97.108	246	140	9	4							
2010	247.87	140.57	97.123	246	140	8	4							
2010	246.5	140.94	97.178	246	140	5	4							
2010	246.16	140.73	97.183	246	140	7	4							
2010	246.93	140.56	97.168	246	140	12	4							
2010	246.63	140.28	97.138	246	140	13	4							
2010	246.15	140.99	97.188	246	140	1	4							
2010	246.22	140.99	97.188	246	140	2	4							
2010	246.47	140.99	97.188	246	140	4	4							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2010	246.83	140.88	97.188	246	140	6	4							
2010	246.29	140.72	97.178	246	140	8	4							
2010	246.13	140.51	97.168	246	140	10	4							
2010	246.56	140.5	97.168	246	140	11	4							
2010	246.6	140.13	97.148	246	140	15	4					3		
2010	247.41	140.75	97.088	246	140	2	5	yes	exterior	6			53	20
2010	247.56	140.785	97.078	246	140	1	5	yes	exterior/interior	14			35	45
2010	247.18	140.75	97.063	246	140	13	5						50	16
2010	247.42	140.93	97.078	246	140	7	5					4	13	55
2010	247.485	140.61	97.048	246	140	14	5						103	17
2010	247.08	140.73	97.088	246	140	12	5						22	7
2010	247.12	140.48	97.068	246	140	15	5						70	15
2010	247.395	140.59	97.058	246	140	17	5						312	27
2010	247.13	140.64	97.088	246	140	16	5						320	40
2010	247.55	140.95	97.048	246	140	6	5						65	30
2010	247.65	140.78	97.048	246	140	10	5						82	55
2010	247.335	140.86	97.058	246	140	8	5						29	3
2010	247.19	140.1	97.048	246	140	18	5						74	5
2010	247.98	140.5	97.088	246	140	11	5							
2010	247.52	140.8	97.058	246	140	19	5						315	0
2010	247.81	140.97	97.073	246	140	5	5							
2010	247.385	140.85	97.043	246	140	9	5						125	40
2010	247.315	140.81	97.088	246	140	3	5						76	42
2010	247.045	140.94	97.098	246	140	4	5						92	22
2010	247.04	141.42	96.95	246	140	4	8					3		
2010	247.56	141.935	96.94	246	140	3	8							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2010	247.755	141.6	96.94	246	140	2	8							
2010	247.542	141.065	97.979	246	140	1	8							
2010	247.48	141.15	96.89	246	140	6	9						302	90
2010	247.52	141.32	96.89	246	140	5	9						342	2
2010	247.71	141.14	96.89	246	140	4	9						90	47
2010	247.71	141.3	96.89	246	140	3	9						358	10
2010	247.98	141.88	96.91	246	140	2	9						0	5
2010	247.26	141.15	96.89	246	140	8	9						32	65
2010	247.08	141.37	96.91	246	140	9	9						65	18
2010	247.3	141.46	96.88	246	140	7	9						87	5
2010	247.64	141.47	96.92	246	140	1	9						252	60
2010	247.66	141.68	96.88	246	140	17	10	yes	exterior	1			46	14
2010	247.8	141.74	96.82	246	140	18	10						292	0
2010	247.8	141.31	96.83	246	140	5	10						330	10
2010	247.54	141.3	96.83	246	140	8	10						352	90
2010	247.36	141.62	96.87	246	140	15	10						21	45
2010	247.65	141.09	96.85	246	140	4	10						289	13
2010	247.57	141.33	96.86	246	140	7	10						3	45
2010	247.12	141.31	96.87	246	140	12	10						70	90
2010	247.99	141.88	96.84	246	140	25	10						252	30
2010	247.99	141.09	96.85	246	140	1	10					2	22	6
2010	247.89	141.08	96.85	246	140	2	10						292	0
2010	247.84	141.05	96.83	246	140	3	10						345	0
2010	247.65	141.35	96.86	246	140	6	10						349	12
2010	247.32	141.22	96.83	246	140	10	10						23	0
2010	247.25	141.47	96.87	246	140	14	10						282	40

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2010	247.42	141.59	96.84	246	140	16	10						320	90
2010	247.88	141.68	96.86	246	140	19	10						310	0
2010	247.79	141.91	96.84	246	140	20	10						30	0
2010	247.43	141.76	96.86	246	140	21	10						44	45
2010	247.25	141.76	96.84	246	140	22	10						350	0
2010	248	141.6	96.83	246	140	26	10						48	0
2010	247.43	141.3	96.84	246	140	9	10						24	90
2010	247.08	141.1	96.86	246	140	11	10						68	0
2010	247.14	141.36	96.86	246	140	13	10						358	90
2010	247.2	141.78	96.89	246	140	23	10						280	0
2010	247.07	141.65	96.86	246	140	24	10						242	90
2010	246.225	142.13	97.22	246	142	2	4						320	90
2010	246.045	142.32	97.24	246	142	4	4						90	20
2010	246.92	142.85	97.245	246	142	6	4						80	0
2010	246.87	142.1	97.218	246	142	3	4						63	28
2010	246.65	142.78	97.23	246	142	5	4					3	70	15
2010	246.52	142.36	97.24	246	142	1	4						60	0
2010	246.67	142.92	97.2	246	142	7	4						85	0
2010	246.61	142.77	97.14	246	142	7	5	yes	exterior	3				
2010	246.28	142.04	97.2	246	142	1	5							
2010	246.59	142.14	97.19	246	142	3	5							
2010	246.07	142.38	97.14	246	142	2	5							
2010	246.71	142.31	97.17	246	142	5	5							
2010	246.49	142.72	97.16	246	142	8	5							
2010	246.2	142.89	97.14	246	142	9	5							
2010	246.1	142.84	97.18	246	142	10	5							

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2010	246.89	142.27	97.15	246	142	6	5							
2010	246.64	142.22	97.17	246	142	4	5							
2010	246.28	142.825	97.133	246	142	9	6						165	0
2010	246.94	142.165	97.138	246	142	1	6						40	90
2010	246.17	142.11	97.148	246	142	4	6						175	15
2010	246.775	142.81	97.123	246	142	10	6						180	25
2010	246.27	142.4	97.123	246	142	5	6						180	35
2010	246.53	142.17	97.143	246	142	3	6						200	25
2010	246.84	142.44	97.143	246	142	7	6						110	10
2010	246.57	142.24	97.123	246	142	2	6						190	25
2010	246.61	142.42	97.143	246	142	6	6					4	80	30
2010	246.57	142.51	97.128	246	142	8	6						235	35
2010	246.19	142.54	97.103	246	142	8	7						99	0
2010	246.68	142.325	97.088	246	142	2	7						18	45
2010	246.45	142.22	97.123	246	142	4	7						42	0
2010	246.75	142.725	97.108	246	142	9	7						32	55
2010	246.17	142.87	97.098	246	142	15	7						105	90
2010	246.735	142.8925	97.098	246	142	12	7						62	85
2010	246.375	142.23	97.073	246	142	16	7						48	0
2010	246.74	142.645	97.083	246	142	5	7						310	0
2010	246.625	142.265	97.078	246	142	3	7						22	0
2010	246.71	142.62	97.098	246	142	6	7						330	0
2010	246.775	142.135	97.068	246	142	1	7						218	0
2010	246.32	142.82	97.053	246	142	11	7						27	30
2010	246.5	142.95	97.135	246	142	14	7						360	15
2010	246.58	142.93	97.123	246	142	13	7						58	0

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2010	246.295	142.605	97.1055	246	142	7	7						58	0
2010	246.15	142.7	97.108	246	142	10	7						50	15
2010	246.41	142.675	97.013	246	142	9	8						40	0
2010	246.07	142.29	97.043	246	142	3	8						15	0
2010	246.79	142.43	97.053	246	142	5	8						90	25
2010	246.71	142.715	97.023	246	142	8	8							
2010	246.245	142.35	97.043	246	142	4	8						90	80
2010	246.225	142.63	97.013	246	142	10	8						40	30
2010	246.735	142.725	97.033	246	142	7	8						140	0
2010	246.635	142.2	97.023	246	142	1	8						93	10
2010	246.49	142.18	97.013	246	142	2	8						45	25
2010	246.71	142.51	97.038	246	142	6	8						20	0
2010	248.09	141.05	96.878	248	140	9	12						260	15
2010	248.015	141.58	96.878	248	140	12	12						180	20
2010	248.09	141.33	96.848	248	140	14	13	yes	exterior	7				
2010	248.27	141.04	96.888	248	140	10	13						215	70
2010	248.04	141.84	96.888	248	140	2	13						230	0
2010	248.02	141.31	96.868	248	140	13	13						225	75
2010	248.63	141.155	96.858	248	140	8	13						260	15
2010	248.76	141.64	96.878	248	140	4	13						85	85
2010	248.76	141.11	96.895	248	140	7	13						310	0
2010	248.15	141.505	96.878	248	140	6	13						170	0
2010	248.14	141.6	96.888	248	140	5	13						180	20
2010	248.015	141.23	96.858	248	140	11	13						180	5
2010	248.13	141.73	96.868	248	140	3	13						120	25
2010	248.24	141.64	96.8	248	140	9	14	yes	exterior/interior	8			220	15

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2010	248.45	141.69	96.828	248	140	6	14						95	0
2010	248.84	141.85	96.808	248	140	7	14						30	0
2010	248.115	141.65	96.808	248	140	5	14						120	0
2010	248.065	141.05	96.838	248	140	2	14						225	35
2010	248.015	141.44	96.828	248	140	1	14						60	80
2010	248.35	141.11	96.803	248	140	3	14						315	20
2010	248.24	141.72	96.818	248	140	8	14						210	12
2010	248.82	141.04	96.878	248	140	4	14						20	0
2010	248.075	141.9	96.788	248	140	1	15	yes	exterior	1		4	140	83
2010	248.54	141.8	96.793	248	140	10	15						0	55
2010	248.125	141.92	96.788	248	140	2	15						100	15
2010	248.71	141.94	96.768	248	140	9	15						125	0
2010	248.43	141.58	96.788	248	140	7	15						130	20
2010	248.46	141.16	96.768	248	140	4	15						350	0
2010	248.53	141.66	96.788	248	140	8	15						275	30
2010	248.375	141.55	96.778	248	140	6	15						180	75
2010	248.14	141.91	96.868	248	140	1	15						60	0
2010	248.24	141.61	96.778	248	140	3	15						70	0
2010	248.59	141.18	96.758	248	140	5	15						340	75
2010	263.865	146.63	97.801	263	145	1	1							
2010	263.96	146.49	97.691	263	145	2	3							
2010	264.03	146.87	97.621	263	145	3	3							
2010	263.76	146.93	97.681	263	145	1	3					3		
2010	263.51	146.6	97.601	263	145	4	3					2		
2010	263.62	145.12	97.231	263	145	1	7	yes	exterior	2		4		
2010	263.12	145.1	97.126	263	145	3	8					4		

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2010	263.24	145.38	97.161	263	145	2	8					3		
2010	263.93	145.41	97.201	263	145	1	8	yes						
2010	264.81	146.6	97.031	263	145	1	9					4		
2010	263.99	146.21	96.901	263	145	1	10	yes	exterior	4				
2010	263.21	146.24	96.851	263	145	1	11							
2011	246.265	140.105	96.843	246	140	9	**11**						346	28
2011	246.625	140.095	96.828	246	140	5	**11**						350	10
2011	246.26	140.09	96.853	246	140	8	**11**						113	8
2011	246.43	140.745	96.838	246	140	14	**11**						90	5
2011	246.18	140.01	96.848	246	140	10	**11**				possible	4	220	10
2011	246.38	140.08	96.823	246	140	7	**11**						320	6
2011	246.705	140.63	96.838	246	140	4	**11**						270	4
2011	246.79	140.62	96.803	246	140	3	**11**						314	4
2011	246.9	140.08	96.823	246	140	2	**11**						306	2
2011	246.415	140.575	96.823	246	140	13	**11**						352	6
2011	246.525	1440.1	96.823	246	140	6	**11**						34	60
2011	246.13	140.28	96.833	246	140	12	**11**						26	4
2011	246.96	140.43	96.823	246	140	1	**11**						270	8
2011	246.1	140.275	96.843	246	140	11	**11**						8	15
2011	246.39	140.88	96.803	246	140	15	**11**						52	2
2011	246.37	140.47	96.785	246	140	11	12						333	5
2011	246.625	140.653	96.783	246	140	2	12						70	39
2011	246.59	140.095	96.766	246	140	5	12						19	26
2011	246.61	140.352	96.768	246	140	4	12						350	49
2011	246.13	140.676	96.786	246	140	7	12				possible	2	36	57
2011	246.047	140.315	96.779	246	140	10	12						332	90

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2011	246.54	140.45	96.773	246	140	3	12					2	320	25
2011	246.92	140.83	96.808	246	140	1	12						80	40
2011	246.136	140.562	96.779	246	140	8	12						71	52
2011	246.036	140.518	96.789	246	140	9	12						91	25
2011	246.355	140.88	96.777	246	140	6	12					3	62	32
2011	246.7	140.35	96.763	246	140	1	13						24	1
2011	246.385	140.28	96.753	246	140	5	13						282	26
2011	246.62	140.745	96.763	246	140	2	13						343	10
2011	246.36	140.345	96.733	246	140	3	13						310	5
2011	246.385	140.27	96.753	246	140	6	13						282	29
2011	246.315	140.485	96.758	246	140	4	13						10	10
2011	246.085	140.665	96.723	246	140	7	13						350	5
2011	247.1	140.88	97.03	246	140	4	6						0	350
2011	247.42	140.76	97.03	246	140	2	6						270	30
2011	247.32	140.6	96.98	246	140	5	6						278	0
2011	247.43	140.86	97.01	246	140	3	6						92	15
2011	247.22	140.19	97.038	246	140	1	6						270	10
2011	247.07	140.51	96.95	246	140	4	7						300	0
2011	247.44	140.72	96.97	246	140	6	7						220	15
2011	247.35	140.39	96.95	246	140	2	7						260	0
2011	247.05	140.52	96.95	246	140	5	7							
2011	247.04	140.47	96.93	246	140	3	7						280	15
2011	247.18	140.24	96.95	246	140	1	7							
2011	247.19	140.83	96.94	246	140	3	8						190	45
2011	247.3	140.89	96.94	246	140	4	8						230	25
2011	247.87	140.68	96.94	246	140	2	8						10	0

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2011	247.06	140.59	96.9	246	140	1	8						320	0
2011	246.38	140.34	96.853	246	140	6	9	yes	exterior	3		2	320	45
2011	246.16	140.89	96.863	246	140	3	9						4	0
2011	246.57	140.975	96.868	246	140	2	9						10	0
2011	246.33	141.01	96.888	246	140	1	9					2	122	26
2011	246.05	140.8	96.868	246	140	4	9						0	0
2011	246.45	140.59	96.853	246	140	5	9						2	302
2011	246.64	140.27	97.138	246	140	6	5						220	0
2011	246.64	140.28	97.138	246	140	7	5							
2011	246.61	140.92	97.148	246	140	2	5							
2011	246.02	140.88	97.148	246	140	4	5							
2011	246.45	140.37	97.128	246	140	5	5						205	10
2011	246.54	140.71	97.13	246	140	3	5	yes	exterior/interior	6	yes		200	25
2011	246.77	140.88	97.138	246	140	1	5						280	12
2011	246.59	140.98	97.1	246	140	1	6						285	20
2011	246.28	140.49	97.07	246	140	7	6						220	17
2011	246.09	140.33	97.08	246	140	9	6						260	30
2011	246.06	140.36	97.09	246	140	8	6				yes		125	15
2011	246.53	140.95	97.09	246	140	2	6						270	35
2011	246.24	140.49	97.07	246	140	6	6						125	0
2011	246.85	140.65	97.07	246	140	4	6						335	42
2011	246.23	140.54	97.07	246	140	5	6						375	35
2011	246.7	140.87	97.09	246	140	3	6	yes	exterior/interior	2	yes		350	50
2011	246.69	140.61	96.99	246	140	8	7						40	0
2011	246.68	140.07	97.033	246	140	23	7						50	30
2011	246.11	140.33	97.038	246	140	14	7				possible	4	275	10

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2011	246.31	140.41	97.043	246	140	13	7					2	345	30
2011	246.265	140.72	97.028	246	140	6	7						255	10
2011	246.49	140.52	97.048	246	140	11	7						338	25
2011	246.62	140.83	97.038	246	140	3	7					3	310	25
2011	246.79	140.65	97.008	246	140	22	7						320	3
2011	246.705	140.09	97.038	246	140	19	7						300	0
2011	246.975	140.93	97.018	246	140	2	7						280	12
2011	246.2	140.69	97.038	246	140	7	7						340	55
2011	246.575	140.11	97.008	246	140	17	7						280	10
2011	246.33	140.47	97.028	246	140	12	7						315	55
2011	246.88	140.655	97.028	246	140	10	7						272	25
2011	246.28	140.18	97.028	246	140	15	7						260	0
2011	246.82	140.375	97.028	246	140	16	7	yes	exterior	2	yes		330	10
2011	246.69	140.93	97.028	246	140	21	7						345	5
2011	246.82	140.65	97.028	246	140	9	7						270	30
2011	246.03	140.72	97.018	246	140	20	7						260	40
2011	246.43	140.02	97.038	246	140	18	7						40	30
2011	246.71	140.93	97.038	246	140	1	7						143	32
2011	246.57	140	96.953	246	140	1	7							
2011	246.98	140.75	97.038	246	140	4	7						38	40
2011	247.04	141...	96.87	246	140	5	7						350	15
2011	246.45	140.72	96.978	246	140	12	8						335	33
2011	246.3	140.14	96.988	246	140	23	8						10	10
2011	246.54	140.96	96.988	246	140	3	8						325	2
2011	246.825	140.17	96.988	246	140	25	8						25	5
2011	246.915	140.54	96.968	246	140	18	8						45	20

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2011	246.84	140.8	96.988	246	140	13	8					5	280	25
2011	246.62	140.815	96.968	246	140	7	8						5	65
2011	246.99	140.76	96.988	246	140	14	8						260	10
2011	246.25	140.595	96.958	246	140	17	8						310	30
2011	246.16	140.72	96.993	246	140	11	8						85	55
2011	247.01	140.36	96.973	246	140	24	8					2	8	0
2011	246.525	140.325	96.968	246	140	20	8						245	20
2011	246.52	140.84	96.988	246	140	5	8						35	45
2011	247	140.65	96.958	246	140	16	8					1	330	30
2011	246.69	140.98	96.988	246	140	6	8						45	20
2011	246.58	140.76	96.968	246	140	8	8						355	0
2011	246.12	140.36	96.958	246	140	19	8						320	30
2011	246.7	140.29	96.968	246	140	21	8						240	15
2011	246.215	140.9	96.968	246	140	2	8						75	15
2011	246.96	141.05	96.948	246	140	15	8						245	47
2011	247.04	141.07	96.993	246	140	1	8						15	0
2011	246.07	140.08	96.993	246	140	22	8						275	10
2011	246.68	140.76	96.988	246	140	9	8	yes	exterior	2	yes		280	25
2011	246.63	140.75	96.958	246	140	10	8						0	15
2011	246.51	140.9	96.968	246	140	4	8						355	30
2011	246.74	140.58	96.908	246	140	6	9						35	65
2011	246.32	140.855	96.938	246	140	1	9						40	10
2011	246.31	140.62	96.938	246	140	5	9						35	40
2011	246.735	140.4	96.918	246	140	7	9						310	40
2011	246.38	140.19	96.938	246	140	12	9					2	40	30
2011	246.94	140.11	96.938	246	140	13	9						280	10

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2011	246.09	140.09	96.919	246	140	15	9				possible		225	10
2011	246.45	140.78	96.928	246	140	2	9						255	48
2011	246.23	140.64	96.938	246	140	4	9						295	35
2011	246.09	140.1	96.928	246	140	11	9						50	5
2011	246.88	140.46	96.948	246	140	8	9						70	65
2011	246.915	140.465	96.948	246	140	9	9						350	17
2011	246.9	140.08	96.898	246	140	16	9						295	30
2011	246.95	140.28	96.918	246	140	10	9						330	5
2011	246.01	140.9	96.943	246	140	14	9	yes	exterior	2		1	290	0
2011	247	140.65	96.938	246	140	3	9						340	70
2011	246.87	140.34	96.878	246	140	17	10						335	15
2011	246.34	140.37	96.878	246	140	14	10						10	5
2011	246.97	140.42	96.858	246	140	18	10						55	40
2011	246.18	140.03	96.88	246	140	23	10						315	40
2011	246.54	140.19	96.878	246	140	26	10						45	25
2011	246.935	140.82	96.868	246	140	9	10						95	0
2011	246.85	140.37	96.868	246	140	16	10						265	53
2011	246.71	140.95	96.89	246	140	3	10						15	5
2011	246.625	140.42	96.88	246	140	15	10						60	55
2011	246.495	140.62	96.878	246	140	11	10	yes	exterior	2	yes		255	45
2011	246.15	140.15	96.858	246	140	21	10						250	45
2011	246.87	140.82	96.868	246	140	8	10						55	25
2011	246.69	140.84	96.87	246	140	6	10						280	28
2011	246.45	140.57	96.898	246	140	10	10						300	20
2011	246.46	140.105	96.878	246	140	24	10						290	0
2011	246.53	140.455	96.858	246	140	13	10						325	15

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2011	246.77	140.06	96.853	246	140	27	10						0	45
2011	246.15	140.08	96.88	246	140	22	10						0	50
2011	246.69	140.98	96.89	246	140	2	10						320	20
2011	246.26	140.86	96.89	246	140	1	10						45	45
2011	246.46	140.19	96.868	246	140	25	10						30	50
2011	246.015	140.23	96.88	246	140	19	10				yes		255	25
2011	246.65	140.54	96.888	246	140	12	10	yes	exterior	3	yes		305	25
2011	246.93	141.03	96.89	246	140	4	10						315	30
2011	246.27	140.22	96.888	246	140	20	10						60	5
2011	246.77	140.8	96.888	246	140	7	10						55	35
2011	246.58	140.795	96.838	246	140	3	11						40	20
2011	246.28	140.38	96.818	246	140	10	11						285	25
2011	246.32	140.47	96.828	246	140	8	11						310	20
2011	246.48	140.38	96.838	246	140	12	11						290	55
2011	246.89	140.98	96.818	246	140	1	11						350	15
2011	246.93	140.315	96.738	246	140	15	11						350	0
2011	246.24	140.31	96.848	246	140	11	11						305	25
2011	246.05	140.54	96.838	246	140	6	11						265	15
2011	246.87	140.41	96.828	246	140	13	11						50	10
2011	246.04	140.77	96.818	246	140	2	11						270	30
2011	246.185	140.47	96.828	246	140	7	11						340	40
2011	246.74	140.04	96.808	246	140	17	11						15	70
2011	246.47	140.6	96.838	246	140	5	11						70	0
2011	246.69	140.05	96.838	246	140	16	11					4	40	35
2011	246.92	140.85	96.828	246	140	4	11						295	15
2011	246.71	140.59	96.828	246	140	9	11						5	30

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2011	246.93	140.4	96.828	246	140	14	11						0	40
2011	246.26	140.18	96	246	140	18	11						50	50
2011	246.25	140.4	96.788	246	140	10	12						265	60
2011	246.715	140.58	96.788	246	140	8	12						305	55
2011	246.43	140.3	96.788	246	140	15	12				possible		325	15
2011	246.42	140.1	96.788	246	140	17	12						40	20
2011	246.53	140.35	96.748	246	140	11	12						50	34
2011	246.61	140.99	96.788	246	140	1	12					1	225	28
2011	246.725	140.27	96.788	246	140	13	12						310	50
2011	246.69	140.35	96.758	246	140	12	12						350	30
2011	246.85	140.56	96.788	246	140	9	12						280	20
2011	246.28	140.31	96.788	246	140	14	12						345	45
2011	246.86	140.65	96.793	246	140	5	12						45	30
2011	246.22	140.7	96.748	246	140	2	12						340	20
2011	246.92	140.78	96.758	246	140	6	12						10	45
2011	246.9	140.33	96.753	246	140	16	12					2	45	
2011	246.985	140.75	96.793	246	140	7	12						85	40
2011	246.59	140.77	96.778	246	140	4	12						304	5
2011	246.475	140.73	96.798	246	140	3	13	yes	exterior	4	yes		220	10
2011	246.67	140.76	97.018	246	140	5								
2011	246.846	142.595	97.175	246	142	16	9	yes	exterior/interior	3	yes		310	20
2011	246.155	142.4	97.008	246	142	2	9	yes	exterior	6	possible		61	29
2011	246.43	142.77	97.003	246	142	11	9	yes	exterior	1	yes		40	9
2011	246.055	142.615	96.893	246	142	4	9						80	5
2011	246.07	142.11	97.043	246	142	1	9						350	5
2011	246.22	142.57	97.003	246	142	6	9					2	320	15

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2011	246.825	142.85	96.979	246	142	17	9						20	20
2011	246.725	142.51	97.003	246	142	15	9						300	40
2011	246.535	142.482	96.991	246	142	13	9				possible	2	280	25
2011	246.623	142.93	96.991	246	142	14	9						58	32
2011	246.347	142.51	96.968	246	142	9	9						300	0
2011	246.425	142.53	96.981	246	142	12	9						320	45
2011	246.245	142.41	96.995	246	142	3	9				yes		330	0
2011	246.175	142.75	96.953	246	142	8	9						80	10
2011	246.195	142.69	97.009	246	142	7	9						50	11
2011	246.09	142.59	96.979	246	142	5	9						350	14
2011	246.38	142.655	96.983	246	142	10	9						230	24
2011	246.87	142.4	96.953	246	142	15	10					4	300	0
2011	246.32	142.54	96.973	246	142	11	10						340	55
2011	246.71	142.59	96.963	246	142	18	10					1	0	60
2011	246.09	142.78	96.973	246	142	25	10					1	19	71
2011	246.64	142.02	96.953	246	142	1	10						10	28
2011	246.01	142.85	97.023	246	142	29	10				possible	4	350	20
2011	246.36	142.66	96.963	246	142	16	10						90	40
2011	246.72	142.38	96.913	246	142	13	10						331	35
2011	246.72	142.38	96.913	246	142	13	10	yes	exterior	2	yes		64	25
2011	246.58	142.73	96.963	246	142	23	10				yes		345	0
2011	246.31	142.53	96.903	246	142	12	10					3	90	0
2011	246.63	142.67	96.983	246	142	19	10						90	30
2011	246.72	142.11	96.933	246	142	3	10						0	21
2011	246.5	142.45	96.963	246	142	9	10				possible	2	300	0
2011	246.06	142.24	96.973	246	142	6	10						0	41

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2011	246.03	142.35	96.973	246	142	8	10						61	8
2011	246.55	142.75	96.963	246	142	22	10						82	17
2011	246.4	142.69	96.903	246	142	17	10					2	340	5
2011	246.8	142.35	96.953	246	142	14	10						300	40
2011	246.6	142.09	96.923	246	142	2	10					2	80	10
2011	246.6	142.09	96.923	246	142	2	10						80	0
2011	246.03	142.3	96.923	246	142	7	10						340	10
2011	246.86	142.08	96.913	246	142	4	10						350	30
2011	246.86	142.08	96.913	246	142	4	10						50	0
2011	246.69	142.84	96.943	246	142	27	10						0	0
2011	246.64	142.88	96.943	246	142	26	10						10	20
2011	246.46	142.5	96.903	246	142	10	10						299	3
2011	246.75	142.67	96.953	246	142	20	10						10	20
2011	246.53	142.71	96.933	246	142	21	10						320	10
2011	246.48	142.29	96.913	246	142	5	10						10	21
2011	246.58	142.78	96.923	246	142	24	10				possible	3	290	0
2011	246.2	142.91	96.943	246	142	28	10	yes	exterior	1	yes		79	1
2011	246.14	142.58	96.883	246	142	10	11						20	50
2011	246.63	142.72	96.893	246	142	20	11						350	0
2011	246.34	142.47	96.863	246	142	7	11						18	79
2011	246.82	142.52	96.903	246	142	9	11						30	0
2011	246.19	142.67	96.883	246	142	11	11						0	0
2011	246.63	142.72	96.893	246	142	21	11						310	0
2011	246.33	142.77	96.853	246	142	22	11						90	20
2011	246.48	142.73	96.893	246	142	17	11						280	10
2011	246.02	142.96	96.853	246	142	24	11						350	25

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2011	246.45	142.35	96.883	246	142	5	11						345	0
2011	246.51	142.73	96.893	246	142	18	11						342	17
2011	246.85	142.17	96.873	246	142	4	11						350	10
2011	246.26	142.68	96.873	246	142	12	11						330	5
2011	246.73	142.16	96.853	246	142	3	11						90	0
2011	246.44	142.69	96.853	246	142	16	11						310	50
2011	246.2	142.45	96.913	246	142	6	11						60	50
2011	246.55	142.12	96.863	246	142	2	11						340	79
2011	246.42	142.61	96.883	246	142	15	11						90	20
2011	246.34	142.97	96.863	246	142	25	11						65	40
2011	246.36	142.67	96.863	246	142	14	11						90	10
2011	246.35	142.81	96.853	246	142	23	11						310	2
2011	246.44	142.97	96.863	246	142	26	11						38	31
2011	246.27	142.62	96.863	246	142	13	11						2	28
2011	246.57	142.74	96.903	246	142	19	11						350	31
2011	246.72	142.42	96.863	246	142	8	11						43	8
2011	246.61	142.01	96.873	246	142	1	11						322	2
2011	246.38	142.92	96.843	246	142	29	12						50	20
2011	246.2	142.39	96.843	246	142	8	12						320	12
2011	246.43	142.34	96.833	246	142	6	12						330	10
2011	246.72	142.77	96.803	246	142	24	12						300	0
2011	246.69	142.65	96.823	246	142	19	12						80	50
2011	246.2	142.96	96.843	246	142	30	12						71	37
2011	246.02	142.75	96.823	246	142	23	12						30	25
2011	246.78	142.68	96.803	246	142	20	12						60	0
2011	246.75	142.98	96.833	246	142	31	12						20	0

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2011	246.86	142.03	96.843	246	142	2	12						10	18
2011	246.61	142.12	96.843	246	142	5	12						90	70
2011	246.58	142.63	96.833	246	142	18	12						80	10
2011	246.44	142.44	96.843	246	142	12	12						40	0
2011	246.6	142.74	96.843	246	142	21	12						360	40
2011	246.16	142.44	96.823	246	142	13	12						78	23
2011	246.18	142.47	96.803	246	142	14	12						90	0
2011	246.65	142.43	96.833	246	142	10	12						300	9
2011	246.16	142.04	96.803	246	142	1	12						20	0
2011	246.49	142.4	96.843	246	142	9	12						342	5
2011	246.58	142.8	96.843	246	142	25	12						310	18
2011	246.12	142.4	96.813	246	142	11	12						252	20
2011	246.35	142.9	96.843	246	142	28	12						360	5
2011	246.68	142.81	96.843	246	142	27	12						350	0
2011	246.87	142.33	96.823	246	142	7	12						330	0
2011	246.74	142.73	96.803	246	142	22	12						271	4
2011	246.13	142.18	96.803	246	142	3	12						0	8
2011	246.57	142.19	96.823	246	142	4	12						20	10
2011	246.77	142.59	96.813	246	142	17	12						80	10
2011	246.71	142.59	96.803	246	142	16	12						312	40
2011	246.91	142.57	96.843	246	142	15	12						320	10
2011	246.61	142.83	96.843	246	142	26	12						10	0
2011	246.415	142.925	96.738	246	142	21	13						310	0
2011	246.63	142.67	96.983	246	142	19	13						360	25
2011	246.495	142.58	96.745	246	142	16	13						340	0
2011	246.31	142.265	96.778	246	142	6	13						80	0

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2011	246.86	142.91	96.754	246	142	23	13						330	0
2011	246.72	142.75	96.748	246	142	18	13						303	3
2011	246.74	142.58	96.747	246	142	14	13						80	0
2011	246.77	142.625	96.743	246	142	15	13						270	20
2011	246.66	142.12	96.778	246	142	2	13						50	5
2011	246.69	142.38	96.758	246	142	11	13					2	88	4
2011	246.38	142.1	96.773	246	142	3	13						280	0
2011	246.175	142.97	96.783	246	142	22	13						310	30
2011	246.74	142.51	96.776	246	142	13	13						330	5
2011	246.63	142.45	96.778	246	142	10	13						290	0
2011	246.38	142.38	96.779	246	142	9	13						320	0
2011	246.76	142.42	96.758	246	142	12	13						300	0
2011	246.822	142.705	96.743	246	142	17	13						50	15
2011	246.11	142.095	96.733	246	142	5	13						70	0
2011	246.695	142.785	96.748	246	142	19	13						300	30
2011	246.77	142.875	96.758	246	142	20	13						20	20
2011	246.22	142.325	96.763	246	142	8	13						320	10
2011	246.395	142.18	96.793	246	142	4	13						25	0
2011	246.79	142.02	96.808	246	142	1	13						45	0
2011	246.17	142.295	96.773	246	142	7	14						330	30
2011	248.29	140.88	96.738	248	140	6	16	yes	dorsal	2			2	4
2011	248.14	140.83	96.758	248	140	7	16						10	20
2011	248.495	140.76	96.728	248	140	4	16						310	50
2011	248.79	140.66	96.728	248	140	3	16						302	4
2011	248.74	140.39	96.733	248	140	2	16						32	10
2011	248.75	140.35	96.738	248	140	1	16						0	3

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2011	248.37	140.82	96.748	248	140	5	16						320	8
2011	248.625	140.01	96.693	248	140	6	17						301	20
2011	248.21	140.11	96.678	248	140	3	17						303	30
2011	248.15	140.09	96.683	248	140	2	17						290	6
2011	248.165	140.17	96.688	248	140	1	17						50	35
2011	248.52	140.32	96.658	248	140	7	17				possible		0	13
2011	248.355	140.205	96.653	248	140	4	17						8	30
2011	248.44	140.14	96.628	248	140	5	17						50	2
2012	246.92	139.57	97.15	246	138	3	3						0	0
2012	246.44	139.46	97.15	246	138	1	3						30	10
2012	246.89	139.09	97.16	246	138	2	3				yes		50	20
2012	246.2	138.05	97.11	246	138	1	3						0	0
2012	246.2	138.05	97.11	246	138	1	3							
2012	246.23	139.92	97.14	246	138	4	4						0	0
2012	246.32	139.24	97.14	246	138	2	4						0	0
2012	246.33	139.55	97.10	246	138	11	4						0	0
2012	246.12	139.07	97.13	246	138	1	4					3	50	0
2012	246.12	139.84	97.14	246	138	6	4					3	55	0
2012	246.38	139.52	97.13	246	138	8	4				possible	2	60	0
2012	246.04	139.88	97.10	246	138	7	4						330	0
2012	246.18	139.94	97.13	246	138	5	4						340	10
2012	246.31	139.81	97.14	246	138	3	4	yes	exterior	4	yes		320	20
2012	246.32	139.45	97.12	246	138	9	4						350	20
2012	246.29	139.5	97.10	246	138	10	4						70	90
2012	246.61	139.81	97.05	246	138	4	5	yes	exterior	4	yes		0	0
2012	246.22	139.71	97.05	246	138	3	5						10	0

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2012	246.2	139.63	97.06	246	138	2	5						10	0
2012	246.13	139.23	97.05	246	138	1	5						285	0
2012	246.23	138.13	97.07	246	138	1	5	yes	exterior	1		4	0	0
2012	246.25	138.05	97	246	138	2	5						11	0
2012	246.68	138.78	97.08	246	138	5	5						356	10
2012	246.5	138.19	97	246	138	3	5						54	15
2012	246.63	138.6	96.99	246	138	4	5	yes	exterior	6		3	312	15
2012	246.03	138.77	97.15	246	138	6	5							
2012	246.6	139.23	97.002	246	138	5	6						0	0
2012	246.35	138.36	97.00	246	138	4	6						0	0
2012	246.23	138.65	97.00	246	138	2	6						40	0
2012	246.04	138.37	97.03	246	138	1	6						60	10
2012	246.48	139.63	97.03	246	138	8	6						0	23
2012	246.3	139.59	97.02	246	138	7	6						65	23
2012	246.68	139.49	97.02	246	138	6	6						330	30
2012	246.18	138.97	97.00	246	138	3	6						330	50
2012	246.17	138.54	96.99	246	138	5	6						20	0
2012	246.21	138.45	96.98	246	138	3	6					1	345	7
2012	246.35	138.45	96.97	246	138	4	6						235	10
2012	246.68	138.13	96.95	246	138	2	6				yes	3	280	20
2012	246.05	138.38	96.97	246	138	1	6						304	70
2012	246.48	139.175	96.95	246	138	3	7						349	0
2012	246.71	139.44	96.97	246	138	6	7						206	10
2012	246.99	139.9	96.99	246	138	2	7				yes		300	10
2012	246.925	139.68	96.96	246	138	8	7				yes		320	20
2012	246.11	139.99	96.96	246	138	1	7				yes		340	20

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2012	246.88	139.885	96.95	246	138	9	7						125	25
2012	246.55	139.99	97	246	138	14	7						45	30
2012	246.99	139.21	96.99	246	138	5	7						105	30
2012	246.94	139.7	96.95	246	138	10	7						105	33
2012	246.85	139.79	96.95	246	138	13	7	yes	exterior	2	yes	2	105	33
2012	246.95	139.87	96.96	246	138	12	7						45	40
2012	246.685	139.5	96.96	246	138	7	7						94	45
2012	246.96	139.85	96.96	246	138	11	7						45	65
2012	246	139	96.98	246	138	4	7						250	82
2012	246.11	138.09	96.89	246	138	11	7						41	0
2012	246.15	138.7	96.95	246	138	2	7						108	0
2012	246.18	138.1	96.91	246	138	10	7						122	7
2012	246.21	138.115	96.94	246	138	1	7						108	8
2012	246.66	138.82	96.91	246	138	6	7						48	18
2012	246.82	138.45	96.92	246	138	8	7	yes	exterior	2	yes	2	118	18
2012	246.67	138.75	96.82	246	138	7	7				yes	3	155	24
2012	246.72	138.09	96.9	246	138	9	7						352	33
2012	246.51	138.87	96.91	246	138	5	7						66	50
2012	246.09	138.9	96.94	246	138	3	7							
2012	246.22	138.89	96.88	246	138	4	7							
2012	246.17	139.13	96.92	246	138	5	8						110	10
2012	246	139.04	96.95	246	138	6	8						280	10
2012	246.86	139.98	96.82	246	138	12	8						345	20
2012	246.64	139.1	96.94	246	138	2	8						255	25
2012	246.98	139.41	96.92	246	138	7	8						295	25
2012	246.98	139.64	96.92	246	138	10	8						34	30

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2012	246.98	139.7	96.94	246	138	11	8					3	34	35
2012	246.78	139.71	96.91	246	138	9	8					3	300	35
2012	246.19	139.05	96.92	246	138	4	8					2	270	40
2012	246.3	139.18	96.92	246	138	3	8						280	85
2012	246.55	139.68	96.94	246	138	8	8				yes		30	90
2012	246.99	139.08	96.95	246	138	1	8						54	90
2012	246.46	138.87	96.89	246	138	10	8						140	0
2012	246.03	138.38	96.87	246	138	5	8						146	5
2012	246.34	138.21	96.87	246	138	1	8				possible		270	6
2012	246.16	138.7	96.89	246	138	7	8				yes		170	15
2012	246.04	138.4	96.89	246	138	6	8						150	20
2012	246.11	138.84	96.9	246	138	8	8						182	20
2012	246.41	138.58	96.86	246	138	11	8					4	224	30
2012	246.29	138.27	96.89	246	138	2	8						220	40
2012	246.17	188.43	96.89	246	138	4	8				yes		210	43
2012	246.28	138.85	96.87	246	138	9	8						170	45
2012	246.97	138.92	96.89	246	138	12	8					3	40	53
2012	246.25	138.3	96.9	246	138	3	8						140	80
2012	246.04	139.42	96.88	246	138	5	9						192	0
2012	246.42	139.33	96.9	246	138	6	9						198	0
2012	246.28	139.74	96.9	246	138	8	9						228	0
2012	246.08	139.07	96.878	246	138	1	9						280	0
2012	246.91	139.11	96.9	246	138	4	9						219	5
2012	246..1	139.76	96.88	246	138	7	9						202	10
2012	246.79	139.97	96.9	246	138	13	9						294	10
2012	246.79	139.2	96.87	246	138	14	9						341	10

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2012	246.39	139.56	96.9	246	138	15	9						42	15
2012	246.58	139.94	96.88	246	138	12	9					1	255	15
2012	246.39	138.15	96.9	246	138	16	9						215	18
2012	246.98	139.65	96.9	246	138	9	9					3	95	30
2012	246.11	139.97	96.9	246	138	10	9						155	30
2012	246.36	139.91	96.87	246	138	11	9				possible		150	45
2012	246.42	139.2	96.895	246	138	2	9						260	45
2012	246.66	139.055	96.9	246	138	3	9						282	90
2012	246.99	138.78	96.8	246	138	14	9						72	0
2012	246.41	138.56	96.8	246	138	8	9						2	3
2012	246.09	138.21	96.81	246	138	1	9						292	5
2012	246.13	138.61	96.82	246	138	5	9						268	8
2012	246.88	138.65	96.8	246	138	13	9						6	10
2012	246.73	138.75	96.84	246	138	11	9				yes		340	13
2012	246.24	138.33	96.84	246	138	2	9					2	294	14
2012	246.86	138.69	96.84	246	138	12	9						344	16
2012	246.4	138.62	96.8	246	138	7	9						24	17
2012	246.84	138.87	96.84	246	138	10	9						16	18
2012	246.18	138.57	96.82	246	138	4	9						218	20
2012	246.41	138.7	96.78	246	138	20	9	yes	exterior	7	yes		370	21
2012	246.2	138.5	96.84	246	138	3	9						6	22
2012	246.8	138.64	96.81	246	138	6	9						268	25
2012	246.37	138.15	96.79	246	138	19	9						312	27
2012	246.83	138.28	96.83	246	138	18	9						356	28
2012	246.52	138.32	96.83	246	138	17	9					2	280	35
2012	246.64	138.94	96.85	246	138	9	9					3	320	38

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2012	246.58	138.47	96.84	246	138	16	9						46	45
2012	246.5	138.55	96.84	246	138	15	9						318	45
2012	246.97	139.44	96.82	246	138	10	10						45	0
2012	246.46	139.37	96.82	246	138	5	10						60	0
2012	246.16	139.99	96.81	246	138	17	10						188	0
2012	246.95	139.92	96.8	246	138	19	10						355	0
2012	246.83	139.37	96.84	246	138	9	10						40	10
2012	246.04	139.85	96.83	246	138	16	10						285	10
2012	246.76	139.55	96.82	246	138	15	10						325	15
2012	246.99	139.79	96.84	246	138	20	10						340	15
2012	246.43	139.07	96.8	246	138	2	10				yes	3	350	22
2012	246.44	139.5	96.84	246	138	12	10					3	35	25
2012	246.59	139.37	96.81	246	138	6	10					2	320	25
2012	246.66	139.36	96.8	246	138	8	10						255	30
2012	246.62	139.4	96.81	246	138	7	10						340	30
2012	246.16	139.57	96.8	246	138	11	10						225	35
2012	246.61	139.08	96.81	246	138	3	10						0	40
2012	246.7	139.47	96.83	246	138	13	10						75	40
2012	246.7	139.55	96.84	246	138	14	10						310	40
2012	246.47	139.8	96.8	246	138	18	10						45	45
2012	246.12	139.25	96.8	246	138	1	10						270	45
2012	246.48	139.34	96.81	246	138	4	10						235	65
2012	246.52	138.35	96.8	246	138	8	10					4	5	0
2012	246.55	138.27	shatter	246	138	7	10						5	0
2012	246.07	138.22	96.81	246	138	4	10						37	0
2012	246.8	138.29	96.8	246	138	12	10				possible		80	0

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2012	246.66	138.44	96.79	246	138	9	10				yes	3	10	5
2012	246.29	138.62	96.79	246	138	3	10						300	15
2012	246.27	138.11	96.79	246	138	5	10						10	18
2012	246.09	138.51	96.8	246	138	2	10						28	20
2012	246.42	138.79	96.79	246	138	1	10						320	20
2012	246.26	138.17	96.79	246	138	6	10						290	25
2012	246.34	138.48	96.73	246	138	13	10						262	28
2012	246.78	138.13	96.77	246	138	11	10	yes	exterior	2			40	30
2012	246.47	138.38	96.79	246	138	10	10						120	30
2012	246.86	139.86	96.8	246	138	15	11						240	0
2012	246.77	139.9	96.78	246	138	14	11						280	0
2012	246.78	139.25	96.76	246	138	20	11					1	335	0
2012	246.37	139.98	96.76	246	138	18	11						350	0
2012	246.15	139.68	96.75	246	138	7	11				yes	3	60	5
2012	246.92	139.88	96.8	246	138	16	11						250	5
2012	246.59	139.46	96.8	246	138	3	11						355	5
2012	246.03	139.36	96.76	246	138	1	11						180	10
2012	246.57	139.37	96.78	246	138	2	11						235	10
2012	246.23	138.69	96.79	246	138	8	11						230	13
2012	246.07	139.88	96.8	246	138	11	11						200	15
2012	246.52	139.83	96.8	246	138	13	11						305	20
2012	246.97	139.67	96.78	246	138	9	11						320	25
2012	246.4	139.57	96.8	246	138	4	11						390	25
2012	246.05	139.92	96.8	246	138	12	11						205	30
2012	246.77	139.51	96.78	246	138	6	11					2	304	30
2012	246.52	139.59	96.78	246	138	5	11						340	35

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2012	246.8	139.26	96.75	246	138	21	11						335	40
2012	246.99	139.77	96.8	246	138	10	11						260	45
2012	246.98	139.86	96.8	246	138	17	11						35	70
2012				246	138	19	11							
2012	246.45	138.76	96.73	246	138	13	11						0	0
2012	246.18	138.71	96.72	246	138	5	11						20	0
2012	246.31	138.72	96.72	246	138	8	11						40	0
2012	246.82	138.79	96.72	246	138	21	11	yes	exterior	3			85	0
2012	246.3	138.98	96.76	246	138	4	11					2	90	0
2012	246.29	138.91	96.74	246	138	24	11					3	90	0
2012	246.5	138.52	96	246	138	25	11						100	0
2012	246.03	138.27	96.12	246	138	1	11						42	5
2012	246.7	138.7	96.73	246	138	18	11						80	5
2012	246.17	138.44	96.71	246	138	19	11						80	5
2012	246.39	138.49	96.73	246	138	9	11				yes		340	5
2012	246.4	138.65	96.71	246	138	10	11						350	5
2012	246.49	138.85	96.71	246	138	14	11						40	10
2012	246.12	138.4	96.74	246	138	6	11						50	10
2012	246.25	138.86	96.74	246	138	3	11						315	15
2012	246.78	138.87	96.73	246	138	22	11				yes		24	20
2012	246.48	138.13	96.7	246	138	17	11					3	50	20
2012	246.52	138.48	96.71	246	138	16	11					3	85	20
2012	246.22	138.37	96.72	246	138	7	11					2	328	20
2012	246.41	138.68	96.71	246	138	11	11				yes		80	45
2012	246.84	138.88	96.73	246	138	23	11						100	45
2012	246.45	138.71	96.72	246	138	12	11						345	45

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2012	246.78	138.77	96.73	246	138	20	11						48	50
2012	246.45	138.8	96.76	246	138	15	11						68	80
2012	246.01	138.38	96.73	246	138	2	11						62	90
2012				246	138	9	12						10	0
2012	246.3	139.58	96.7	246	138	20	12						30	0
2012	246.26	139.48	96.73	246	138	17	12						140	0
2012	246.29	139.34	96.73	246	138	6	12					4	160	0
2012	246.24	139.25	96.75	246	138	5	12						210	0
2012	246.09	139.55	96.7	246	138	19	12				yes		255	0
2012				246	138	15	12						265	0
2012	246.62	138.2	96.72	246	138	10	12					3	265	0
2012	246.28	139.12	96.71	246	138	4	12				possible		300	0
2012	246.44	139.68	96.75	246	138	23	12						325	0
2012	246.55	139.31	96.73	246	138	14	12						350	0
2012	246.95	139.29	96.72	246	138	12	12						355	0
2012	246.7	139.79	96.75	246	138	30	12						355	0
2012	246.20	139.15	96.75	246	138	3	12						280	3
2012	256.56	139.15	96.74	246	138	16	12						250	5
2012	246.64	139.95	96.74	246	138	31	12						305	8
2012	246.41	139.21	96.73	246	138	7	12						35	10
2012	246.2	139.78	96.72	246	138	27	12				possible		195	10
2012	246.98	139.25	96.72	246	138	11	12					1	290	10
2012	246.28	139.75	96.75	246	138	28	12						115	12
2012	246.23	139.64	96.75	246	138	21	12					3	30	15
2012	246.49	139.17	96.7	246	138	8	12						170	15
2012	246.04	139.39	96.755	246	138	13	12						165	20

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2012	246.25	139.1	96.75	246	138	32	12						0	22
2012	241.92	139.6	96.73	246	138	22	12						35	25
2012	246.56	139.79	96.745	246	138	29	12						265	25
2012	246.23	139.78	96.72	246	138	33	12						200	30
2012	246.18	139.76	96.72	246	138	26	12						300	30
2012	246.71	139.56	96.72	246	138	18	12						20	40
2012	246.07	139.71	96.73	246	138	1	12	yes	exterior	3	yes		15	45
2012	246	139.76	96.72	246	138	24	12						195	45
2012	246.06	139.76	96.73	246	138	25	12	yes	exterior	2		2	300	80
2012	246.07	139.79	96.71	246	138	2	12	yes	exterior	6	yes		230	90
2012	246.44	139.23	96.7	246	138	34	12							
2012	246.17	139.45	96.86	246	138	12	13						20	0
2012	246.52	139.23	96.66	246	138	4	13						55	0
2012	246.2	139.75	96.67	246	138	17	13						80	0
2012	246.17	139.94	96.66	246	138	18	13						275	0
2012	246.79	139.06	96.68	246	138	9	13						300	0
2012	246.28	139.62	96.68	246	138	16	13						305	0
2012	246.27	139.09	96.67	246	138	1	13						325	0
2012	246.36	139.41	96.66	246	138	13	13					2	350	0
2012	246.57	139.06	96.67	246	138	7	13					3	355	0
2012	246.65	139.04	96.67	246	138	14	13						0	10
2012	246.68	139.17	96.68	246	138	10	13						35	15
2012	246.56	139.04	96.64	246	138	5	13						355	15
2012	246.55	139.1	96.66	246	138	8	13						355	15
2012	246.22	139.16	96.69	246	138	2	13						290	20
2012	246.94	139.37	96.67	246	138	15	13						305	20

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2012	246.93	139.25	96.65	246	138	11	13						40	25
2012	2446.6	139.43	96.66	246	138	21	13						245	25
2012	246.41	139.22	96.69	246	138	3	13						275	25
2012	246.58	139.02	96.67	246	138	6	13				possible		305	25
2012	246.99	139.94	96.69	246	138	20	13				yes	3	10	45
2012	246.09	139.91	96.69	246	138	19	13					3	130	55
2012	246.55	141.04	96.83	246	140	5	11					2	23	0
2012	246.96	141.9	96.84	246	140	11	11						10	9
2012	246.7	141.45	96.82	246	140	7	11						9	20
2012	246.33	141.35	96.82	246	140	4	11						50	20
2012	246.13	141.58	96.83	246	140	1	11						73	20
2012	246.28	141.63	96.84	246	140	3	11						80	20
2012	246.6	141.54	96.84	246	140	6	11						270	20
2012	246.84	141.65	96.83	246	140	9	11						320	20
2012	246.2	141.48	96.84	246	140	2	11						50	30
2012	246.79	141.15	96.81	246	140	8	11						320	40
2012	246.95	141.63	96.82	246	140	10	11					4	10	
2012	246.64	141.25	96.82	246	140	13	12						70	16
2012	246.32	141.19	96.79	246	140	3	12						300	21
2012	246.81	141.6	96.83	246	140	9	12						348	26
2012	246.1	141.49	96.81	246	140	1	12					3	79	35
2012	246.95	141.54	96.84	246	140	12	12						42	35
2012	246.95	141.81	96.85	246	140	10	12						330	37
2012	246.13	141.3	96.81	246	140	2	12						99	40
2012	246.53	141.11	96.81	246	140	4	12						355	40
2012	246.81	141.02	96.83	246	140	14	12						357	43

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2012	246.8	141.8	96.80	246	140	8	12						299	56
2012	246.58	141.83	96.79	246	140	6	12						359	59
2012	246.71	141.95	96.81	246	140	7	12	yes	exterior	2	Present		0	67
2012	246.52	141.45	96.84	246	140	5	12						2	76
2012	246.93	141.84	96.81	246	140	11	12						324	79
2012	246.87	141.67	96.7	246	140	13	13					1	126	0
2012	246.36	141.41	96.72	246	140	4	13						28	4
2012	246.61	141.955	96.74	246	140	7	13					3	25	4
2012	246.36	141.98	96.72	246	140	5	13						340	5
2012	246.84	141.62	96.7	246	140	15	13						30	5
2012	246.8	141.85	96.75	246	140	16	13						130	7
2012	246.79	141.07	96.72	246	140	19	13						4	7
2012	246.85	141.8	96	246	140	12	13						320	8
2012	246.83	141.13	96.72	246	140	18	13						85	9
2012	246.53	141.17	96.7	246	140	9	13						58	10
2012	246.44	141.88	96.7	246	140	6	13						31	14
2012	246.96	141.9	96.73	246	140	20	13						4	15
2012	246.56	141.17	96.69	246	140	10	13						128	18
2012	246.18	141.14	96.72	246	140	1	13					2	94	20
2012	246.55	141.51	96.72	246	140	8	13						39	20
2012	246.84	141.66	96.7	246	140	14	13						278	20
2012	246.03	141.65	96.73	246	140	2	13						326	22
2012	246.67	141.72	96.73	246	140	11	13						40	25
2012	246.92	141.36	96.73	246	140	17	13						110	25
2012	246.18	141.72	96.7	246	140	3	13						59	29
2012	246.03	140.1	96.71	246	140	2	13						155	0

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2012	246.03	140.17	96.72	246	140	3	13						215	0
2012	246.65	140.35	96.7	246	140	6	13						0	0
2012	246.06	140.58	96.72	246	140	10	13					2	218	0
2012	246.18	140.69	96.74	246	140	11	13					3	10	0
2012	246.58	140.55	96.74	246	140	12	13						5	0
2012	246.87	140.64	96.71	246	140	18	13						60	0
2012	246.66	140.73	96.7	246	140	20	13						18	0
2012	246.66	140.96	96.72	246	140	22	13						290	0
2012	246.72	140.56	96.74	246	140	16	13						355	5
2012	246.61	140.8	96.74	246	140	19	13						355	5
2012	246.76	141.74	96.71	246	140	23	13						38	8
2012	246.03	140.05	96.74	246	140	1	13						200	10
2012	246.54	140.295	96.71	246	140	4	13						160	10
2012	246.7	140.485	96.74	246	140	9	13						80	10
2012	246.92	140.81	96.72	246	140	24	13					3	360	10
2012	246.46	140.64	96.73	246	140	13	13					3	40	15
2012	246.94	140.51		246	140	17	13					2	325	15
2012	246.36	140.55	96.7	246	140	7	13						55	20
2012	246.61	140.99	96.7	246	140	21	13						70	20
2012	246.59	140.43	96.74	246	140	8	13						140	25
2012	246.44	140.71	96.74	246	140	14	13						320	25
2012	246.65	140.29	96.7	246	140	5	13						90	35
2012	246.58	140.55	96.74	246	140	15	13						295	38
2012	246.98	140.72	96.73	246	140	25	13						35	40
2012	246	140.06	96.7	246	140	26	13						205	75
2012	247.06	141.21	96.65	246	140	3	14						315	0

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2012	247.29	141.93	96.68	246	140	4	14					4	0	0
2012	247.27	141.21	96.72	246	140	5	14						350	10
2012	247.86	141.85	96.65	246	140	8	14						340	20
2012	247.02	141.92	96.72	246	140	1	14						0	30
2012	247.04	141.36	96.68	246	140	2	14					3	50	30
2012	247.81	141.66	96.65	246	140	7	14						40	40
2012	247.5	141.14	96.68	246	140	6	14						350	90
2012	246.52	141.42	96.65	246	140	2	14						0	0
2012	246.59	141.8	96.71	246	140	3	14						18	0
2012	246.7	141.71	96.7	246	140	4	14						0	0
2012	246.75	141.92	96.71	246	140	6	14						20	0
2012	246.86	141.81	96.71	246	140	8	14						320	0
2012	246.1	141.36	96.73	246	140	11	14						310	0
2012	246.13	141.54	96.78	246	140	16	14						340	0
2012	246.4	141.18	96.68	246	140	25	14	yes					60	0
2012	246.02	141.46	96.68	246	140	37	14					1	260	0
2012	246.66	141.8	96.7	246	140	5	14						0	1
2012	246.39	141.15	96.7	246	140	26	14					3	285	5
2012	246.8	141.49	96.66	246	140	35	14						290	5
2012	246.14	141.59	96.71	246	140	14	14						355	10
2012	246.04	141.52	96.71	246	140	19	14						320	10
2012	246.18	141.34	96.7	246	140	23	14						290	10
2012	246.16	141.19	96.7	246	140	24	14						50	10
2012	246.54	141.21	96.67	246	140	27	14						30	10
2012	246.6	141.53	96.67	246	140	29	14						35	10
2012	246.2	141.52	96.66	246	140	34	14						110	10

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2012	246.15	141.34	96.68	246	140	22	14						270	15
2012	246.84	141.51	96.73	246	140	9	14						0	20
2012	246.21	141.52	96.73	246	140	17	14					2	20	20
2012	246.64	141.19	96.66	246	140	28	14						240	20
2012	246.18	141.32	96.66	246	140	32	14						90	20
2012	246.07	141.74	96.73	246	140	12	14						60	30
2012	246.08	141.64	96.78	246	140	13	14						340	30
2012	246.12	141.31	96.69	246	140	31	14						350	30
2012	246.31	141.995	96.71	246	140	1	14						0	32
2012	246.77	141.85	96.71	246	140	7	14						45	35
2012	246.04	141.54	96.66	246	140	33	14						0	35
2012	246.76	141.44	96.67	246	140	10	14						280	40
2012	246.02	141.59	96.79	246	140	15	14					2	40	45
2012	246.24	141.49	96.69	246	140	18	14					3	280	45
2012	246.03	141.48	96.72	246	140	20	14						310	45
2012	246.12	141.3	96.67	246	140	36	14						350	45
2012	246.06	141.28	96.69	246	140	30	14	yes					300	50
2012	246.02	141.38	96.69	246	140	21	14						70	55
2012	246.16	140.76	96.67	246	140	22	14						15	0
2012	246.67	140.35	96.65	246	140	12	14						18	0
2012	246.33	140.07	96.68	246	140	3	14						20	0
2012	246.35	140.45	96.66	246	140	11	14						45	0
2012	246.05	140.95	96.67	246	140	26	14						95	0
2012	246.29	140.65	96.69	246	140	19	14						115	0
2012	246.18	140.99	96.65	246	140	30	14				possible	3	220	0
2012	246.61	140.42	96.66	246	140	13	14					3	260	0

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2012	246.82	140.22	96.68	246	140	6	14					2	280	0
2012	246.64	140.64	96.65	246	140	20	14						335	0
2012	246.44	140.61	96.66	246	140	18	14						5	5
2012	246.04	140.38	96.68	246	140	7	14						155	5
2012	246.74	140.57	96.66	246	140	14	14						355	10
2012	246.99	140.72	96.69	246	140	24	14						20	15
2012	246.04	140.55	96.66	246	140	15	14						190	15
2012	246.04	140.02	96.69	246	140	1	14						215	15
2012	246.23	140.99	96.67	246	140	28	14						330	15
2012	246.35	140.91	96.69	246	140	25	14						80	20
2012	246.39	140.03	96.65	246	140	2	14					4	98	20
2012	246.32	140.29	96.69	246	140	5	14						155	20
2012	246.89	140.38	96.69	246	140	8	14						190	20
2012	246.25	140.63	96.65	246	140	17	14						0	25
2012	246.34	140.52	96.65	246	140	16	14					3	30	25
2012	246.86	140.65	96.69	246	140	21	14						85	25
2012	246.54	140.295	96.71	246	140	4	14						40	35
2012	246.34	140.72	96.65	246	140	29	14						40	35
2012	246.15	140.95	96.67	246	140	27	14						65	35
2012	246.48	140.36	96.67	246	140	9	14						45	40
2012	246.11	140.41	96.65	246	140	10	14						0	45
2012	246.33	140.71	96.65	246	140	23	14						125	45
2012	247.43	141.58	96.59	246	140	5	15						40	10
2012	247.73	141.46	96.58	246	140	6	15						122	11
2012	247.26	141.97	96.59	246	140	4	15						222	15
2012	247.84	141.89	96.60	246	140	7	15					1	79	20

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2012	247.94	141.16	96.62	246	140	8	15						322	22
2012	247.26	141.3	96.60	246	140	3	15					3	38	30
2012	247.03	141.54	96.61	246	140	1	15						339	43
2012	247.06	141.45	96.60	246	140	2	15						337	45
2012	246.65	141.93	96.61	246	140	5	15						0	0
2012	246.12	141.66	96.63	246	140	2	15						290	5
2012	246.14	141.71	96.6	246	140	1	15						50	10
2012	246.84	141.74	96.62	246	140	4	15	yes	exterior	3	Present		310	15
2012	246.64	141.81	96.6	246	140	3	15						275	40
2012	247.23	140.48	96.57	246	140	2	16						358	0
2012	247.16	140.9	96.55	246	140	3	16	yes	dorsal	3	yes		360	20
2012	247.77	140.44	96.575	246	140	1	16						254	25
2012	247.11	140.94	96.585	246	140	4	16					2	110	25
2012	247.32	140.98	96.56	246	140	5	16						130	25
2012	246.51	141.76	96.58	246	140	18	16						30	0
2012	246.1	141.86	96.59	246	140	16	16						35	0
2012	246.34	141.26	96.6	246	140	5	16						85	0
2012	246.3	141.37	96.55	246	140	7	16						135	0
2012	246.16	141.15	96.55	246	140	2	16						340	0
2012	246.12	141.04	96.6	246	140	1	16						320	5
2012	246.58	141.68	96.59	246	140	17	16	x	Interior	1			0	15
2012	246.76	141.22	96.57	246	140	12	16						140	15
2012	246.61	141.14	96.58	246	140	8	16					2	210	15
2012	246.95	141.27	96.62	246	140	13	16					3	235	19
2012	246.3	141.12	96.55	246	140	3	16						10	20
2012	246.97	141.56	96.59	246	140	15	16	yes	Interior/exterior	4			150	20

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2012	246.92	141.31	96.58	246	140	14	16						320	20
2012	246.36	141.25	96.61	246	140	6	16						85	25
2012	246.65	141.12	96.57	246	140	10	16						225	25
2012	246.56	141.82	96.59	246	140	19	16						310	25
2012	246.42	141.15	96.61	246	140	4	16	yes	exterior	1			335	25
2012	246.76	141.07	96.54	246	140	11	16						160	60
2012	246.61	141.02	96.55	246	140	9	16							
2012	246.55	140.49	96.58	246	140	15	16						0	0
2012	246.43	140.59	96.58	246	140	13	16					3	5	0
2012	246.38	140.54	96.6	246	140	10	16				yes	3	60	0
2012	246.61	140.96	96.55	246	140	23	16					2	90	0
2012	246.39	140.88	96.55	246	140	19	16				yes		105	0
2012	246.33	140.55	96.56	246	140	9	16				yes		115	0
2012	246.29	140.09	96.59	246	140	1	16						295	0
2012	246.62	140.67	96.55	246	140	29	16						355	0
2012	246.61	140.66	96.55	246	140	17	16						355	5
2012	246.31	140.67	96.57	246	140	1	16						355	5
2012	246.82	140.65	96.56	246	140	27	16						55	10
2012	246.04	140.55	96.56	246	140	7	16						122	10
2012	246.55	140.71	96.58	246	140	16	16						65	15
2012	246.59	140.88	96.58	246	140	25	16					4	315	15
2012	246.61	140.86	96.59	246	140	24	16						340	15
2012	246.5	140.24	96.59	246	140	2	16						35	20
2012	246.15	140.15	96.55	246	140	6	16						80	20
2012	246.36	140.62	96.56	246	140	12	16					3	85	20
2012	246.03	140.46	96.58	246	140	4	16						55	25

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2012	246.45	140.41	96.59	246	140	3	16						135	25
2012	246.76	140.69	96.59	246	140	26	16				yes		240	25
2012	246.63	140.73	96.6	246	140	18	16						285	25
2012	246.14	140.66	96.57	246	140	14	16						15	30
2012	246.58	140.96	96.55	246	140	22	16						295	30
2012	246.5	140.99	96.58	246	140	21	16						105	35
2012	246.4	140.94	96.57	246	140	20	16						15	45
2012	246.78	140.62	96.55	246	140	28	16				yes		50	45
2012	246.04	140.63	96.59	246	140	8	16						100	45
2012	246.13	140.51	96.59	246	140	5	16					1	150	50
2012	246.51	142.05	96.73	246	142	2	14						0	0
2012	246.3	142.3	96.71	246	142	9	14					3	0	0
2012	246.4	142.7	96.7	246	142	26	14						10	0
2012	246.89	142.29	96.74	246	142	15	14						18	0
2012	246.59	142.28	96.74	246	142	11	14						20	0
2012	246.46	142.2	96.75	246	142	7	14						35	0
2012	246.31	142.72	96.71	246	142	25	14				possible		285	0
2012	246.91	142.22	96.705	246	142	14	14						290	0
2012	246.44	142.3	96.7	246	142	10	14						305	0
2012	246.36	142.41	96.72	246	142	18	14						318	0
2012	246.63	142.9	96	246	142	27	14						331	0
2012	246.48	142.43	96.7	246	142	20	14						50	5
2012	246.48	142.09	96	246	142	3	14					2	68	5
2012	246.27	142.41	96.72	246	142	17	14						320	5
2012				246	142	28	14						350	5
2012	246.7	142.07	96.72	246	142	4	14						320	8

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2012	246.3	142.15	96.73	246	142	6	14						40	10
2012	246.3	142.23	96.72	246	142	8	14						310	10
2012	246.92	142.45	96.74	246	142	22	14						345	10
2012	246.31	142.64	96.72	246	142	24	14						38	15
2012	246.89	142.29	96.72	246	142	16	14						310	15
2012	246.87	142.21	96.71	246	142	13	14						80	20
2012	246.91	142	96.72	246	142	5	14					2	330	20
2012	246.64	142.94	96.71	246	142	29	14					3	45	25
2012	246.49	142	96.725	246	142	1	14				possible		48	30
2012	246.54	142.44	96.7	246	142	21	14						50	40
2012	246.43	142.42	96.73	246	142	19	14						50	90
2012	246.63	142.27	96.7	246	142	12	14						247	90
2012	246.22	142.63	96	246	142	23	14							
2012	246.08	142.06	96.65	246	142	1	15						5	0
2012	246.52	142.16	96.65	246	142	15	15						15	0
2012	246.93	142.27	96.69	246	142	19	15						45	0
2012	246.58	142.22	96.67	246	142	16	15						85	0
2012	246.58	142.22	96.66	246	142	17	15						255	0
2012	246.63	142.78	96.66	246	142	6	15					3	350	0
2012	246.28	142.28	96.66	246	142	3	15					3	355	0
2012	246.59	142.04	96.68	246	142	14	15					2	0	5
2012	246.41	142.07	96.67	246	142	12	15						30	5
2012	246.66	142.36	96.67	246	142	13	15						30	5
2012	246.14	142.93	96.65	246	142	2	15						330	5

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2012	246.82	142.89	96.64	246	142	7	15						5	10
2012	246.74	142.7	96.66	246	142	9	15						85	10
2012	246.42	142.8	96	246	142	4	15						90	10
2012	246.89	142.34	96.65	246	142	11	15				yes		285	10
2012	246.76	142.15	96.68	246	142	21	15						300	10
2012	246.81	142.16	96.68	246	142	20	15						320	10
2012	246.63	142.26	96.67	246	142	18	15					4	90	15
2012	246.73	142.11	96.65	246	142	23	15				yes		305	20
2012	246.92	142.87	96.65	246	142	8	15						350	20
2012	246.68	142.6	96.65	246	142	10	15						260	30
2012	246.58	142.88	96.65	246	142	5	15					3	340	40
2012	246.81	142.14	96.67	246	142	22	15				yes		230	45
2012	246.89	142.77	96.62	246	142	4	16						295	0
2012	246.89	142.37	96.6	246	142	6	16						200	0
2012	246.27	142.09	96.62	246	142	7	16						0	0
2012	246.92	142.19	96.63	246	142	9	16						335	5
2012	246.49	142.89	96.62	246	142	2	16						20	15
2012	246.81	142.15	96.64	246	142	8	16						80	20
2012	246.37	142.97	96.6	246	142	1	16						80	23
2012	246.8	142.58	96.6	246	142	5	16						315	40
2012	246.57	142.84	96.61	246	142	3	16						345	50
2012	246.31	142.81	96.75	246	142	1	17					1	30	0
2012	246.72	142.02	96.57	246	142	5	17						340	0
2012	246.73	142.66	96.6	246	142	9	17					3	345	0

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2012	246.76	142.49	96.55	246	142	12	17						110	0
2012	246.92	142.67	96.55	246	142	13	17						355	0
2012	246.8	142.55	96.6	246	142	14	17						315	0
2012	246.65	142.51	96.55	246	142	16	17						30	0
2012	246.83	142.55	96.55	246	142	17	17						285	0
2012	246.57	142.12	96.58	246	142	4	17						315	5
2012	246.62	142.51	96.58	246	142	11	17						320	10
2012	246.63	142.18	96.6	246	142	6	17						270	15
2012	246.58	142.52	96.58	246	142	10	17						65	15
2012	246.03	142.02	96.58	246	142	3	17						45	20
2012	246.88	142.98	96.59	246	142	15	17					2	340	25
2012	246.13	142.32	96	246	142	2	17						320	50
2012	246.84	142.26	96.57	246	142	7	17						295	55
2012	246.55	142.64	96.59	246	142	8	17						40	60
2012	248.2	141.5	96.64	248	140	1	18						50	0
2012	248.51	141.98	96.64	248	140	8	18						0	0
2012	248.6	141.44	96.62	248	140	9	18						90	0
2012	248.83	141.08	96.65	248	140	14	18						90	0
2012	248.5	141.86	96.61	248	140	7	18						90	5
2012	248.52	141.65	96.62	248	140	6	18						90	10
2012	248.81	141.47	96.61	248	140	13	18					2	325	10
2012	248.43	141.49	96.62	248	140	4	18					3	40	20
2012	248.63	141.42	96.61	248	140	10	18						0	20
2012	248.36	141.75	96.61	248	140	15	18						90	20

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2012	248.63	141.34	96.63	248	140	11	18						50	25
2012	248.48	141.59	96.61	248	140	5	18						50	30
2012	248.74	141.26	96.62	248	140	12	18						325	30
2012	248.28	141.46	96.62	248	140	2	18						0	35
2012	248.35	141.74	96.61	248	140	3	18						0	40
2012	248.25	141.57	96.57	248	140	4	19						40	0
2012	248.74	141.7	96.555	248	140	15	19						60	0
2012	248.6	141.07	96.57	248	140	11	19						90	0
2012	248.4	141.75	96.6	248	140	8	19					3	90	0
2012	248.64	141.23	96.57	248	140	12	19					3	90	0
2012	248.53	141.82	96.6	248	140	10	19					2	0	20
2012	248.77	141.94	96.59	248	140	14	19						40	20
2012	248.41	141.66	96.59	248	140	7	19						320	20
2012	248.05	141.42	96.59	248	140	3	19						0	30
2012	248.31	141.48	96.6	248	140	5	19						30	30
2012	248.53	141.19	96.57	248	140	9	19						340	30
2012	248.92	141.2	96.59	248	140	1	19						90	40
2012	248.09	141.17	96.58	248	140	2	19						90	45
2012	248.38	141.17	96.56	248	140	6	19						0	60
2012	248.7	141.36	96.56	248	140	13	19						45	65
2012	248.31	141.77	96.52	248	140	2	20					4	0	0
2012	248.77	141.52	96.52	248	140	12	20				yes		0	0
2012	248.89	141.12	96.54	248	140	16	20						0	0
2012	248.9	141.07	96.54	248	140	17	20						0	0

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2012	248.09	141.53	96.54	248	140	1	20					3	42	0
2012	248.37	141.18	96.53	248	140	5	20						60	0
2012	248.57	141.4	96.54	248	140	9	20						90	0
2012	248.73	141.31	96.52	248	140	10	20						90	0
2012	248.79	141.38	96.53	248	140	11	20						90	0
2012	248.96	141.13	96.53	248	140	20	20						90	0
2012	248.92	141.04	96.53	248	140	21	20						90	0
2012	248.9	141.83	96.5	248	140	14	20						25	5
2012	248.9	141.17	96.51	248	140	15	20						0	10
2012	248.55	141.12	96.51	248	140	6	20						20	10
2012	248.17	141.96	96.49	248	140	19	20						40	10
2012	248.6	141.15	96.51	248	140	7	20				yes	1	0	15
2012	248.3	141.99	96.53	248	140	3	20						40	15
2012	248.88	141.82	96.52	248	140	13	20					3	40	15
2012	248.41	141.92	96.51	248	140	4	20						40	20
2012	248.67	141.15	96.5	248	140	8	20				yes		90	45
2012	248.89	141.05	96.53	248	140	18	20						0	90
2012	248.44	141.16	96.44	248	140	8	21	yes	exterior	2	yes		40	0
2012	248.31	141.74	96.46	248	140	4	21	yes	exterior	3	yes		40	30
2012	248.55	141.45	96.43	248	140	17	21						90	0
2012	248.14	141.97	96.45	248	140	2	21						45	0
2012	248.95	141.09	96.47	248	140	15	21						0	20
2012	248.53	141.79	96.49	248	140	7	21						310	10
2012	248.55	141.28	96.49	248	140	10	21						90	25

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2012	248.22	141.99	96.45	248	140	3	21	yes	exterior	1		2	41	0
2012	248.68	141.03	96.5	248	140	12	21						90	90
2012	248.49	141.82	96.45	248	140	6	21						0	0
2012	248.58	141.28	96.49	248	140	9	21						340	25
2012	248.75	141	96.49	248	140	13	21						0	0
2012	248.7	141.66	96	248	140	16	21	yes	exterior	2			0	60
2012	248.89	141.1	96.44	248	140	14	21						90	0
2012	248.65	141.1	96.46	248	140	18	21	yes	exterior	1	yes		40	10
2012	248.05	141.83	96.45	248	140	1	21						0	0
2012	248.58	141.07	96.49	248	140	11	21						90	0
2012	248.4	141.85	96.45	248	140	5	21	yes	exterior	1		2	310	95
2012	248.14	141.29	96.51	248	140	7	21					3	0	0
2012	248.27	141.39	96.58	248	140	3	21						45	0
2012	248.22	141.34	96.48	248	140	8	21						90	0
2012	248.26	141.44	96.58	248	140	2	21						90	17
2012	248.2	141.33	96.51	248	140	4	21						20	33
2012	248.27	141.86	96.55	248	140	6	21						90	45
2012				248	140	1	21							
2012	248.2	141.26	96.62	248	140	5	21							
2012	248.22	140.4	96.85	248	140	1	11						0	0
2012	248.1	140.4	96.85	248	140	2	11						0	0
2012	248.27	140.38	96.81	248	140	11	12						0	0
2012	248.24	140.93	96.83	248	140	2	12					3	40	0
2012	248.34	140.79	96.82	248	140	3	12					3	40	0

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2012	248.1	140.42	96.8	248	140	9	12					2	45	0
2012	248.34	140.74	96.8	248	140	4	12						60	0
2012	248.16	140.16	96.82	248	140	12	12						60	0
2012	248.51	140.76	96.8	248	140	6	12						300	0
2012	248.49	140.1	96.81	248	140	15	12						300	0
2012	248.37	140.19	96.8	248	140	14	12						320	0
2012	248.06	140.42	96.8	248	140	8	12						330	0
2012	248.04	140.89	96.84	248	140	1	12						40	7
2012	248.15	140.11	96.83	248	140	13	12						320	10
2012	248.48	140.77	96.81	248	140	5	12						40	20
2012	248.12	140.4	96.8	248	140	10	12					4	70	20
2012	248.57	140.71	96.8	248	140	7	12							
2012	248.19	140.93	96.75	248	140	1	13						40	0
2012	248.91	140.79	96.75	248	140	2	13						0	0
2012	248.47	140.55	96.77	248	140	4	13					3	0	0
2012	248.13	140.25	96.76	248	140	6	13						80	0
2012	248.23	140.1	96.75	248	140	7	13						0	0
2012	248.57	140.1	96.76	248	140	9	13						60	0
2012	248.12	140.48	96.78	248	140	3	13						310	10
2012	248.94	140.31	96.8	248	140	10	13						330	15
2012	248.59	140.16	96.78	248	140	8	13						50	20

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2012	248.52	140.5	96.78	248	140	5	13						300	25
2012	248.61	140.88	96.72	248	140	2	14						0	0
2012	248.15	140.73	96.71	248	140	3	14						40	0
2012	248.24	140.68	96.71	248	140	4	14						90	0
2012	248.63	140.71	96.71	248	140	5	14					1	0	0
2012	248.93	140.58	96.76	248	140	6	14	yes	dorsal	3	yes		290	0
2012	248.94	140.55	96.75	248	140	7	14					3	290	0
2012	248.78	140.51	96.73	248	140	8	14						90	0
2012	248.22	140.23	96.7	248	140	11	14						320	0
2012	248.42	140.29	96.73	248	140	12	14						340	0
2012	248.17	140.22	96.71	248	140	14	14						35	10
2012	248.15	140.28	96.73	248	140	10	14						300	25
2012	248.45	140.2	96.7	248	140	13	14						40	25
2012	248.07	140.91	96.74	248	140	1	14						65	40
2012	248.89	140.4	96.7	248	140	9	14						320	50
2012	248.83	140.86	96.7	248	140	4	15						57	0
2012	248.93	140.9	96.7	248	140	6	15						285	0
2012	248.3	140.7	96.65	248	140	8	15					2	320	0
2012	248.4	140.59	96.65	248	140	9	15						260	0
2012	248.1	140.41	96.65	248	140	12	15						60	0
2012	248.28	140.14	96.66	248	140	16	15						345	0

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2012	248.75	140.3	96.66	248	140	13	15						15	2
2012	248.04	140.2	96.66	248	140	14	15						0	2
2012	248.37	140.94	96.68	248	140	2	15						350	5
2012	248.02	140.76	96.69	248	140	7	15						325	5
2012	248.37	140.99	96.65	248	140	1	15						340	8
2012	248.83	140.85	96.7	248	140	5	15						80	12
2012	248.58	140.8	96.67	248	140	3	15					2	40	15
2012	248.28	140.22	96.68	248	140	15	15					3	30	15
2012	248.2	140.46	96.17	248	140	11	15						65	20
2012	248.06	140.5	96.68	248	140	10	15						60	45
2012	248.87	140.54	96.6	248	140	7	16						0	0
2012	248.2	140.55	96.58	248	140	10	16						0	0
2012	248.13	140.44	96.63	248	140	14	16						0	0
2012	248.05	140.07	96.63	248	140	21	16						0	0
2012	248.33	140.55	96.63	248	140	9	16						40	0
2012	248.12	140.03	96.64	248	140	22	16						50	0
2012	248.91	140.39	96.6	248	140	16	16						85	0
2012	248.82	140.62	96.6	248	140	6	16						90	0
2012	248.12	140.2	96.62	248	140	20	16					3	340	0
2012	248.67	140.85	96.61	248	140	4	16					3	305	10
2012	248	140.53	96.61	248	140	12	16					2	0	15

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2012	248.12	140.81	96.59	248	140	3	16						40	15
2012	248.63	140.7	96.62	248	140	5	16						50	15
2012	248.48	140.57	96.6	248	140	8	16						70	15
2012	248.12	140.95	96.61	248	140	2	16						50	20
2012	248.03	140.59	96.62	248	140	11	16						20	25
2012	248.19	140.19	96.61	248	140	19	16						345	25
2012	248.43	140.25	96.6	248	140	17	16	no			yes		90	30
2012	248.34	140.22	96.61	248	140	18	16						90	30
2012	248.13	140.51	96.62	248	140	13	16						90	30
2012	248.35	140	96.65	248	140	23	16	yes	exterior	2	no	4	0	90
2012	248.18	140.32	96.6	248	140	15	16						90	90
2012	248.34	140.71?	96.6	248	140	1	16							
2012	248.47	140.75	96.55	248	140	13	17						0	0
2012	248.11	140.58	96.56	248	140	8	17					3	0	0
2012	248.41	140.06	96.55	248	140	36	17						0	0
2012	248.77	140.67	96.55	248	140	17	17						0	0
2012	248.31	140.12	96.57	248	140	37	17						0	0
2012	248.49	140.3	96.57	248	140	29	17						0	0
2012	248.72	140.45	96.55	248	140	31	17						0	0
2012	248.8	140.52	96.55	248	140	32	17				yes		0	0
2012	248.83	140.39	96.55	248	140	33	17						0	0

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2012	248.88	140.47	96.55	248	140	34	17						0	0
2012	248.87	140.2	96.56	248	140	35	17	yes	exterior	1	yes		0	0
2012	248.51	140.71	96.59	248	140	12	17						0	0
2012	248.76	140.81	96.56	248	140	2	17					1	0	0
2012	248.01	140.49	96.55	248	140	21	17						0	0
2012	248.25	140.62	96.55	248	140	7	17					3	0	0
2012	248.88	140.61	96.56	248	140	19	17						20	0
2012	248.47	140.32	96.59	248	140	28	17						20	0
2012	248.91	140.63	96	248	140	20	17						40	0
2012	248.56	140.57	96.55	248	140	16	17				possible		65	0
2012	248.8	140.44	96.56	248	140	23	17						70	0
2012	248.6	140.44	96.55	248	140	22	17						77	0
2012	248.81	140.64	96	248	140	18	17						90	0
2012	248.11	140.4	96.59	248	140	24	17						90	0
2012	248.43	140.67	96.59	248	140	10	17						300	0
2012	248.39	140.6	96.585	248	140	9	17						310	0
2012	248.62	140.3	96.55	248	140	30	17					2	310	0
2012	248.22	140.29	96.55	248	140	26	17						320	0
2012	248.68	140.92	96.595	248	140	1	17						330	0
2012	248.53	140.78	96.55	248	140	14	17						45	5
2012	248.45	140.71	96.59	248	140	11	17						320	5

Table A38-1 continued

Yr.	North	East	Depth	N	E	Art	Lvl	Mod.	Face	M. scars	M.Wear		Strike	Dip
2012	248.21	140.68	96.55	248	140	5	17						30	10
2012	248.33	140.3	96.59	248	140	27	17						70	10
2012	248.24	140.69	96.56	248	140	4	17						40	20
2012	248.22	140.47	96.55	248	140	25	17						60	20
2012	248.18	140.79	96.585	248	140	3	17						40	30
2012	248.12	139.99	96.55	248	140	38	17					2	320	35
2012	248.24	140.65	96.56	248	140	6	17	yes	exterior	1		3	43	50
2012	248.42	140.66	96.56	248	140	15	17						45	50

APPENDIX 39

RESULTS OF EXPERIMENTAL WEATHERING SIMULATION

The chert outcrops at Topper are not impervious to the effects of natural weathering and such processes could explain the occurrence of items misclassified as flakes and flake debris Specifically, the identification of high quantities of Amorphous debris from the Pleistocene Terrace at Topper warrants further analysis to determine if these materials reflect deposits associated with the technological reductive trajectory implicit in the production of bend breaks or other chipped stone tools, or if such materials were produced naturally. Although chert is tough and has no preferred direction of cleavage, extreme temperature changes may induce artificial cleavage. In some cases, the interior surface of detached pieces may retain distinct markings that resemble compression rings. These "lines" form as the detachment breaks away from the parent cobble and are not as uniform and concentric as compression rings formed via conchoidal flaking. Figure 8-1 presents an example of a chert cobble that exhibits features characteristic of natural formation processes. Likewise, fire can result in the pitting and crazing of the surfaces of chert materials, and such markers can resemble the products of chert cobble testing. As a result, it is important to differentiate between each of these processes and the subsequent byproducts that can form from each. The Figures and tables below present the results of an experimental weathering simulation to evaluate whether lithic detachments can form as the byproducts of specific weathering processes. Where detachments were produced, their attributes were recorded and compared to the attributes of lithic items recovered from the archaeological contexts at the Topper Site (38AL23). Figures A39-1-3 show the change in weight for each cycle of a given weathering simulation. Cobbles tend to increase in weight during wetting cycles and decrease in weight during freezing and thawing cycles.

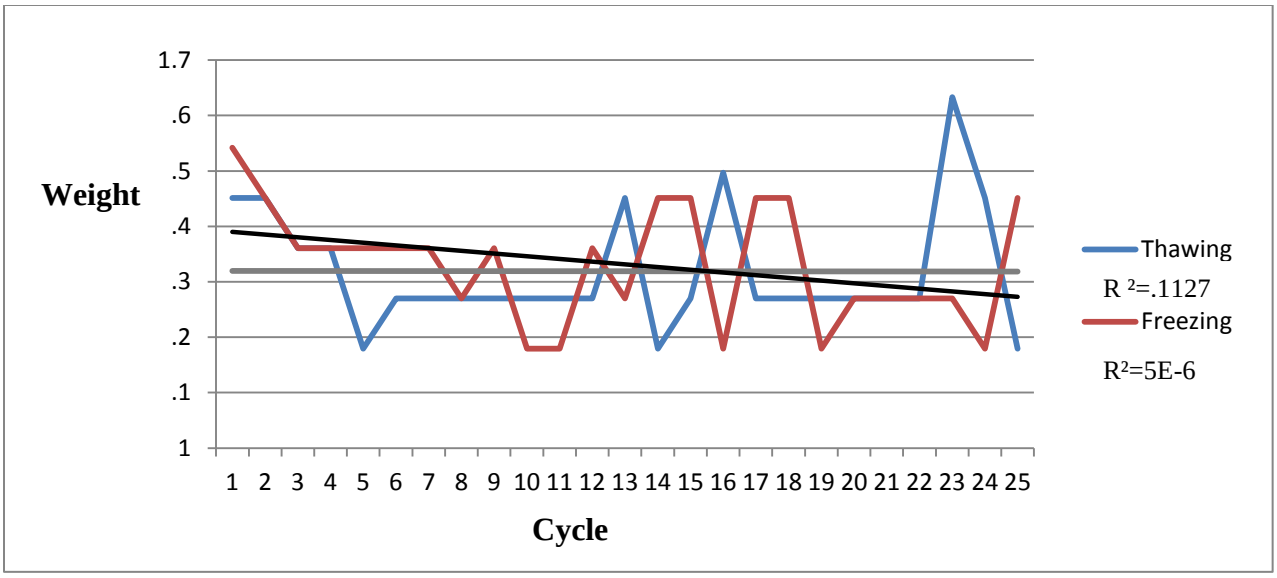


Figure A39-1

Chert cobble (1) selected for freeze thaw simulation prior to undergoing experimental weathering. Black and grey lines shows linear trend in weight as simulation study progresses. Freezing has the greater influence on weight decrease than the thawing process.

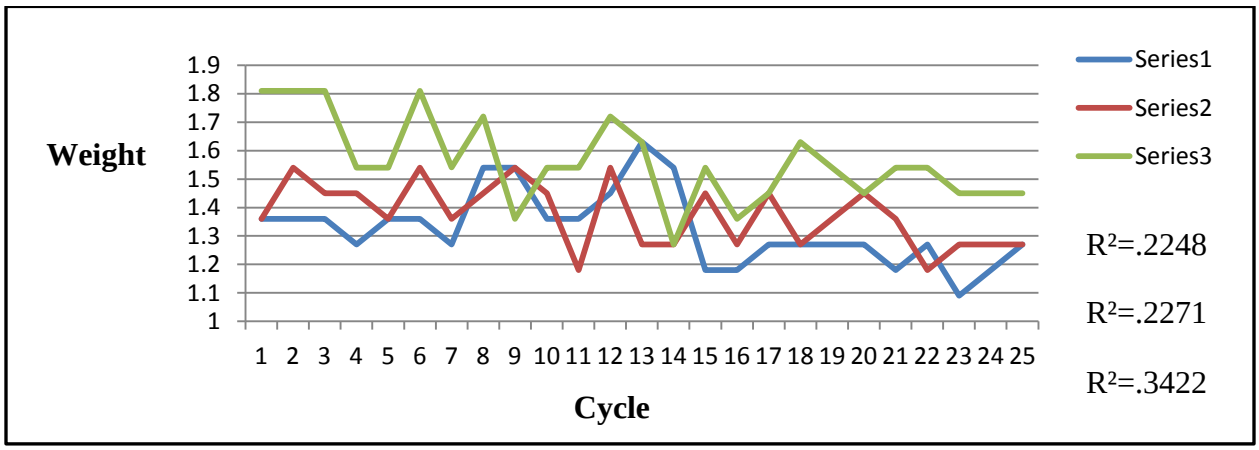


Figure A39-2A

Chert cobble (2) selected for freeze thaw soak simulation prior to undergoing experimental weathering. There is a decrease in cobble weight as a result of each of the three weathering procedures. (Red line indicates freezing cycle, blue line indicates thawing cycle, and green line indicates wetting cycle).

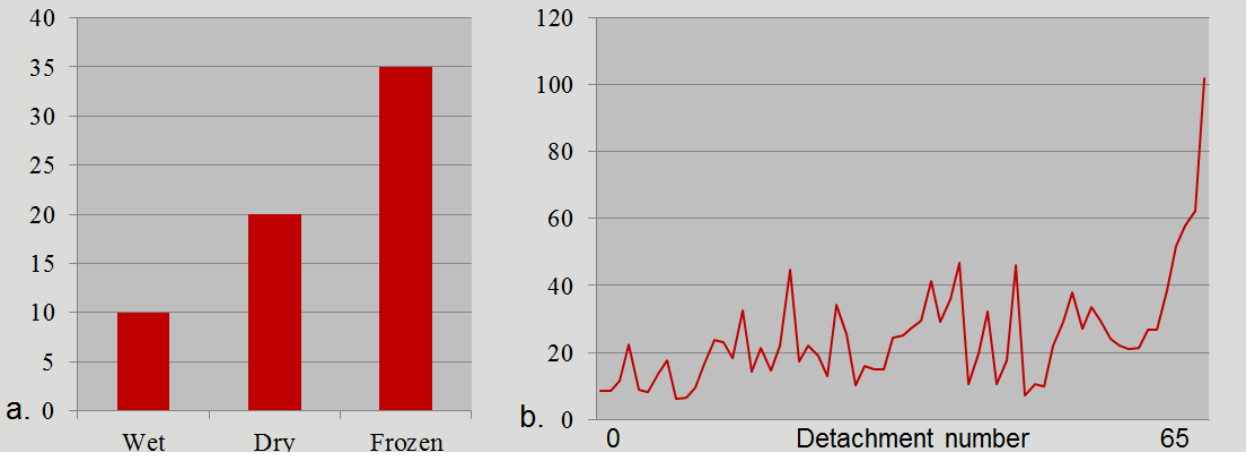


Figure A39-2B

The number of detachments by weathering agent for Cobble Sample 2 (a) and the number of detachments by weathering cycle (b). There is an increase in detachments during cycles of freezing as well as during later stages of the experiment.

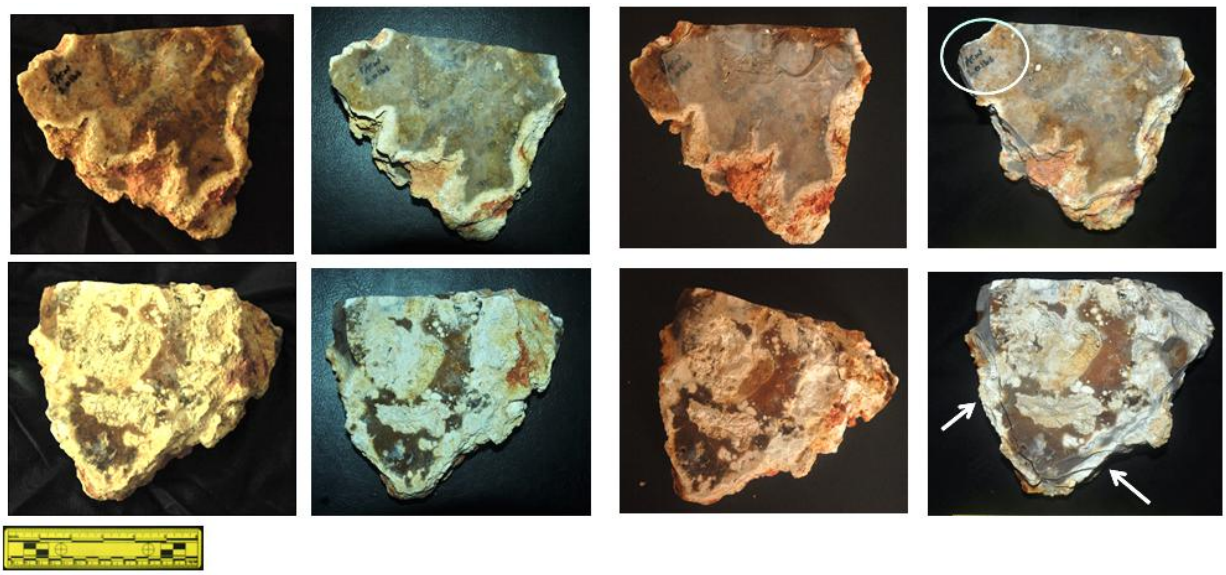


Figure A39-2C

Time Lapse progression of Cobble Sample 2 which underwent 25 cycles of freezing, thawing, and soaking. Note cracks forming on surface of cobble in images to right.



Figure A39-2D
Detachments from Cobble Sample 2.

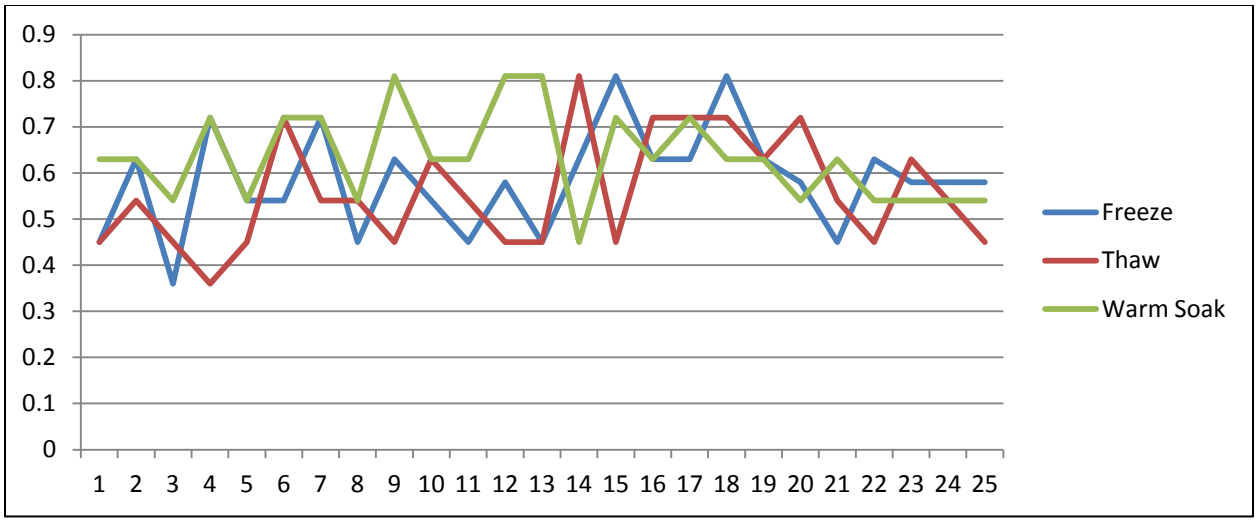
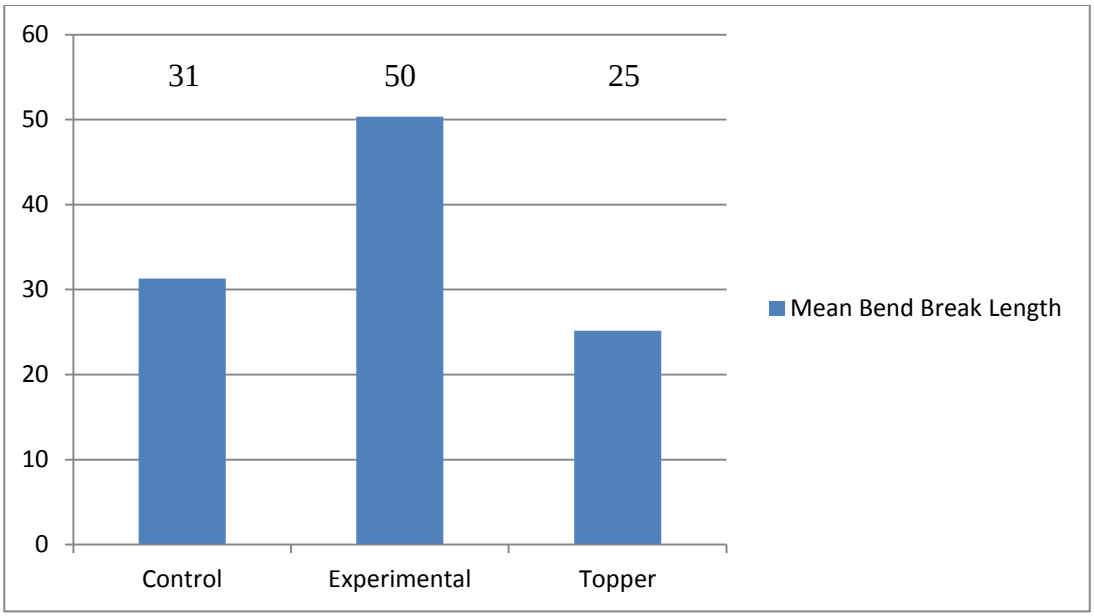


Figure A39-3

Chert cobble selected for freeze thaw soak/warm simulation prior to undergoing experimental weathering. There is a general increase in cobble weight as a result of each of the three weathering procedures through the first 17 weathering cycles.



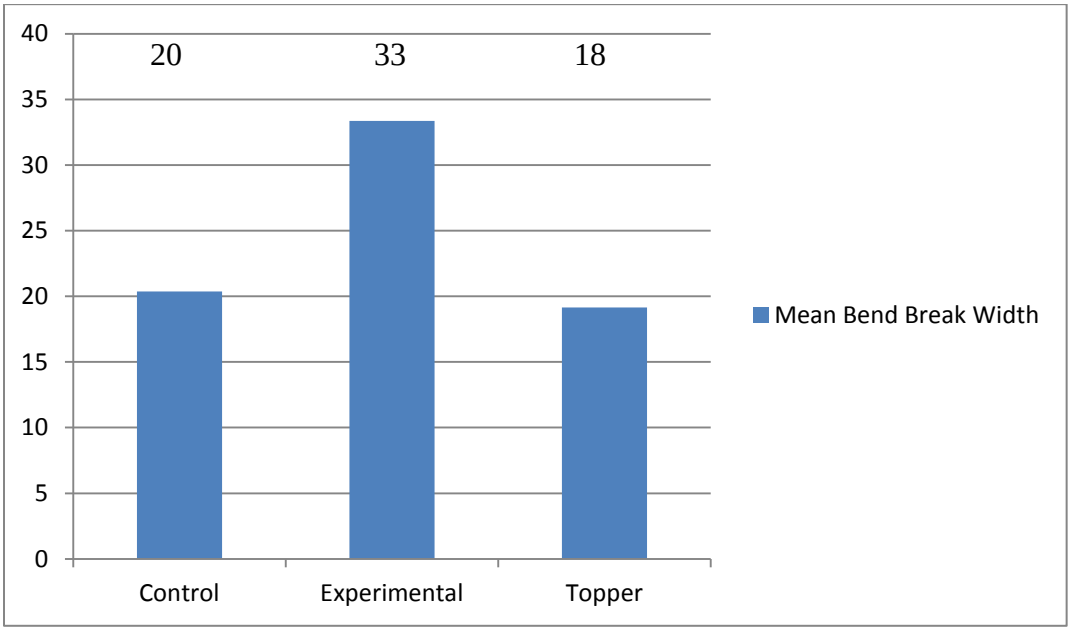
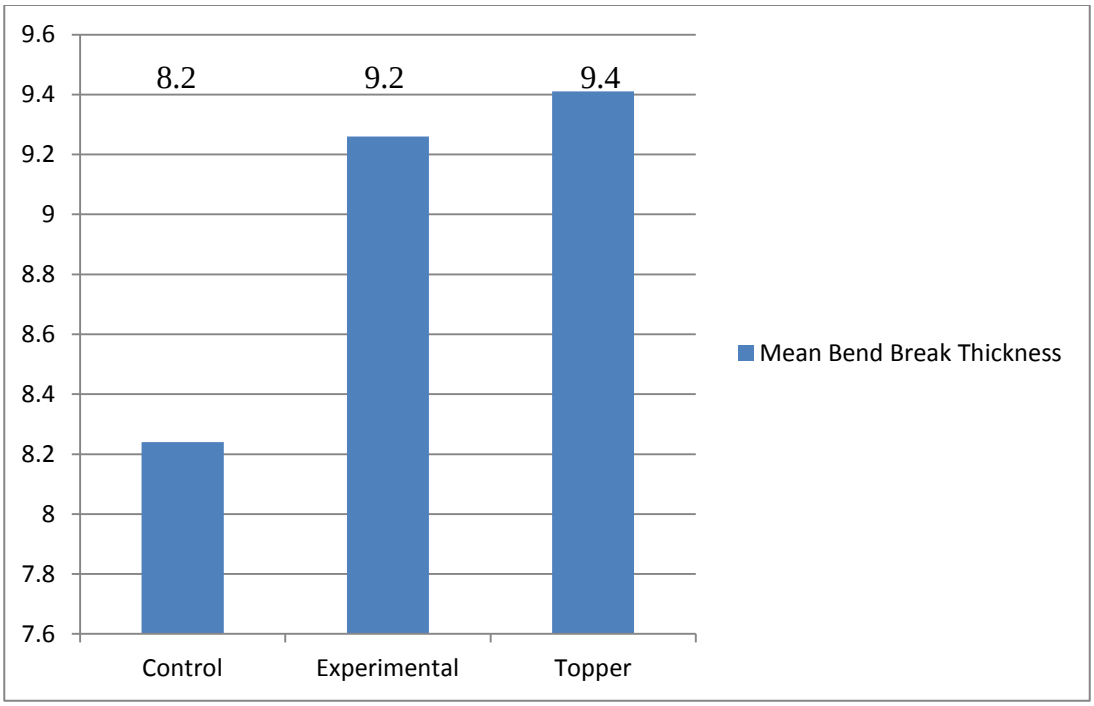


Figure A39-4
Mean metric attributes for variables of Bend break length and width (mm) for the Control, Experimental, and Topper assemblages.



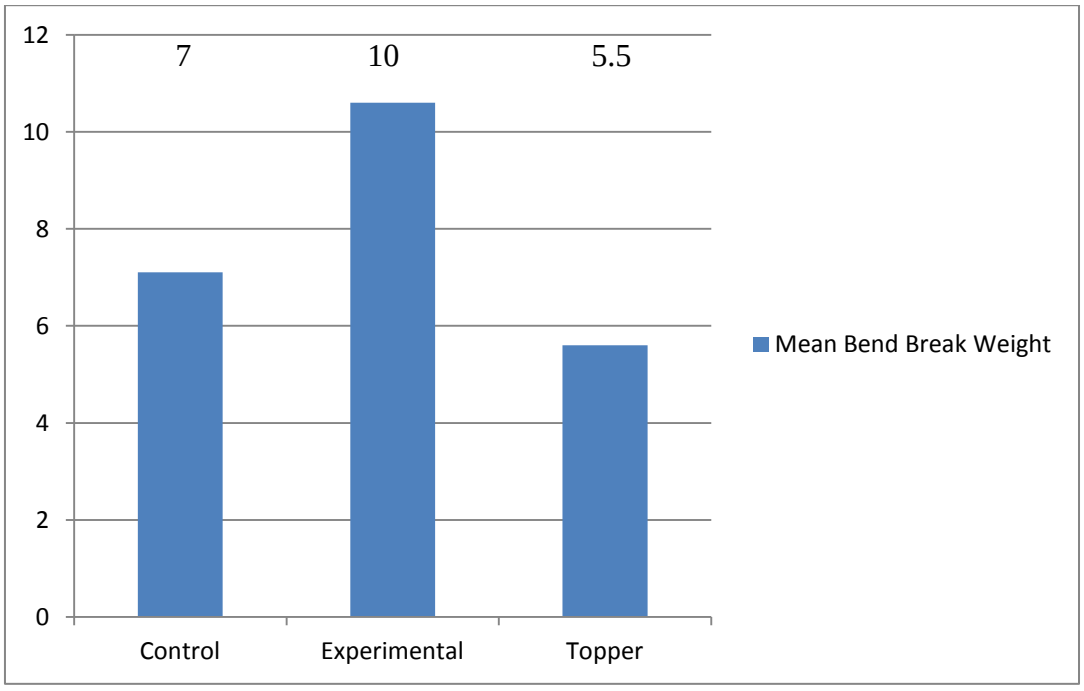


Figure A39-5
Mean metric attributes for variables of Bend break length and width (mm) for the Control, Experimental, and Topper assemblages.

Figures A39-6-13 show the results of a study comparing the morphological attributes of pre Clovis bend breaks and flakes from the Topper Site and lithic items recovered from an off-site control sample.

Attribute Ratio Analysis

To evaluate the prospect that the Topper bend break assemblage is morphologically comparable to the control sample, all bend breaks from each of the three samples (Topper, experimental, control) were compared according to the ratio attributes of artifact length/width, width/ thickness, thickness/weight and length/ weight. The results of this analysis are presented as scatterplots in Figures A39-6-7. The results are indicated as follows:

- For the ratio of bend break length to width, the experimental and Topper assemblages were found to have a high linear correlation as indicated by the r^2 values, whereas only a moderate linear correlation was found for the off-site control assemblage. Based on the scatterplot, it is clear that at Topper, as bend break lengths increase, widths also increase.

-For the ratio of bend break width to thickness, only the experimental assemblage was found to show a positive correlation. No positive correlation was found for the Topper or control sample. In fact, the ratio of artifact width to thickness is weak for the Topper and control assemblages.

-Figure A39-6-7 shows the ratios of bend break weight to attributes of length and thickness. According to the scatter plots, all three assemblages display a moderate to positive linear correlation with regard to the ratio of artifact length to weight. By contrast, only the

Topper assemblage was found to exhibit a positive linear correlation when the ratio of artifact weight to thickness measures were examined.

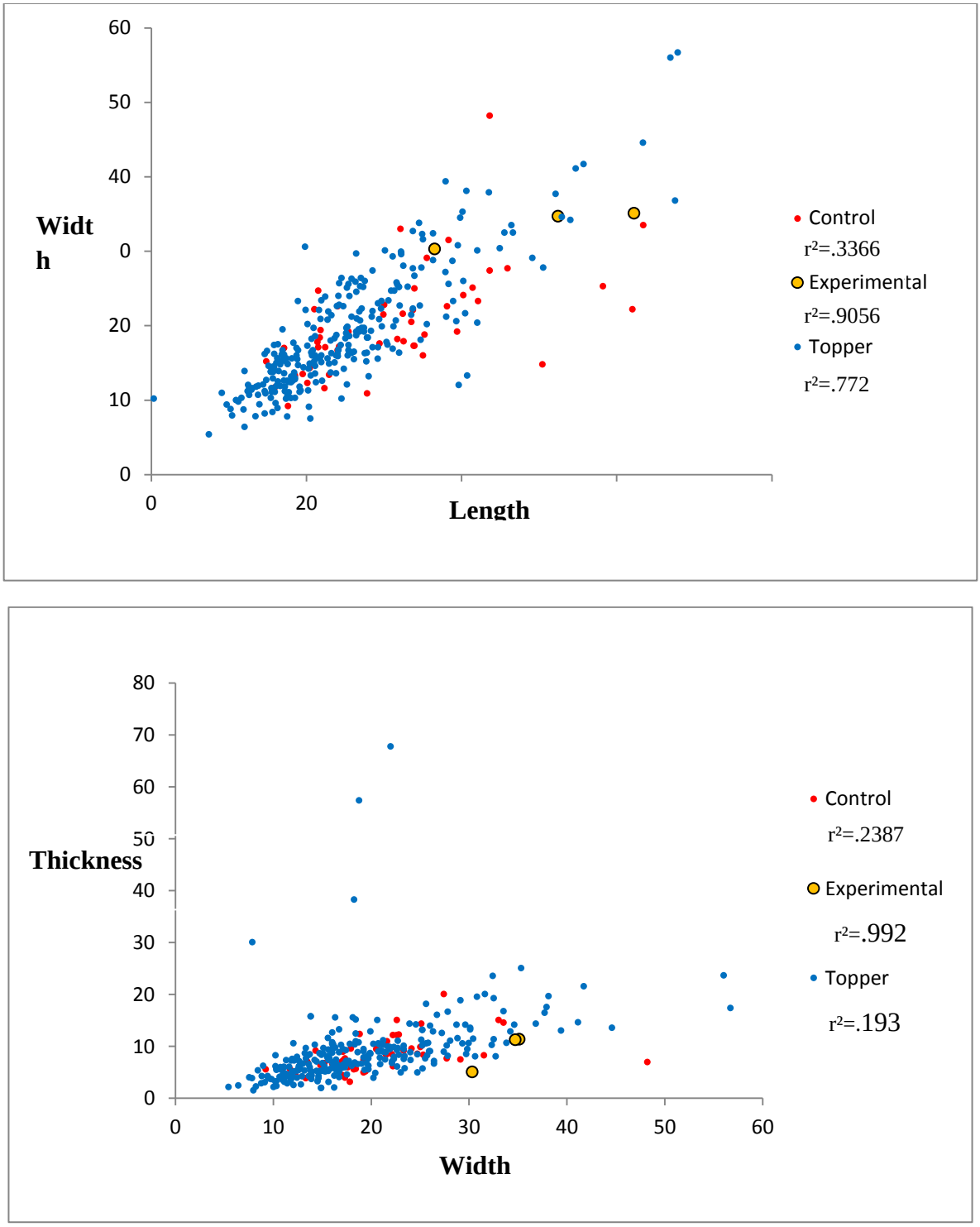
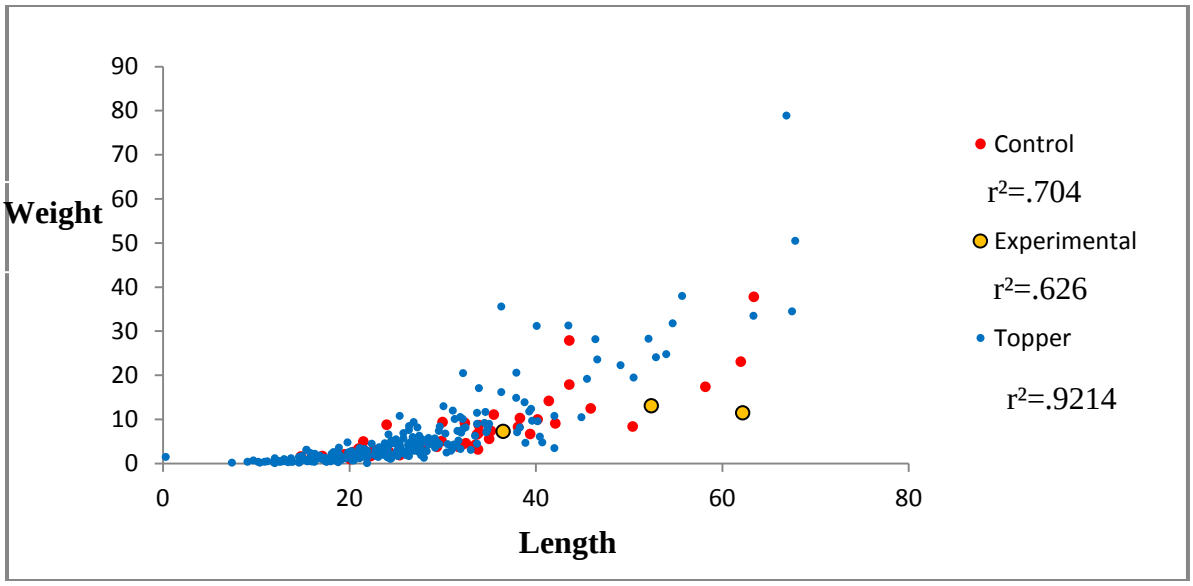


Figure A39-6

Mean morphological attributes of Bend break length regressed against bend break width (top) and bend break width regressed against bend break thickness (bottom) for the Control, Experimental, and Topper Assemblages.



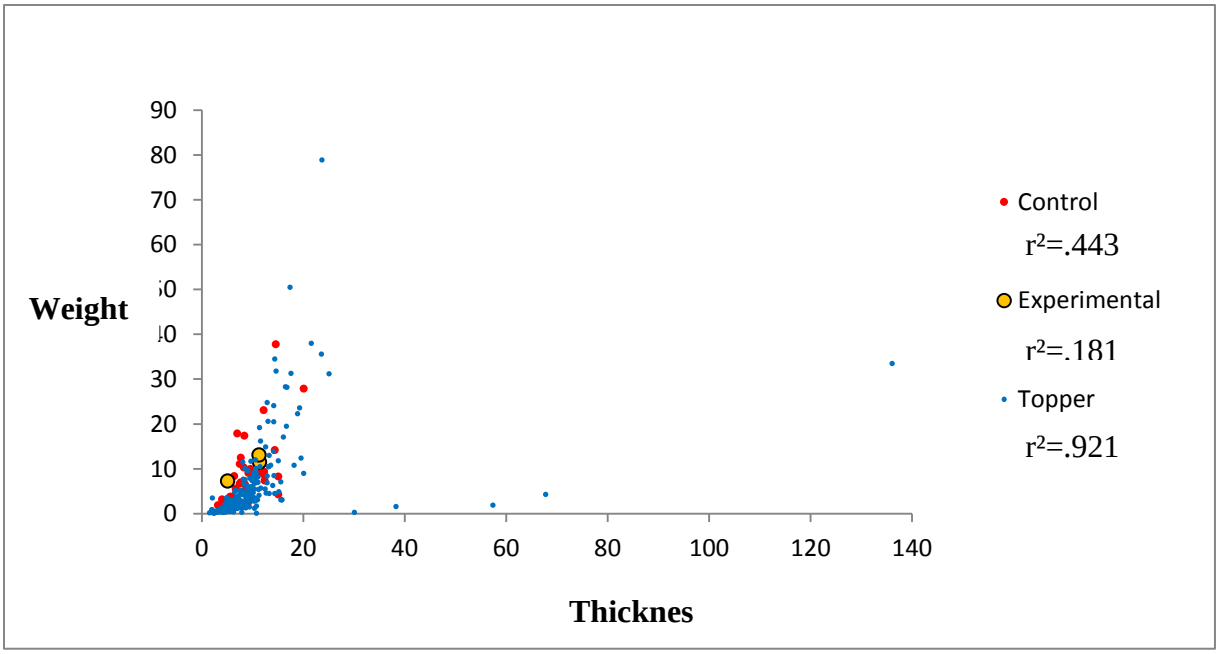
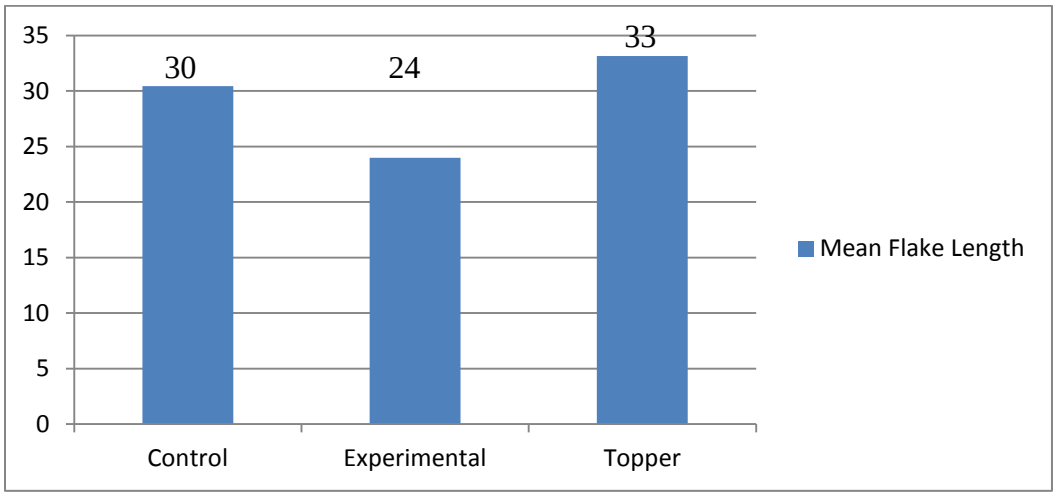


Figure A39-7
Mean morphological attributes of Bend break weight regressed against bend break length (top) and bend break weight regressed against bend break thickness (bottom) for the Control, Experimental, and Topper Assemblages.



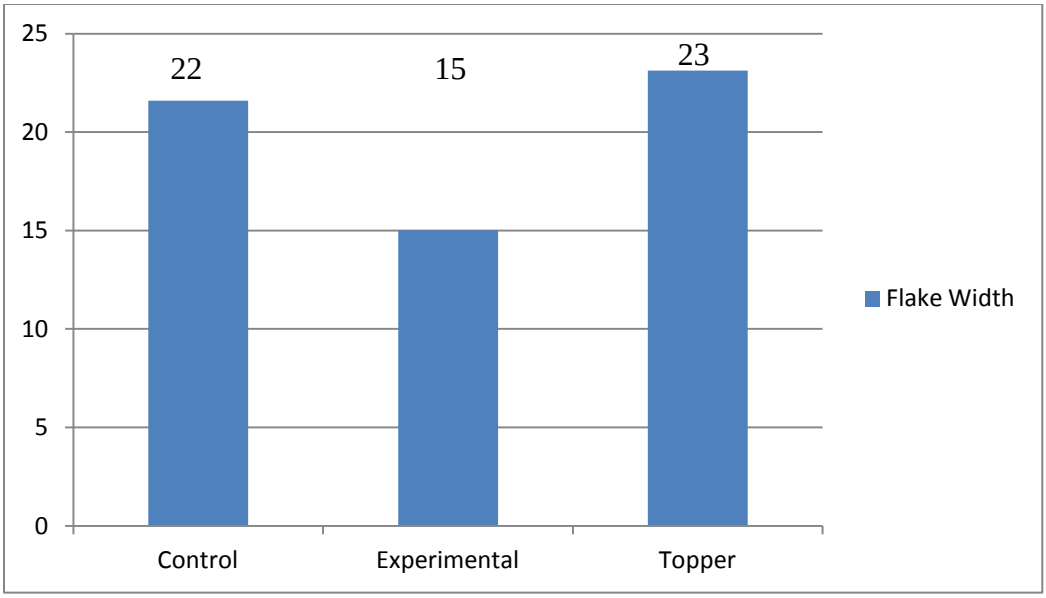
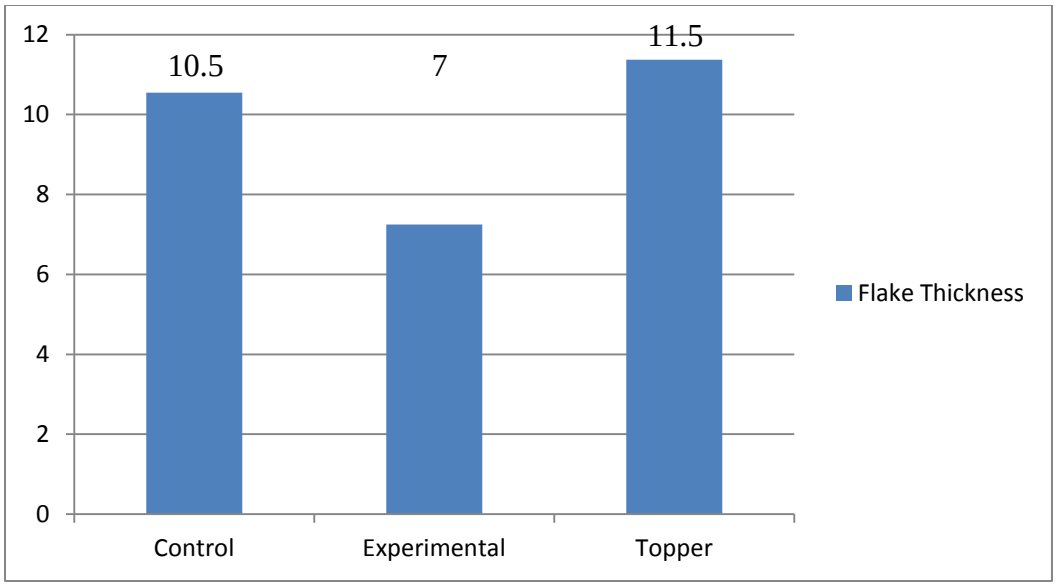


Figure A39-8
Mean metric attributes for variables of Ffake length and width for the Control, Experimental, and Topper assemblages.



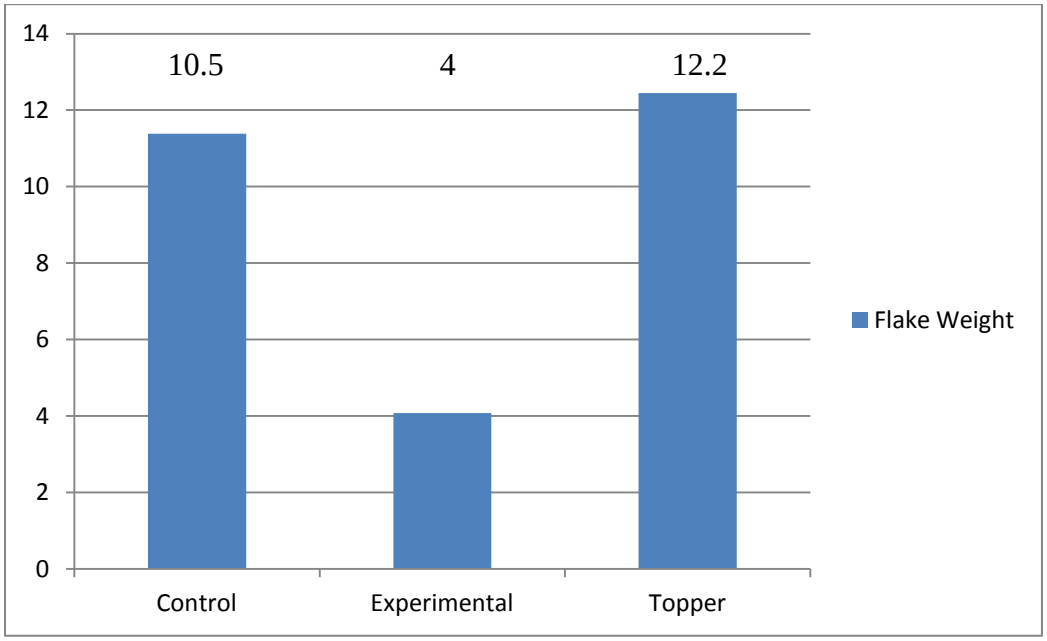
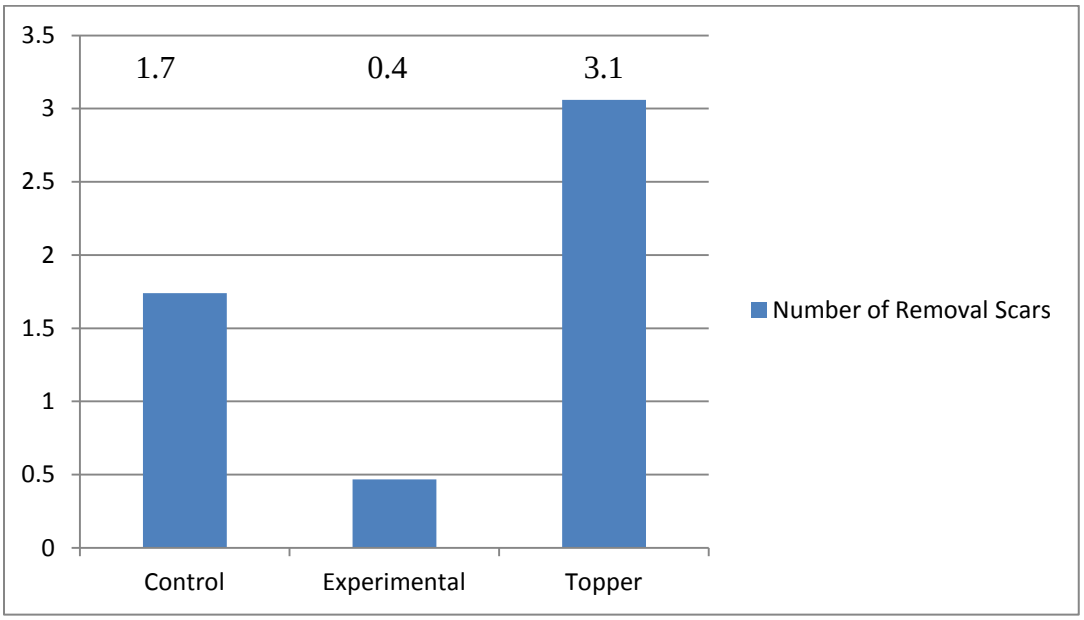


Figure A39-9
Mean metric attributes for variables of flake thickness and weight for the Control, Experimental, and Topper assemblages.



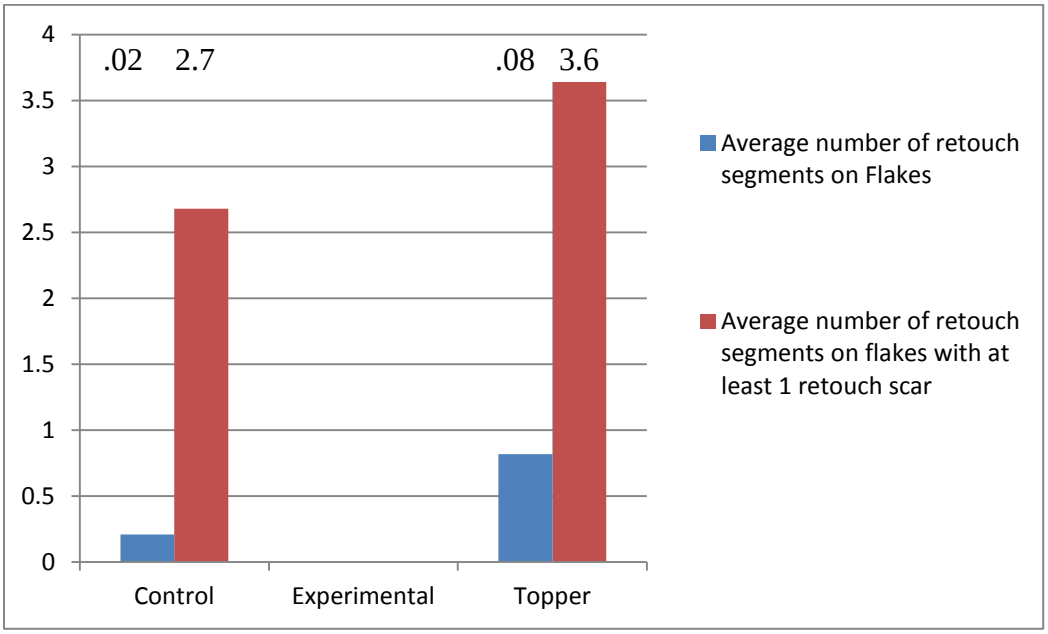


Figure A39-10

Bar chart showing the average number of removal scars on flakes from each assemblage (at top) and average number of retouch segments on flakes from each assemblage (at bottom). Attributes characteristic of retouch were absent on flakes from the Experimental assemblage.

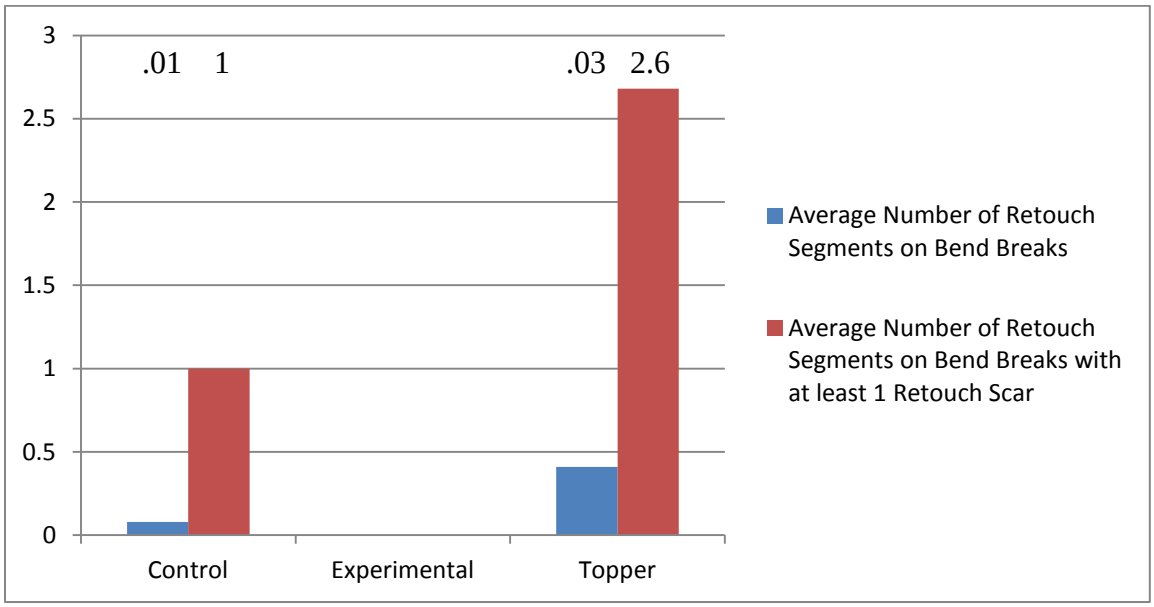


Figure A39-11

Bar chart showing the average number of retouch segments on bend breaks from each assemblage (at bottom). Attributes characteristic of retouch were absent on the bend breaks from the Experimental assemblage.

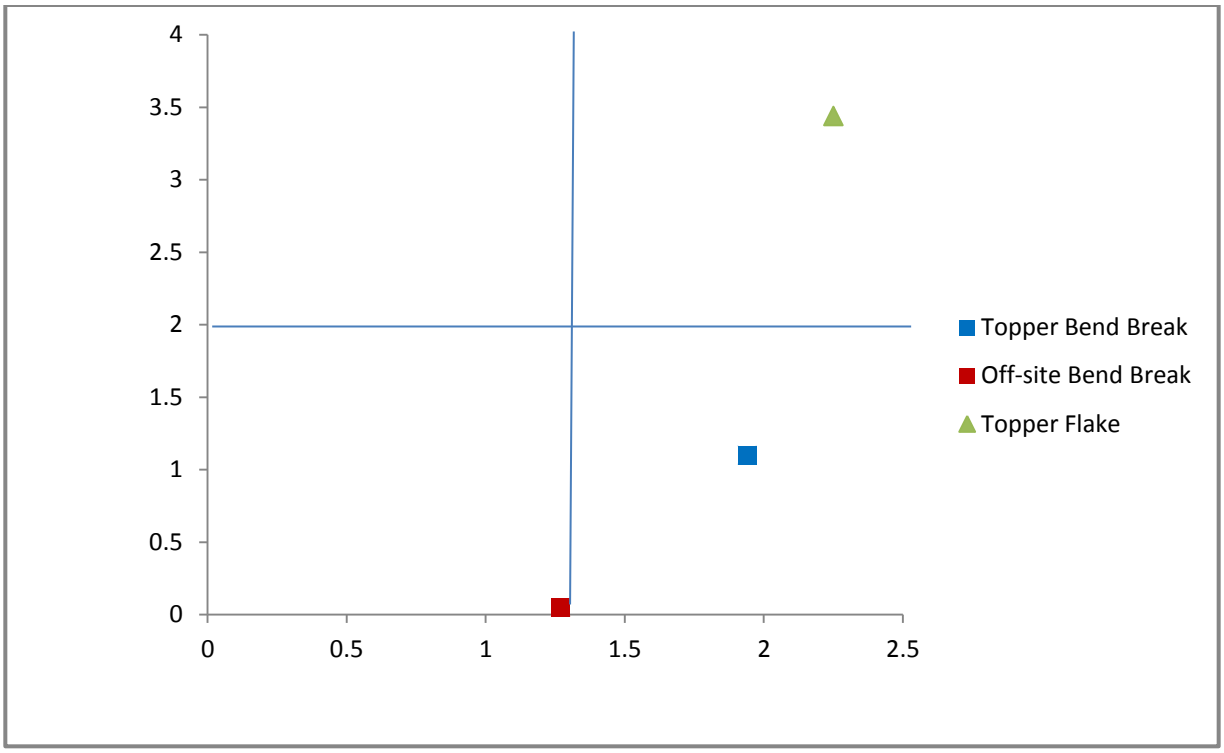


Figure A39-12

Mean attribute scores for each artifact type for artifact exterior surface (x-axis) by interior surface (y-axis) attributes. In the Figure, the quadrants to the right indicate high exterior surface attribute scores based on the attribute scoring analysis whereas the two quadrants at the top of the figure indicate high interior surface values. Based on these results, only the Topper flake category has high interior surface attribute scores, whereas Topper pre Clovis flake and bend breaks have high exterior surface scores.

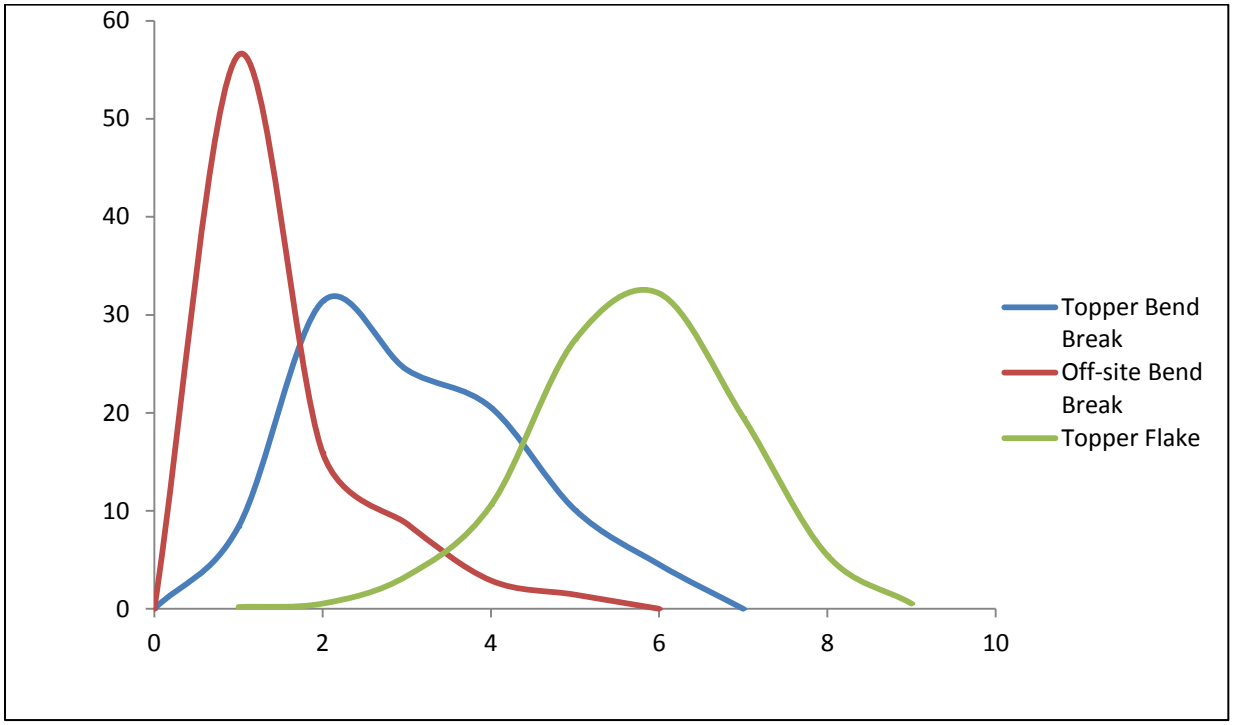


Figure A39-13

Mean artifact attribute score per assemblage (x-axis) by the percentage of attribute states per assemblage (y-axis).The percentage of items classified by attribute score. According to the graph, peak percentages of the Topper bend break and flake categories have higher attribute scores than the peak percentages of objects from the control sample. Consequently the three samples reflect three distinct assemblages distinguished by mean attribute score.

Scoring system Analysis

Lubinski et al. (2014) have developed a scoring system to distinguish materials modified by humans (artifacts) from natural objects (Lubinski et al. 2014:314). In the method, attributes are given a value of 1 or 0 depending on whether they do (1) or do not (0) meet the criteria of chipped stone tool manufacture. The cumulative attribute values are summed creating an attribute score for the given piece. Items with higher attribute scores are more likely to have resulted from chipped stone tool production whereas items with lower scores are more likely to have formed under natural conditions. For the purpose of this study, the analysis is employed to test the degree of similarity or dissimilarity between the Topper bend break (n=287), Topper flake (n=568), and control (n=69) assemblages. Attributes selected for inclusion in the scoring system for the present study are presented in Table A39-22 and are further distinguished and categorized as belonging to the exterior (5) or interior (5) surface of the piece. Attribute states with a 1 indicate culturally suggestive conditions whereas those with a value of 0 reflect natural conditions. The total maximum score is 10 for artifacts that score a 1 on all 5 exterior and interior attribute conditions. The strongest case for cultural origin would seem to be specimens with high quantities of culturally suggestive attributes whereas items with few such attributes would be those more likely to be of natural origin (Lubinski et al. 2014).

The results of the analysis are presented in Table A39-23. The Topper bend break assemblage has a mean attribute score of 1.94 (of 5) for attributes of the exterior surface and a mean attribute score of 1.1 for attributes of the ventral surface. The interior surface attributes with the highest percentages of positive scores on these items include fissures (44%), compression rings (31.2%), and intact margins (24.3%). By contrast only 4.8% of the Topper bend breaks were found to have a bulb of force and only 6.2% exhibit a striking platform.

When the attributes of the exterior surfaces of bend breaks was considered, the results show that the absence of cortex (86.1%), presence of more than two removal scars (55.2%), and modification retouch (23.9) are the attributes with the highest percentage of positive scores. Items with two or more unidirectional removal scars and feathered terminations occur with less frequency. Interestingly, the presence of differentially weathered removal scars was not observed on possible bend breaks from the Topper sample.

Next, the attribute scores for the control sample were tabulated. The results show a lower mean attribute score for the off-site assemblage. For example, the assemblage has a mean attribute score of 1.27 for the exterior surface attributes and a mean value of .05 for the attributes of the interior surface. Attribute types with the highest percentages of positive scores for the exterior surface category include scar directionality (52%) and scar count (34.7%). Only 28% of bend breaks from the control sample are completely interior and 22% exhibit scars that could be considered possible retouch. Of the items with two or more observable removal scars (n=20), 14 (70%) were found to have differentially weathered scar surfaces on the object exterior indicating that the detachments scars were likely formed at different periods in the lithic objects history. For the attributes of the interior surface, only a single attribute state (Fissures) has a positive score that occurs on more than one item.

All items classified as flakes from the pre Clovis deposits at Topper were subjected to the attribute score analysis. The results provide a higher mean score value for both exterior (2.25) and interior (3.44) surface conditions when compared tor the Topper bend break and control samples. The flake assemblage has higher percentages of items with striking platforms bulbs of percussion, and removal scars than either the Topper bend break or control sample. To illustrate the differences for each assemblage, the mean score value for exterior surface attributes is

presented in Figure A39-12. In the Figure, the quadrants to the right indicate high exterior surface scores whereas the two quadrants at the top of the figure indicate high interior surface values. Based on these results, only the Topper flake category has high interior surface attribute scores, whereas Topper pre Clovis flake and bend breaks have high exterior surface scores.

A second illustration (Figure A39-13) displays the percentage of items classified by attribute score. According to the graph, peak percentages of the Topper bend break and flake categories have higher attribute scores than the peak percentages of objects from the control sample. Consequently the three samples reflect three distinct assemblages distinguished by mean attribute score. The control assemblage has the greatest percentage of lithic objects with scores of 1 or fewer (58%) whereas roughly 1/3rd of the pre Clovis Topper bend break have scores of 2-3, and 1/3rd of the Topper flakes have scores of 6. Whereas the distribution of items from the control sample exhibit an asymmetrical distribution, the Topper flake and bend break assemblages appear unimodal in form. Lubinski (et al. 2014:317) found similar distributions when comparing items from natural matrix to two experimentally flint knapped assemblages.

Although the possible Topper bend break assemblage does have a mean score count more consistent with the control sample as is evident in Figure A39-13, it is more similar to the Topper flake assemblage in three ways. First, both the Topper bend break and flake assemblages have more exterior surface attributes (e.g. absence of cortex, number of removal scars) in common. Second, they have higher incidences of retouch modification suggestive of cultural behavior. Third, the bend breaks from Topper do not exhibit removal scar patterns that are differentially weathered. Taking these results into consideration the Topper bend breaks are more likely to be artifices than geofacts, having greater similarity to artifacts with attributes that are known to occur as the product of human agency.

Table A39-1
Results of Freeze/Thaw analysis showing cobble weights, observations, and cumulative detachments for each freezing cycle.

Cycle	Observations	Weight	Detachments
		1.45	
1	None	1.54221	0
2	Crack 1 forming	1.4515	0
3	No Change	1.36078	0
4	No Change	1.36078	0
5	Crack 4 forming	1.36078	0
6	No Change	1.36078	0
7	No Change	1.36078	0
8	No Change	1.27006	0
9	No Change	1.36078	0
10	No Change	1.17934	0
11	No Change	1.17934	0
12	No Change	1.36078	0
13	No Change	1.27006	0
14	No Change	1.4515	0
15	No Change	1.4515	0
16	No Change	1.17934	0
17	No Change	1.4515	0
18	No Change	1.4515	0
19	No Change	1.17934	0
20	No Change	1.27006	0
21	No Change	1.27006	0
22	No Change	1.27006	0
23	No Change	1.27006	0
24	No Change	1.17934	0
25	No Change	1.4515	0

Table A39-2A
Results of Freeze/Thaw simulation under the condition of Thawing.

Cycle Number	Observations	Weight (kg)	Detachments
1	None	1.4515	0
2	Crack 2and 3 forming	1.4515	0
3	None	1.36078	0
4	None	1.36078	0
5	Crack 1 widening	1.17934	0
6	None	1.27006	0
7	None	1.27006	0
8	None	1.27006	0
9	None	1.27006	0
10	None	1.27006	0
11	None	1.27006	0
12	None	1.27006	0
13	None	1.4515	0
14	None	1.17934	0
15	None	1.27006	0
16	None	1.49685	0
17	None	1.27006	0
18	None	1.27006	0
19	None	1.27006	0
20	None	1.27006	0
21	None	1.27006	0
22	None	1.27006	0
23	None	1.63293	0
24	None	1.4515	0
25	None	1.17934	0

Table A39-2B
Results of T test comparing weights for each freezing cycle by the weights for each thawing cycle

Condition	Thawing	Freezing	T Value	P Value
Weight	1.31	1.33	.411664	.6824

Table A39-3
Morphological attributes for detachments from Freeze/Thaw/Soak weathering simulation.

Detachment	Length	Width	Thickness	Wt	Condition	Class	Interp
1	8.6	7.6	3	0.3	Soak	Cortical	Pebble
2	8.4	7.4	3.1	0.2	Soak	Cortical	Pebble
3	11.6	8.1	9	-	Frozen	Cortical	Pebble
4	22.3	14.9	5.3	-	Frozen	Secondary	A. Debris
5	8.7	5.6	2.8	-	Frozen	Cortical	Pebble
6	8.2	5	1.5	-	Frozen	Cortical	Pebble
7	13.6	10.3	9.8	-	Soak	Cortical	Pebble
8	17.5	12.1	5.8	-	Soak	Cortical	Pebble
9	6.3	5	1.4	-	Frozen	Cortical	Pebble
10	6.5	4.6	2.7	-	Frozen	Cortical	Pebble
11	9.6	6.4	2.9	-	Frozen	Cortical	Pebble
12	16.6	15.2	8.3	-	Frozen	Interior	A. Debris
13	23.9	18.4	11.6	2.1	Dry	Cortical	Pebble
14	23.2	10.3	10.1	-	Frozen	Cortical	Pebble
15	18.2	5.5	2.4	-	Frozen	Secondary	A. Debris
16	32.7	17.7	14.3	-	Frozen	Cortical	Pebble
17	14.1	8.8	8	-	Dry	Cortical	Pebble
18	21.2	23.5	7.2	-	Soak	Cortical	Pebble
19	14.5	7.7	4	-	Soak	Cortical	Pebble
20	21.9	21.6	10.3	-	Soak	secondary	A. Debris
21	44.8	35.6	19.9	-	Frozen	Secondary	A. Debris
22	17.2	15.3	9.8	-	Frozen	Cortical	Pebble
23	21.9	14.8	10.9	-	Dry	Cortical	Pebble
24	19	7	4.2	0.7	Soak	Cortical	A. Debris
25	13	9.8	3.8	0.3	Soak	Cortical	Pebble
26	34.2	14.1	6.6	1.7	Frozen	secondary	A. Debris
27	25.5	18.5	6.4	1.7		Cortical	Pebble
28	10.2	9	3.4	-	Dry	Cortical	Pebble
29	15.8	4.2	0.8	0.1	Dry	secondary	A. Debris
30	15	9.9	3.6	-	Dry	Cortical	Pebble
31	15	10.7	5.8	-	Dry	Cortical	Pebble
32	24.3	14.3	6.5	-	Dry	Cortical	Pebble
33	25	12.7	11.1	1.5	Dry	Cortical	A. Debris
34	27.5	10.7	6.8	-	Dry	Cortical	Pebble
35	29.4	17.2	5.6	-	Dry	Cortical	A. Debris
36	41.3	25.6	8.8	5	Dry	Cortical	A. Debris

Table A39-3 continued

Detachment	Length	Width	Thickness	Wt	Condition	Class	Interp
37	29.1	21.4	9.7	-	Dry	Cortical	Pebble
38	35.9	27.8	13.5	5.9	Dry	secondary	Debris
39	46.8	33.2	17.8	26.6	Soak	secondary	
40	10.6	9.9	2.9	0.1	Frozen	Interior	A. Debris
41	19.8	7.7	2.1	0.2	Frozen	Interior	Debris
42	32.3	15.5	5	1.2	Frozen	secondary	A. Debris
43	10.6	10	4	-	Dry	Cortical	Pebble
44	17.8	10.9	4.8	-	Dry	Cortical	Pebble
45	46.1	18	6	3.8	Dry	secondary	Debris
46	7.1	2.7	1.9	0	Frozen	secondary	A. Debris
47	10.5	7.4	3	0.1	Frozen	secondary	A. Debris
48	9.8	7.1	2.7	0.1	Frozen	Cortical	Pebble
49	22	16.2	3.9	0.7	Frozen	Cortical	Pebble
50	29.2	11.4	6.6	1.6	Frozen	Cortical	Pebble
51	37.8	25.6	10.3	7.4	Frozen	Secondary	A. Debris
52	27	25.4	9.3	4.6	Frozen	Secondary	A. Debris
53	33.6	13.4	10.3	2.6	Frozen	Cortical	A. Debris
54	29.4	12.8	8.5	1.9	Dry	Secondary	A. Debris
55	24.1	18.3	18	3.2	Dry	Cortical	Pebble
56	22.1	12	7.7	1.1	Dry	Secondary	A. Debris
57	21	14.9	3.8	0.8	Frozen	Secondary	A. Debris
58	21.3	18.5	8.8	2	Frozen	Secondary	A. Debris
59	26.9	13.9	6.9	1	Frozen	secondary	A. Debris
60	26.9	16.2	6.8	1.5	Frozen	secondary	A. Debris
61	38.5	29	10.1	5.1	Frozen	Secondary	A. Debris
62	51.8	37.4	15.7	13.7	Frozen	Secondary	A. Debris
63	57.9	37.6	10	12	Frozen	Secondary	A. Debris
64	62.2	35.1	11.4	11.5	Frozen	secondary	A. Debris
65	102.1	41.5	17	30.9	Frozen	Secondary	Debris

Table A39-4
Results of Freeze/Thaw/ Soak analysis showing cobble weights, observations, and cumulative detachments for each Soaking cycle.

Cycle	**Weight**	**Observations**	**Cumulative Detachments**
1 (3.6)	1.63	None	
2	1.81	None	
3	1.81	No Change	
4	1.54	Detached piece/cortical	1
5	1.54	Detached piece/cortical	2
6 (4)	1.81	No Change	
7	1.541	No Change	
8 (3.8)	1.72	No Change	
9	1.36	No Change	
10	1.54	2 Detached Pieces	8
11	1.54	No Change	
12	1.72	No Change	
13	1.63	3 Detached Pieces	20
14 (2.8)	1.27	2 Detachments	25
15	1.54	No Change	
16 (3)	1.36	1 detachment	39
17	1.45	No Change	
18	1.63	No Change	
19	1.54	No Change	
20	1.45	No Change	
21	1.54	No Change	
22 (3.4)	1.54	No Change	
23	1.45	No Change	
24	1.45	No Change	
25 (3.2)	1.45	No Change	
	Mean = 1.63		**Detachments= 10**

Table A39-5
Results of Freeze/Thaw/ Soak analysis showing cobble weights, observations, and cumulative detachments for each Freezing cycle.

Cycle	**Weight**	**Observations**	**Cumulative Detachments**
1	1.36	None	-
2	1.54	None	-
3	1.45	Some microfractures	-
4	1.45	No Change	-
5	1.36	Detached piece/cortical	3
6	1.54	No Change	-
7	1.36	No Change	-
8	1.45	2 Detached Pieces	5
9	1.54	Detached piece/cortical	6
10	1.45	4 Detached Pieces	12
11	1.18	Detached piece/cortical	14
12	1.54	1 Detachment Cracks widening	16
13	1.27	2 Detached Pieces	22
14	1.27	2 Detachments	27
15	1.45	Cracks continue to widen	-
16	1.27	3 Detached Pieces	42
17	1.45	No Change	-
18	1.27	7 detachments	52
19	1.36	1 detachment	53
20	1.45	No Change	-
21	1.36	No Change	-
22	1.18	No Change	-
23	1.27	4 detachments	69
24	1.27	No Change	-
25	1.27	No Change	-
	Mean =1.37		**Detachments= 29**

Table A39-6
Results of Freeze/Thaw/ Soak analysis showing cobble weights, observations, and cumulative detachments for each Thawing cycle.

Cycle	Weight	Observations	Cumulative Detachments
1	1.36	None	-
2	1.36	None	-
3	1.36	None	-
4	1.27	None	-
5	1.36	No Change	-
6	1.36	No Change	-
7	1.27	No Change	-
8	1.54	No Change	-
9	1.54	No Change	-
10	1.36	More cracks visible	-
11	1.36	No Change	-
12	1.45	Detached piece/cortical	13
13	1.63	Detached piece/cortical	15
14	1.54	Detached piece/cortical	17
15	1.18	1 Detachment	23
16	1.18	No Change	-
17	1.27	11 detachments	38
18	1.27	2 detachments	44
19	1.27	1 detachment	45
20	1.27	No Change	-
21	1.18	3 detachments	56
22	1.27	No Change	-
23	1.09	9 detachments	65
24	1.18	No Change	-
25	1.27	No Change	-
	Mean =1.33		**Detachments= 30**

Table A39-7
Morphology of lithic detachments from lithic Cobble Sample 2 that underwent 25 cycles of the Freeze/Thaw/Soaking simulation.

	Detachments	**detachments per cycle**	**Mean Length**	**Mean Width**	**Mean Thickness**	**Mean Weight**
Soak	10	.4	19.09	14.42	6.85	4.96
Freeze	29	1.16	26.71	16.16	7.22	4.70
Thaw	30	1.2	23.92	14.37	7.75	2.73

Table A39-8
Morphology of lithic detachments for each Weathering Cycle by Interpretation Free Category.

	Soak				**Freeze**				**Thaw**			
	L	W	T	We	L	W	T	We	L	W	T	We
Cort. Pebble	13.82	11.2	5.11	0.26	15.4	9.39	5.64	0.8	19.45	13.1	7.75	2.65
Cort. Amorphous Debris	19	7	4.2	0.7	33.6	13.4	10.3	2.6	31.9	18.5	8.5	2.86
Sec Amorphous Debris	34.35	27.4	14.05	26.6	31.8	20.54	8.07	4.47	22.43	9.66	5.66	1.03
Sec Debris	-	-	-	-	102.	41.5	17	30.9	41	22.9	9.75	4.85
Int. Amorphous Debris	-	-	-	-	13.6	12.55	5.6	0.1	-	-	-	-
Int. Debris	-	-	-	-	19.8	7.7	2.1	0.2	-	-	-	-

Table A39-9
One way Analysis comparing morphological attributes of detachments formed by the Soaking, Freezing, and Thawing process.

	df	F Value	F crit	P Value	Result
Length	2	0.763072	3.145258	0.47056	Not Significant
Width	2	0.34081	3.145258	0.712518	Not Significant
Thickness	2	0.032547	3.145258	0.967994	Not Significant
Weight	2	0.489589	3.284918	0.617259	Not Significant

Table A39-10
Results of Freeze/Thaw/Soak Warm analysis showing cobble weights, observations, and cumulative detachments for each Warm Soaking cycle.

Cycle	Weight	Condition	Observations
1	.63	Soak/Warm	None
2	.63	Soak/Warm	None
3	.54	Soak/Warm	None
4	.72	Soak/Warm	None
5	.54	Soak/Warm	None
6	.72	Soak/Warm	None
7	.72	Soak/Warm	None
8	.54	Soak/Warm	None
9	.81	Soak/Warm	None
10	.63	Soak/Warm	None
11	.63	Soak/Warm	Cracks forming
12	.81	Soak/Warm	No Change
13	.81	Soak/Warm	No Change
14	.45	Soak/Warm	No Change
15	.72	Soak/Warm	No Change
16	.63	Soak/Warm	No Change
17	.72	Soak/Warm	No Change
18	.63	Soak/Warm	No Change
19	.63	Soak/Warm	No Change
20	.54	Soak/Warm	No Change
21	.63	Soak/Warm	Cracks widening
22	.54	Soak/Warm	New Microfractures
23	.54	Soak/Warm	No Change
24	.54	Soak/Warm	No Change
25	.54	Soak/Warm	No Change
Mean	.633		

Table A39-11
Results of Freeze/Thaw/Soak Warm analysis showing cobble weights, observations, and cumulative detachments for each Freezing cycle.

Cycle	Weight	Condition	Observations
1	.45	Frozen	None
2	.63	Frozen	None
3	.36	Frozen	None
4	.72	Frozen	None
5	.54	Frozen	None
6	.54	Frozen	None
7	.72	Frozen	None
8	.45	Frozen	None
9	.63	Frozen	Cracks Forming
10	.54	Frozen	No Change
11	.45	Frozen	No Change
12	.58	Frozen	No Change
13	.45	Frozen	No Change
14	.63	Frozen	1 detachment
15	.81	Frozen	No Change
16	.63	Frozen	No Change
17	.63	Frozen	No Change
18	.81	Frozen	No Change
19	.63	Frozen	No Change
20	.58	Frozen	No Change
21	.45	Frozen	No Change
22	.63	Frozen	No Change
23	.58	Frozen	No Change
24	.58	Frozen	No Change
25	.58	Frozen	No Change

Table A39-12
Results of Freeze/Thaw/Soak Warm analysis showing cobble weights, observations, and cumulative detachments for each Thawing cycle.

Cycle	Weight	Condition	Observations
	.45		
1	.45	Thaw	None
2	.54	Thaw	None
3	.45	Thaw	None
4	.36	Thaw	None
5	.45	Thaw	None
6	.72	Thaw	None
7	.54	Thaw	None
8	0.54	Thaw	None
9	0.45	Thaw	None
10	0.63	Thaw	None
11	0.54	Thaw	No Change
12	0.45	Thaw	No Change
13	0.45	Thaw	No Change
14	0.81	Thaw	No Change
15	0.45	Thaw	No Change
16	0.72	Thaw	No Change
17	0.72	Thaw	No Change
18	0.72	Thaw	2 detachments
19	0.63	Thaw	No Change
20	0.72	Thaw	No Change
21	0.54	Thaw	No Change
22	0.45	Thaw	No Change
23	0.63	Thaw	No Change
24	0.54	Thaw	No Change
25	0.45	Thaw	No Change

Table A39-13
Results of comparative descriptive statistics for control, experimental, and Topper bend break and flake assemblages. Numbers refer to mean values from entire assemblage for each attribute.

Sample	Length	Width	Th	Weight	RS	TS	BA	Av. R	RI
Control Flakes	30.42	21.59	10.55	11.38	2.42	4.05	0.578	0.21	1
Experimental Flakes	23.97	15.01	7.25	4.08	0.468	1.468	na	0	0
Topper Flakes	33.14	23.13	11.37	12.45	4.04	5.33	3.34	.817	3.64
Control Bend Breaks	31.29	20.36	8.24	7.10	1.76	4.4	2.3	.08	1
Experimental Bend Breaks	51.53	33.56	9.13	10.7	2.33	3.33	2.0	0	0
Topper Bend Breaks	25.17	19.14	9.41	5.6	3.06	4.32	3.03	.41	2.68

* TH = thickness; RS = removal scar; TS = total detachment scars; BA = break angles; Av.R = average retouch scars; RI = Retouch index.

Table A39-14
Results of a One Way Analysis of Variance (ANOVA) comparing Morphological attributes of Length, Width, Thickness and Weight for bend breaks from the Topper, Control, and Experimental assemblages.

	df	F	P-Value	Significance
Length	2	6.98	.001438	Significantly Different
Width	2	4.27	.015207	Significantly Different
Thickness	2	.255	.774	Not Significantly Different
Weight	2	.747	.474	Not Significantly Different

Table A39-15
Results of a t-test comparing Morphological attributes of Length, Width, Thickness and Weight for bend breaks from the Topper and Control assemblages.

	T-Value	P-Value	Significance
Length	3.70	.000247	Significantly Different
Width	1.007	.3145	Not Significantly Different
Thickness	.803	.4227	Not Significantly Different
Weight	1.13	.2571	Not Significantly Different

Table A39-16
Results of a One Way Analysis of Variance (ANOVA) comparing Morphological attributes of Length, Width, Thickness and Weight for flakes from the Topper, Control and Experimental assemblages. Only for the attribute

	df	F	P-Value	Significance
Length	2	1.92	.146	Not Significantly Different
Width	2	2.500645	0.082933	Not Significantly Different
Thickness	2	0.808343	.44606	Not Significantly Different
Weight	2	1.42	.233	Not Significantly Different

Table A39-17
Results of P-values from T-Tests comparing the morphology of the Topper, control, and experimental assemblages. P-values less than .05 reflect a statistical difference for the selected attribute.

Bend Break Assemblage	Length	Width	Thickness	Weight
Topper/Control	p = 0.00091	p = 0.26671	p = 0.1404	p = 0.00043
Topper/Experimental	p = 0.07711	p = 0.00723	p = 0.95053	p = 0.08857
Control/Experimental	p = 0.11953	p = 0.0022	p = 0.67627	p = 0.16138
Flake Assemblage				
Topper/Control	p = 0.47381	p = 0.50484	p = 0.49986	p = 0.73117
Topper/Experimental	p = 2.987536E-5	p = 3.455342E-9	p = 5.534911E-8	p = 4.546639E-7
Control/Experimental	p = 0.14047	p = 0.01854	p = 0.01719	p = 0.0989

Table A39-18
Results of ANOVA to test if the observed differences in mean flake "removal scar count" is statistically significant for each of the three assemblages. Results demonstrate a significant difference between the means of the three independent (unrelated) groups.

Groups	**Count**	**Sum**	**Average**	**Variance**	
Column 1	51	90	1.764705882	3.423529412	
Column 2	64	30	0.46875	0.348214286	
Column 3	286	878	3.06993007	5.363513679	
Total		**401**			
Variation	***SS***	***df***	***MS***	***F***	***P-value***
Between Groups	384.4841321	2	192.242066	44.43959998	3.80E-18
Within Groups	1721.715369	398			
Total	2106.199501	400			

Table A39-19
Results of Brown-Forsythe F* Test. Results confirm the results of the ANOVA that the variance among the three assemblages does not influence the probability that the assemblages are significantly different.

m-num	***m***	***df****		
2.98811794	0.620080208	0.00769		
0.292638938	0.060727059	5.85E-05		
1.538164771	0.319192733	0.000357		
4.81892165		0.008106		
F-ports	***df***	***F***	***P-value***	***F crit***
384.4841321	2	79.78634	5.19E-09	384.4841321
4.81892165	0.008106013			4.81892165

Table A39I-20
Results of ANOVA to test if the observed differences between the group means for the variable retouch scar count on flakes are statistically significant. (control, experimental and Topper assemblages). Results demonstrate a significant difference between the means of the three independent (unrelated) groups.

Source	SS	df	MS	F	P
between groups	41.06	2	20.53	8.99	0.000148
Error	1069.16	468	2.28		

Table A39-21
Results of ANOVA to test if the observed differences between the group means for the variable average retouch scar count on bend breaks is statistically significant. (control, experimental and Topper assemblages). Results do not demonstrate a significant difference between the means of the three independent (unrelated) groups at the .05 significance level, although the results are not suggestive of an association.

Source	SS	df	MS	F	P
between groups	5.164405	2	2.582202	2.38	0.094105
Error	365.338537	337	1.084091		

Table A39-22
Lithic debitage attributes and cultural interpretation.

Attribute	**Typical of natural processes**	**Typical of Cultural Processes**
Exterior Surface Attributes		
Cortex	Present	Absent
Removal scar counts	<2	>2
Removal scar directionality	Multidirectional	Uni/bi-directional
Termination type	Step, hinge, NA	Feathered
Modification retouch	Absent	Present
Interior Surface Attributes		
Bulb of Force	Absent	Present
Compression Rings	Absent	Present
Fissures	Absent	Present
Striking Platform	Absent	Present
Margins	Broken	Intact

Table A39-23

Results of comparative descriptive statistics for control, experimental, and Topper bend break and flake assemblages. Numbers refer to mean values from entire assemblage for each attribute.

Sample	Length	Width	Th.	Weight	RS	TS	BA	Av. R	RI
Control Flakes	30.42	21.59	10.55	11.38	2.42	4.05	0.578	0.21	1
Experimental Flakes	23.97	15.01	7.25	4.08	0.468	1.468	na	0	0
Topper Flakes	33.14	23.13	11.37	12.45	4.04	5.33	3.34	.817	3.64
Control Bend Breaks	31.29	20.36	8.24	7.10	1.76	4.4	2.3	.08	1
Experimental Bend Breaks	51.53	33.56	9.13	10.7	2.33	3.33	2.0	0	0
Topper Bend Breaks	25.17	19.14	9.41	5.6	3.06	4.32	3.03	.41	2.68

* TH = thickness; RS = removal scar; TS = total detachment scars; BA = break angles; Av.R = average retouch scars; RI = Retouch index.

APPENDIX 40

RESULTS OF PRELIMINARY LITHIC ANALYSES OF THE PRE CLOVIS ASSEMBLAGE AT THE TOPPER SITE (38AL23).

Table A-40-1
Results of 2013 pre Clovis Flake Tool Analysis conducted by Wilkinson and Goodyear (n.d.).
Sample size=50.

	Exterior	**Interior**				
Location of Retouch (%)	78.57	21.43				
	Prim	**Sec.**	**Tert.**			
% Exterior conditions	46	26	28			
	Exterior	**Interior**	**Both**	**Bifacial**		
% Retouch per margin	58	18	20	4		
	present	**absent**				
% Plat./bulb	18	82				
	TA	**Craz.**				
%TA	14	2				
	1	**2**	**3**	**4**	**5**	**6**
# retouched edges	52	22	12	8	4	2
Av. retouched edges per	1.96					

Table A40—2
Results of Bend Break Analysis (Goodyear and Wilkins)

Study #	Year	N	E	Depth	L	W	T	snaps	Rem
BB-11	1999	N242	E132	140-150cmbd	13.76	13.56	3.12	4	2
BB-22	1999	N242	E132	140-150cmbd	24.78	15.97	6.59	2	6
BB-29	1999	N242	E132	140-150cmbd	10.4	9.41	4.06	4	1
BB-41	1999	N242	E132	140-150cmbd	16.27	11.49	2.72	4	1
BB-43	1999	N242	E132	140-150cmbd	15.59	11.03	2.43	2	1
BB-44	1999	N242	E132	140-150cmbd	16.67	14.27	4.85	2	0
BB-46	1999	N242	E132	140-150cmbd	11.93	6.73	3.64	3	1
BB-47	1999	N242	E132	140-150cmbd	10.75	7.83	4.57	2	1
BB-56	1999	N242	E132	140-150cmbd	25.4	21.08	8.47	6	6
BB-70	1999	N242	E130	90-100cmbd	23.02	13.89	4.93	4	2
BB-75	1999	N242	E132	140-150cmbd	11.46	8.12	2.38	2	1
BB-76	1999	N242	E132	140-150cmbd	16.53	14.78	5.29	4	0
BB-77	1999	N242	E132	140-150cmbd	10.75	11.11	4.4	3	1
BB-78	1999	N242	E132	140-150cmbd	14.43	9.11	3.5	2	0
BB-80	1999	N242	E132	140-150cmbd	12.86	12.17	4.63	3	0
BB-84	1999	N242	E130	120-130cmbd	15.25	14.69	4.54	3	2
BB-95	1999	N242	E132	140-150cmbd	17.38	9.92	2.81	4	1
BB-96	1999	N242	E132	140-150cmbd	14.81	11.54	5.27	4	1
BB-97	1999	N242	E132	140-150cmbd	15.89	10.57	3.77	3	1
BB-98	1999	N242	E132	140-150cmbd	18.93	18.37	6.43	2	0
BB-103	1999	N242	E132	150-160cmbd	32.09	28.99	5.37	5	4
BB-113	1999	N242	E132	80-90cmbd	9.19	7.93	2.9	4	1
BB-114	1999	N242	E132	140-150cmbd	16.35	10	5.85	2	2
BB-144	1999	N242	E132	140-150cmbd	20.2	15.88	6.35	2	1
BB-205	1999	N242	E132	80-90cmbd	23.21	20.06	7.69	3	1
BB-226	1999	N242	E132	110-120cmbd	14.96	9.55	3.89	4	2
BB-239	1999	N242	E132	140-150cmbd	15.85	11.45	2.63	3	1
BB-242	1999	N242	E132	140-150cmbd	11.4	9.59	3.38	5	1
BB-244	1999	N242	E132	140-150cmbd	21.08	14.42	4.55	4	0
BB-248	1999	N242	E132	140-150cmbd	11.79	9.53	1.68	2	1
BB-249	1999	N242	E132	140-150cmbd	12.82	8.88	3.01	4	1
BB-250	1999	N242	E132	140-150cmbd	10.41	6.75	3.29	3	1
BB-13	1999	N242	E132	140-150cmbd	10.2	5.88	4.45	4	1
BB-79	1999	N242	E132	140-150cmbd	15.37	10.47	5.65	4	1
BB-89	1999	N242	E132	130-140cmbd	26.58	16.42	6.73	3	2
BB-145	1999	N242	E130	140-150cmbd	14.72	16.02	6.07	3	1
BB-4	2000	N244	E132	170-175cmbd	27.01	13.4	5.77	2	4
BB-9	2000	N244	E148	170-180cmbd	39.89	32.36	6.69	3	3
BB-15	2000	N244	E132	175-180cmbd	18.72	9.89	6.96	3	0
BB-16	2000	N244	E146	200-210cmbd	28.52	21.51	6.3	4	2
BB-17	2000	N242	E128	180-185	14.95	13.55	6.51	3	0
BB-20	2000	N244	E132	175-180cmbd	19.6	11.45	5.23	2	1

Table A40—2 continued

Study #	Year	N	E	Depth	L	W	T	snaps	Rem
BB-21	2000	N244	E148	180-190cmbd	16.06	10.48	4.53	4	1
BB-26	2000	N244	E148	170-180cmbd	17.45	13.29	3.91	4	1
BB-28	2000	N244	E132	170-175cmbd	29.32	15.84	7.39	2	0
BB-30	2000	N244	E132	135-140cmbd	18.04	7.85	5.04	2	0
BB-31	2000	N244	E132	175-180cmbd	17.65	8.7	5.54	2	1
BB-32	2000	N244	E132	135-140cmbd	10.54	8.75	4.43	3	1
BB-33	2000	N244	E132	175-180cmbd	10.47	7.72	3.59	2	0
BB-34	2000	N244	E132	175-180cmbd	20.35	13.04	8.54	5	0
BB-35	2000	N244	E132	165-170cmbd	20.98	15.39	4.51	4	2
BB-36	2000	N242	E128	180-185cmbd	19.73	11.42	6.1	4	0
BB-37	2000	N242	E128	180-185cmbd	12.87	8.61	2.61	3	1
BB-38	2000	N242	E128	180-185cmbd	18.41	10.82	5.06	3	0
BB-39	2000	N242	E128	180-185cmbd	21.31	10.72	6.31	2	2
BB-45	2000	N244	E132	180-185cmbs	14.47	11.04	3.87	4	0
BB-49	2000	N244	E132	175-180cmbd	13.39	6.28	2.2	4	1
BB-50	2000	N244	E132	185-190cmbd	18.97	12.52	7.32	2	1
BB-51	2000	N244	E132	180-185cmbd	12.14	10.58	6.34	3	0
BB-52	2000	N244	E132	175-180cmbd	13.4	12.65	6.02	2	0
BB-53	2000	N244	E132	175-180cmbd	12.73	11.6	4.04	2	0
BB-54	2000	N244	E132	180-185cmbd	19.1	12.49	5.05	2	1
BB-55	2000	N244	E128	130-135cmbd	17.37	10.6	4.53	4	1
BB-57	2000	N244	E148	180-190cmbd	34.73	24.88	5.85	5	2
BB-58	2000	N244	E128	130-135cmbd	18.26	13.24	5.14	6	1
BB-59	2000	N244	E148	180-190cmbd	20.92	13.78	5.2	3	0
BB-60	2000	N244	E132	135-140cmbd	16.45	11.63	5.31	2	1
BB-61	2000	N244	E148	190-200cmbd	26.48	12.81	3.55	2	2
BB-62	2000	N244	E128	100-110cmbd	20.93	13.52	3.44	5	1
BB-65	2000	N244	E132	170-175cmbd	15.62	14.24	7.31	3	1
BB-66	2000	N242	E130	185-Clay	12.09	7.54	1.91	4	1
BB-68	2000	N242	E128	185-Clay	16.41	14.61	4.26	4	1
BB-69	2000	N244	E146	200-210cmbd	10.99	9.96	2.17	4	1
BB-71	2000	N244	E132	160-165cmbd	15.83	9.59	6.23	3	1
BB-72	2000	N244	E132	170-175cmbd	10.01	8.18	3.63	4	1
BB-73	2000	N244	E128	195-Clay	15.57	10	3.99	2	2
BB-74	2000	N244	E128	190-195cmbd	16.11	15.63	3.45	5	2
BB-81	2000	N242	E128	175-180cmbd	24.41	15.7	5.88	3	1
BB-83	2000	N242	E128	120-125cmbd	14.33	11.79	4.18	2	1
BB-85	2000	N244	E132	175-180cmbd	11.49	8.44	6.29	4	0
BB-87	2000	N244	E132	170-175cmbd	11.04	11.01	4.1	3	1
BB-90	2000	N242	E128	115-120cmbd	14.28	10.28	3.88	2	2
BB-92	2000	N244	E132	120-125cmbd	16.53	11.73	4.22	2	1
BB-93	2000	N242	E128	135-140cmbd	10.94	9.89	4.04	4	1
BB-94	2000	N244	E132	170-175cmbd	19.82	14.66	5.28	5	1

Table A40—2 continued

Study #	Year	N	E	Depth	L	W	T	snaps	Rem
BB-99	2000	N242	E128	100-110cmbd	10.11	6.77	5.23	2	0
BB-100	2000	N244	E132	170-175cmbd	15.86	13.95	8.4	3	0
BB-102	2000	N242	E128	165-170cmbd	17.4	16.96	8.01	2	1
BB-106	2000	N242	E130	170-175cmbd	20.37	17.32	3.67	3	3
BB-111	2000	N242	E130	160-170cmbd	10.97	10.38	3.46	4	2
BB-115	2000	N242	E128	155-160cmbd	9.37	7.76	3.98	2	1
BB-116	2000	N244	E132	175-180cmbd	11.21	10.07	3.15	3	1
BB-118	2000	N242	E128	170-175cmbd	20.41	11.14	4.68	2	1
BB-119	2000	N244	E128	180-185cmbd	22.35	11.24	4.37	3	1
BB-120	2000	N242	E130	160-170cmbd	25.18	18.94	4.62	5	1
BB-132	2000	N242	E128	180-185cmbd	21.7	9.96	5.54	3	1
BB-133	2000	N244	E132	160-165cmbd	18.86	17.28	6.82	3	1
BB-135	2000	N244	E128	130-135cmbd	10.91	7.52	3.82	3	1
BB-136	2000	N244	E128	175-180cmbd	13.24	10.19	3.08	3	1
BB-137	2000	N242	E128	155-160cmbd	15.75	12.6	3.24	4	2
BB-138	2000	N244	E128	125-130cmbd	18	11	6.3	3	0
BB-139	2000	N244	E132	180-185cmbd	23.94	16.07	4.13	5	1
BB-141	2000	N242	E130	170-175cmbd	9.43	7.66	1.93	4	1
BB-142	2000	N244	E128	185-190cmbd	11.31	9.88	4.85	3	0
BB-143	2000	N242	E130	180-185cmbd	15.46	8.53	3.74	3	2
BB-147	2000	N244	E128	185-190cmbd	19.78	14.13	6.18	2	1
BB-148	2000	N242	E130	180-185cmbd	13.38	11.1	3.72	3	1
BB-151	2000	N244	E132	170-175cmbd	19.73	17.07	3.56	4	1
BB-153	2000	N242	E130	170-175cmbd	12.34	9.83	2.79	4	2
BB-154	2000	N244	E132	170-175cmbd	17.51	7.19	4.33	2	1
BB-155	2000	N244	E132	175-180cmbd	16.17	11.95	5.72	2	1
BB-158	2000	N241.10	E129.90	Top of Terrace	36.33	30.81	10.9	4	0
BB-159	2000	N244	E128	150-155cmbd	16.6	9.92	4.88	2	1
BB-160	2000	N244	E128	120-125cmbd	20.24	14.1	3.88	3	1
BB-161	2000	N242	E128	170-175cmbd	11.63	8.68	2.25	3	1
BB-162	2000	N244	E128	185-190cmbd	20.15	14.34	4.25	2	1
BB-164	2000	N244	E148	200-210cmbd	26.05	22.3	6.81	2	0
BB-165	2000	N244	E148	190-200cmbd	17.64	10.66	3.04	4	3
BB-168	2000	N244	E132	185-190cmbd	16.01	10.89	2.11	4	1
BB-169	2000	N244	E128	125-130cmbd	20.81	9.98	6.08	3	1
BB-171	2000	N244	E128	165-170cmbd	13.98	14.79	4.22	3	1
BB-179	2000	N244	E128	185-190cmbd	10.96	6.08	3.16	4	0
BB-180	2000	N244	E128	185-190cmbd	16.46	11.2	2.94	3	0
BB-181	2000	N244	E128	180-185cmbd	13.54	10.55	3.56	3	1
BB-182	2000	N244	E128	120-125cmbd	14.55	9.23	3.86	3	2
BB-183	2000	N244	E128	120-125cmbd	13.47	4.97	2.67	3	2
BB-184	2000	N244	E128	120-125cmbd	16.78	9.74	5.49	3	1
BB-185	2000	N244	E128	120-125cmbd	13.74	9.41	4.39	3	1

Table A40—2 continued

Study #	Year	N	E	Depth	L	W	T	snaps	Rem
BB-186	2000	N244	E128	120-125cmbd	16.36	7.05	2.73	4	1
BB-187	2000	N244	E128	120-125cmbd	17.99	12.72	3.27	3	1
BB-188	2000	N244	E128	120-125cmbd	19.5	16.62	4.16	3	1
BB-189	2000	N244	E128	185-190cmbd	17.41	9.07	3.81	3	0
BB-190	2000	N244	E128	180-185cmbd	13.13	7.46	4.05	5	1
BB-191	2000	N244	E128	180-185cmbd	14.29	12.64	4.67	3	2
BB-192	2000	N244	E128	195-Clay	12.09	11.09	6.78	2	1
BB-193	2000	N244	E128	185-190cmbd	11.81	8.98	1.83	3	1
BB-195	2000	N242	E128	155-160cmbd	21.77	11.5	3.01	3	2
BB-196	2000	N242	E130	170-175cmbd	35.76	24.67	6.14	5	0
BB-198	2000	N242	E128	155-160cmbd	17.35	8.45	5.2	3	0
BB-199	2000	N242	E130	175-180cmbd	17.14	9.12	5.66	4	1
BB-202	2000	N244	E128	170-175cmbd	10.21	8.13	2.33	2	1
BB-204	2000	N244	E132	175-180cmbd	17.97	13.86	5.46	4	0
BB-206	2000	N244	E132	180-185cmbd	29.45	26.23	10.6	2	1
BB-207	2000	N244	E132	180-185cmbd	15.08	9.34	4.26	4	1
BB-208	2000	N244	E132	185-190cmbd	12.7	7.42	3.29	2	1
BB-209	2000	N244	E128	155-160cmbd	16.53	9.97	1.64	4	1
BB-210	2000	N244	E128	135-140cmbd	15.3	10.71	4.01	4	1
BB-211	2000	N244	E132	180-185cmbd	20.63	17.57	4.98	3	0
BB-212	2000	N244	E132	180-185cmbd	19.17	12.21	4.07	3	1
BB-213	2000	N244	E132	175-180cmbd	15.47	12.02	2.91	3	2
BB-214	2000	N244	E132	175-180cmbd	17.03	7.66	2.43	3	1
BB-215	2000	N244	E132	175-180cmbd	16.35	6.98	3.3	2	1
BB-216	2000	N244	E132	180-185cmbd	19.25	11.02	5.21	3	0
BB-217	2000	N244	E128	190-195cmbd	12.75	10.86	3.34	3	1
BB-219	2000	N244	E128	135-140cmbd	18.78	10.85	6.15	3	2
BB-220	2000	N244	E132	185-190cmbd	14.27	5.05	2.85	2	1
BB-221	2000	N244	E132	175-180cmbd	10.17	6.16	3.3	4	1
BB-222	2000	N244	E132	175-180cmbd	19.51	14.37	3.74	5	1
BB-223	2000	N244	E132	175-180cmbd	22.34	13.94	5.65	2	0
BB-224	2000	N244	E132	175-180cmbd	13.31	5.09	2.34	4	1
BB-225	2000	N242	E128	165-170cmbd	20.01	13.57	7.28	3	1
BB-228	2000	N244	E128	155-160cmbd	11.82	6.44	2.84	3	1
BB-229	2000	N244	E132	195-200cmbd	9.76	6.79	1.92	3	1
BB-230	2000	N244	E128	195-Clay	6.79	6.62	2.22	3	1
BB-231	2000	N244	E132	195-200cmbd	13.7	7.1	6.45	3	0
BB-232	2000	N244	E132	170-175cmbd	11.73	10.34	4.62	4	1
BB-233	2000	N244	E132	180-185cmbd	13.42	11.47	4.31	3	1
BB-234	2000	N242	E130	160-170cmbd	11.95	10.06	5.12	4	1
BB-235	2000	N244	E132	175-180cmbd	22.66	10.69	4.41	2	0
BB-237	2000	N244	E148	180-190cmbd	10.5	7.7	2.88	2	1
BB-238	2000	N244	E148	180-190cmbd	25.57	18.35	5.18	3	1

Table A40—2 continued

Study #	Year	N	E	Depth	L	W	T	snaps	Rem
BB-240	2000	N244	E128	130-135cmbd	23.56	14.71	6.08	2	1
BB-243	2000	N244	E132	170-175cmbd	15.82	10.81	4.83	2	0
BB-245	2000	N244	E146	200-210cmbd	13.07	11.08	3.38	2	3
BB-247	2000	N244	E132	180-185cmbd	14.89	14.11	7.61	3	2
BB-1	2000	N242	E130	170-175cmbd	27.87	13.97	4.4	3	1
BB-2	2000	N242.0	E129.59	181.00cmbs	27.74	26.49	7.92	3	3
BB-3	2000	N245.8	E147.22	80cmbd	30.98	29.05	6.88	3	2
BB-48	2000	N242	E128	175-180cmbd	17.06	15.08	3.53	3	2
BB-86	2000	N244	E132	175-180cmbd	19.57	11.56	5.92	2	0
BB-104	2000	N244	E132	170-175cmbd	45.36	25.98	11.0	2	2
BB-110	2000	N244	E148	200-210cmbd	28.03	19.96	4.26	2	1
BB-156	2000	N242	E128	150-155cmbd	11.86	9.79	4.44	3	1
BB-194	2000	N242	E128	145-150cmbd	12.77	11.13	5.66	2	2
BB-246	2000	N244	E132	175-180cmbd	19.75	19.56	7.53	2	1
BB-67	2001	N242	E130	175-180cmbd	13.03	10.54	3.64	3	2
BB-109	2001	N240	E130	97.80-	26.05	21.18	3.77	4	1
BB-112	2001	N242	E130	175-180cmbd	14.45	7.01	4.55	3	1
BB-200	2001	N238	E132	97.10mbd	27.93	23.06	9.39	3	0
BB-117	2001	N238	E132	97.00mbd	40.21	33.87	8.17	2	3
BB-7	2002	N244	E136	97.45-97.40	29.83	18.36	4.4	3	3
BB-8	2002	N243.1	E142.87	97.55-97.50	36.82	36.62	10.0	4	6
BB-12	2003	N243.90	E141.79	97.345	21.7	14.42	6.61	2	0
BB-126	2003	N245.08	E142.84	97.43mbd	21.48	14.8	6.63	5	1
BB-127	2003	N245.11	E142.54	97.41mbd	12.28	8.69	2.42	2	1
BB-152	2003	N243.09	E142.40	97.455mbd	19.15	15.47	3.75	3	1
BB-18	2004	N242.60	E141.80	97	31.7	27.21	8.24	6	2
BB-14	2005	N246.25	E142.65	150-155cmbd	16.68	12.65	4.22	4	1
BB-101	2005	N245	E140	96.75mbd	20.55	12.59	4.87	3	1
BB-6	2006	N242.28	E142.14	96.755cmbd	17.34	10.73	4.13	3	0
BB-10	2006	N242.17	E140.19	96.30-96.25	33	26.45	7.81	3	0
BB-23	2006	N242.07	E142.49	96.45	30.53	21.73	9.07	3	1
BB-24	2006	N242.77	E141.56	96.77	15.47	11.86	4.72	2	1
BB-42	2006	N242.43	E142.73	96.43	32.68	17.61	10.4	2	0
BB-88	2006	N242.64	E146.86	96.34	14.64	12.54	5.65	6	3
BB-108	2006	N242.24	E140.68	96.35mbd	31.88	21.63	8.08	3	1
BB-121	2006	N242.40	E141.46	96.145mbd	24.34	16.01	6.93	2	2
BB-122	2006	N242.22	E140.62	96.01mbd	11.52	11.52	4.56	2	1
BB-123	2006	N242.34	E142.63	96.51mbd	33.05	19.98	5.91	4	1
BB-124	2006	N242.75	E142.09	96.71mbd	18.8	15.1	4.22	4	1
BB-125	2006	N242.63	E142.65	96.51mbd	33.85	17.3	7.09	4	1
BB-128	2006	N242.33	E140.80	95.80mbd	16.63	12.72	3.19	6	1
BB-130	2006	N242.47	E142.70	96.77mbd	21.51	11.99	8.86	3	0

PB = Plat = Bulb, Rem = Removal Scars

Table A40—2 continued

Study #	Year	N	E	Depth	L	W	T	snaps	Rem
BB-149	2006	N242.70	E140.68	96.155mbd	33.27	15.81	11.8	3	1
BB-150	2006	N242.15	E142.32	96.77mbd	27.85	16.61	7.16	2	1
BB-167	2006	N242.48	E141.77	96.35mbd	21.74	11.71	3.24	4	1
BB-201	2006	N242.73	E140.36	95.80mbd	10.44	9.16	1.94	5	2
BB-203	2006	N242.31	E141.47	96.22mbd	25.58	24.68	18.0	3	1
BB-236	2006	N242.14	E140.00	95.93mbd	17.41	12.55	4.5	3	1
BB-5	2006	N242.58	E139.93	96.82cmbd	36.18	31.23	7.32	3	3
BB-19	2007	N244.30	E139.90	97.03	15.42	13.63	3.93	3	2
BB-25	2007	N244	E138	96.60-96.55	16.97	11.97	3.76	2	2
BB-129	2007	N244.46	E139.29	96.99mbd	15.12	11.06	7.68	4	1
BB-131	2007	N242.67	E140.80	95.75mbd	21.01	15.02	3.55	2	1
BB-166	2007	N242.44	E141.78	95.84mbd	20.78	11.89	4.83	2	1
BB-82	2008	N244.70	E139.49	95.95	23.52	21.59	8.73	3	0
BB-157	2008	N242.10	E141.84	95.35mbd	15.62	9.49	6.67	3	0
BB-175	2008	N244.66	E139.72	96.52mbd	24.38	20.61	4.41	3	1
BB-64	2009	N248.90	E143.83	97.5	21.79	9.63	5.02	4	0
BB-91	2009	N248.77	E143.78	97.63	35.92	29.32	10.1	4	0
BB-105	2009	N248	E142	97.90-97.85	10.35	9.57	6.05	2	0
BB-170	2009	N246	E136	97.15-97.10	11.36	6.72	2.73	3	1
BB-172	2009	N247.17	E137.67	97.10	15.81	11.8	5.33	2	0
BB-176	2009	N246	E136	97.15-97.10	10.45	6.93	2.29	3	1
BB-177	2009	N246	E136	97.15-97.10	10.13	9.19	3.26	2	3
BB-218	2009	N246.53	E137.83	97.00	20.85	18.36	7.05	4	1
BB-27		N244	E146	190-200cmbd	34.32	31.32	12.9	4	0
BB-40				130-135cmbd	12.51	7.84	2.08	2	1
BB-63				130-135cmbd	14.71	10.2	1.92	6	1
BB-107				160-170cmbd	14.63	14.27	5.35	3	1
BB-134				160-170cmbd	14.57	12.41	8.12	3	0
BB-140				160-170cmbd	13.8	12.49	2.58	3	1
BB-146				150-160cmbd	14.43	8.51	3.87	4	1
BB-163				150-160cmbd	9.21	6.31	1.85	4	2
BB-173				160-170cmbd	12.28	10.29	2.69	3	2
BB-174				160-170cmbd	22.82	11.68	5.87	3	0
BB-178				160-170cmbd	22.32	21.42	6.95	2	1
BB-197				150-160cmbd	20.37	9.37	2.65	3	1
BB-227				160-170cmbd	13.83	10.51	4.45	2	1
BB-241				160-170cmbd	10.77	8.05	2.22	2	1

Table A40-3
Results of Flake Tool Analysis (Goodyear and Wilkins)

Study	**Year**	**N**	**E**	**Depth**	**L**	**W**	**T**	PB	Rem
RF-1	2000	N244	E148	170-180cmbd	51.25	31.92	11.84	No	1
RF-2	2003	N245.0	E143.14	97.30mbd	54.48	48.06	15.31	No	8
RF-3	2003	N243.2	E140.43	97.30mbd	78.46	36.72	26.55	Yes	9
RF-4		N242	E132	160-165cmbd	27.14	26.4	7.18	No	2
RF-5	2003	N245.4	E142.85	97.31mbd	41.51	24.96	10.84	Yes	5
RF-6	2000	N244	E144	180-190cmbd	58.36	42.65	16.84	No	0
RF-7	2000	N244	E148	170-180cmbd	61.33	44.87	18.23	No	3
RF-8	2000	N242.6	E128.15	184cmbd	58.94	50.58	23.81	No	5
RF-9	2001	N241.3	E131.42	96.79mbd	24.53	24.93	6.54	Yes	2
RF-10	2000	N244	E148	180-190cmbd	31.4	24.67	8.56	Yes	0
RF-11	2002	N243.9	E138.32	97.46mbd	51.35	49.22	22.49	No	4
RF-12				Level 1 PT	71.96	56.77	23.55	No	3
RF-13	1999	N242	E132	150-160cmbd	40.65	22.98	20.13	No	2
RF-14	2000	N244	E128	185-190cmbd	20.98	11.4	4.06	No	3
RF-15	1998	N245.1	E131.93	183cmbd	27.24	26.86	7.93	Yes	2
RF-16	2001	N240	E134	97.25-97.20	31.5	27.61	8.54	No	3
RF-17	2000	N242	E130	185-Claycmbd	27.55	20.57	7.22	No	0
RF-18	1999	N242	E132	140-150cmbd	25.35	13.48	4.69	No	1
RF-19	2000	N244	E128	130-135cmbd	20.53	17.02	4.92	No	1
RF-20		N242	E132	160-170cmbd	21.07	8.76	5.34	No	2
RF-21	1999	N242	E132	140-150cmbd	29.68	21.76	9.39	No	2
RF-22	2000	N244	E128	195-Claycmbd	11.1	7.2	4.04	No	2
RF-23	2000	N244	E128	185-190cmbd	28.18	14.79	7.85	No	3
RF-24		N242	E128	150-155cmbd	33.95	23.8	14.08	No	0
RF-25	2009	N246.5	E137.64	97.5mbd	37.79	23.02	13.56	No	2
RF-26	2000	N244	E148	190-200cmbd	42.48	38.33	11.51	Yes	2
RF-27	2006	N242.2	E141.28	96.02mbd	32.1	26.49	12.81	No	2
RF-28	2005			95.28mbd	41.98	41.49	13	No	2
RF-29	2004	N242.7	E141.57	96.905mbd	22.54	15.22	10.07	No	2
RF-30	1999	N242	E132	140-150cmbd	30.16	28.75	11.3	No	1
RF-31		N242	E132	150-160cmbd	13.07	11.3	4.42	No	2
RF-32	1999	N242	E132	140-150cmbd	30.88	20.75	8.42	No	0
RF-33	2000	N242	E128	175-180cmbd	14.64	7.44	5.4	No	1
RF-34	1999	N242	E132	130-140cmbd	17.81	11.08	8.6	No	2
RF-35	2002	N244.4	143.85	97.705mbd	44.09	31.29	18.8	No	3
RF-36	2007	N242.2	E141.44	95.52mbd	39.87	24.47	10.09	No	1
RF-37	2007	N242.5	E141.77	95.72mbd	47.63	39.01	20.95	No	0
RF-38	2000	N242	E234	160-165cmbd	45.85	43.54	13.79	No	0
RF-39	2001	N233.6	E105.21	97.37mbd	62.39	26.72	11.01	No	
RF-40					49.68	45.79	14.66	No	2
RF-41	2005	N244.3	E144.80	97.93mbd	91.5	72.5	29.55	No	3
RF-42	2003	N242.7	E143.66	97.42mbd	94.96	69.82	33.33	No	1
RF-43	2002	N242	E136	97.15-97.10	50.4	64.65	39.1	No	2

Table A40-3 continued

Study	Year	N	E	Depth	L	W	T	PB	Rem
RF-44	1999	N242	E132	110-120cmbd	16.69	14.27	5.39	Yes	1
RF-45	2000	N244	E148	190-200cmbd	22.32	16.88	9.31	Yes	2
RF-46	2000	N245.6	E146.70	193cmbd	36.02	28.04	14.51	Yes	2
RF-47	2002	N243.4	E138.34	97.55mbd	37.75	28.27	14.48	No	2
RF-48	2008	N244.6	E139.38	95.43mbd	45.83	24.5	13.25	No	4
RF-49	2001	N240	E134	96.90-96.85	48.13	41.38	15	No	4
RF-50	2000	N244	E132	170-175cmbd	33.96	24.29	18.8	No	2
RF-51	1999	N242	E132		64.57	42.79	15.92	Yes	3
RF-52	2000	N242	E128	175-180cmbd	13.42	12.49	4.38	No	4
RF-53		N242	E130	150-160cmbd	38.25	19.15	11.9	No	2
RF-54	2000	N243.8	E130.53	185-190cmbd	23.5	12.71	9.2	No	1
RF-55		N248	E142.85	Level 16	32.21	19.98	10.56	No	2
RF-56	2000	N242	E130	175-180cmbd	26.33	11.45	7.88	No	2
RF-57	1998	N244	E118	190-200cmbd	27.21	15.56	8.4	No	1
RF-58	1999	N242	E132	150-160cmbd	40.27	30.28	15.89	No	2
RF-59	2000	N244	E146	190-200cmbd	23.21	20.95	6.91	No	2
RF-60		N242.3	E129.71	180-185cmbd	56.78	38.73	24.99	No	0
RF-61	1999	N242	E132	150-160cmbd	90.69	72.9	36.58	Yes	3
RF-62	2009	N248.5	E143.94	97.70mbd	35.99	18.4	17.62	No	0
RF-63	2003	N242.8	E142.53	97.38mbd	44.43	31.84	11.55	No	3
RF-64	2000	N244	E146	190-200cmbd	38.56	25.52	14.82	No	0
RF-65	2002	N245.5	E141.27	97.435mbd	27.61	20.52	9.51	No	4
RF-66	2006	N242.3	E140.32	95.91mbd	43.84	25.72	15.83	No	0
RF-67	2002	242.45	E139.10	97.44mbd	35	29.62	9.55	No	2
RF-68	2000	N245	E146.14	174cmbd	65.49	41.04	27.13	No	4
RF-69	2000	N243.2	E139.64	97.365mbd	47.65	42.3	22.9	No	1
RF-70	1999	N242	E130	130-140cmbd	34.82	22.79	12.73	No	0
RF-71	1999	N242	E130	130-140cmbd	22.24	20.56	10.1	No	1
RF-72	2002	N243	E143.39	97.73mbd	66.36	40.56	18.16	No	7
RF-73	2000	N242	E128	135-140cmbd	48.46	43.38	12.4	No	4
RF-74	2002	N245.6	E140.87	97.425mbd	101.12	57.73	35.36	No	1
RF-75	2009	N248	E142	97.85-97.80	34.37	26.09	14.97	No	2
RF-76	2008	N243.1	E142.61	96.27mbd	32.89	30.97	9.96	Yes	3
RF-77	2002	N243.2	E145.09	97.55mbd	41.51	29.84	17.92	No	1
RF-78	2002	N245.6	E138.14	97.52mbd	70.23	30.34	10.43	No	3
RF-79	1999	N243.7	E133.15	148.50cmbd	83.63	59.59	44.76	No	4
RF-80	2003	N245.0	E143.71	97.365mbd	68.54	44.08	21.99	No	3
RF-81	2006	N242.3	E142.85	96.73mbd	87.33	83.49	36.16	No	0
RF-82	2003	N244.8	E142.73	97.43mbd	67.56	27.22	12.78	No	3

Table A40-3 continued

Study	Year	N	E	Depth	L	W	T	PB	Rem
RF-1	2000	N244	E148	170-180cmbd	51.25	31.92	11.84	2	
RF-2	2003	N245.03	E143.14	97.30mbd	54.48	48.06	15.31	4	
RF-3	2003	N243.27	E140.43	97.30mbd	78.46	36.72	26.55	1	1
RF-4		N242	E132	160-165cmbd	27.14	26.4	7.18	2	
RF-5	2003	N245.42	E142.85	97.31mbd	41.51	24.96	10.84	1	
RF-6	2000	N244	E144	180-190cmbd	58.36	42.65	16.84	1	
RF-7	2000	N244	E148	170-180cmbd	61.33	44.87	18.23	1	1
RF-8	2000	N242.69	E128.15	184cmbd	58.94	50.58	23.81	4	1
RF-9	2001	N241.36	E131.42	96.79mbd	24.53	24.93	6.54		2
RF-10	2000	N244	E148	180-190cmbd	31.4	24.67	8.56	2	
RF-11	2002	N243.93	E138.32	97.46mbd	51.35	49.22	22.49	3	1
RF-12					71.96	56.77	23.55	3	1
RF-13	1999	N242	E132	150-160cmbd	40.65	22.98	20.13	1	
RF-14	2000	N244	E128	185-190cmbd	20.98	11.4	4.06		1
RF-15	1998	N245.14	E131.93	183cmbd	27.24	26.86	7.93	2	1
RF-16	2001	N240	E134	97.25-97.20mbd	31.5	27.61	8.54	1	1
RF-17	2000	N242	E130	185-Claycmbd	27.55	20.57	7.22	1	
RF-18	1999	N242	E132	140-150cmbd	25.35	13.48	4.69	1	
RF-19	2000	N244	E128	130-135cmbd	20.53	17.02	4.92		1
RF-20		N242	E132	160-170cmbd	21.07	8.76	5.34	2	
RF-21	1999	N242	E132	140-150cmbd	29.68	21.76	9.39	1	1
RF-22	2000	N244	E128	195-Claycmbd	11.1	7.2	4.04	1	
RF-23	2000	N244	E128	185-190cmbd	28.18	14.79	7.85	1	
RF-24		N242	E128	150-155cmbd	33.95	23.8	14.08	3	
RF-25	2009	N246.59	E137.64	97.5mbd	37.79	23.02	13.56	1	1
RF-26	2000	N244	E148	190-200cmbd	42.48	38.33	11.51	1	
RF-27	2006	N242.23	E141.28	96.02mbd	32.1	26.49	12.81		1
RF-28	2005			95.28mbd	41.98	41.49	13	1	
RF-29	2004	N242.7	E141.57	96.905mbd	22.54	15.22	10.07		1
RF-30	1999	N242	E132	140-150cmbd	30.16	28.75	11.3	1	
RF-31		N242	E132	150-160cmbd	13.07	11.3	4.42	1	
RF-32	1999	N242	E132	140-150cmbd	30.88	20.75	8.42		1
RF-33	2000	N242	E128	175-180cmbd	14.64	7.44	5.4	1	
RF-34	1999	N242	E132	130-140cmbd	17.81	11.08	8.6	2	
RF-35	2002	N244.46	143.85	97.705mbd	44.09	31.29	18.8	2	1
RF-36	2007	N242.27	E141.44	95.52mbd	39.87	24.47	10.09		1
RF-37	2007	N242.54	E141.77	95.72mbd	47.63	39.01	20.95	1	
RF-38	2000	N242	E234	160-165cmbd	45.85	43.54	13.79	2	
RF-39	2001	N233.66	E105.21	97.37mbd	62.39	26.72	11.01	1	
RF-40					49.68	45.79	14.66	1	
RF-41	2005	N244.30	E144.80	97.93mbd	91.5	72.5	29.55	6	

Table A40-3 continued

Study	Year	N	E	Depth	L	W	T	PB	Rem
RF-42	2003	N242.75	E143.66	97.42mbd	94.96	69.82	33.33	31	
RF-43	2002	N242	E136	97.15-97.10mbd	50.4	64.65	39.1	2	
RF-44	1999	N242	E132	110-120cmbd	16.69	14.27	5.39	1	
RF-45	2000	N244	E148	190-200cmbd	22.32	16.88	9.31	3	1
RF-46	2000	N245.64	E146.70	193cmbd	36.02	28.04	14.51	1	1
RF-47	2002	N243.48	E138.34	97.55mbd	37.75	28.27	14.48	2	1
RF-48	2008	N244.60	E139.38	95.43mbd	45.83	24.5	13.25	1	
RF-49	2001	N240	E134	96.90-96.85mbd	48.13	41.38	15	2	1
RF-50	2000	N244	E132	170-175cmbd	33.96	24.29	18.8	3	
RF-51	1999	N242	E132		64.57	42.79	15.92	1	
RF-52	2000	N242	E128	175-180cmbd	13.42	12.49	4.38	3	
RF-53		N242	E130	150-160cmbd	38.25	19.15	11.9		1
RF-54	2000	N243.82	E130.53	185-190cmbd	23.5	12.71	9.2	1	
RF-55		N248	E142.85	Level 16	32.21	19.98	10.56	1	
RF-56	2000	N242	E130	175-180cmbd	26.33	11.45	7.88	1	
RF-57	1998	N244	E118	190-200cmbd	27.21	15.56	8.4		1
RF-58	1999	N242	E132	150-160cmbd	40.27	30.28	15.89	1	
RF-59	2000	N244	E146	190-200cmbd	23.21	20.95	6.91	1	
RF-60		N242.36	E129.71	180-185cmbd	56.78	38.73	24.99	1	
RF-61	1999	N242	E132	150-160cmbd	90.69	72.9	36.58	1	1
RF-62	2009	N248.57	E143.94	97.70mbd	35.99	18.4	17.62	1	
RF-63	2003	N242.85	E142.53	97.38mbd	44.43	31.84	11.55		1
RF-64	2000	N244	E146	190-200cmbd	38.56	25.52	14.82	1	
RF-65	2002	N245.50	E141.27	97.435mbd	27.61	20.52	9.51	2	1
RF-66	2006	N242.32	E140.32	95.91mbd	43.84	25.72	15.83	2	
RF-67	2002	N242.45	E139.10	97.44mbd	35	29.62	9.55	1	1
RF-68	2000	N245	E146.14	174cmbd	65.49	41.04	27.13	2	2
RF-69	2000	N243.20	E139.64	97.365mbd	47.65	42.3	22.9	3	1
RF-70	1999	N242	E130	130-140cmbd	34.82	22.79	12.73	2	
RF-71	1999	N242	E130	130-140cmbd	22.24	20.56	10.1	2	
RF-72	2002	N243	E143.39	97.73mbd	66.36	40.56	18.16	5	
RF-73	2000	N242	E128	135-140cmbd	48.46	43.38	12.4	2	
RF-74	2002	N245.66	E140.87	97.425mbd	101.1	57.73	35.36	3	2
RF-75	2009	N248	E142	97.85-97.80mbd	34.37	26.09	14.97	2	
RF-76	2008	N243.18	E142.61	96.27mbd	32.89	30.97	9.96	2	
RF-77	2002	N243.27	E145.09	97.55mbd	41.51	29.84	17.92	1	
RF-78	2002	N245.69	E138.14	97.52mbd	70.23	30.34	10.43	2	
RF-79	1999	N243.75	E133.15	148.50cmbd	83.63	59.59	44.76	2	1
RF-80	2003	N245.06	E143.71	97.365mbd	68.54	44.08	21.99	1	
RF-81	2006	N242.35	E142.85	96.73mbd	87.33	83.49	36.16	2	1
RF-82	2003	N244.87	E142.73	97.43mbd	67.56	27.22	12.78		1

APPENDIX 41

RESULTS OF CORTICAL ANALYSIS

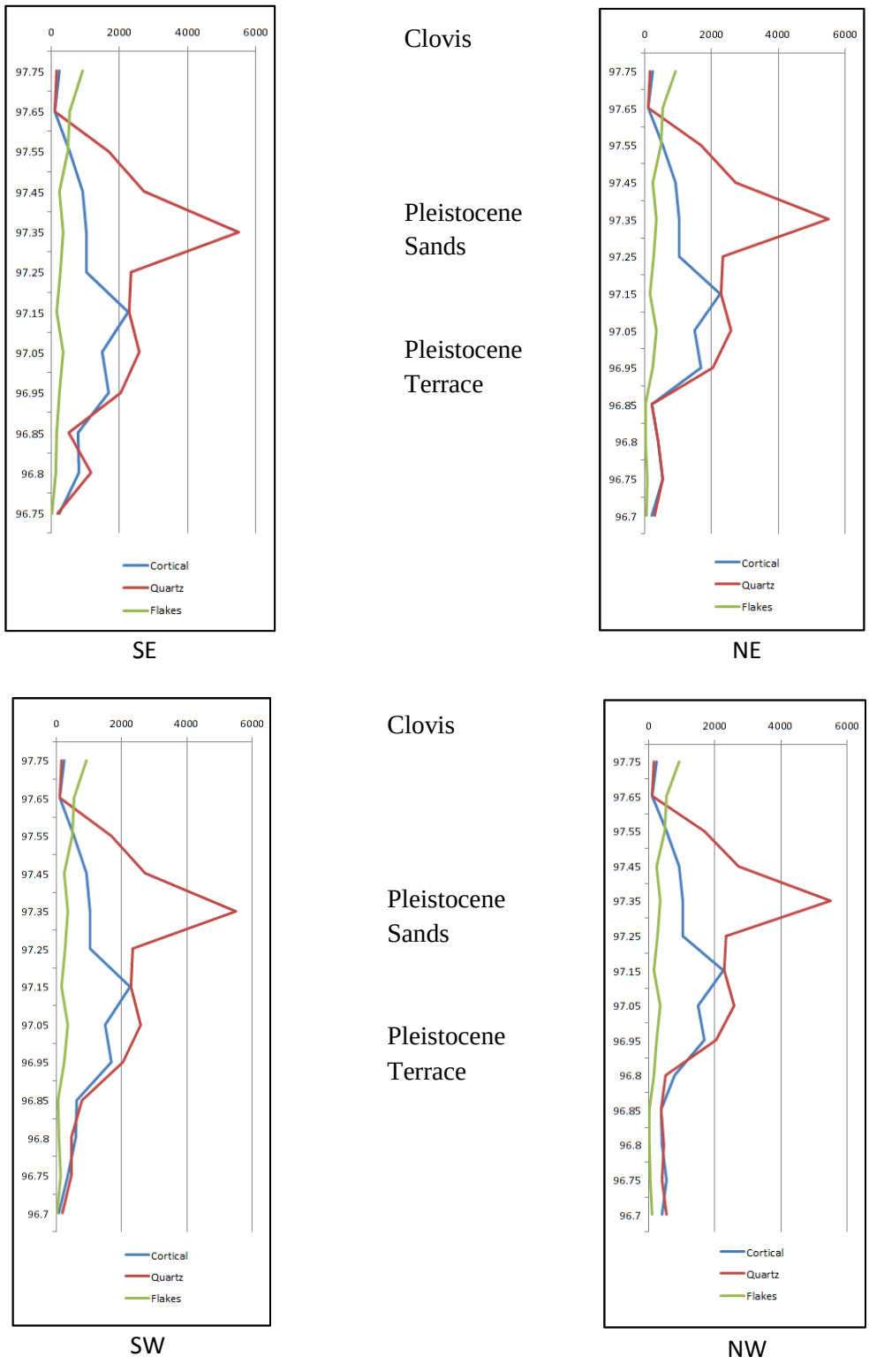


Figure A 41 -1
Distribution of cortical, quartz and flake weights (g) by depth from unit N242 E130 Pleistocene Sands.

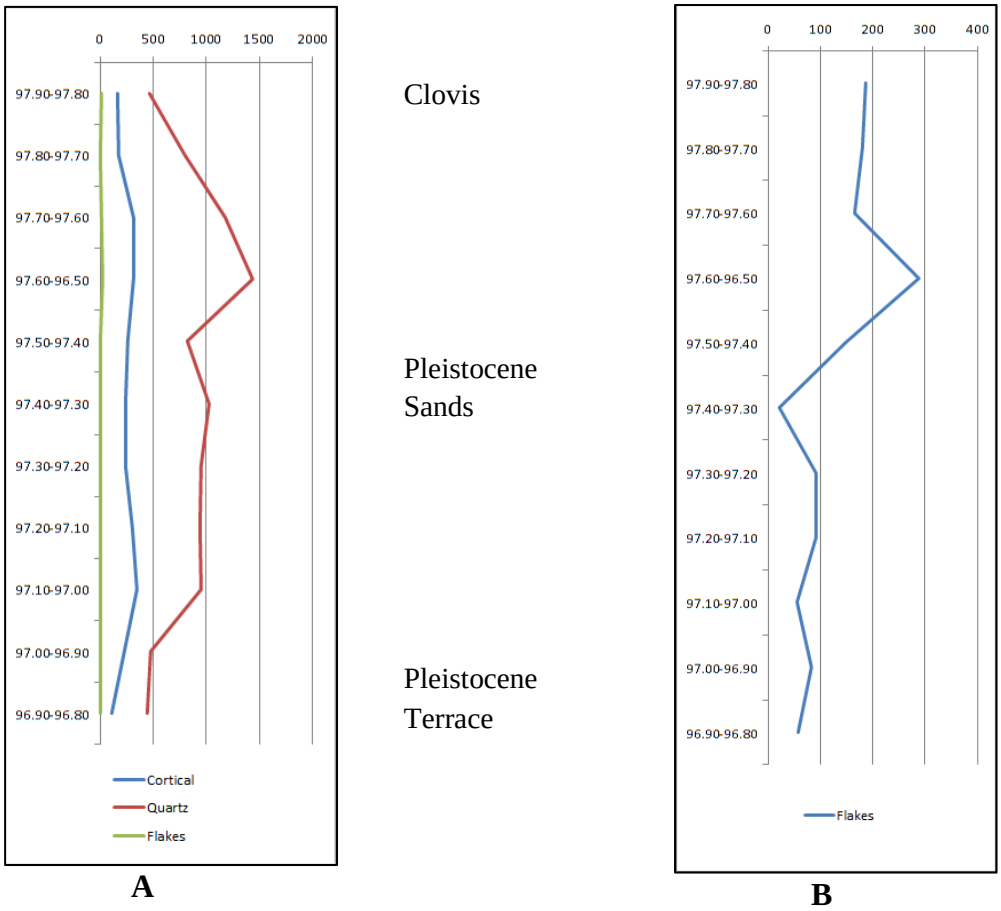


Figure A 41-2
A: Distribution of cortical, quartz, and flake weights by depth from unit N263 E145 Pleistocene Sands. B; Distribution of flakes by depth.

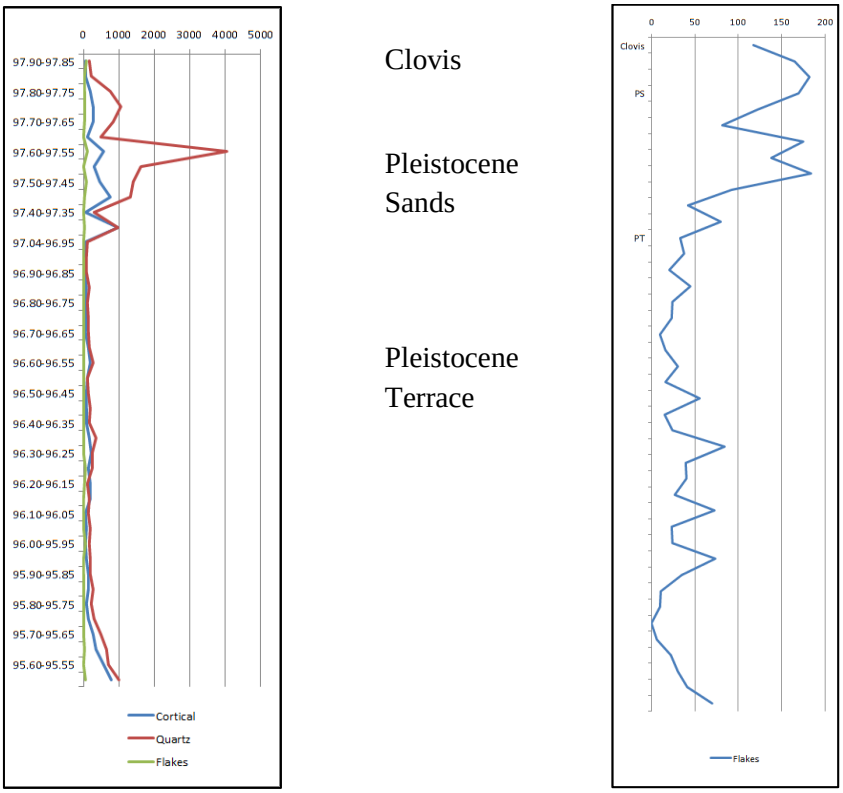


Figure A 42–3
A: Distribution of cortical, quartz, and flake weights by depth from unit N242 E138 NE. B; Distribution of flakes by depth.

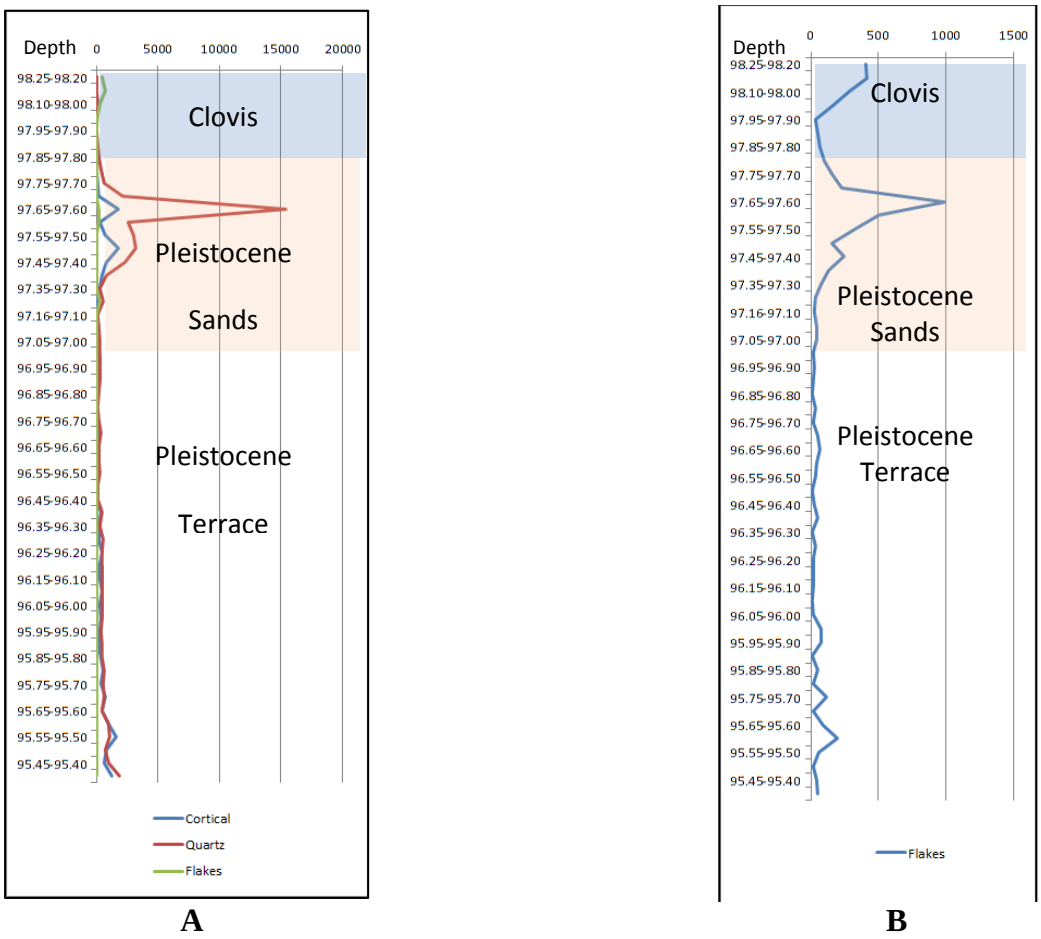
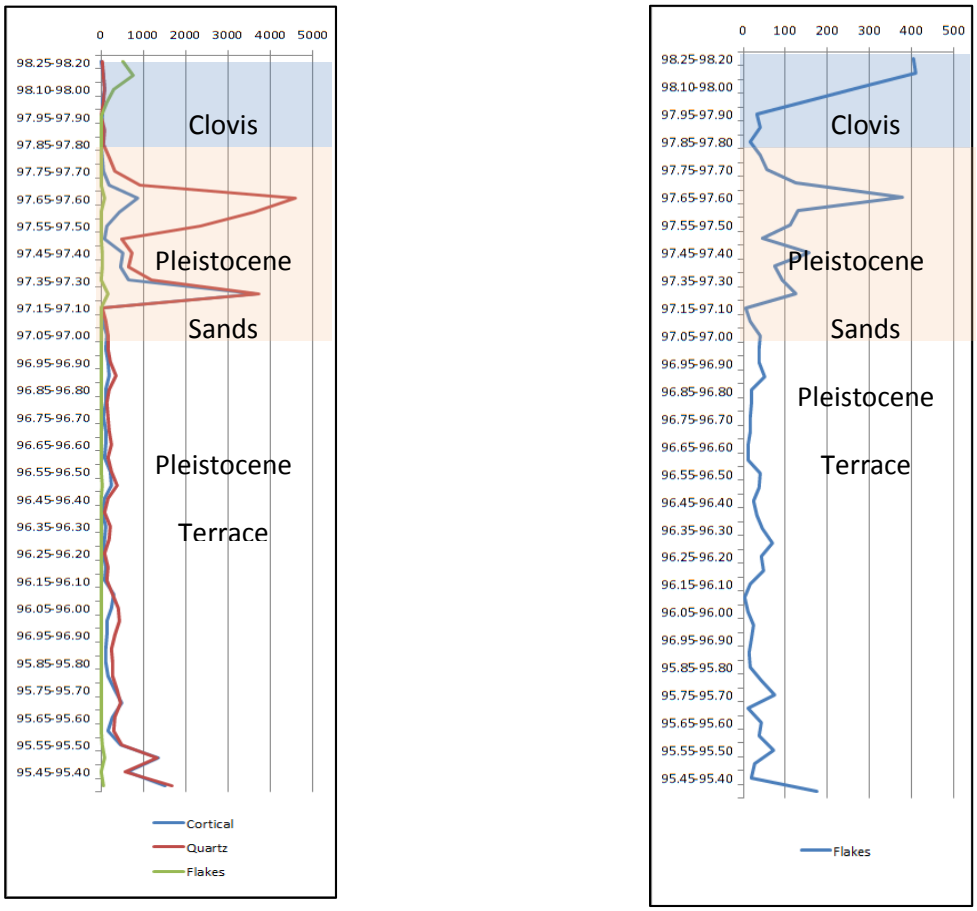
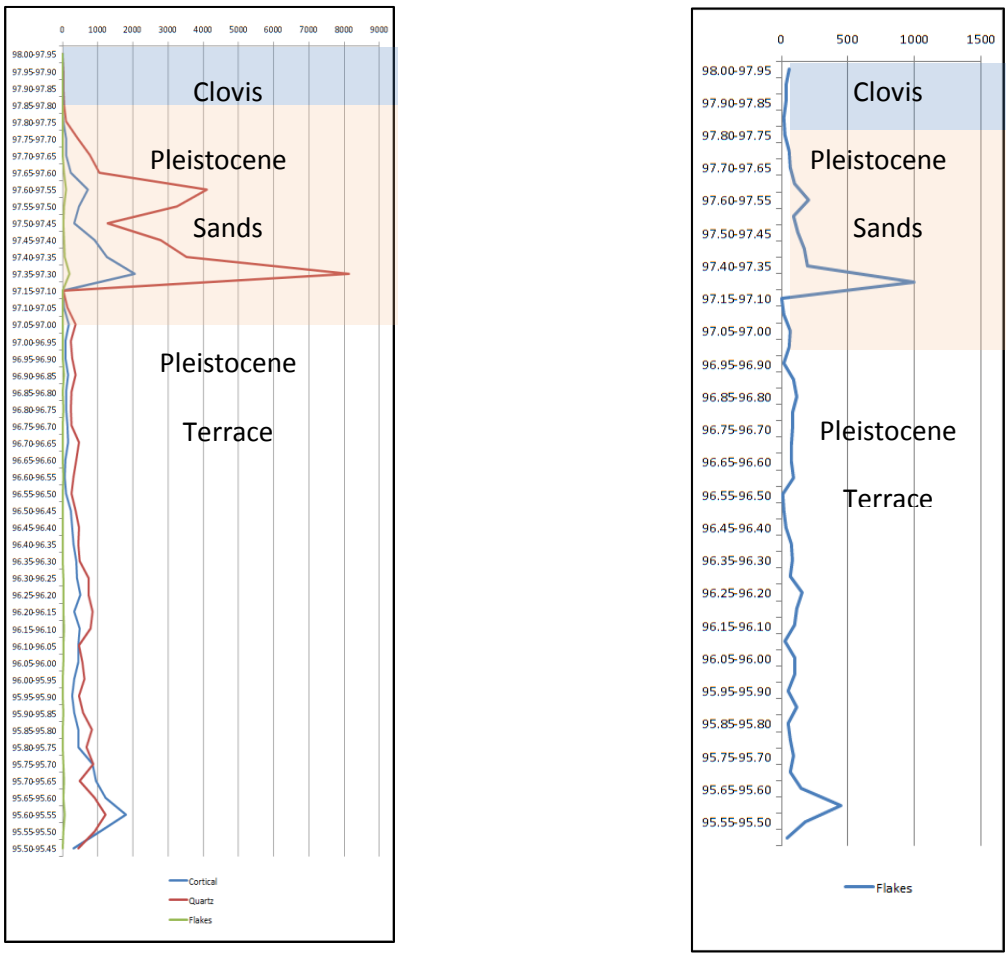


Figure A 41–4
A: Distribution of cortical, quartz, and flake weights by depth from unit N242 E140 SE. B; Distribution of flakes by depth.



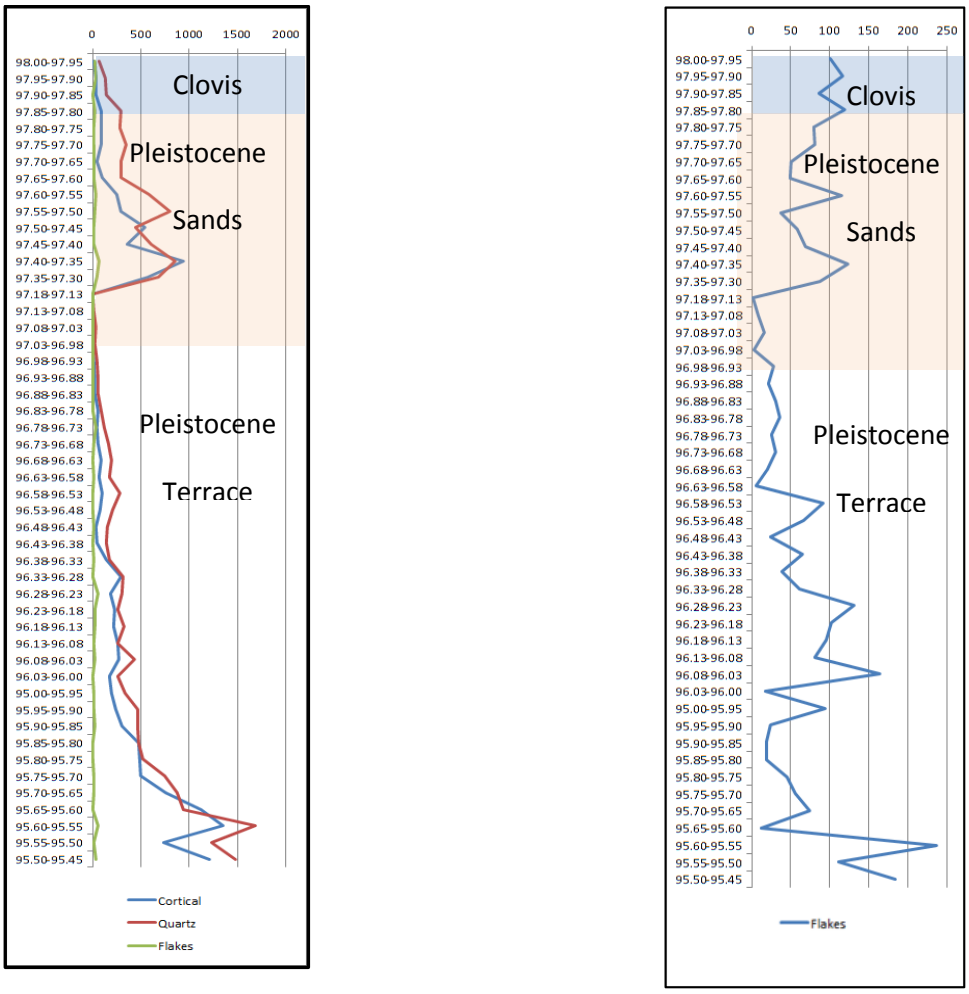
A **B**

Figure A 41–5
A: Distribution of cortical, quartz, and flake weights by depth from unit N242 E140 SW. B; Distribution of flakes by depth.



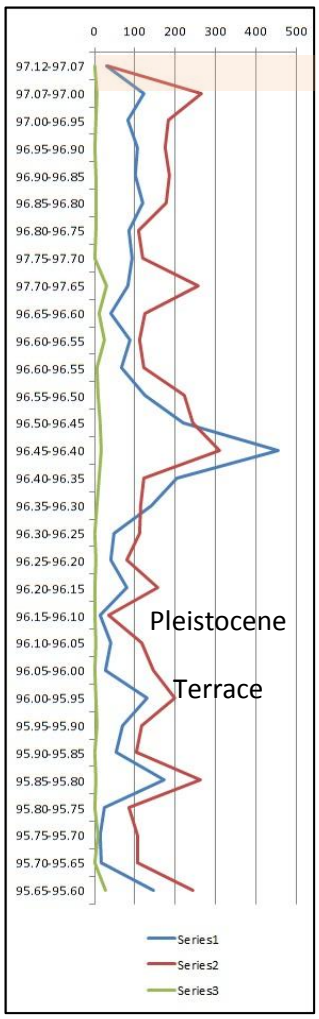
A **B**

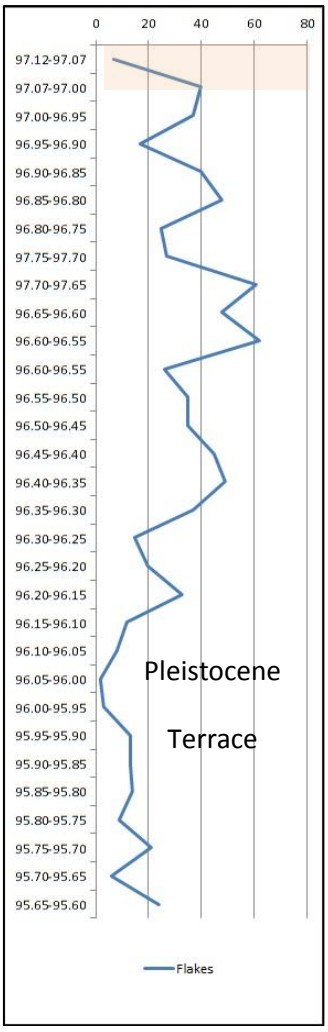
Figure A 41 -6
A: Distribution of cortical, quartz, and flake weights by depth from Unit N242 E142 SW. B; Distribution of flakes by depth.



A **B**

Figure A 41–7
A: Distribution of cortical, quartz, and flake weights by depth from unit N242 E142 NW. B; Distribution of flakes by depth.





A **B**

Figure A 41–8
A: Distribution of cortical, quartz, and flake weights by depth from unit N244 E138 SE. B; Distribution of flakes by depth. Entire profile for this quad is Terrace.

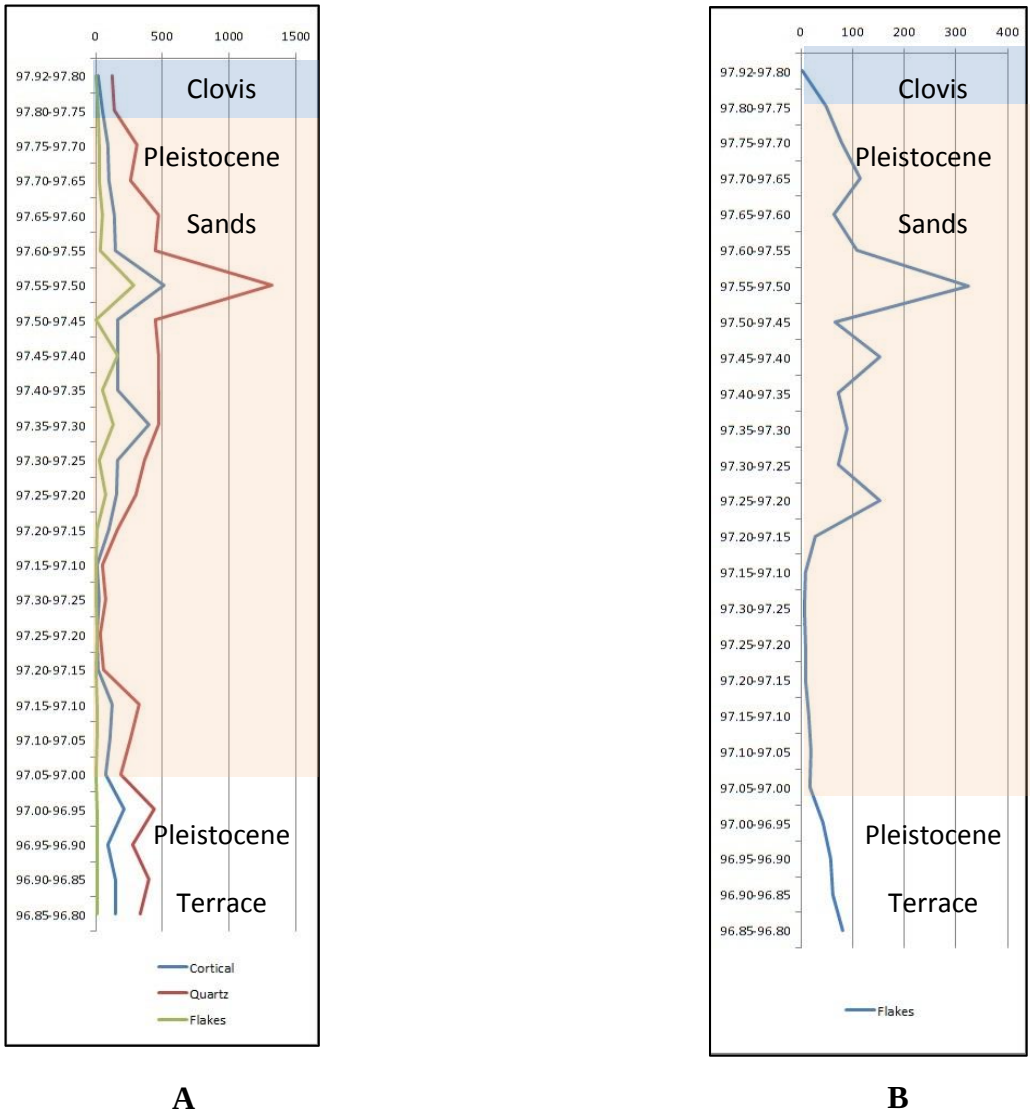
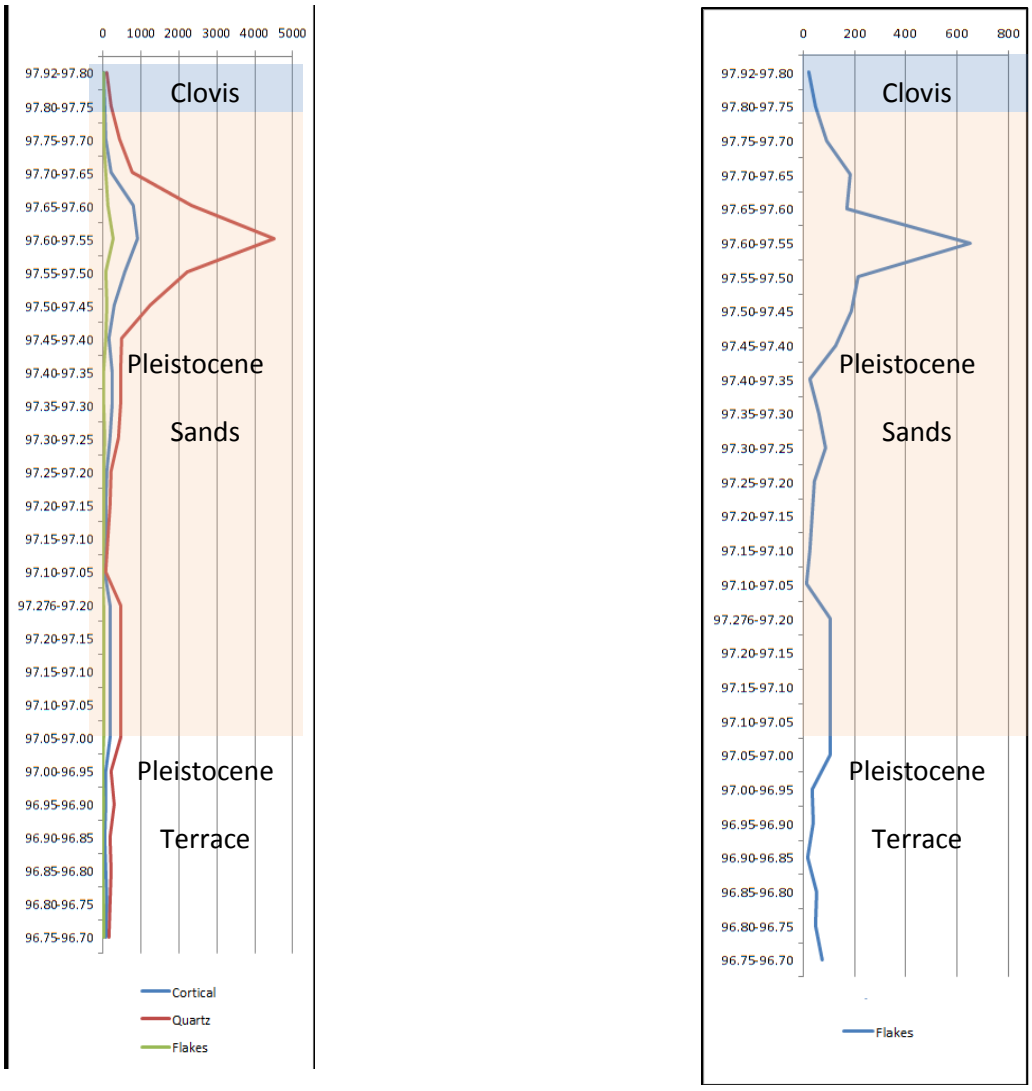


Figure A 41–9
A: Distribution of cortical, quartz, and flake weights by depth from unit N246 E138 SE.
B; Distribution of flakes by depth.



A **B**

Figure A 41–10
A: Distribution of cortical, quartz, and flake weights by depth from unit N246 E138 SW. B; Distribution of flakes by depth

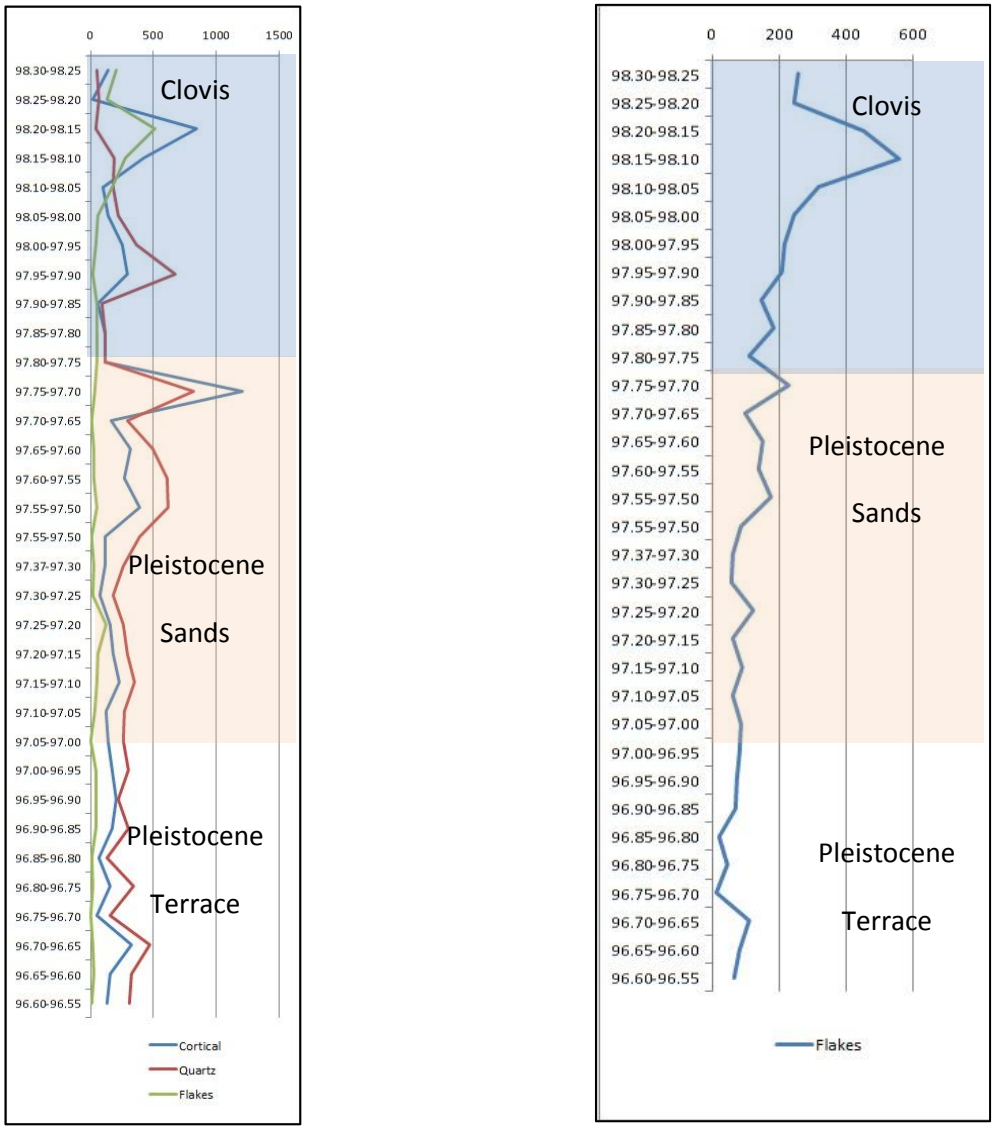


Figure A 41−11
A: Distribution of cortical, quartz, and flake weights by depth from unit N246 E140 SE. B; Distribution of flakes by depth.

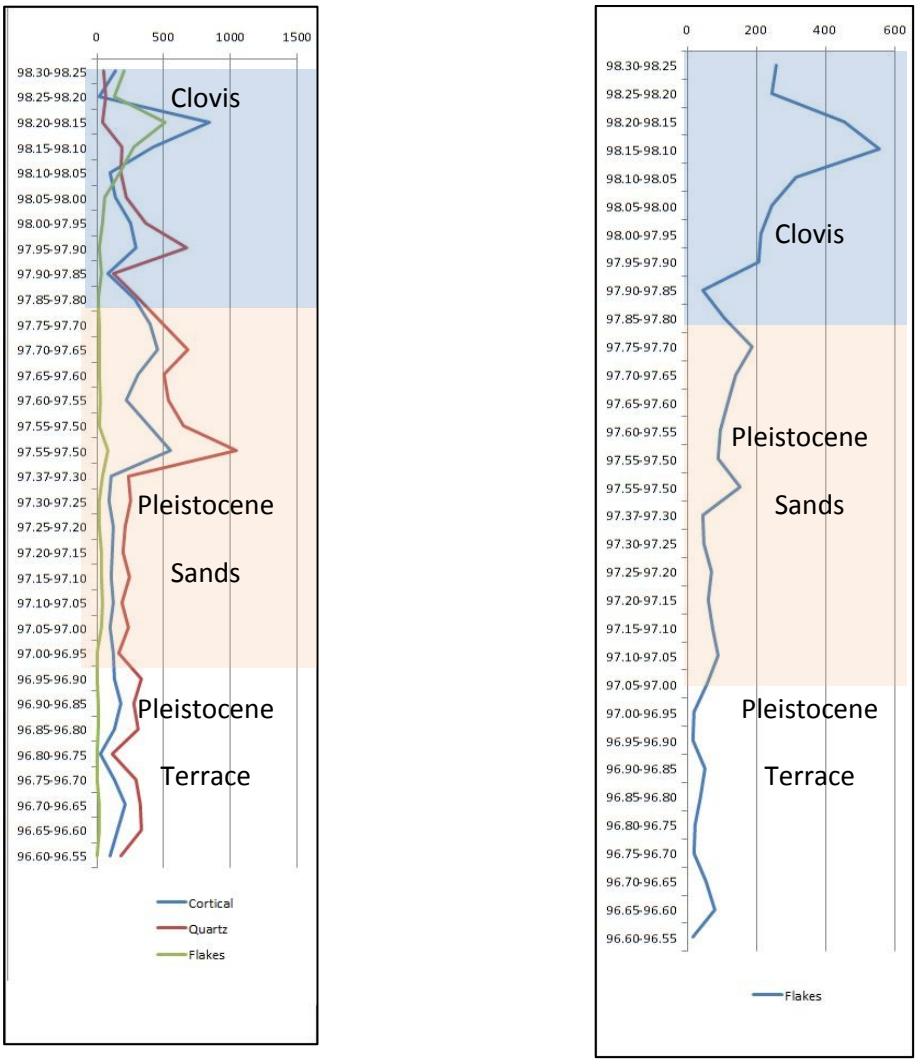


Figure A 41–12
A: Distribution of cortical, quartz, and flake weights by depth from unit N246 E140 NE. B; Distribution of flakes by depth.

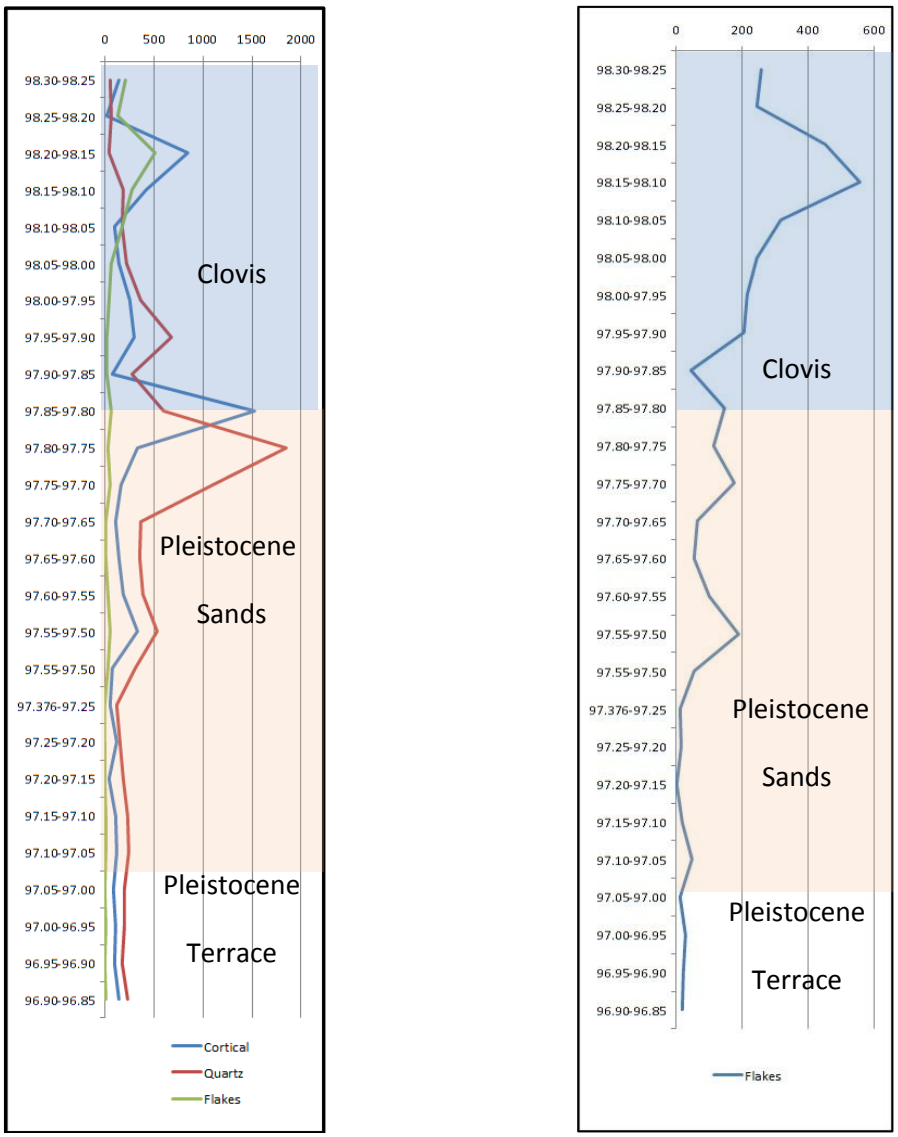
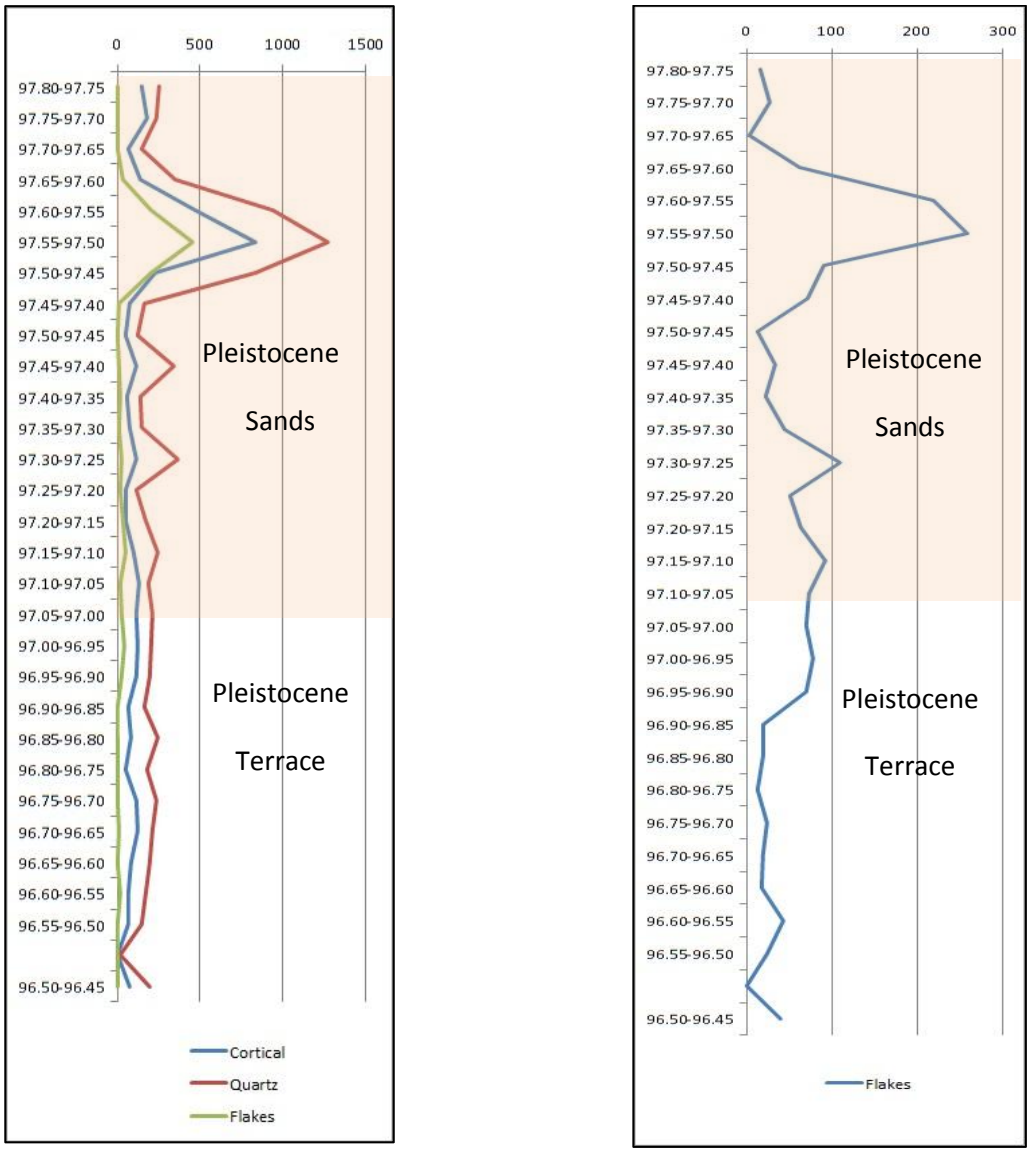
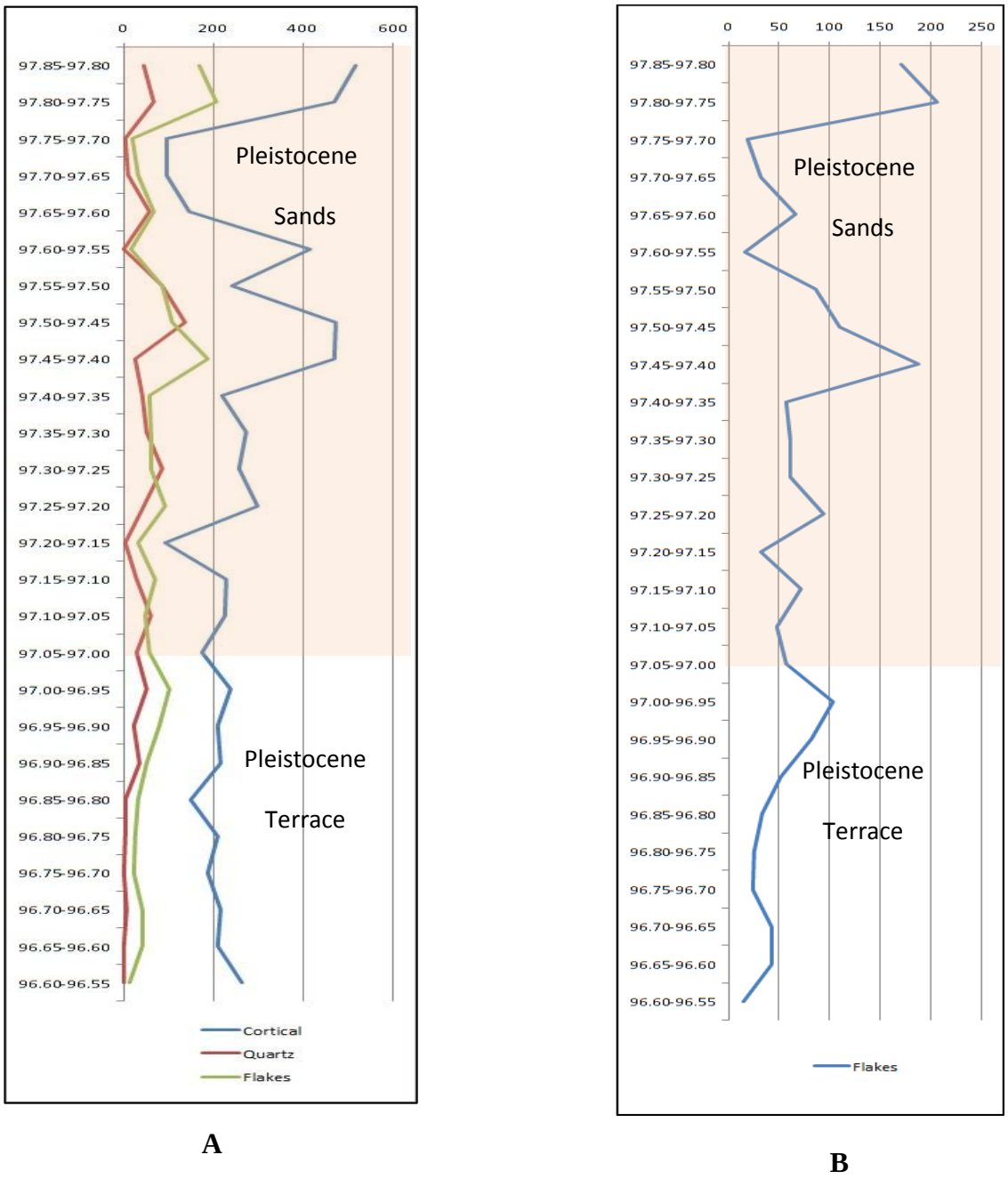


Figure A41–13
A: Distribution of cortical, quartz, and flake weights by depth from unit N246 E140 NW. B; Distribution of flakes by depth.



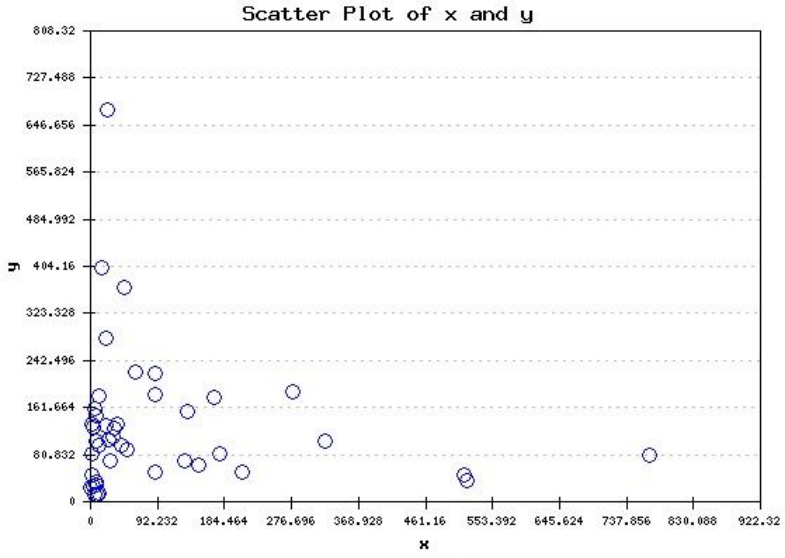
A **B**

Figure A 41−14
A: Distribution of cortical, quartz, and flake weights by depth from unit N248 E140 SE. B; Distribution of flakes by depth.



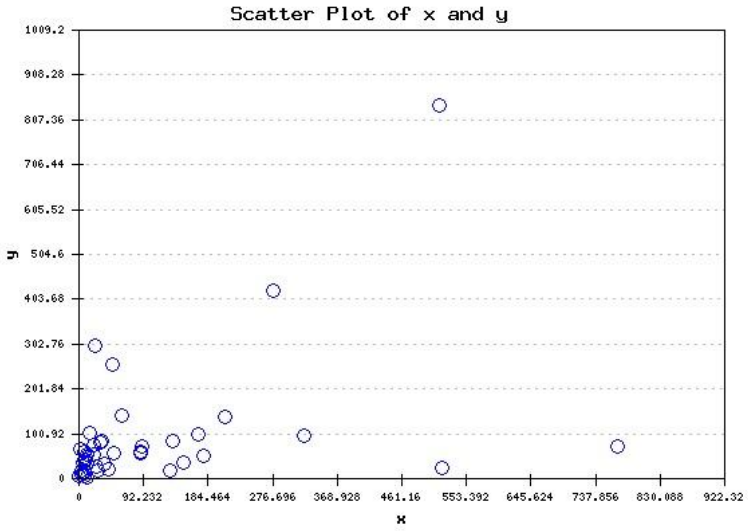
A **B**

Figure A41–15
A: Distribution of cortical, quartz, and flake weights by depth from unit N248 E140 SW. B; Distribution of flakes by depth



r = - .1423

A



r = .4340

B

Figure A41−16

Results of Pearsons Correlation Test. A; Negative correlation for flake weights by quartz weights from Clovis deposits. B; weak positive correlation for flake weights by cortical weights from Clovis deposits.

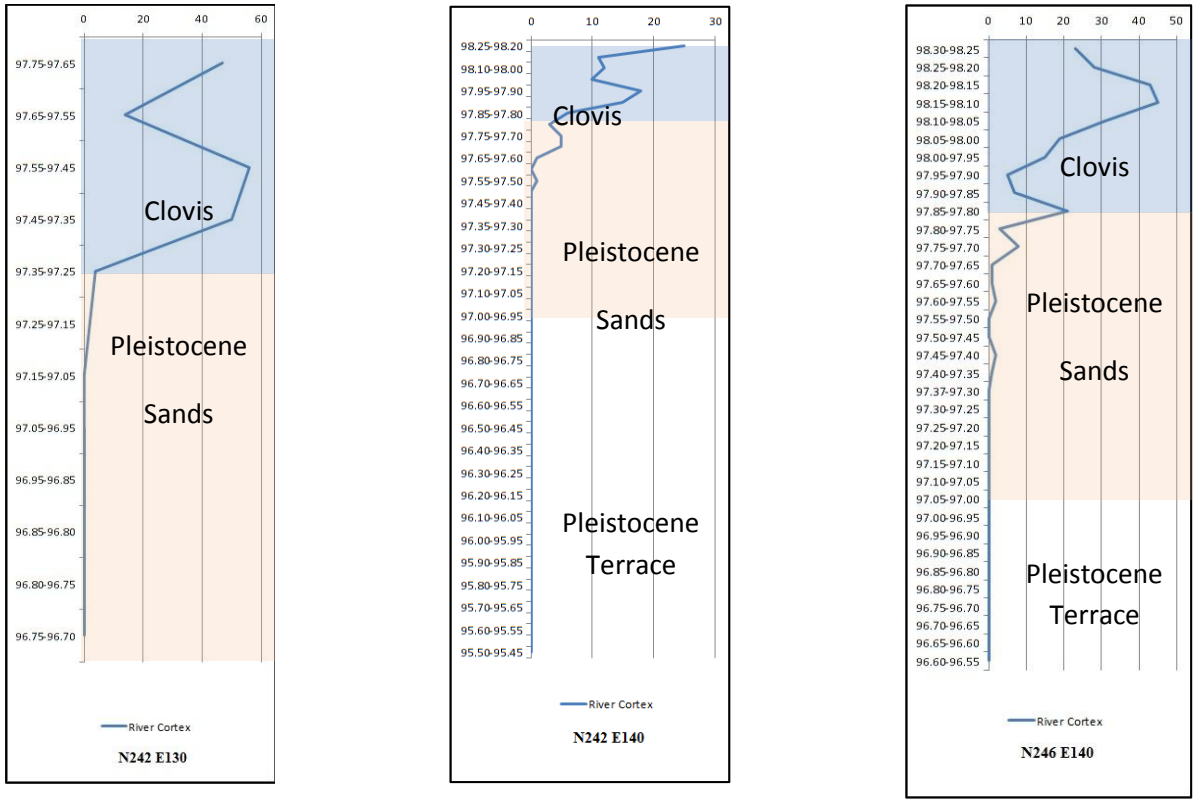


Figure A 41–17

Distribution of river cortex by stratum for units N242 E130, N242 E140, and N246 E140. There is an abrupt decrease in the number of flakes that exhibit river cortex below the Clovis contexts at Topper.

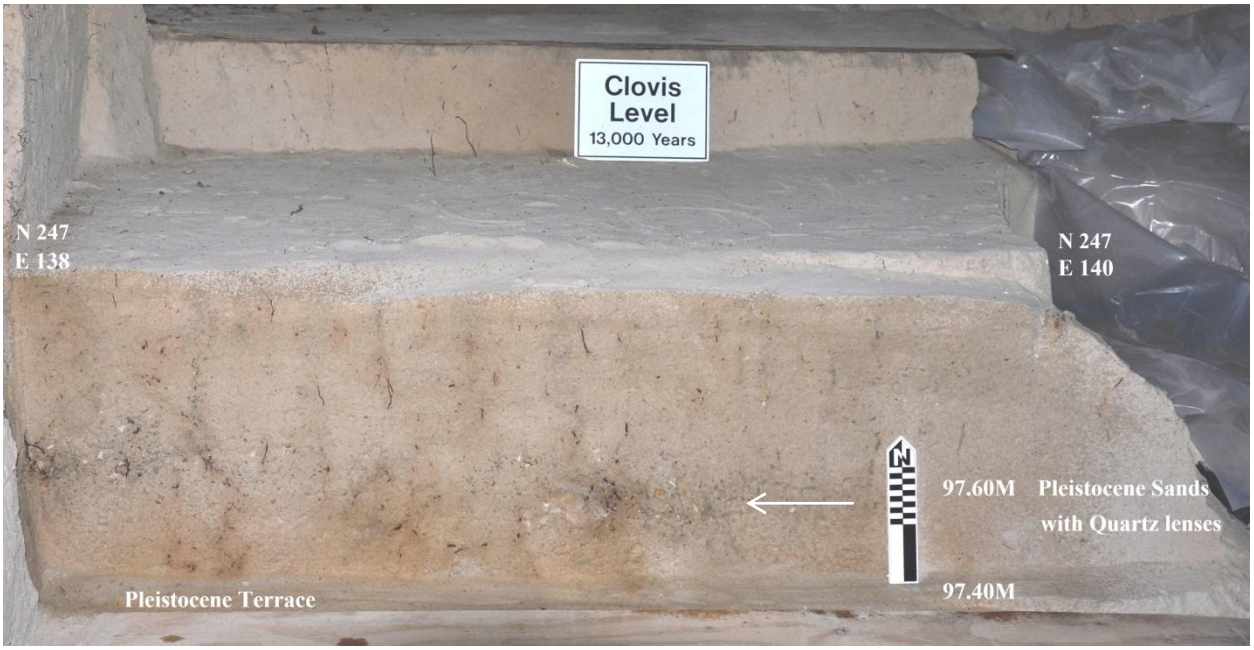
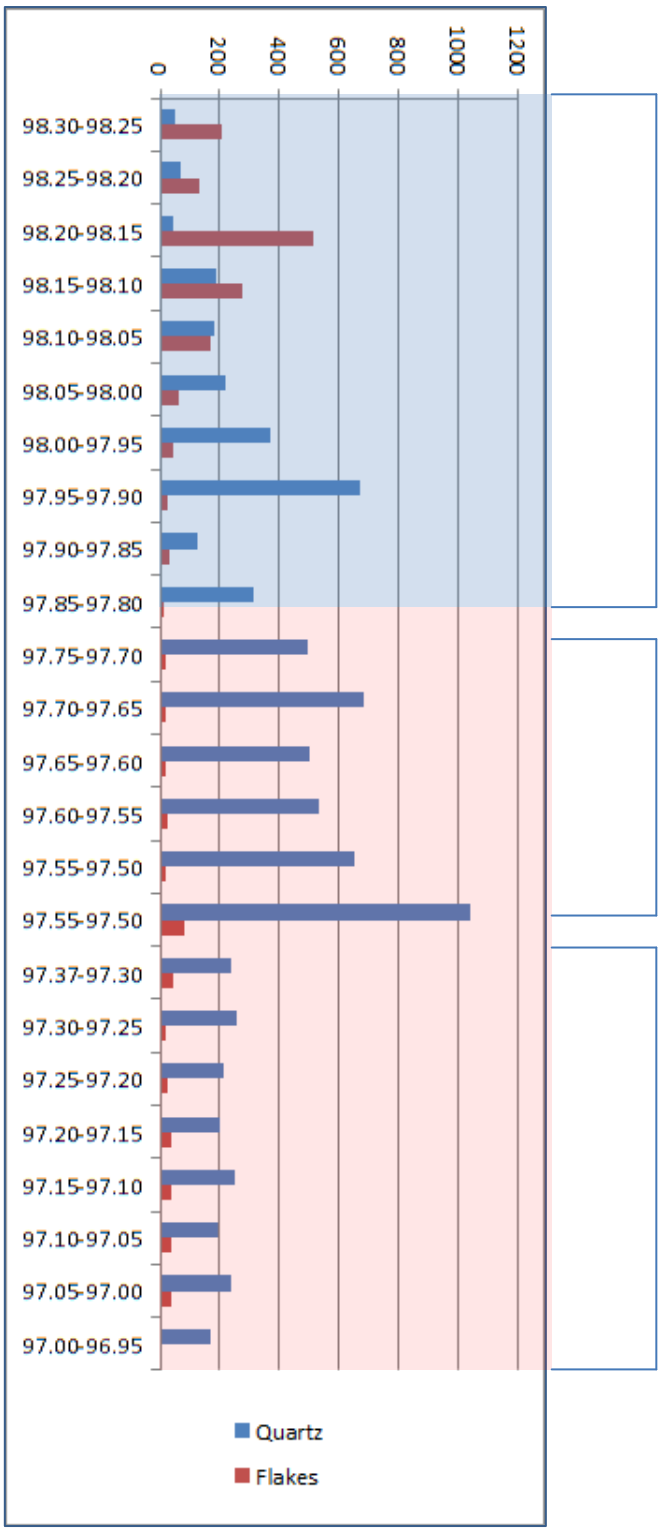


Figure A41−18

Stratigrapic position of quartz pebbles from the Pleistocene Sands. These quartz lenses presumably resulted from flooding episodes of the Savannah River when it flowed as a braided pattern during the Late Pleistocene. Lithic debitage are found in association with these lenses (97.60m) as well as from the terrace surface below (97.40m) where the quartz lenses are absent.



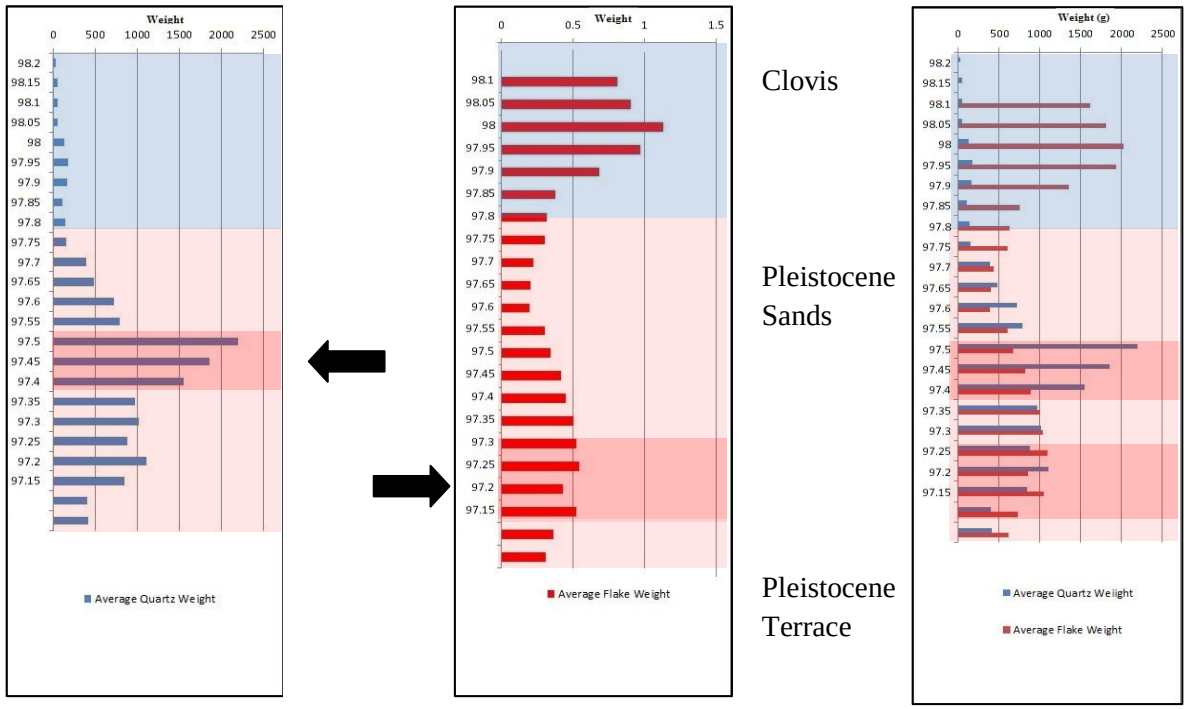
Clovis deposits showing the distribution of flakes and quartz pebbles by weight.

Upper Pleistocene Sands deposits showing elevated concentrations of quartz pebbles by Weight and low concentrations of flakes by weight

Lower Pleistocene Sands deposits showing decrease in quartz by weight relative to comparatively higher proportion of flake weight.

Figure 41–19

Distribution of quartz pebbles and chert flakes by weight for Unit N246E140 NE. High concentrations of quartz pebbles occur in levels ranging from 97.55m-97.75m. By contrast, the highest concentrations of flakes by weight occur in levels below 97.50m).



A B C

Figure 41–20

Illustration showing A; the average weight of quartz pebbles per level for all units exmined, B; the average fake weight per level for all units examined, C; Comparison of average quartz weight by average flake weight (x2k) per level. Highest average flake weights for Pleistocene Sands do not overlap with highest average quartz weights.Arrows indicate highest average quartz and flake weights below Clovis respectively.

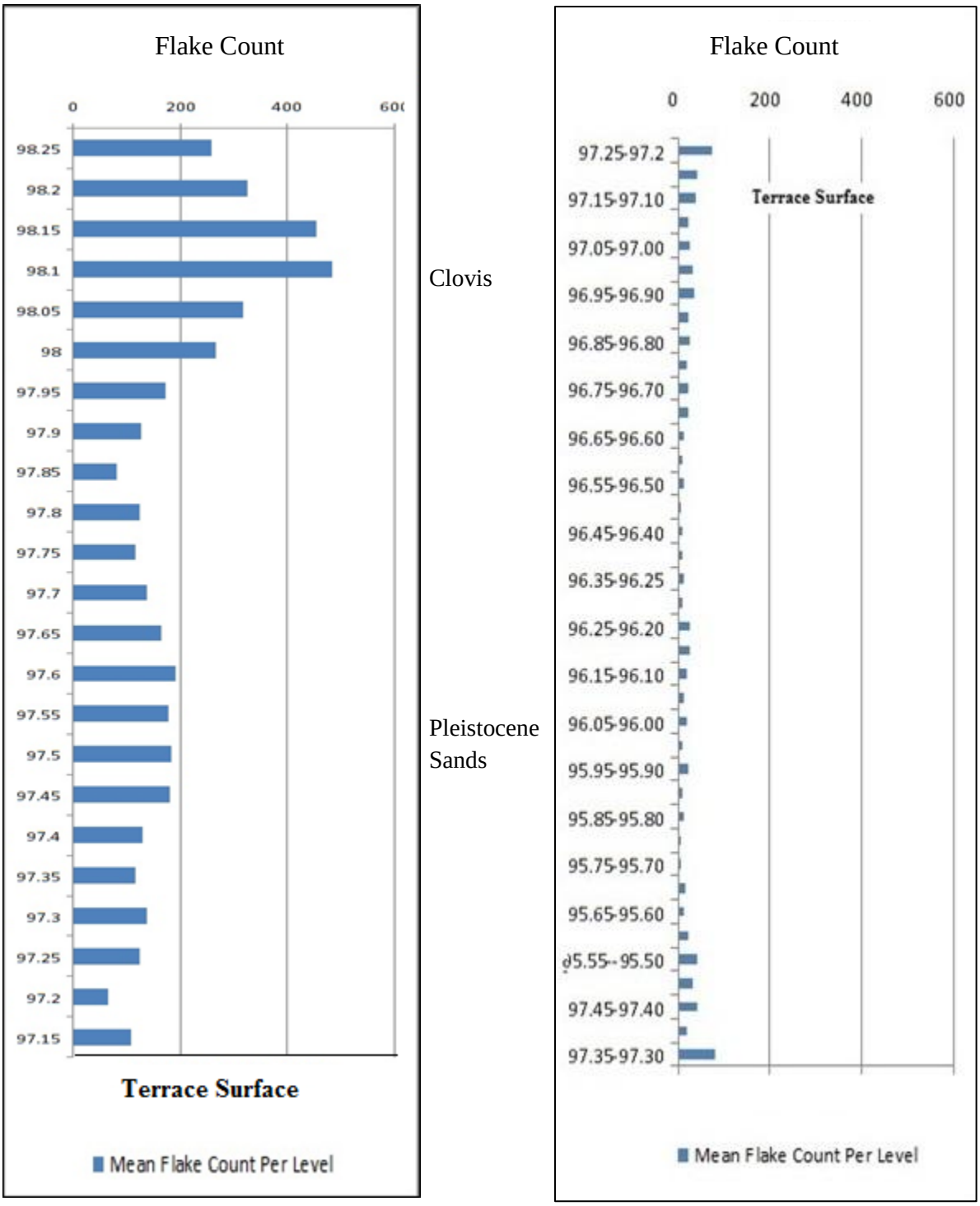
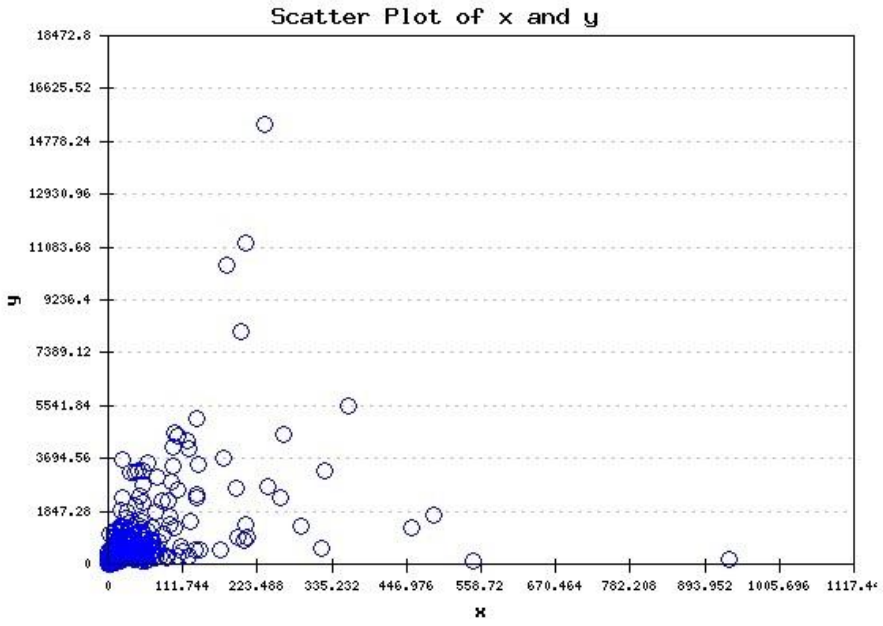
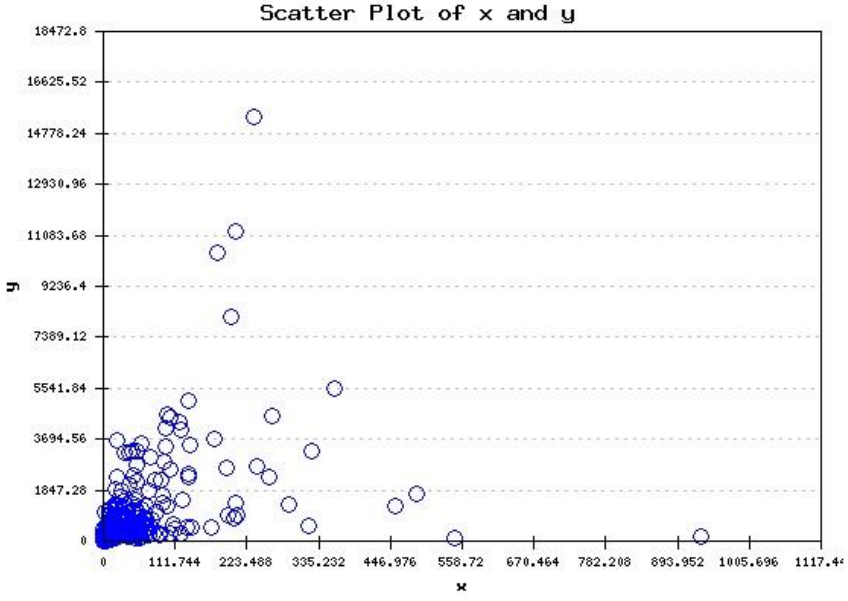


Figure 41–21
Average flake count by level for all flakes and debitage recovered from the Holocene and Pleistocene Sands.



r = .3573

A



r = .3535

B

Figure A41–22

Results of Pearsons Correlation Test. A; weak positive correlation for flake weights by quartz weights from Pleistocene Sands. B; weak positive correlation for flake weights by Cortical weights from Pleistocene Sands.

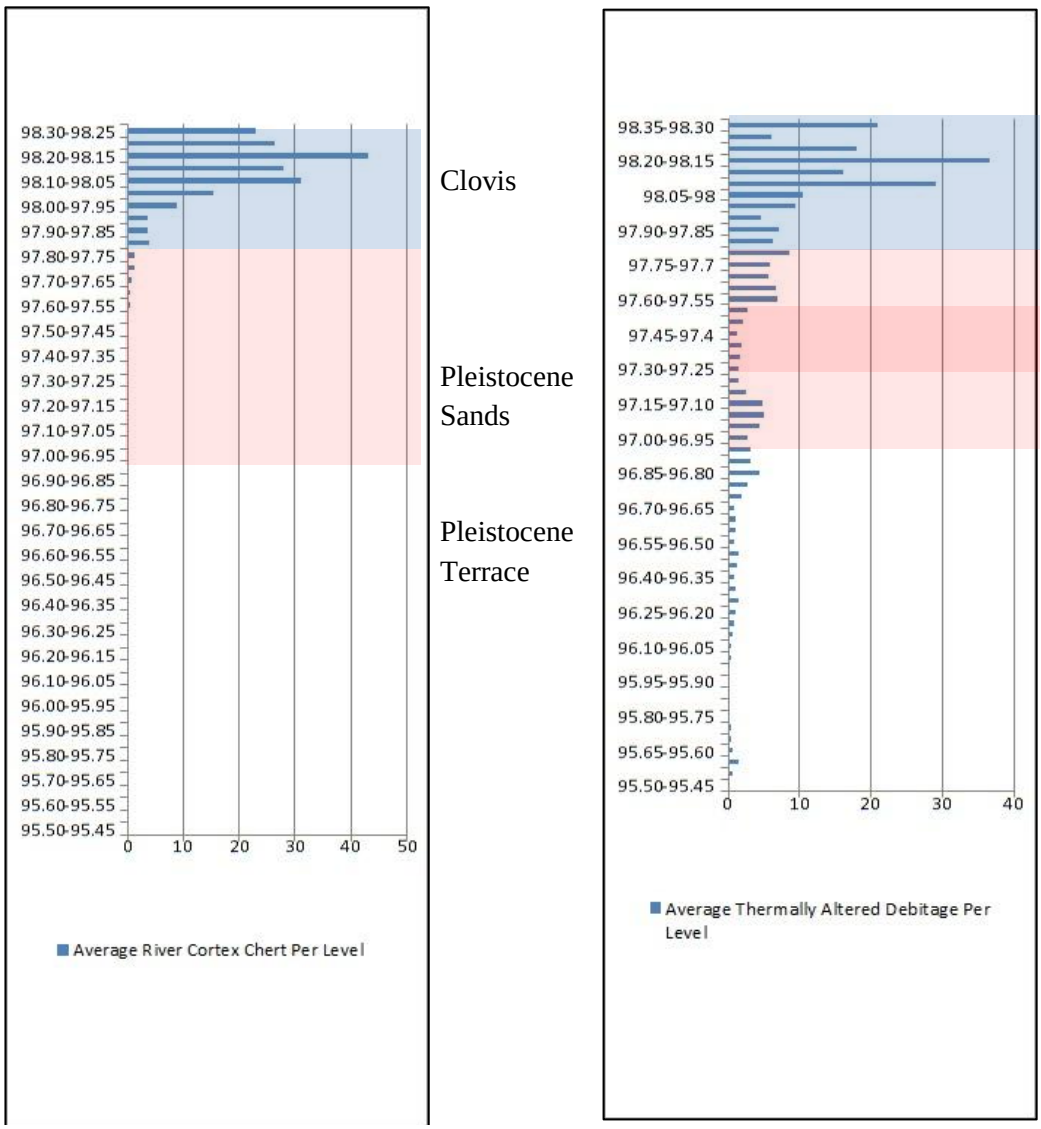
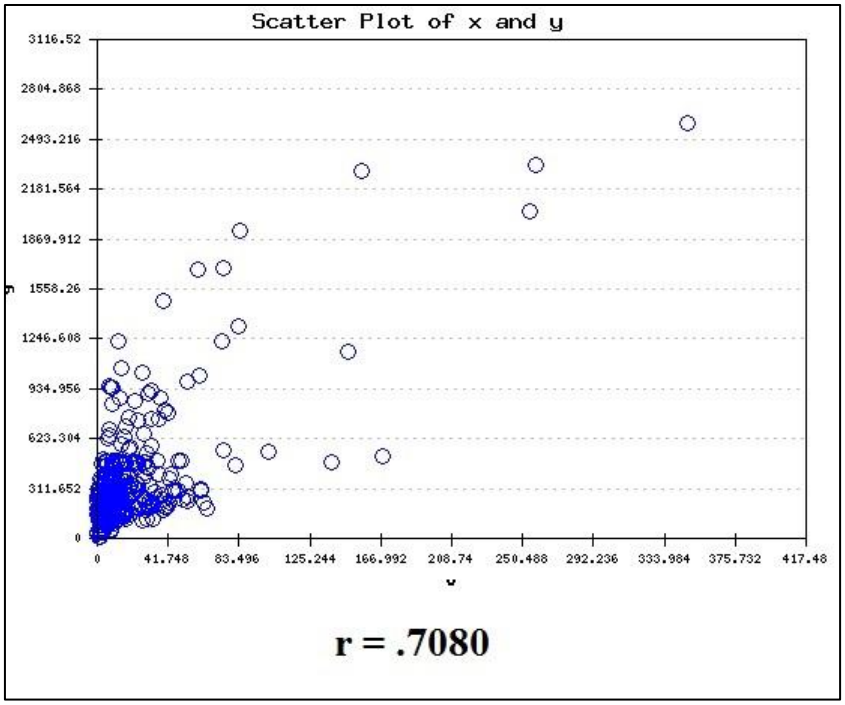
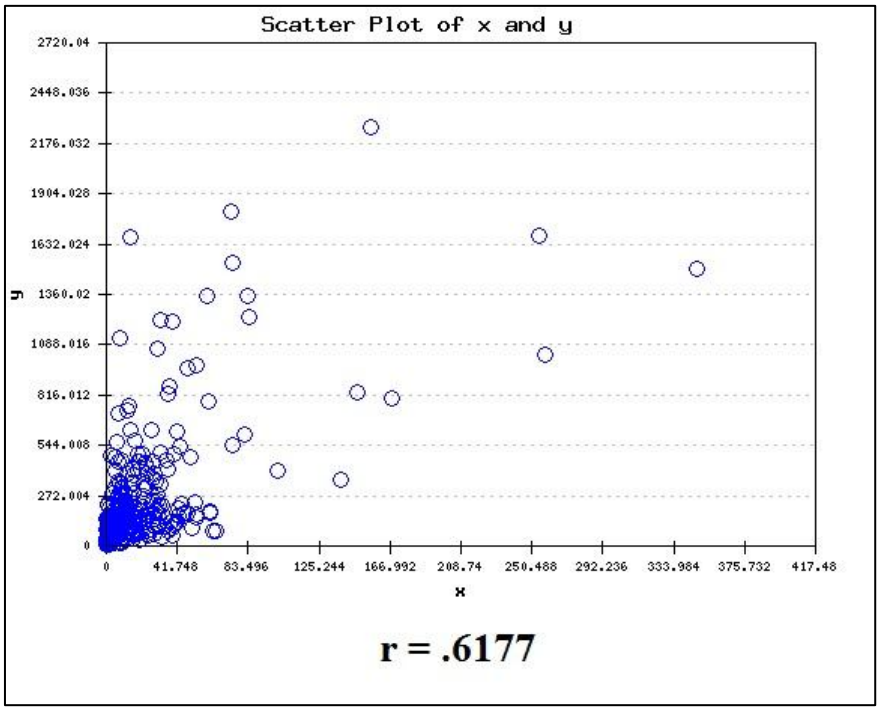


Figure A41–23

Average number of river stained and thermally altered flakes by level at the Topper Site (38AL23). Dark red shaded area at right indicates levels with highest average quartz content.



A



B

Figure A41–24

Results of Pearsons Correlation Test. A; positive correlation for flake weights by quartz weights from Pleistocene Terrace. B; positive correlation for flake weights by Cortical weights from Pleistocene Terrace.

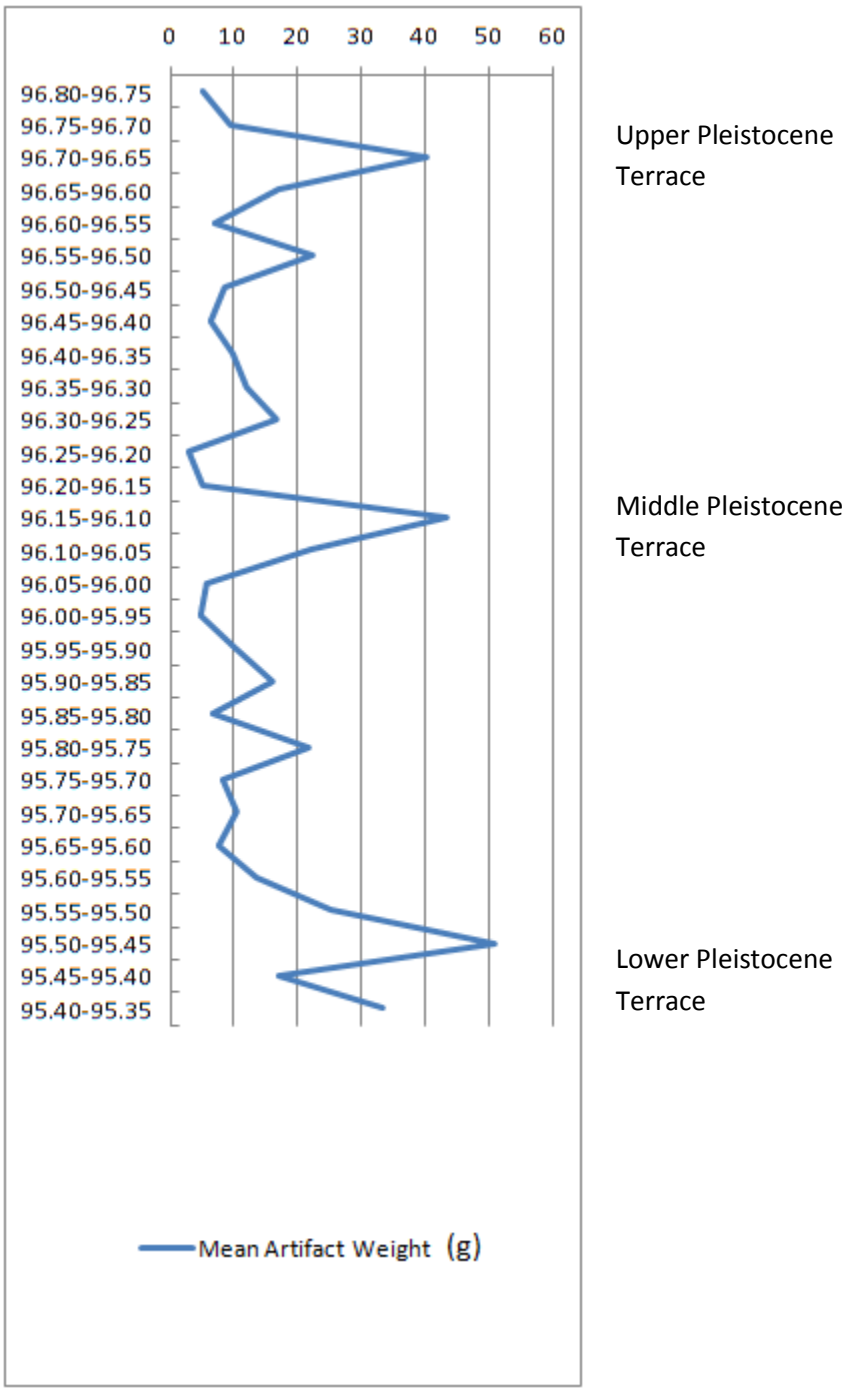


Figure A41–25A
Mean Artifact Weight per level for the Pleistocene Terrace at the Topper Site. Artifacts cluster by weight in three zones. Upper, Middle, and Lower section of the Pleistocene Terrace.

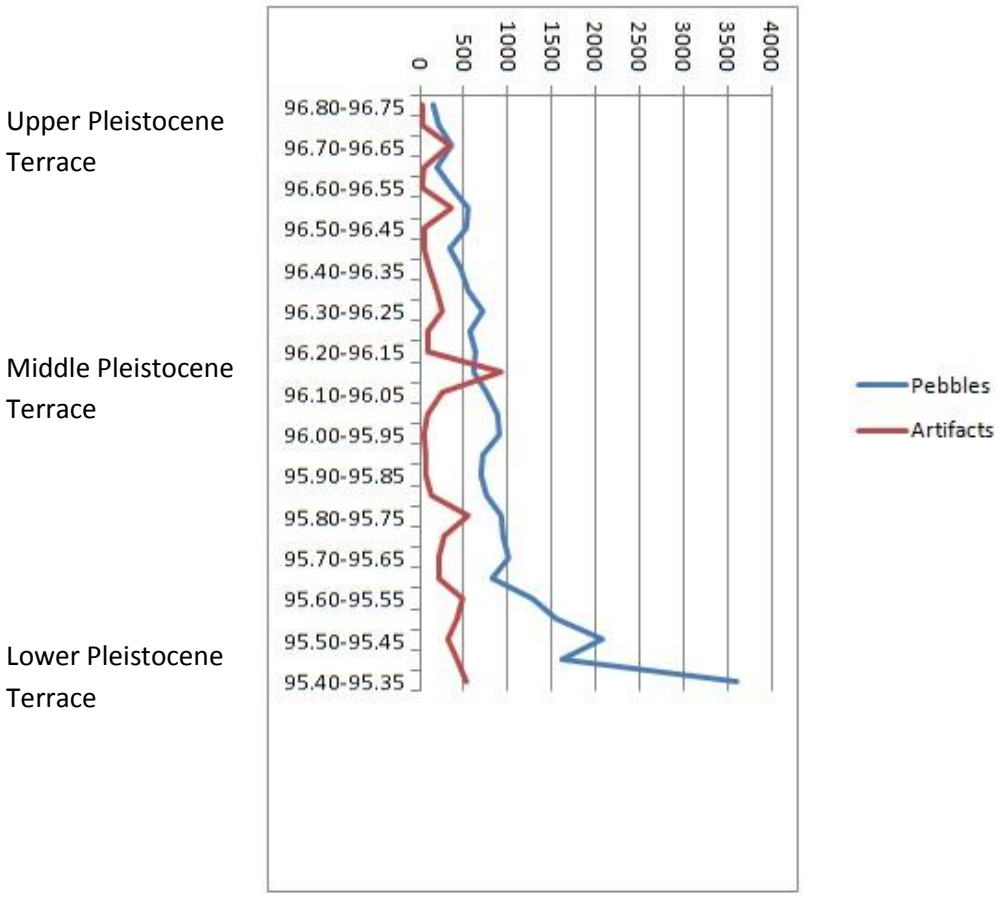


Figure A41−25B
Mean Artifact and Pebble Weight per level for the Pleistocene Terrace at the Topper Site. Artifacts cluster by weight in three zones. Upper, Middle, and Lower section of the Pleistocene Terrace.

Table A41−1

Weight in grams for cortical, quartz and flake materials from unit N242 E130 from 2000 4m x 8m block excavation.

Provenience		Sum	Cort	Quartz	Flake	Flakes	Cort %	Qrtz%	Flk%
N242 E130 LT 9	C	1315.5	235	149.3	931.2	945	17.86	11.34	70.78
N242 E130 LT 10	C	775.9	109	119.8	547.1	390	14.04	15.44	70.51
N242 E130 LT 11	PS	2716.5	537.2	1692.2	487.1	1531	19.77	62.29	17.93
N242 E130 LT 12	PS	3875.9	921.9	2715.6	238.4	906	23.78	70.06	6.15
N242 E130 LT 13	PS	6897.2	1034.1	5503.7	359.4	1090	14.99	79.79	5.21
N242 E130 LT 14	PS	3618.2	1031.8	2328.4	258	939	28.51	64.35	7.13
N242 E130 LT 15	PS	4717.6	2266.7	2295.3	155.6	794	48.04	48.65	3.29
N242 E130 LT 16	PS	4441.2	1496.2	2597.1	347.9	647	33.68	58.47	7.83
N242 E130 LT 17	PS	3973.6	1677.3	2041.2	255.1	1087	42.21	51.36	6.41
N242 E130 LT 19 SE	PS	1482.33	799.33	514.7	168.3	201	53.92	34.72	11.35
N242 E130 LT 20 SE	PS	2146.4	829.8	1168.6	148	430	38.66	54.44	6.89
N242 E130 LT 21 SE	PS	457.5	244.4	183.2	29.9	121	53.4	40	6.53
N242 E130 LT 19 NE	PS	465.7	216.6	216.4	32.7	99	46.51	46.46	7.02
N242 E130 LT 20 NE	PS	849.7	417	396.7	36	73	49.07	46.68	4.2
N242 E130 LT 21 NE	PS	1170.7	544.2	552.2	74.3	164	46.48	47.16	6.3
N242 E130 LT 22 NE	PS	576.5	229.9	302.1	44.5	99	39.87	52.4	7.71
N242 E130 LT 19 SW	PS	1439.3	615.2	782.8	41.3	201	42.74	54.38	2.86
N242 E130 LT 20 SW	PS	1141.1	605.8	453.6	81.7	122	53.08	39.75	7.15
N242 E130 LT 21 SW	PS	971.2	360.6	472.6	138	29	37.12	48.66	14.2
N242 E130 LT 22 SW	PS	289.4	78.3	187.4	23.7	104	27.05	64.75	8.18
N242 E130 LT 19NW	PS	774.9	378.9	379.7	16.3	133	48.84	48.89	2.1
N242 E130 LT 20NW	PS	891.7	412.5	463.1	16.1	69	46.25	51.93	1.8
N242 E130 LT 21NW	PS	980	540.4	396.7	42.9	145	55.14	40.47	4.37
N242 E130 LT 22NW	PS	1049.3	408.5	540	100.8	246	38.93	51.46	9.6

Table A41−2

Vertical distribution of bulk weight in grams for cortical, quartz and flake materials from unit N263 E145 from 2010-2011 4x4m block excavation.

Provenience		Sum	Cort	Quartz	Flake	Flakes	Cort %	Qrtz%	Flk%
97.90-97.80	PS	642.1	162.7	467.7	11.7	187	25.33	72.83	1.82
97.80-97.70	PS	996.6	179.6	806.6	10.4	181	18.02	80.93	1.04
97.70-97.60	PS	1513.5	318.9	1174.3	20.3	165	21.07	77.58	1.34
97.60-96.50	PS	1785.1	314.4	1440.8	29.9	289	17.61	80.71	1.67
97.50-97.40	PS	1097.6	264.8	822.6	10.2	148	24.12	74.94	0.929
97.40-97.30	PS	1275	246.6	1027	1.4	22	19.34	80.54	0.109
97.30-97.20	PS	1206.4	239.6	957.6	9.2	92	20.69	79.38	0.76
97.20-97.10	PS	1248.2	307.4	940.8	9.1	91	24.62	75.37	0.729
97.10-97.00	PS	1300	346.4	953.6	7.2	57	26.64	73.35	0.553
97.00-96.90	PS	723.1	230.9	483.7	8.5	84	31.91	66.89	1.17
96.90-96.80	PS	563.7	109.9	449.4	4.4	59	19.49	79.27	0.78

Table A41−3
Vertical distribution of bulk weight in grams for cortical, quartz and flakes from 1m x 1m unit N242 E138 NE from 5m x 9m block excavation.

Provenience		Sum	Cort	Quartz	Flake	Flakes	Cort %	Qrtz%	Flk%
97.90-97.85	CL	329.8	56.1	185	88.7	118	17.01	56.09	26.89
97.85-97.80	CL	320	56.7	229.4	33.9	165	17.71	71.68	10.59
97.80-97.75	PS	986.7	196.5	759	31.2	182	19.91	76.92	3.16
97.75-97.70	PS	1378.5	277.4	1063.9	37.2	170	20.12	77.17	2.69
97.70-97.65	PS	1163	293	841.4	28.6	122	25.19	72.34	2.45
97.65-97.60	PS	632.2	126.8	488.8	16.6	82	20.05	77.31	2.62
97.60-97.55	PS	4747.1	579.7	4047.8	119.6	175	12.21	85.26	2.51
97.55-97.50	PS	1957	316.4	1615	25.6	138	16.16	82.52	1.3
97.50-97.45	PS	1963.9	463.4	1408.4	92.1	184	23.59	7.71	4.68
97.45-97.40	PS	2132.6	762.1	1323.8	46.7	92	35.73	62.07	2.18
97.40-97.35	PS	377.3	71.8	300	5.5	42	19.02	79.51	1.45
97.25-97.20	PS	1997.6	981.7	978	37.9	80	49.14	48.95	1.89
97.04-96.95*	PT	177.2	56.7	112.6	7.9	33	31.99	63.54	4.45
96.95-96.90*	PT	154.9	54	95.7	5.2	38	34.86	61.78	3.35
96.90-96.85*	PT	135.5	49	83.5	3	21	36.16	61.62	2.21
96.85-96.80*	PT	261.1	80.9	174.4	5.8	45	30.98	66.79	2.22
96.80-96.75*	PT	200.8	68.8	127.1	4.9	24	34.26	63.29	2.44
96.75-96.70*	PT	224.1	82.6	138.4	3.1	23	36.85	62.03	0.38
96.70-96.65*	PT	211.7	58.2	152.1	1.4	10	27.49	71.84	0.661
96.65-96.60*	PT	320.1	154.3	162.3	3.5	16	48.2	50.7	1.09
96.60-96.55*	PT	489.7	202.4	270.3	17	30	41.33	55.19	0.714
96.55-96.50*	PT	231.9	113.4	117.1	1.4	16	48.9	50.49	0.603
96.50-96.45*	PT	252.9	86.2	159.1	7.6	56	34.08	62.91	3
96.45-96.40*	PT	305.1	93.6	208	3.5	15	30.67	68.17	1.14
96.40-96.35*	PT	267.3	88.9	161.6	16.8	24	33.25	60.45	6.28
96.35-96.30*	PT	545.6	175.7	353.1	16.8	84	32.2	64.71	3.07
96.30-96.25*	PT	489.7	217.2	263.7	8.8	39	44.35	53.84	1.79
96.25-96.20*	PT	472.3	158.6	260.2	53.5	40	33.58	55.09	11.3
96.20-96.15*	PT	344.3	190	125.1	29.2	27	55.18	36.33	8.48
96.15-96.10*	PT	384.2	190.7	181.4	12.1	73	49.63	47.21	3.14
96.10-96.05*	PT	210.4	57.1	137.3	16	23	27.13	65.25	7.6
96.05-96.00*	PT	295.7	80.9	210.5	4.3	24	27.35	71.18	1.45
96.00-95.95*	PT	326.4	79.8	182.1	64.5	74	24.44	55.79	19.76
95.95-95.90*	PT	302.2	98.4	201	2.8	35	32.56	66.51	0.92
95.90-95.85*	PT	340.9	137.8	200.1	3	11	40.42	58.69	0.88
95.85-95.80*	PT	417.5	145.8	270.7	1	10	34.92	64.83	0.239
95.80-95.75*	PT	318.2	87.5	230.7	0	0			
95.75-95.70*	PT	454.5	135.6	317.8	1.1	6			
95.70-95.65*	PT	777.7	282.1	492.5	3.1	22	36.27	66.32	0.398
95.65-95.60*	PT	1049	370	651.3	27.7	30	35.27	62.08	2.64
95.60-95.55*	PT	1289.8	569.8	702.8	17.2	41	44.17	54.48	1.33
95.55-95.50*	PT	1857	783.9	1013.3	59.8	70	42.21	54.56	3.22

Table A41–4
Vertical distribution of bulk weight in grams for cortical, quartz and flakes from 1m x 1m unit N242 E140 SE from 5m x 9m block excavation.

Provenience		Sum	Cort	Quartz	Flake	Flakes	Cort %	Qrtz%	Flk%
98.25-98.20	CL	579.2	24.4	36.9	517.9	405	4.2	6.37	89.41
98.20-98.10	CL	921.8	73.2	80	768.6	412	7.94	8.67	83.38
98.10-98.00	CL	521.3	96.1	102.9	322.3	288	18.43	19.73	61.82
98.00-97.95	CL	245.97	34.77	62.3	148.9	166	14.13	25.53	60.53
97.95-97.90	CL	31.6	12.8	12.7	6.1	39	40.5	40.18	19.3
97.90-97.85	CL	160.2	21.5	95.7	43	49	13.42	59.73	26.84
97.85-97.80	PS	260.6	46.7	202.6	11.3	72	17.92	77.74	4.33
97.80-97.75	PS	514.2	83.6	416	14.6	104	16.25	80.9	2.83
97.75-97.70	PS	829.9	154.2	647.9	27.8	158	18.58	78.06	3.34
97.70-97.65	PS	2520.9	252.2	2188.8	79.9	230	10	86.82	3.16
97.65-97.60	PS	17418	1790.8	15394	233.2	985	10.28	88.37	1.33
97.60-97.55	PS	3117.1	295.8	2629	192.3	507	9.48	84.34	6.16
97.55-97.50	PS	3822.7	707.6	3041.7	73.4	328	18.51	79.56	1.92
97.50-97.45	PS	5030.5	1801.7	3195.5	33.3	159	35.81	63.52	0.662
97.45-97.40	PS	3261.9	852.8	2361.3	47.8	243	26.14	72.39	1.46
97.40-97.35	PS	1359.3	486.9	818.9	53.5	129	35.81	60.24	3.93
97.35-97.30	PS	669.7	340	307	22.7	73	50.76	45.8	3.38
97.30-97.25	PS	992.7	133.1	539.9	319.7	36	13.4	54.38	32.2
97.16-97.10	PT	201.1	81.9	117.7	1.5	26	40.72	58.52	0.745
97.10-97.05	PT	465.9	208.6	248.8	8.5	48	44.77	53.4	1.8
97.05-97.00	PT	481.8	162.9	285.1	33.8	41	33.81	59.17	7
97.00-96.95	PT	530.7	227.8	301.8	1.1	17	42.92	56.86	0.207
96.95-96.90	PT	517.4	216.8	299.6	1	26	40.85	57.9	0.193
96.90-96.85	PT	475.8	200.9	273.3	1.6	18	42.22	57.44	0.336
96.85-96.80	PT	264.9	84.5	179.3	1.1	14	31.89	67.8	0.415
96.80-96.75	PT	203.6	37.2	150.4	16	38	18.27	73.87	7.85
96.75-96.70	PT	327.1	93	227.6	6.5	19	28.4	69.58	1.98
96.70-96.65	PT	549.9	175.5	360.3	14.1	50	31.91	65.52	2.56
96.65-96.60	PT	295.3	91.6	196.1	7.6	66	31.01	66.4	2.57
96.60-96.55	PT	329.4	127.6	193.2	8.6	46	38.73	58.65	2.6
96.55-96.50	PT	432.1	137.8	282.7	11.6	40	31.89	65.42	2.68
96.50-96.45	PT	225.4	81	141	3.4	13	35.93	62.55	1.5
96.45-96.40	PT	246.4	71.3	166.5	8.6	26	28.93	67.16	3.49
96.40-96.35	PT	892.7	390.9	473.5	28.3	56	43.78	53.04	3.17
96.35-96.30	PT	581.5	253.8	321.3	6.4	15	43.64	55.25	1.1
96.30-96.25	PT	760.2	198.5	532.9	28.8	37	26.11	70.09	3.78
96.25-96.20	PT	962.2	459.1	475.8	27.3	23	47.71	49.44	2.83
96.20-96.15	PT	827.6	350.5	447.7	29.4	19	42.35	54.09	3.55

Table A41–4 continued

Provenience		Sum	Cort	Quartz	Flake	Flakes	Cort %	Qrtz%	Flk%
96.15-96.10*	PT	742.4	265	467.6	9.8	18	35.69	62.98	1.32
96.10-96.05*	PT	988.6	463.9	489.4	35.3	14	46.9	49.5	3.57
96.05-96.00*	PT	763.5	267.7	473.4	22.4	18	35.06	62	2.93
96.00-95.95*	PT	869.1	394.6	450.9	23.6	78	45.4	51.88	2.71
95.95-95.90*	PT	677.8	266.5	402.5	8.8	74	39.31	59.38	1.29
95.90-95.85*	PT	722.2	246.3	464.8	11.1	8	34.1	64.35	1.53
95.85-95.80*	PT	901.4	409	487.4	5	56	45.37	54.07	0.554
95.80-95.75*	PT	1195.2	560	628.8	6.4	24	46.85	52.61	0.535
95.75-95.70*	PT	990.6	407.8	564	18.8	118	41.16	56.93	1.89
95.70-95.65*	PT	1365.2	717.2	640.8	7.2	19	52.16	43.73	0.527
95.65-95.60*	PT	1008.13	498	488.8	21.33	96	49.39	48.48	2.11
95.60-95.55*	PT	2006.4	977.1	975.9	53.4	197	48.69	48.63	2.66
95.55-95.50*	PT	2748.2	1666.3	1067.6	14.3	60	60.63	38.84	0.52
95.50-95.45*	PT	1607.8	826.2	745.4	36.2	17	51.38	46.36	2.25
95.45-95.40*	PT	1694.3	629.4	1038.2	26.7	48	37.14	61.27	1.57
95.40-95.35*	PT	3249.6	1241.4	1924.1	84.1	53	38.2	59.21	2.58

Table A41−5

Vertical distribution of bulk weight in grams for cortical, quartz and flakes from 1m x 1m unit N242 E140 SW from 5m x 9m block excavation.

Provenience		Sum	Cort	Quartz	Flake	Flakes	Cort %	Qrtz%	Flk%
98.25-98.20	CL	579.2	24.4	36.9	517.9	405	4.2	6.37	89.41
98.20-98.10	CL	921.8	73.2	80	768.6	412	7.94	8.67	83.38
98.10-98.00	CL	521.3	96.1	102.9	322.3	288	18.43	19.73	61.82
98.00-97.95	CL	245.97	34.77	62.3	148.9	166	14.13	25.53	60.53
97.95-97.90	CL	69.9	47.9	11.6	10.4	32	68.52	16.59	14.87
97.90-97.85	PS	94.5	10.2	81.4	2.9	41	10.79	86.13	3.06
97.85-97.80	PS	64.1	6.7	55.2	2.2	16	10.45	86.11	3.43
97.80-97.75	PS	232.3	36	190.2	6.1	40	15.49	81.87	2.62
97.75-97.70	PS	409.7	56	345.2	8.5	58	13.66	84.25	2.07
97.70-97.65	PS	1130.7	192.8	916.3	21.6	125	17.05	81.03	1.91
97.65-97.60	PS	5564.7	869.2	4596.4	99.1	380	15.61	82.59	1.78
97.60-97.55	PS	4095	447.1	3627.7	20.2	130	10.91	88.58	0.493
97.55-97.50	PS	2506.7	139.4	2346.5	20.8	111	5.56	93.6	0.829
97.50-97.45	PS	616.5	105.8	504.9	5.8	47	17.16	81.89	0.94
97.45-97.40	PS	1295.3	512.8	735	47.5	158	39.58	56.74	3.667
97.40-97.35	PS	1187.2	476.7	657.8	52.7	75	40.15	55.4	4.43
97.35-97.30	PS	1857.3	651.1	1186.4	19.8	95	35.05	63.87	1.06
97.30-97.25	PS	7575	3679	3722.1	173.9		48.56	49.13	2.29
97.15-97.10	PT	76.8	37.3	38	1.5	6	48.56	49.47	1.95
97.10-97.05	PT	156.3	36.2	118.7	1.3	17	23.16	75.94	0.831
97.05-97.00	PT	319.5	153.1	163.6	2.8	41	47.91	51.2	0.876
97.00-96.95	PT	299.4	117	179.5	2.9	39	39	59.95	0.968
96.95-96.90	PT	413.5	176.3	234.8	2.4	37	42.63	56.78	0.58
96.90-96.85	PT	555.6	195.2	352.8	7.6	51	35.13	63.49	1.36
96.85-96.80	PT	344	130.4	211.4	2.2	19	37.9	61.45	0.639
96.80-96.75	PT	271.8	118.1	152.4	1.3	20	43.45	56.07	0.478
96.75-96.70	PT	242.8	66.6	174.5	1.7	17	27.42	71.86	0.7
96.70-96.65	PT	323.6	129.9	189.7	4	17	40.14	56.82	1.23
96.65-96.60	PT	381.9	124.6	254.8	2.5	11	32.62	66.71	0.654
96.59-96.55	PT	268.89	102.29	164.3	2.3	12	38.04	61.1	0.855
96.55-96.50	PT	488.2	217.5	262.8	7.9	40	44.55	53.83	1.61
96.50-96.45	PT	655.7	244.5	384	27.2	39	37.29	58.56	4.14
96.45-96.40	PT	275.2	88.2	183.9	3.1	24	32.04	66.82	1.12
96.40-96.35	PT	152.1	51.5	90.9	9.7	33	33.85	59.76	6.37
96.35-96.30	PT	374.5	127.7	237.3	9.5	47	34.09	63.36	2.53
96.30-96.25	PT	315.9	100.8	193.2	21.9	71	31.9	61.15	6.93
96.25-96.20	PT	165.3	53.8	105.6	5.9	44	32.54	63.88	3.56
96.20-96.15	PT	323.8	131.7	179.8	12.3	50	40.67	55.52	3.79
96.15-96.10	PT	264.2	104.1	158.7	1.4	17	39.4	60.06	0.529
96.10-96.05	PT	605.9	321.4	276	8.5	4.8	53.04	45.55	1.4

Table A41−5 Continued

Provenience		Sum	Cort	Quartz	Flake	Flakes	Cort %	Qrtz%	Flk%
96.05-96.00*	PT	661.9	243.6	407.9	10.4	12	36.8	61.62	1.57
96.00-96.95*	PT	595.5	134.7	450.3	10.5	25	22.61	75.61	1.76
96.95-96.90*	PT	481.3	146.4	328.3	6.6	19	30.41	68.21	1.37
96.90-96.85*	PT	377.7	129.2	243	5.5	14	34.2	64.4	1.45
95.85-95.80*	PT	393.6	116.4	269.9	7.3	17	29.57	68.57	1.85
95.80-95.75*	PT	469.6	166	293.1	10.5	43	35.34	62.41	2.23
95.75-95.70*	PT	737.6	342.2	387.7	7.7	75	46.39	52.56	1.04
95.70-95.65*	PT	952.2	484.9	464.8	2.5	11	50.92	48.81	0.26
95.65-95.60*	PT	634.3	287.3	331.1	15.9	44	45.29	52.21	2.5
95.60-95.55*	PT	485.2	170.2	304.1	10.9	39	35.07	62.67	2.24
95.55-95.50*	PT	1009.6	476.5	483.9	49.2	73	47.19	47.92	4.87
95.50-95.45*	PT	2757.7	1349.5	1325.4	82.8	27	48.93	48.06	3
95.45-95.40*	PT	1228.3	626.3	588	14	20	50.98	47.87	1.1
95.40-95.35*	PT	3296.8	1533.2	1689.4	74.2	176	46.5	51.24	2.2

Table A41−6

Vertical distribution of bulk weight in grams for cortical, quartz and flakes from 1m x 1m unit N242 E142 SW from 5m x 9m block excavation.

Provenience		Sum	Cort	Quartz	Flake	Flakes	Cort %	Qrtz%	Flk%
98.00-97.95	CL	28.3	2.8	14.7	10.8	57	9.89	51.94	38.16
97.95-97.90	CL	41.2	10.1	27.8	3.3	39	24.51	67.47	8
97.90-97.85	CL	48.1	7.5	33.4	7.2	35	15.59	69.43	14.96
97.85-97.80	PS	64.2	14.7	48.8	0.7	16	22.89	76.01	1.09
97.80-97.75	PS	127.2	25.8	99.5	1.9	30	20.28	78.22	1.49
97.75-97.70	PS	551.2	110.8	427.6	12.8	62	20.1	77.57	2.32
97.70-97.65	PS	912.9	114.4	783.4	15.1	69	12.53	85.58	1.65
97.65-97.60	PS	1340.3	238.9	1053.1	48.3	100	17.82	78.57	3.6
97.60-97.55	PS	4934	722.7	4113.1	98.2	206	14.64	83.36	1.99
97.55-97.50	PS	3778.5	477.8	3255	45.7	93	12.64	86.14	1.2
97.50-97.45	PS	1649.7	334.6	1291.1	24	125	20.28	78.26	1.45
97.45-97.40	PS	3764.8	926.6	2785.2	53	171	24.61	73.98	1.4
97.40-97.35	PS	4845.2	1261.9	3524.1	59.2	197	26.04	72.73	1.22
97.35-97.30	PS	10391.1	2056.1	8137	198	996	19.78	78.3	1.9
97.15-97.10	PT	31.1	5.8	25.3	0	0	18.64	81.35	0
97.10-97.05	PT	197.2	50.6	145.2	1.4	17	25.65	73.63	0.709
97.05-97.00	PT	563.6	174.2	385	4.4	68	30.9	68.31	0.78
97.00-96.95	PT	325.3	78.4	234	12.9	57	24.1	71.93	3.96
96.95-96.90	PT	362.8	90	271.5	1.3	17	24.8	74.83	0.358
96.90-96.85	PT	579.4	163.6	373.1	42.7	90	28.23	64.39	7.36
96.85-96.80	PT	373.5	104.4	254.6	14.5	118	27.95	68.16	3.88
96.80-96.75	PT	379	111.2	240.3	27.5	86	29.34	63.4	7.25
96.75-96.70	PT	416.2	143.7	262.1	10.4	81	34.52	62.97	2.49
96.70-96.65	PT	638.4	155.5	466.5	16.4	78	24.35	73.07	2.56
96.65-96.60	PT	504	85.5	401.2	17.3	77	16.96	79.6	3.4
96.60-96.55	PT	394	61.3	309	23.7	95	15.55	78.42	6.01
96.55-96.50	PT	373	113.4	259	0.6	12	30.4	69.43	0.16
96.50-96.45	PT	621.4	240.5	374.1	6.8	21	38.7	60.2	1.09
96.45-96.40	PT	760.6	287.7	463.7	9.2	33	37.8	60.96	1.2
96.40-96.35	PT	779.6	313.6	460.5	5.5	75	40.61	59.068	0.002
96.35-96.30	PT	887.2	387.9	486.5	12.8	82	43.72	54.83	1.44
96.30-96.25	PT	1182	423.6	734.4	24	67	35.83	62.13	2
96.25-96.20	PT	1281.8	503	747.2	31.6	161	39.24	58.29	2.46
96.20-96.15	PT	1219.2	336.7	860.3	22.2	117	27.61	70.56	1.82
96.15-96.10	PT	1340.9	497.9	802.8	40.2	103	37.13	59.87	2.99
96.10-96.05	PT	946.2	447.8	475.6	22.8	32	47.32	50.26	2.4
96.05-96.00	PT	1050.3	459.4	571.7	19.2	102	43.73	54.43	1.82
96.00-95.95	PT	991.2	339.7	635.7	15.8	100	34.27	64.13	1.59
95.95-95.90	PT	777	284.2	482.5	10.3	53	36.5	62.09	1.3
95.90-95.85	PT	947.3	333.7	581.7	31.9	118	35.22	61.4	3.36

Table A41−6 Continued

Provenience		Sum	Cort	Quartz	Flake	Flakes	Cort %	Qrtz%	Flk%
95.85-95.80	PT	1307.9	463.2	836	8.7	53	35.41	63.91	0.665
95.80-95.75	PT	1143.2	456.2	679.6	7.4	70	39.9	59.44	0.647
95.75-95.70	PT	1775.2	862.1	875.9	37.2	94	48.56	49.34	2.09
95.70-95.65	PT	1498	964.2	486.4	47.4	65	64.36	32.46	3.16
95.65-95.60	PT	2175.8	1224.6	919.6	31.6	148	56.28	42.26	1.45
95.60-95.55	PT	3111	1807.7	1229.8	73.5	449	58.1	39.53	2.36
95.55-95.50	PT	2002.8	1064.6	908	30.2	185	53.1	45.33	1.5
95.50-95.45	PT	779.1	312.5	458.1	8.5	48	40.11	58.79	1.09

Table A41−7

Vertical distribution of bulk weight in grams for cortical, quartz and flakes from 1m x 1m unit N242 E142 NW from 5m x 9m block excavation.

Provenience		Sum	Cort	Quartz	Flake	Flakes	Cort %	Qrtz%	Flk%
98.00-97.95	Clovis	117.1	18.8	70.9	27.4	101	16.05	60.54	23.39
97.95-97.90	Clovis	201.6	33	132.3	36.3	117	16.36	65.62	18
97.90-97.85	Clovis	196.5	41.9	146.7	7.9	86	21.11	74.65	4.02
97.85-97.80	PS	408.4	91.7	293.5	23.2	120	22.45	71.86	5.68
97.80-97.75	PS	384.4	86.5	283.9	14	80	22.5	73.85	3.64
97.75-97.70	PS	461.4	88.1	354.1	19.2	81	19.09	76.74	4.16
97.70-97.65	PS	362.3	51.6	292	18.7	51	14.24	80.59	5.16
97.65-97.60	PS	408.4	96.9	300.6	10.9	50	23.72	73.6	2.66
97.60-97.55	PS	888.3	256.1	590.7	41.5	116	28.83	66.49	4.67
97.55-97.50	PS	1129.7	298.6	800.8	30.3	38			
97.50-97.45	PS	1013.8	548.6	449.1	16.1	59	54.11	44.29	1.58
97.45-97.40	PS	987.2	362.3	607	17.9	69	36.69	61.48	1.81
97.40-97.35	PS	1863.9	942.8	854.1	67	123	50.58	45.82	3.59
97.35-97.30	PS	1313.3	580.9	686	46.4	88	34.11	64.63	1.25
97.18-97.13	PT	12	5.3	5.9	0.8	2	44.16	49.16	6.6
97.13-97.08	PT	17.8	5	11	1.8	9	28.08	61.79	10.1
97.08-97.03	PT	49.5	6.4	41.2	1.9	17	12.92	83.23	3.83
97.03-96.98	PT	34.4	7.2	26.9	0.3	3	20.99	78.19	0.87
96.98-96.93	PT	78.4	19.3	50.7	8.4	28	24.6	64.6	10.71
96.93-96.88	PT	90.4	27.4	59.9	3.1	22	30.3	66.26	3.42
96.88-96.83	PT	88.6	22.7	57.6	8.3	31	25.62	65.01	9.36
96.83-96.78	PT	161	63.3	91.7	6	36	39.31	56.95	3.72
96.78-96.73	PT	211.5	52.8	125.6	33.1	26	24.96	59.38	15.65
96.73-96.68	PT	244.3	61.3	166.9	16.1	31	25.09	68.31	6.59
96.68-96.63	PT	287	87	196.8	3.2	20	30.31	68.57	1.11
96.63-96.58	PT	264.5	67	179	18.5	6	25.33	67.67	6.99
96.58-96.53	PT	391.7	100.6	283.3	7.8	92	25.68	72.32	1.99
96.53-96.48	PT	303.1	84	211.6	7.5	67	27.71	69.81	2.47
96.48-96.43	PT	208.2	36.1	152.7	19.4	24	17.3	73.33	9.31
96.43-96.38	PT	205.8	52.4	148.8	4.6	65	25.46	72.3	2.23
96.38-96.33	PT	340.2	148.7	178.2	13.3	39	43.7	52.3	3.9
96.33-96.28	PT	624	294.8	321.3	7.9	61	47.24	51.49	1.26
96.28-96.23	PT	552.2	183.7	307.2	61.3	132	33.26	55.63	11.1
96.23-96.18	PT	518	228.9	262.3	26.8	102	44.18	50.63	5.17
96.18-96.13	PT	581.6	222.6	327.7	31.3	96	38.27	56.34	5.38
96.13-96.08	PT	540.1	262.3	263.5	14.3	81	48.56	48.78	2.64
96.08-96.03	PT	744.61	277.4	437.11	30.1	164	37.25	58.7	4.04
96.03-96.00	PT	451	175.8	265.9	9.3	18	38.98	58.95	2.06
95.00-95.95	PT	552.4	193.8	339.1	19.5	94	35.08	61.38	3.53
95.95-95.90	PT	722	237.7	469.8	14.5	25	32.92	65.06	2

Table A41−7 Continued

Provenience		Sum	Cort	Quartz	Flake	Flakes	Cort %	Qrtz%	Flk%
95.90-95.85	PT	802.2	311	469.4	21.8	19	38.76	58.51	2.71
95.85-95.80	PT	963.4	480.5	477.2	5.7	19	49.8	49.01	0.59
95.80-95.75	PT								
95.75-95.70	PT	1267.3	497.1	752	18.2	56	39.22	59.33	1.43
95.70-95.65	PT	1645.7	758.2	874.4	13.1	74	46.07	53.13	0.796
95.65-95.60	PT	2082	1127.2	947	7.8	13	54.14	45.4	0.374
95.60-95.55	PT	3090.6	1351.3	1680	59.3	237	43.72	54.35	1.91
95.55-95.50	PT	1980.3	736.3	1231.4	12.6	111	37.18	62.18	0.636
95.50-95.45	PT	2736	1216	1481.5	38.5	184	44.44	54.14	1.407

Table A41−8

Vertical distribution of bulk weight in grams for cortical, quartz and flakes from 1m x 1m unit N244 E138 SE from 5m x 9m block excavation.

Provenience		Sum	Cort	Quartz	Flake	Flakes	Cort %	Qrtz%	Flk%
97.12-97.07	PT	64	29.4	34.2	0.4	7	45.93	53.43	0.006
97.07-97.00	PT	396.2	123.9	265.8	6.5	40	31.27	67.08	1.64
97.00-96.95	PT	270.9	84.2	182.9	3.8	37	31.08	67.51	1.4
96.95-96.90	PT	285.9	108.2	176.2	1.5	17	37.84	61.62	0.524
96.90-96.85	PT	293.1	102.3	186.5	4.3	40	34.9	63.63	1.46
96.85-96.80	PT	304.6	121	178.7	4.9	48	39.72	58.66	1.6
96.80-96.75	PT	199.9	86.7	109	4.2	25	43.37	54.52	2.1
97.75-97.70	PT	214.3	92.5	119.4	2.4	27	43.16	55.71	1.11
97.70-97.65	PT	372.5	83.7	258	30.8	61	22.46	69.26	8.26
96.65-96.60	PT	180.2	41.5	126.8	11.9	48	23	70.36	6.6
96.60-96.55	PT	225.2	87.5	111.6	26.1	62	38.85	49.55	11.58
96.60-96.55	PT	198.2	67.8	123.5	6.9	26	34.2	62.31	3.48
96.55-96.50	PT	359	126.2	222.5	10.3	35	35.15	61.97	2.86
96.50-96.45	PT	479.9	221.4	244.2	14.3	35	46.13	50.88	2.97
96.45-96.40	PT	785.3	456.2	310.9	18.2	45	58.09	39.58	2.31
96.40-96.35	PT	340	205.4	121.6	13	49	60.41	35.76	3.82
96.35-96.30	PT	262.2	141.9	114.2	6.1	37	54.11	43.55	2.32
96.30-96.25	PT	161	48.1	112.1	0.8	15	29.87	69.62	0.496
96.25-96.20	PT	123	39.9	80.2	2.9	20	32.43	65.2	2.35
96.20-96.15	PT	283.7	79.4	157.7	1.6	33	27.98	55.58	0.563
96.15-96.10	PT	51.5	13.9	35.1	2.5	12	26.99	68.15	4.85
96.10-96.05	PT	161.8	41.7	117.2	2.9	8	25.77	72.43	1.79
96.05-96.00	PT	176.2	28.4	147.5	0.3	2	16.11	83.71	0.17
96.00-95.95	PT	334.8	131.8	198.4	4.6	3	39.36	59.25	1.37
95.95-95.90	PT	193.6	70.1	117.9	5.6	13	36.2	60.89	2.89
95.90-95.85	PT	161.8	54.6	105.1	2.1	13	33.74	64.95	1.29
95.85-95.80	PT	437.7	172.2	261.9	3.6	14	39.34	59.83	0.822
95.80-95.75	PT	111.6	23.8	85.4	2.4	9	21.32	76.52	2.15
95.75-95.70	PT	129.6	14.8	105.7	9.1	21	11.41	81.55	7.02
95.70-95.65	PT	127.1	18.2	107.4	1.5	6	14.31	84.5	1.18
95.65-95.60	PT	419	147.1	243.2	28.7	24	35.1	58.04	6.84

Table A41−9
Vertical distribution of bulk weight in grams for cortical, quartz and flakes from 1m x 1m unit N246 E138 SE from 5m x 9m block excavation.

Provenience		Sum	Cort	Quartz	Flake	Flakes	Cort %	Qrtz%	Flk%
97.92-97.80	PS	150.4	19.5	127.7	3.2	3	12.96	84.9	2.12
97.80-97.75	PS	208.9	49.2	140.6	19.1	50	23.55	67.3	9.14
97.75-97.70	PS	434.3	91.5	314.4	28.4	80	21.06	72.39	6.53
97.70-97.65	PS	387.6	97.9	258.2	31.5	116	25.25	66.61	8.12
97.65-97.60	PS	666.4	139.6	474.3	52.5	64	20.94	71.17	7.87
97.60-97.55	PS	637.6	148.9	451	37.7	109	23.35	70.73	5.91
97.55-97.50	PS	2121.2	515.3	1317.6	288.3	325	24.3	62.11	13.59
97.50-97.45	PS	615.1	164.1	445.1	5.9	66	26.67	72.36	0.95
97.45-97.40	PS	810.5	166.9	476	167.6	153	20.59	58.72	20.67
97.40-97.35	PS	684	162.9	468.8	52.3	72	23.81	68.53	7.64
97.35-97.30	PS	1003.2	401.1	471.1	131	90	39.98	46.95	13.05
97.30-97.25	PS	560.3	163.6	364.9	31.8	73	29.19	65.12	5.67
97.25-97.20	PS	534.4	153.3	302.9	78.2	153	28.68	56.68	14.63
97.20-97.15	PS	269.9	103.6	166.3	15	28	38.28	61.16	5.55
97.15-97.10	PS	70.5	12.9	55.4	2.2	10	18.29	78.58	3.12
97.30-97.25	PT	115.8	29.4	80.5	5.9	8	25.38	69.516	5.094
97.25-97.20	PT	62.3	14.6	39.6	8.1	10	23.43	63.56	13.00
97.20-97.15	PT	80.5	19.2	57.3	4	9	23.85	71.18	4.968
97.15-97.10	PT	457.5	124.7	322.9	9.9	15	27.25	70.579	2.16
97.10-97.05	PT	378.5	105.7	261.7	11.1	20	27.92	69.14	2.932
97.05-97.00	PT	275.9	79.6	193.3	3	18	28.85	70.061	1.087
97.00-96.95	PT	663.5	212.5	441.1	9.9	43	32.02	66.48	1.492
96.95-96.90	PT	388.9	93.8	281.2	13.9	58	24.1	72.3	3.5
96.90-96.85	PT	554.7	146.9	396.9	10.9	62	26.48	71.55	1.96
96.85-96.80	PT	493.6	147.5	332.8	13.3	81	29.88	67.4	2.69

Table A41−10
Vertical distribution of bulk weight in grams for cortical, quartz and flakes from 1m x 1m unit N246 E138 SW from 5m x 9m block excavation.

Provenience		Sum	Cort	Quartz	Flake	Flakes	Cort %	Qrtz%	Flk%
97.92-97.80	PS	127.8	15.6	105.2	7	21	12.2	82.55	5.47
97.80-97.75	PS	256.9	39.5	204	13.4	45	15.37	79.408	5.21
97.75-97.70	PS	571.3	87.7	451.8	31.8	93	15.35	79.08	5.56
97.70-97.65	PS	1058	202.7	780.1	75.2	184	20.62	79.37	7.65
97.65-97.60	PS	3273.6	798.7	2342	132.9	171	24.39	71.54	4.05
97.60-97.55	PS	5695.7	906.9	4525.3	263.5	653	15.92	79.45	4.62
97.55-97.50	PS	2892.3	572	2230.9	89.4	212	24.95	77.13	3.09
97.50-97.45	PS	1665.6	309.9	1256.6	99.1	188	18.6	75.4	5.95
97.45-97.40	PS	719.9	160.7	486.7	72.5	126	22.32	67.6	10.07
97.40-97.35	PS	710.7	230.2	461.2	19.3	26	32.39	64.89	2.71
97.35-97.30	PS	720.3	233.5	465.1	21.7	60	31.95	64.57	3.01
97.30-97.25	PS	625.9	179.1	403.9	39.8	87	28.6	64.53	6.35
97.25-97.20	PS	330.7	96.6	221	13.1	42	29.21	66.82	3.96
97.20-97.15	PS	273	68.8	197.7	6.5	32	25.2	72.41	2.38
97.15-97.10	PS	214.4	79	118.5	16.9	25	36.84	55.27	7.88
97.10-97.05	PS	119.8	49.6	67.8	2.4	14	41.4	56.5	2
97.276-97.20	PT	678.4	186.9	471.1	20.4	106	27.55	69.4	3
97.20-97.15	PT	678.4	186.9	471.1	20.4	106	27.55	69.4	3
97.15-97.10	PT	678.4	186.9	471.1	20.4	106	27.55	69.4	3
97.10-97.05	PT	678.4	186.9	471.1	20.4	106	27.55	69.4	3
97.05-97.00	PT	678.4	186.9	471.1	20.4	106	27.55	69.4	3
97.00-96.95	PT	312.6	82.3	225.5	4.8	36	26.3	72.1	1.5
96.95-96.90	PT	397.7	84.6	306	7.1	40	21.2	76.9	1.7
96.90-96.85	PT	241.5	46.9	189.1	5.5	16	19.4	78.3	2.2
96.85-96.80	PT	284.5	62.5	217.3	4.7	51	21.96	76.3	1.65
96.80-96.75	PT	298.3	100.9	188.2	9.2	49	33.8	63.09	3.08
96.75-96.70	PT	250.1	68.4	172.5	9.2	74	27.3	68.97	3.67

Table A41−11
Vertical distribution of bulk weight in grams for cortical, quartz and flakes from 1m x 1m unit N246 E140 NE from 5m x 9m block excavation.

Provenience		Sum	Cort	Quartz	Flake	Flakes	Cort %	Qrtz%	Flk%
98.30-98.25	Archaic	399.5	139.9	50.3	209.3	259	35.01	12.59	52.39
98.25-98.20	Archaic	216.7	17.4	69.1	130.2	245	8.02	31.88	60.08
98.20-98.15	Clovis	1401.7	841	45.8	514.9	454	59.99	3.26	36.73
98.15-98.10	Clovis	891.9	424.1	189.4	278.4	557	47.55	21.23	31.21
98.10-98.05	Clovis	449.4	98.8	179.6	171	317	21.98	39.96	38.05
98.05-98.00	Clovis	425.2	141.9	221.6	61.7	245	33.37	52.11	14.51
98.00-97.95	Clovis	672	257.8	367.3	46.9	215	38.36	54.65	6.97
97.95-97.90	Clovis	995.3	298.3	673.6	23.4	207	29.97	67.67	2.35
97.90-97.85	PS	243.6	85.1	126.3	32.2	45	34.93	51.84	13.21
97.85-97.80	PS	607.6	283	314.8	9.8	110	46.57	51.81	1.61
97.75-97.70	PS	909	398.1	494.7	16.2	190	43.79	54.42	1.78
97.70-97.65	PS	1159.8	456.1	684	19.7	141	39.32	58.97	1.69
97.65-97.60	PS	834.6	311.2	504.2	19.2		37.28	60.41	2.3
97.60-97.55	PS	785.6	225.5	533.3	26.8	98	28.7	67.88	3.41
97.55-97.50	PS	1059	388.5	653	17.5	91	36.68	61.66	1.65
97.55-97.50	PS	1678.4	551.8	1043.2	83.4	155	32.87	62.15	4.96
97.49-97.40	PS	898.6	166	672.8	59.8	95	18.47	74.87	6.65
97.40-97.35	PS	601.3	129.3	428.5	43.5	48	21.5	71.26	7.23
97.35-97.30	PS	168.8	46.3	122.5	0	0	27.42	72.57	0
97.30-97.25	PS	88.8	26.9	57.7	4.2	12	30.29	64.97	4.72
97.37-97.30	PT	391.7	108.7	237.9	45.1	46	27.75	60.73	11.51
97.30-97.25	PT	366.8	90.2	257.3	19.3	49	24.59	70.14	5.26
97.25-97.20	PT	362.4	125.9	212.9	23.6	70	34.7	58.74	6.51
97.20-97.15	PT	352.2	113.4	199	39.8	63	32.19	56.5	11.3
97.15-97.10	PT	390.5	106	250.1	34.4	75	27.14	64.04	8.8
97.10-97.05	PT	358.9	125.4	193	40.5	90	34.94	53.775	11.28
97.05-97.00	PT	376.4	99.3	238.6	38.5	60	26.38	63.39	10.22
97.00-96.95	PT	303.5	128.4	167.7	7.4	20	42.3	55.52	2.43
96.95-96.90	PT	466.3	130	332.8	3.5	18	27.87	71.37	0.749
96.90-96.85	PT	473.4	184.7	274.8	13.9	53	39.01	58.04	2.93
96.85-96.80	PT	447.1	130.6	307	9.5	40	29.21	68.66	2.1
96.80-96.75	PT	155.2	31.1	120.7	3.4	23	20.03	77.77	2.1
96.75-96.70	PT	423.7	129.7	293	2	22	30.61	69.15	0.04
96.70-96.65	PT	556.4	209.9	325.5	21	57	37.72	58.5	3.77
96.65-96.60	PT	505.9	156	331.2	18.7	80	30.83	65.467	3.69
96.60-96.55	PT	285.9	103.2	179.1	3.6	18	36.09	62.6	1.2

Table A41−12
Vertical distribution of bulk weight in grams for cortical, quartz and flakes from 1m x 1m unit N246 E140 NW from 5m x 9m block excavation.

Provenience		Sum	Cort	Quartz	Flake	Flakes	Cort %	Qrtz%	Flk%
98.30-98.25	Archaic	399.5	139.9	50.3	209.3	259	35.01	12.59	52.39
98.25-98.20	Archaic	216.7	17.4	69.1	130.2	245	8.02	31.88	60.08
98.20-98.15	Clovis	1401.7	841	45.8	514.9	454	59.99	3.26	36.73
98.15-98.10	Clovis	891.9	424.1	189.4	278.4	557	47.55	21.23	31.21
98.10-98.05	Clovis	449.4	98.8	179.6	171	317	21.98	39.96	38.05
98.05-98.00	Clovis	425.2	141.9	221.6	61.7	245	33.37	52.11	14.51
98.00-97.95	Clovis	672	257.8	367.3	46.9	215	38.36	54.65	6.97
97.95-97.90	Clovis	995.3	298.3	673.6	23.4	207	29.97	67.67	2.35
97.90-97.85	PS	377.4	75.5	280.7	21.2	46	20	74.37	5.61
97.85-97.80	PS	2191.2	1523.4	600.7	67.1	148	69.52	27.41	3.06
97.80-97.75	PS	2214.6	334.3	1851.6	28.7	114	15.09	83.6	1.29
97.75-97.70	PS	1309.7	160.8	1097.3	51.6	178	12.27	83.78	3.93
97.70-97.65	PS	479.6	107.3	369.3	3	64	22.37	77	0.625
97.65-97.60	PS	506.4	144.6	359	2.8	54	28.55	70.89	0.552
97.60-97.55	PS	612.1	185.9	392.5	33.7	102	30.37	64.12	5.5
97.55-97.50	PS	920	337.2	530.2	52.6	189	36.65	57.63	5.71
97.55-97.50	PS	413	72.2	313.7	27.1	55	17.48	75.95	6.56
97.53-97.40	PS	1052.1	350.8	592	109.3	117	33.34	56.26	10.38
97.40-97.35	PS	285	81.7	195.2	8.1	19	28.66	68.49	2.84
97.40-97.35	PS	381.7	68.9	255.3	57.5	44	18.05	66.88	15.06
97.37-97.25	PT	167	49.6	116.6	0.8	11	29.7	69.82	0.47
97.25-97.20	PT	266.4	114.5	150.8	1.1	16	42.98	56.6	0.412
97.20-97.15	PT	228.3	40.1	188.1	0.1	2	17.56	82.39	0.000
97.15-97.10	PT	348.3	108.1	234.2	6	18	31.03	67.24	1.72
97.10-97.05	PT	362.1	115.9	238.2	8	49	32	65.78	2.2
97.05-97.00	PT	285.7	84.2	200.4	1.1	13	29.47	70.14	0.03
97.00-96.95	PT	315.2	109.4	203.3	2.5	30	34.7	64.498	0.07
96.95-96.90	PT	274.5	102	170.7	1.8	23	37.15	62.18	0.06
96.90-96.85	PT	371.4	139.5	226.1	5.8	18	37.56	60.877	1.56

Table A41−13
Vertical distribution of bulk weight in grams for cortical, quartz and flakes from 1m x 1m unit N246 E140 SE from 5m x 9m block excavation.

Provenience		Sum	Cort	Quartz	Flake	Flakes	Cort %	Qrtz%	Flk%
98.30-98.25	Archaic	399.5	139.9	50.3	209.3	259	35.01	12.59	52.39
98.25-98.20	Archaic	216.7	17.4	69.1	130.2	245	8.02	31.88	60.08
98.20-98.15	Clovis	1401.7	841	45.8	514.9	454	59.99	3.26	36.73
98.15-98.10	Clovis	891.9	424.1	189.4	278.4	557	47.55	21.23	31.21
98.10-98.05	Clovis	449.4	98.8	179.6	171	317	21.98	39.96	38.05
98.05-98.00	Clovis	425.2	141.9	221.6	61.7	245	33.37	52.11	14.51
98.00-97.95	Clovis	672	257.8	367.3	46.9	215	38.36	54.65	6.97
97.95-97.90	Clovis	995.3	298.3	673.6	23.4	207	29.97	67.67	2.35
97.90-97.85	PS	196.6	56.6	89.7	50.3	146	28.78	45.62	25.58
97.85-97.80	PS	283.2	115.3	119.2	48.7	186	40.71	42.09	17.19
97.80-97.75	PS	294.3	120.7	117.7	55.9	112	41.01	39.99	18.99
97.75-97.70	PS	2068.4	1209.1	821.2	38.1	228	58.45	39.7	1.84
97.70-97.65	PS	474.4	168.7	292.5	13.2	101	35.56	61.65	2.78
97.65-97.60	PS	839.7	315.1	499.7	24.9	153	37.52	59.5	2.96
97.60-97.55	PS	911.3	271.8	612.8	26.7	140	29.82	67.24	2.92
97.55-97.50	PS	1060.1	387.7	620.7	51.7	178	36.57	58.55	4.87
97.55-97.50	PS	519.42	113.22	393.8	12.4	86	21.79	75.81	23.87
97.47-97.40	PS	447.6	167.7	249	30.9	106	37.46	55.63	6.9
97.40-97.35	PS	426.6	81.9	312.3	32.4	68	19.19	73.2	7.59
97.35-97.30	PS	265.5	80.7	172.5	12.3	50	30.39	64.94	4.63
97.37-97.30	PT	407.6	117.6	260.7	29.3	61	28.85	63.95	7.1
97.30-97.25	PT	280	78.1	179.5	22.4	58	27.89	64.1	8
97.25-97.20	PT	547.4	160.2	266	121.2	124	29.2	48.5	22.1
97.20-97.15	PT	538.6	182	295.9	60.7	64	33.79	54.93	11.2
97.15-97.10	PT	634.3	232.4	349.9	52	91	36.6	55.1	8.1
97.10-97.05	PT	436.5	127.6	270.8	38.1	64	29.23	62.03	8.72
97.05-97.00	PT	402.1	142.8	259.3	0	87	35.55	64.48	0
97.00-96.95	PT	521.8	176.4	299.5	45.9	85	33.8	57.39	8.79
96.95-96.90	PT	469.6	203	222.8	42.8	76	43.22	47.44	9.11
96.90-96.85	PT	523	176.2	298.9	47.9	69	33.6	57.25	9.1
96.85-96.80	PT	211	65.9	130	15.1	22	31.23	61.61	7.156
96.80-96.75	PT	501	156.1	344.9	23.3	45	31.15	68.84	4.65
96.75-96.70	PT	208.4	51.8	153.5	3.1	16	24.8	73.65	1.4
96.70-96.65	PT	823.65	325.95	473.8	23.9	111	39.57	57.52	2.901
96.65-96.60	PT	515.1	155.5	328.5	31.1	84	30.188	63.7740	6.037
96.60-96.55	PT	457.9	134.4	310.5	13	66	29.351	67.089	2.839

Table A41−14
Vertical distribution of bulk weight in grams for cortical, quartz and flakes from 1m x 1m unit N246 E140 SW from 5m x 9m block excavation.

Provenience		Sum	Cort	Quartz	Flake	Flakes	Cort %	Qrtz%	Flk%
98.30-98.25	Archaic	399.5	139.9	50.3	209.3	259	35.01	12.59	52.39
98.25-98.20	Archaic	216.7	17.4	69.1	130.2	245	8.02	31.88	60.08
98.20-98.15	Clovis	1401.7	841	45.8	514.9	454	59.99	3.26	36.73
98.15-98.10	Clovis	891.9	424.1	189.4	278.4	557	47.55	21.23	31.21
98.10-98.05	Clovis	449.4	98.8	179.6	171	317	21.98	39.96	38.05
98.05-98.00	Clovis	425.2	141.9	221.6	61.7	245	33.37	52.11	14.51
98.00-97.95	Clovis	672	257.8	367.3	46.9	215	38.36	54.65	6.97
97.95-97.90	Clovis	995.3	298.3	673.6	23.4	207	29.97	67.67	2.35
97.90-97.85	PS	201.8	67.8	132.9	1.1	8	33.59	65.85	0.545
97.85-97.80	PS	2761.5	570.3	2139.1	52.1	170	46.57	77.46	1.88
97.80-97.75	PS	1251.4	224	1016.2	11.2	64	17.89	81.2	0.894
97.75-97.70	PS	1064.4	230	808.9	25.5	106	21.6	75.99	2.39
97.70-97.65	PS	640.1	160	444.9	35.2	88	24.99	69.5	5.49
97.65-97.60	PS	447.2	73.4	361.6	12.2	72	16.41	80.85	2.72
97.60-97.55	PS	990.5	427.1	552.9	10.5	44	43.11	55.82	1.06
97.55-97.50	PS	856.8	276.2	548	32.6	141	32.23	63.95	3.8
97.55-97.50	PS	657.1	153.3	457.3	46.5	104	23.32	69.59	7.07
97.47-97.40	PS	140.4	36.7	95.3	8.4	6	26.13	67.87	5.98
97.40-97.35	PS	348.3	99.1	212.9	36.3	24	28.45	61.11	10.42
97.35-97.30	PS	424.7	134	236.3	54.4	63	31.55	55.63	12.8
97.30-97.25	PS	181.5	57.1	105.8	18.6	20	31.46	58.29	10.24
97.25-97.20	PS	377.5	138.5	236.5	2.5	29	36.68	62.64	0.662
97.35-97.30	PT	249.4	49.7	196.6	3.1	11			
97.30-97.25	PT	322.9	128.4	189.2	5.3	38			
97.25-97.20	PT	120.3	40.3	79.4	0.6	5			
97.20-97.15	PT	487.8	116.8	368.2	2.8	17			
97.15-97.10	PT	517	142.3	370	4.7	10	27.5	71.56	0.009
97.10-97.05	PT	575.7	171.3	397.8	6.6	39	29.75	69.09	0.11
97.05-97.00	PT	511.9	204.4	302.2	5.3	12	39.92	59.03	0.1
97.00-96.95	PT	461.3	156.2	302.5	2.6	55	33.86	65.57	0.05
96.95-96.90	PT	524.5	172.7	348.7	3.1	38	32.92	66.48	0.05
96.90-96.85	PT	515	141.7	371.1	2.2	31	27.5	72.05	0.04
96.85-96.80	PT	420.6	131.1	285.3	4.2	26	31.16	67.83	0.09
96.80-96.75	PT	533.2	173.2	336	24	90	32.48	63.015	4.5
96.75-96.70	PT	468.2	135.2	324.6	8.4	21			
96.70-96.65	PT	329.2	105.2	217.2	6.8	36	31.9	65.97	2.06
96.65-96.60	PT	370.1	96.2	265.7	8.2	78	25.99	71.79	2.2
96.60-96.55	PT	507.1	164	330.9	12.2	53	32.34	65.25	2.4

Table A41−15
Vertical distribution of bulk weight in grams for cortical, quartz and flakes from 1m x 1m unit N246 E142 SW from 5m x 9m block excavation.

Provenience		Sum	Cort	Quartz	Flake	Flakes	Cort %	Qrtz%	Flk%
97.41-97.35	PT	81.3	17.3	53.1	10.9	17	21.27	65.31	13.4
97.35-97.30	PT	505.3	163	308.9	33.4	27	32.25	61.13	6.6
97.30-97.25	PT	388.2	147.7	200.1	40.4	123	38.04	51.54	10.4
97.25-97.20	PT	579.7	144.8	427.1	7.8	33	24.97	73.67	1.34
97.20-97.15	PT	480.6	172.1	296.9	11.6	58	35.8	61.77	2.41
97.15-97.10	PT	409.7	138.8	267.1	3.8	22	33.87	65.19	0.927
97.10-97.05	PT	586.8	142.5	433.7	10.6	26	24.28	73.9	1.8
97.05-97.00	PT	292.4	91.4	197.3	3.7	20	31.25	67.47	1.26
97.00-96.95	PT	353.6	99.7	248.9	5	35	28.19	70.39	1.4
96.95-96.90	PT	429.6	97.98	327.6	4.2	45	22.8	76.25	0.09
96.90-96.85	PT	514.3	132.3	370.6	11.4	31	25.72	72.05	2.21
96.85-96.80	PT	465	122.4	332.7	9.9	30	23.689	75.18	1.1
96.80-96.75	PT	365.6	100.5	262.4	2.2	20	28.18	71.77	0.06
96.75-96.70	PT	438.9	112.3	323.4	3.2	34	25.5	73.68	0.07
96.70-96.65	PT	407.45	95.8	307.35	4.3	64	23.5	75.4	1
96.65-96.60	PT	351.6	69.3	269.4	12.9	96	19.7	76.6	3
96.60-96.55	PT	365.9	85.85	268.5	11.55	84	23.4	73.3	3.1

Table A41−16

Vertical distribution of bulk weight in grams for cortical, quartz and flakes from 1m x 1m unit N248 E140 SW from 5m x 9m block excavation.

Provenience		Sum	Cort	Quartz	Flake	Flakes	Cort %	Qrtz%	Flk%
97.85-97.80	PS	767.7	202.6	519.4	45.7	171	26.39	67.65	5.95
97.80-97.75	PS	895.3	357.1	470.1	68.1	207	39.88	52.5	7.6
97.75-97.70	PS	139.8	38.1	95.6	6.1	19	27.25	68.38	4.36
97.70-97.65	PS	147.9	42.9	95.5	9.5	32	29	64.57	6.42
97.65-97.60	PS	288.6	83.6	146	59	67	28.96	50.58	20.44
97.60-97.55	PS	672.9	256.3	416.2	0.4	17	38.08	61.85	0.000
97.55-97.50	PS	559.1	229.2	241.2	88.7	87	40.99	43.14	15.68
97.50-97.45	PS	941.6	331.6	473.5	136.5	110	35.21	50.28	14.49
97.45-97.40	PS	761.9	262.9	470.7	28.3	188	34.5	61.77	3.71
97.40-97.35	PT	366.2	105.1	219.2	41.9	58	28.7	59.85	11.44
97.35-97.30	PT	470.4	143.6	273.9	52.9	62	30.527	58.22	11.24
97.30-97.25	PT	458.6	113.2	257.8	87.6	62	24.6	56.2	19.1
97.25-97.20	PT	490.4	142.3	300.8	47.3	94	29.01	61.33	9.6
97.20-97.15	PT	145.1	44.7	95	5.4	33	30.8	65.4	3.72
97.15-97.10	PT	371.3	109.9	230.4	31	72	29.5	62.05	8.3
97.10-97.05	PT	369.4	79.1	227.8	62.5	48	21.4	61.66	16.91
97.05-97.00	PT	272.5	68.4	175.5	28.6	58	25.1	64.4	10.4
97.00-96.95	PT	462	171.2	237.9	52.9	104	37.05	51.49	11.4
96.95-96.90	PT	292.6	56.4	211.3	24.9	82	19.2	72.2	8.5
96.90-96.85	PT	338.7	84	218.6	36.1	52	24.8	64.54	10.68
96.85-96.80	PT	222	67.2	150.4	4.4	34	30.27	67.74	1.9
96.80-96.75	PT	351.5	136.3	211.7	3.5	26	38.77	60.227	0.09
96.75-96.70	PT	274.2	82.1	189.8	2.3	25	29.9	69.2	0.08
96.70-96.65	PT	321.2	96	217	8.2	43	29.8	67.5	2.5
96.65-96.60	PT	304.9	91.5	211.1	2.3	43	30	69.23	0.075
96.60-96.55	PT	418.3	149.8	265.4	3.1	15	35.8	63.4	0.07

Table A41−17
Vertical distribution of bulk weight in grams for cortical, quartz and flakes from 1m x 1m unit N248 E140 SE from 5m x 9m block excavation.

Provenience		Sum	Cort	Quartz	Flake	Flakes	Cort %	Qrtz%	Flk%
97.80-97.75	PS	398.7	146.2	251.9	0.6	16	36.66	63.18	0.15
97.75-97.70	PS	419.3	183.8	234.6	0.9	27	43.8	55.95	0.21
97.70-97.65	PS	219.5	68.3	151	0.2	4	31.11	68.79	0.000
97.65-97.60	PS	531.7	144.3	353.9	33.5	62	27.13	66.56	6.3
97.60-97.55	PS	1618	472.3	936.7	209	219	29.19	57.89	12.91
	PS					75			
97.55-97.50	PS	2564.3	838.1	1271.7	454.5	260	32.68	49.59	17.72
97.50-97.45	PS	1273	232.4	836.9	203.7	91	25.19	52.72	22.08
97.45-97.40	PS	257.2	73.7	169.3	14.2	72	28.65	65.82	5.52
97.50-97.45	PT	185.2	50.8	127.2	7.2	13	27.49	68.623	3.887
97.45-97.40	PT	472.6	119.6	340.5	12.7	34	25.3	72	2.7
97.40-97.35	PT	222.8	61.9	143.7	17.2	23	27.78	64.49	7.729
97.35-97.30	PT	238.7	80.4	148.7	9.6	45	33.68	62.29	4.02
97.30-97.25	PT	518.2	118.6	371.2	28.5	110	22.89	71.61	5.499
97.25-97.20	PT	180.4	49.7	113.6	17.1	52	27.5	62.97	9.47
97.20-97.15	PT	266.1	54.1	173.5	38.5	64	20	65.7	14.3
97.15-97.10	PT	396.7	99.3	246.7	50.7	93	25.03	62.18	12.78
97.10-97.05	PT	335.6	131.2	187.6	16.8	73	39.09	55.89	5.005
97.05-97.00	PT	356.6	114.1	212	30.5	70	31.9966	59.4503	6.679
97.00-96.95	PT	374.2	127.3	205	41.9	78	34.01	54.78	11.2
96.95-96.90	PT	345.4	117.6	197.2	30.6	71	34.047	57.093	8.85
96.90-96.85	PT	233.3	65	166	2.3	19	27.86	71.15	0.985
96.85-96.80	PT	333	82.1	247.3	3.6	20	24.65	74.26	1.08
96.80-96.75	PT	246.5	55.5	183.9	7.1	14	22.51	74.6	28.8
96.75-96.70	PT	363.8	120.9	240.4	2.5	25	33.23	66.08	0.06
96.70-96.65	PT	357.4	127.7	216	13.7	20	35.73	60.43	3
96.65-96.60	PT	287.8	86.8	198.5	2.5	18	30.15	68.9	0.08
96.60-96.55	PT	258.7	66.35	176.3	16.05	44	24.68	71.57	3.73
96.55-96.50	PT	224.4	70.6	148.6	5.2	25	31.46	66.22	2.3
		30.35	7.2	23.1	0.05	1	23.72	76.11	0.164
96.50-96.45	PT	274.5	72.6	194.4	7.5	41	26.4	70.8	2.73

Table A41−18

Vertical distribution of bulk weight in grams for cortical, quartz and flakes from 1m x 1m unit N242 E138 SW from 5m x 9m block excavation. This quad only excavated to top of Pleistocene Terrace.

Provenience		Sum	Cort	Quartz	Flake	Flakes	Cort %	Qrtz%	Flk%
97.90-97.85	Clovis	145.1	37.3	95.8	12	59	25.7	66.02	8.2
97.85-97.80	PS	234.5	47.8	173.3	13.4	81	20.38	73.9	5.71
97.90-97.75	PS	689.8	196.5	465.4	27.9	132	28.48	67.46	4.04
97.75-97.70	PS	564.9	133.3	419.6	12	96	23.59	74.27	2.12
97.70-97.65	PS	418.1	125.2	285	7.9	59	29.94	68.16	1.88
97.65-97.60	PS	408.8	70.6	329.5	8.7	55	17.27	80.6	2.12
97.60-97.55	PS	561.8	132.7	396.3	32.8	79	23.62	70.54	5.83
97.55-97.50	PS	207.6	176.7	25.2	5.7	47	85.11	12.13	2.74
97.50-97.45	PS	713	236.4	467.1	9.5	60	33.15	65.51	1.33
97.45-97.40	PS	621.2	205.3	409.1	6.8	34	33.04	65.85	1.09
97.40-97.35	PS								
97.30-97.25	PS	1269.5	539.8	696.7	33	31			
97.25-97.20	PS	958.2	369.6	574.3	14.3	39	38.57	59.93	1.49

Table A41−19

Vertical distribution of bulk weight in grams for cortical, quartz and flakes from 1m x 1m unit N242 E138 NW from 5m x 9m block excavation. This quad only excavated to top of Pleistocene Terrace.

Provenience		Sum	Cort	Quartz	Flake	Flakes	Cort %	Qrtz%	Flk%
97.90-97.85	Clovis	520	102.2	402.2	15.6	145	19.65	77.34	3
97.85-97.80	PS	721.3	148.2	548.6	24.5	127	20.54	76.05	3.39
97.80-97.75	PS	1646.4	293	1287	66.4	368	17.79	78.17	4.03
97.75-97.70	PS	5250.2	805.6	4325.8	118.8	367	15.34	82.39	2.26
97.70-97.65	PS	2447.4	360.3	2046	41.1	230	14.72	83.59	1.67
97.65-97.60	PS	1451.9	161.9	1277.2	20	71	11.15	87.96	1.37
97.60-97.55	PS	716.3	114.4	587	14.9	68	15.97	81.94	2.08
97.55-97.50	PS	1230.9	415.3	788.1	27.5	50	33.73	64.02	2.23
97.50-97.45	PS	1295.3	471.4	806.6	17.3	79	36.39	62.27	1.33
97.45-97.40	PS	1454.6	453	992.8	8.8	70	31.14	63.44	0.6
97.40-97.35	PS	826.7	272.7	549.4	4.6	33	32.8	66.45	0.556
97.35-97.30	PS								
97.30-97.25	PS	1197.1	427.9	726.3	42.9	130			
97.25-97.20		972.5	265.3	694.5	12.7	72	27.28	71.41	1.3

Table A41−20
Vertical distribution of bulk weight in grams for cortical, quartz and flakes from 1m x 1m unit N242 E138 SE from 5m x 9m block excavation. This quad only excavated to top of Pleistocene Terrace.

Provenience		Sum	Cort	Quartz	Flake	Flakes	Cort %	Qrtz%	Flk%
98.25-98.20	CL	579.2	24.4	36.9	517.9	405	4.2	6.37	89.41
98.20-98.10	CL	921.8	73.2	80	768.6	412	7.94	8.67	83.38
98.10-98.00	CL	521.3	96.1	102.9	322.3	288	18.43	19.73	61.82
98.00-97.95	CL	245.97	34.77	62.3	148.9	166	14.13	25.53	60.53
97.95-97.90	CL	205.4	54.4	130	21	106	26.48	63.29	10.22
97.90-97.85	PS	247.7	55.1	180.5	12.1	68	22.24	72.87	4.88
97.85-97.80	PS	387.7	74.2	299.8	13.7	92	19.13	77.32	3.53
97.80-97.75	PS	675.3	151.9	509.6	13.8	119	22.49	75.46	2.04
97.75-97.70	PS	754.9	160.5	578	16.4	136	21.26	76.56	2.17
97.70-97.65	PS	1447.2	248	1139.3	59.9	271	17.13	78.72	4.13
97.65-97.60	PS	4487.8	1184.2	3252.1	51.5	273	26.38	72.46	1.14
97.60-97.55	PS	3966.3	987	2885	94.3	277	24.88	72.73	23.77
97.55-97.50	PS	4572.9	948.1	3491	133.8	667	20.73	76.34	2.92
97.50-97.45	PS	2450.5	558.8	1873.6	18.1		22.8	76.45	0.738
97.45-97.40	PS	1920.8	470.1	1408	42.7	204	24.47	73.33	2.223
97.40-97.35	PS	2036.1	513.7	1472.1	50.3	160	25.22	72.29	2.47
97.35-97.30	PS	1165.2	580.7	551.9	32.6	92	49.83	47.36	2.79
97.30-97.25	PS	443.5	230	205.3	8.2	30	51.86	46.29	1.84

Table A41−21
Vertical distribution of bulk weight in grams for cortical, quartz and flakes from 1m x 1m unit N242 E140 NE from 5m x 9m block excavation. This quad only excavated to top of Pleistocene Terrace.

Provenience		Sum	Cort	Quartz	Flake	Flakes	Cort %	Qrtz%	Flk%
97.90-97.85	Clovis	203.4	36.9	160.3	6.2	75	18.14	78.81	3.04
97.85-97.80	PS	244	41	197.1	5.9	50	16.8	80.77	2.41
97.80-97.75	PS	443.5	114.6	320.1	8.8	86	25.83	72.17	1.98
97.75-97.70	PS	1003.2	276.4	694.9	31.9	160	27.55	69.26	3.17
97.70-97.65	PS	1163	293	841.4	28.6	122	25.19	72.34	2.45
97.65-97.60	PS	1994.6	268.5	1632.6	93.5	262	13.46	81.85	4.68
97.60-97.55	PS	620.2	163.8	431.2	25.2	56	26.41	69.52	4.06
97.55-97.50	PS	1161.6	419.7	713.4	28.5	115	36.13	61.41	2.45
97.50-97.45	PS	1271.6	437.6	809.3	24.7	101	34.41	63.64	1.94
97.45-97.40	PS	1784.6	930	792.2	66.1	201	52.11	44.39	3.5
97.40-97.35	PS	317.3	146.8	166.8	3.7	37	46.26	52.56	1.16
97.35-97.30	PS								
97.30-97.25	PS	1040	474.6	454.8	110.6	1040			
97.25-97.20	PS	1997.6	981.7	978	37.9	80	49.14	48.95	1.89

Table A41–22
Vertical distribution of bulk weight in grams for cortical, quartz and flakes from 1m x 1m unit N242 E140 NW from 5m x 9m block excavation. This quad only excavated to top of Pleistocene Terrace.

Provenience		Sum	Cort	Quartz	Flake	Flakes	Cort %	Qrtz%	Flk%
98.25-98.20	Clovis	579.2	24.4	36.9	517.9	405	4.2	6.37	89.41
98.20-98.10	Clovis	921.8	73.2	80	768.6	412	7.94	8.67	83.38
98.10-98.00	Clovis	521.3	96.1	102.9	322.3	288	18.43	19.73	61.82
98.00-97.95	Clovis	245.97	34.77	62.3	148.9	166	14.13	25.53	60.53
97.95-97.90	Clovis	201	61.5	50.8	88.7	187	30.59	25.27	44.12
97.90-97.85		223	82.3	110.6	30.1	154	36.9	49.59	13.49
97.85-97.80		507.9	43.7	401	63.2	145	8.6	78.95	12.4
97.80-97.75		915	96.9	775.1	43	168	10.59	84.71	4.69
97.75-97.70	11	1392.6	152.6	1189.3	50.7	253	10.95	85.4	3.64
97.70-97.65	12	3559.74	584.1	2881.94	93.7	240	16.4	80.95	2.63
97.65-97.60	13	13792.7	2377.6	11208.8	206.3	618	17.23	81.26	1.49
97.60-97.55	14	12242.8	1624.2	10440.3	178.3		13.26	85.27	1.45
97.55-97.50	15	6200.8	1001.2	5067.4	132.2	352	16.14	81.17	2.13
97.50-97.45	16	4508.2	1249.1	3218.4	40.7	340	27.7	71.38	0.902
97.45-97.40	17	2002.1	678.3	1307.6	36.2	137	33.87	65.31	1.8
97.40-97.35	18	1925.8	744	1172.4	9.4	157	38.63	60.87	0.488
97.35-97.30	19	2018	695.4	1303.2	19.4	146	34.45	64.57	0.961
97.30-97.25	20	5397.7	2849.2	2415.2	133.3	251	52.78	44.74	2.46

Table A41–23
Vertical distribution of bulk weight in grams for cortical, quartz and flakes from 1m x 1m unit N242 E142 NE from 5m x 9m block excavation. This quad only excavated to top of Pleistocene Terrace.

Provenience		Sum	Cort	Quartz	Flake	Flakes	Cort %	Qrtz%	Flk%
98.00-97.95	Clovis	312	51.6	82.1	178.3	440	16.53	26.31	57.14
97.95-97.90	Clovis	371.4	83.3	154.3	133.8	378	22.42	41.54	36.02
97.90-97.85	Clovis	381.1	72.2	219.5	89.4	318	18.94	57.59	23.45
97.85-97.80	PS	676.2	293.4	278.6	104.2	343	43.38	41.2	15.4
97.80-97.75	PS	302.2	72.4	178.3	51.5	272	23.95	59	17.04
97.75-97.70	PS	436.5	130	235.5	71	233	29.78	53.95	16.26
97.70-97.65	PS	405.5	78.2	260.3	67	147	19.28	64.19	16.52
97.65-97.60	PS	456.9	149.1	273	34.8	102	32.63	59.75	7.61
97.60-97.55	PS	808.7	302.6	440.4	65.7	144	37.41	54.45	8.12
97.55-97.50	PS	1549.8	391.3	1112	46.5	91			
97.50-97.45	PS	2213.9	1088.6	931.7	193.6	266	49.17	42.08	8.74
97.45-97.40	PS	2534.8	949.5	1380	205.3	185	37.45	54.44	8
97.40-97.35	PS	2532.2	908.5	1501.4	122.3	238	35.87	59.29	4.82
97.35-97.30	PS	4179	1495.1	2580.1	103.8	431	35.77	61.73	2.48

Table A41–24

Vertical distribution of bulk weight in grams for cortical, quartz and flakes from 1m x 1m unit N242 E142 SE from 5m x 9m block excavation. This quad only excavated to top of Pleistocene Terrace.

Provenience		Sum	Cort	Quartz	Flake	Flakes	Cort %	Qrtz%	Flk%
98.00-97.95	Clovis	98.7	60.6	30.2	7.9	66	61.39	30.59	8
97.95-97.90	Clovis	57.7	9.1	45.7	2.9	43	15.77	79.2	5.02
97.90-97.85	Clovis	157.4	26.9	105.3	25.2	67	17.09	66.89	16.01
97.85-97.80	PS	377.3	102.7	253	21.6	46	27.21	67.05	5.72
97.80-97.75	PS	309.4	76	215.8	17.6		24.56	69.74	5.68
97.75-97.70	PS	453.2	110.1	333.6	9.5	79	24.29	73.6	2.09
97.70-97.65	PS	243	56	169.5	17.5	32	23.04	69.75	7.2
97.65-97.60	PS	273.8	40.6	222.6	10.6	40	14.82	81.3	3.87
97.60-97.55	PS	428.8	68.6	344.9	15.3	34	15.99	80.43	3.56
97.55-97.50	PS	1182.4	220.8	945.8	15.8	32			
97.50-97.45	PS	755.4	243.5	504.5	7.4	32	32.23	66.78	0.976
97.45-97.40	PS	4271	657.1	3290.3	323.6	208	15.38	77.03	7.57
97.40-97.35	PS	4193.8	651.2	3446.7	95.9	146	15.52	82.18	2.28
97.35-97.30	PS	6538	1950.6	4483.2	104.2	415	29.83	68.57	1.59

APPENDIX 42

RESULTS OF MASS AND SIZE GRADE ANALYSIS

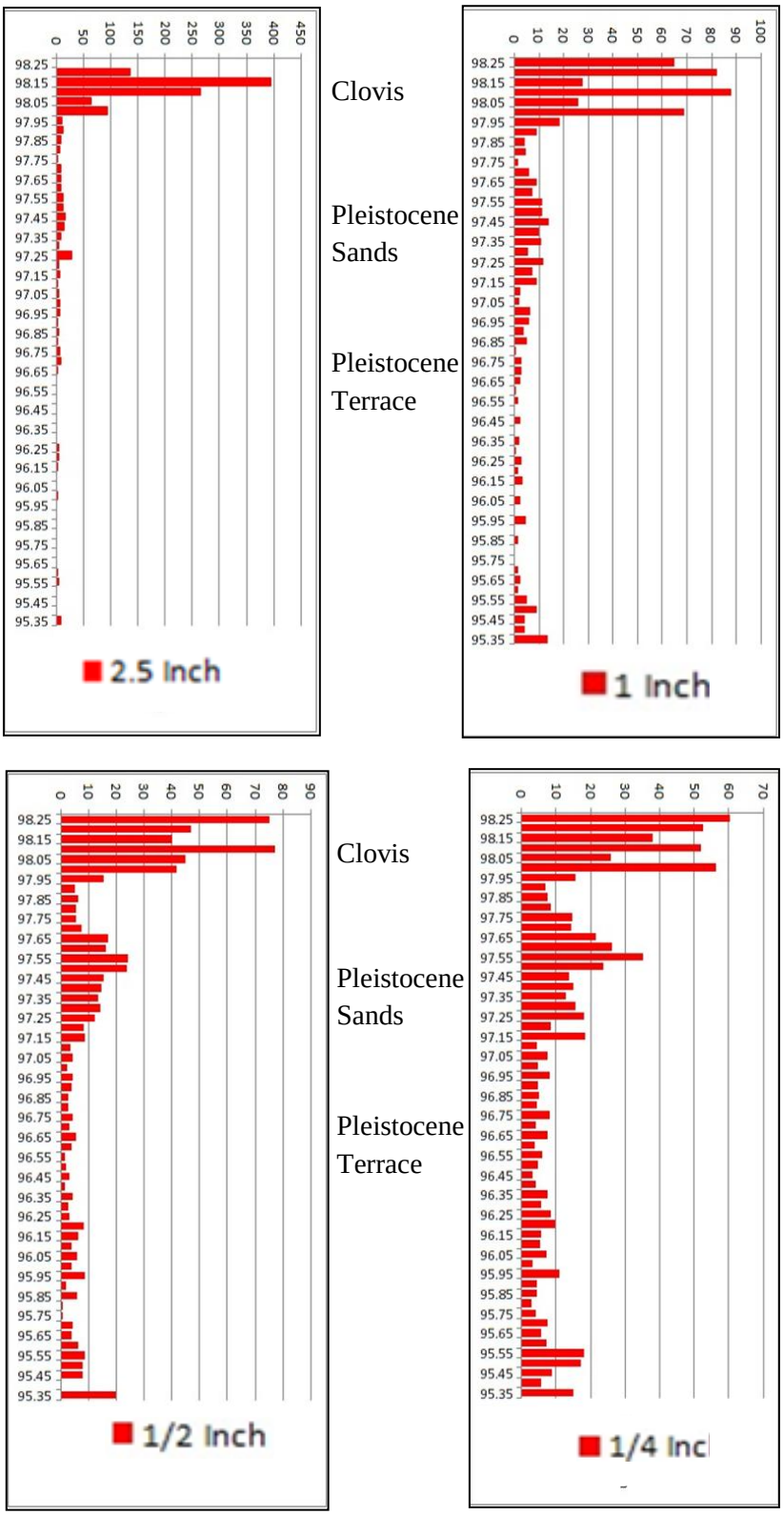


Figure A 42–1
Distribution of flakes by mean weight per level for each size grade.

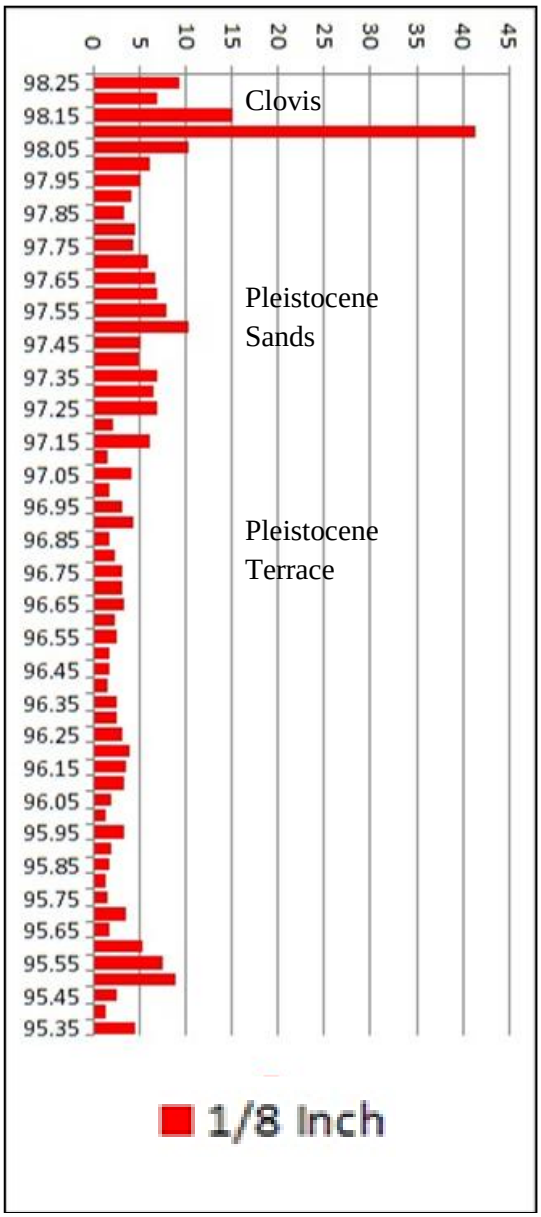


Figure A 42−1 continued
Distribution of flakes by mean weight per level for each size grade.

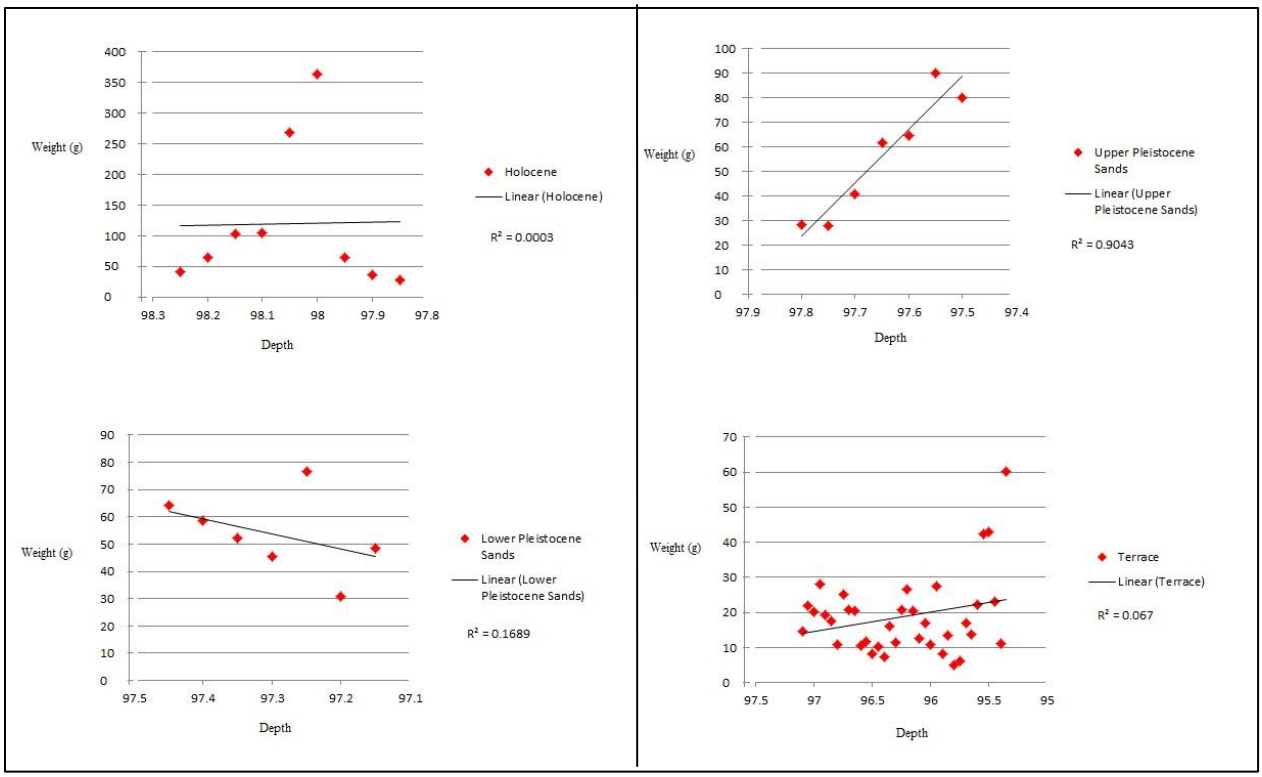


Figure A42-2

Relationship between flake weight and depth for different stratigraphic units at Topper. The results show a positive correlation in flake weight by depth for Upper Pleistocene Sands and a weak association for the Clovis,, Lower Pleistocene Sands and Pleistocene Terrace.

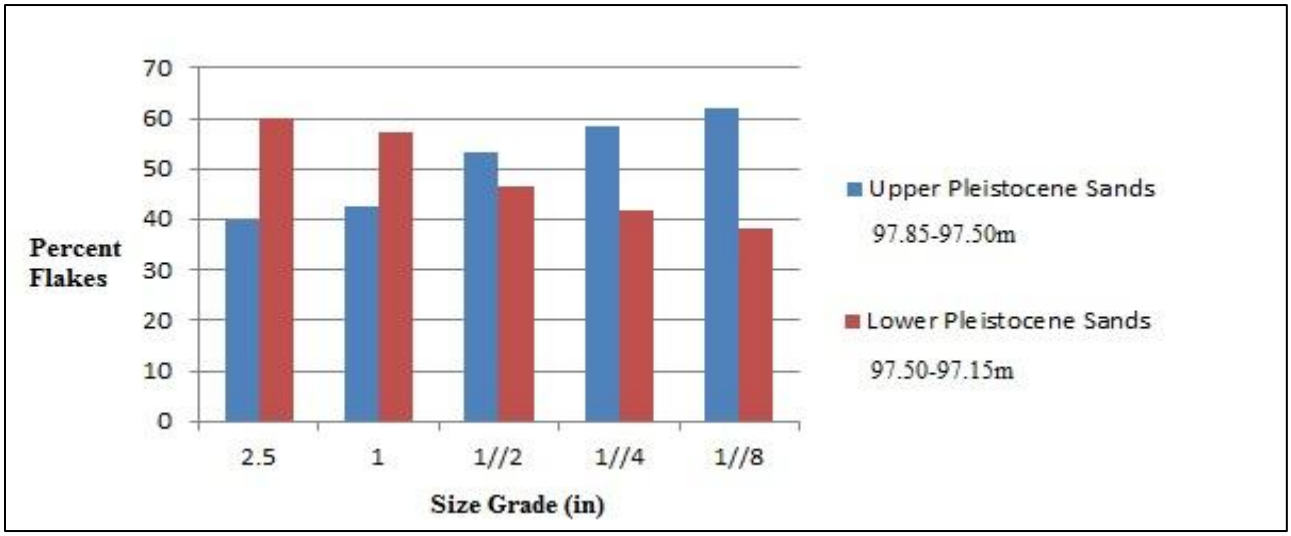
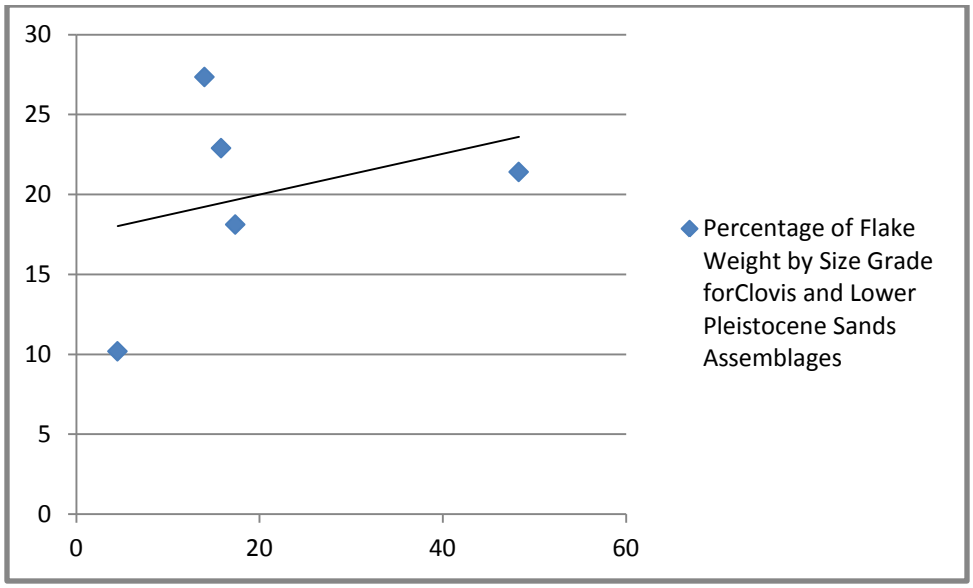
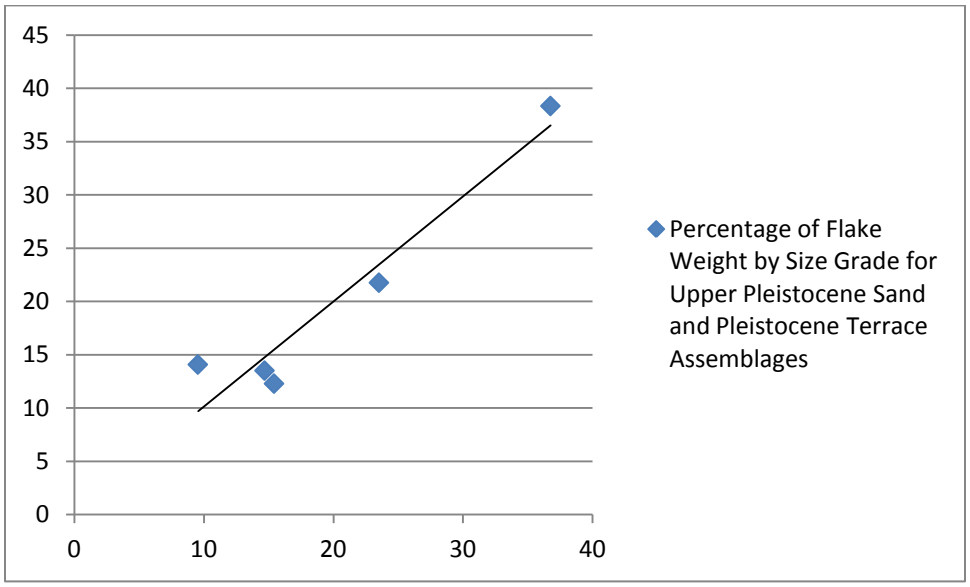


Figure A 42–3

Percentage of flakes by size grade for the upper (blue) and lower (red) Pleistocene Sands. There is a decrease in the amount by weight of smaller flakes with depth. Higher percentages of larger flakes occur in the Lower Pleistocene Sands.



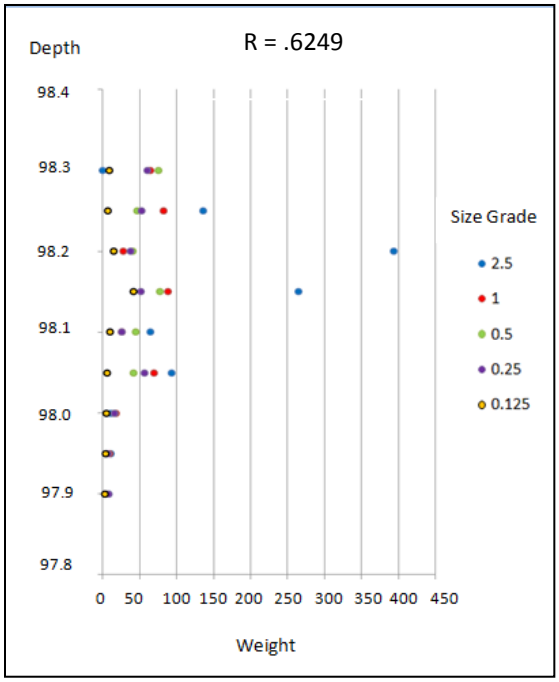
A



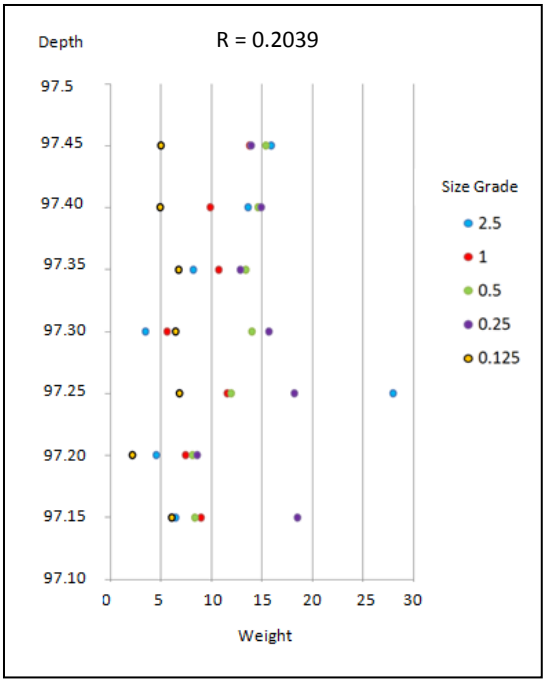
B

Figure A42–4

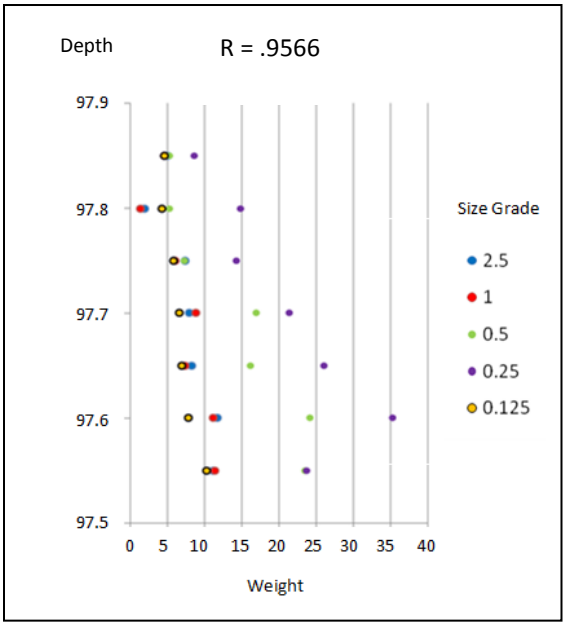
Results of a correlation analysis showing the percentage of flake weight by size grade for the Clovis deposits regressed against the Lower Pleistocene Sands (A), and the Upper Pleistocene Sands regressed against the deposits from the Pleistocene Terrace. There is a moderate positive correlation between the flake assemblage from the Clovis and Lower Pleistocene Sands. By contrast there is a strong positive correlation between the Upper Pleistocene Sands and Pleistocene Terrace; the two assemblages that exhibit the greatest dissimilarity to Clovis.



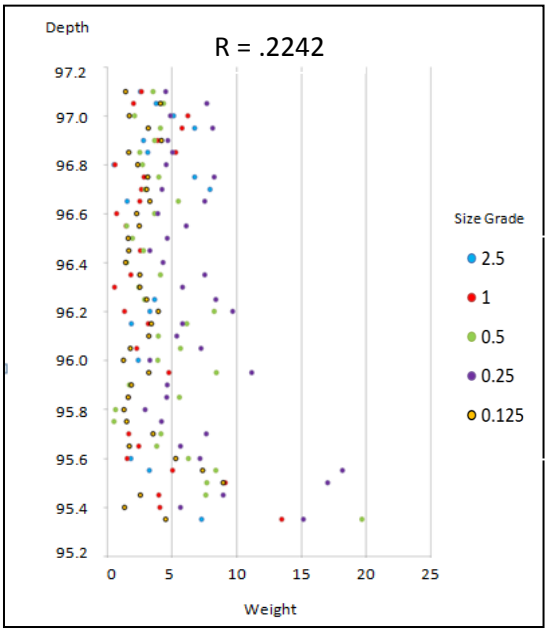
Clovis



Lower Pleistocene Sands



Upper Pleistocene Sands



Pleistocene Terrace

Figure A 42–5
Results of size grade analysis showing the variation in artifact size by depth for the Clovis, Upper and Lower Pleistocene Sands, and Pleistocene Terrace. The variation in flake size is strongly correlated with depth for the Upper Pleistocene Sands indicating that these deposits were likely subjected to post depositional processes.

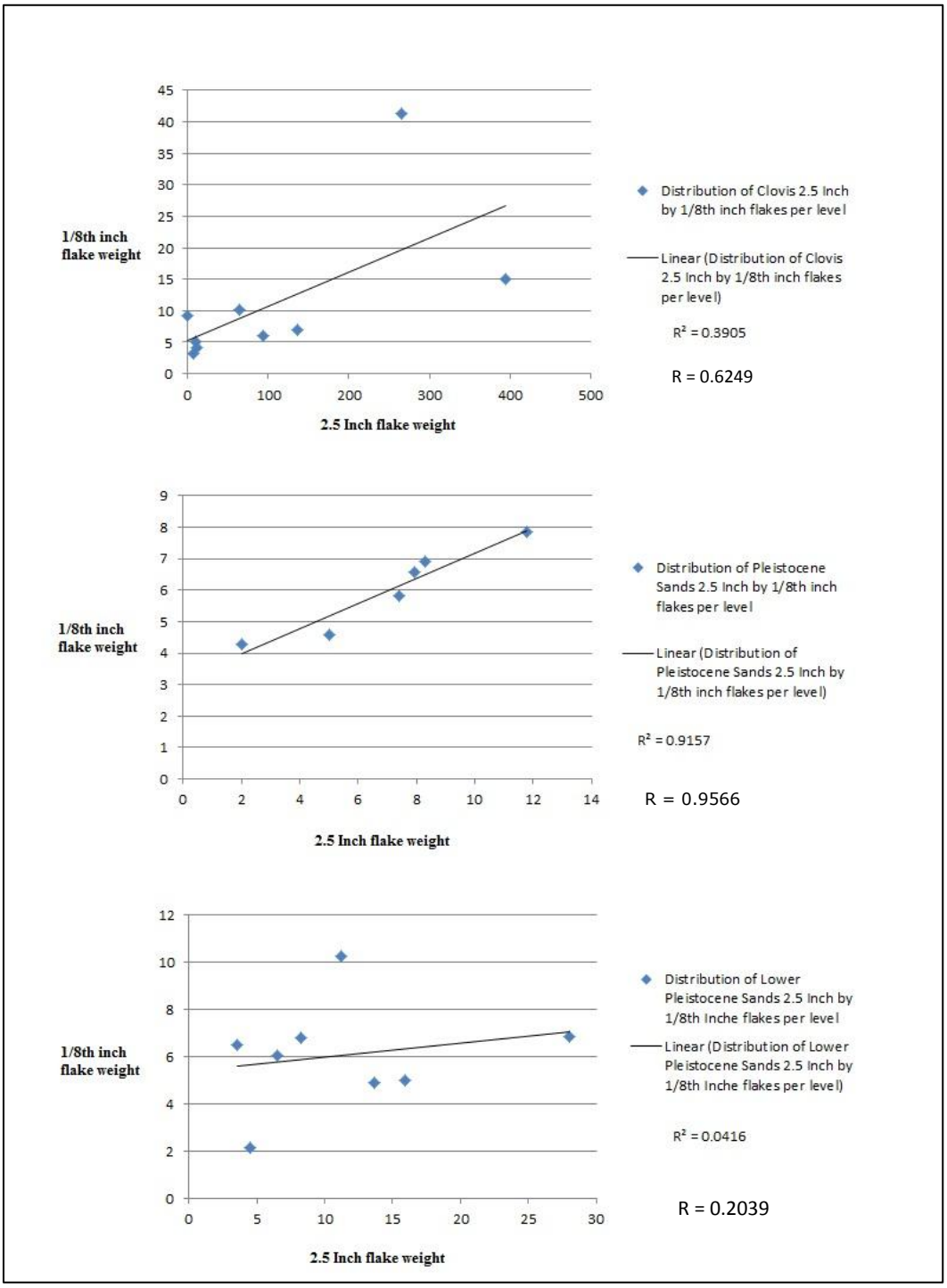


Figure A 42–6
Results of a Pearson correlation test showing the linear relationship between large and small flakes through the stratigraphic profile at Topper. The R value for the Lower Pleistocene Sands indicates an absence of vertical movement of small flakes s across this portion of the stratagraphic deposit. (Compare with Figures 9-11 and 9-16 for quartz and cortical pebble distributions).

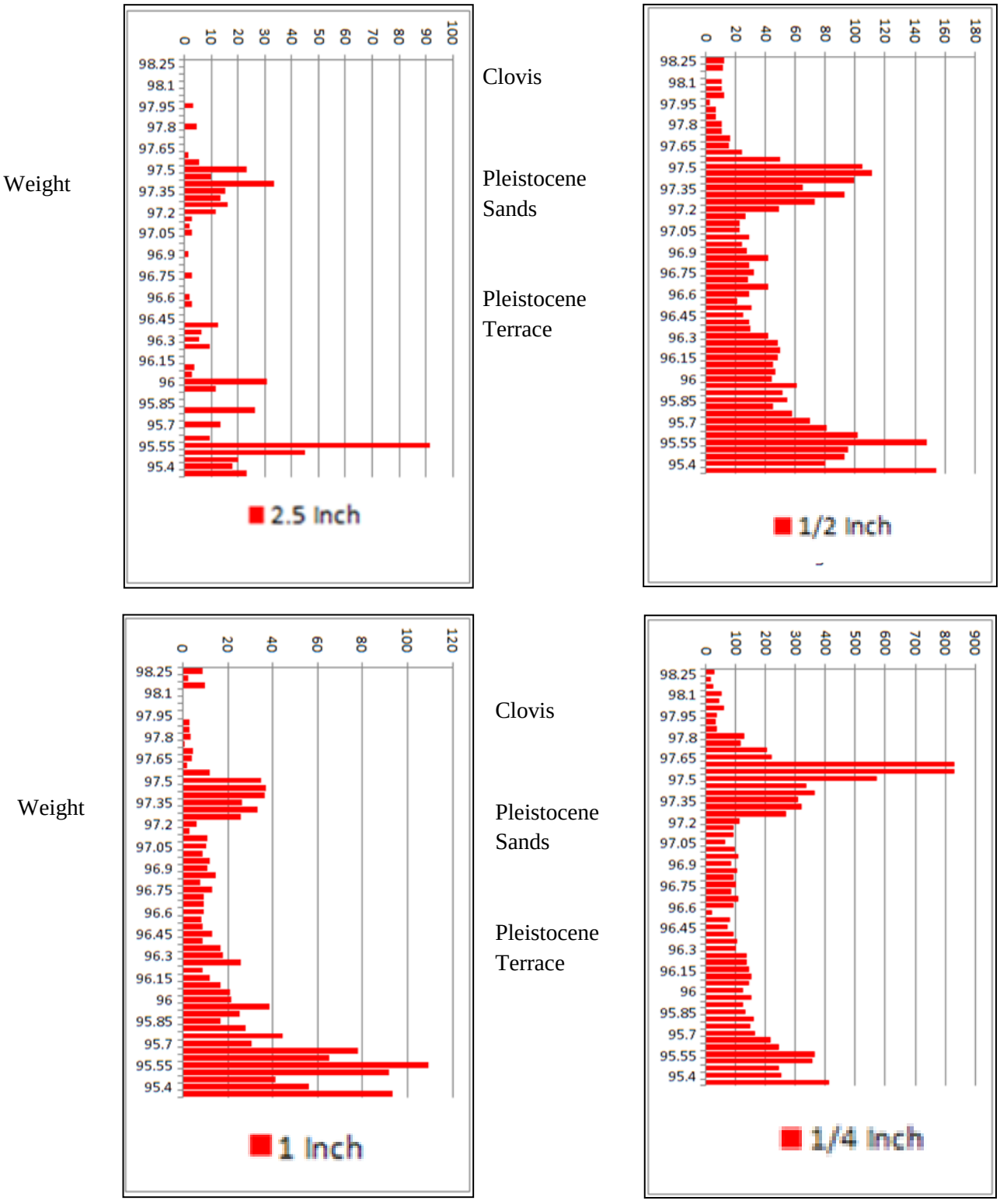


Figure A 42–7

Distribution of quartz by mean weight per level for each size grade.

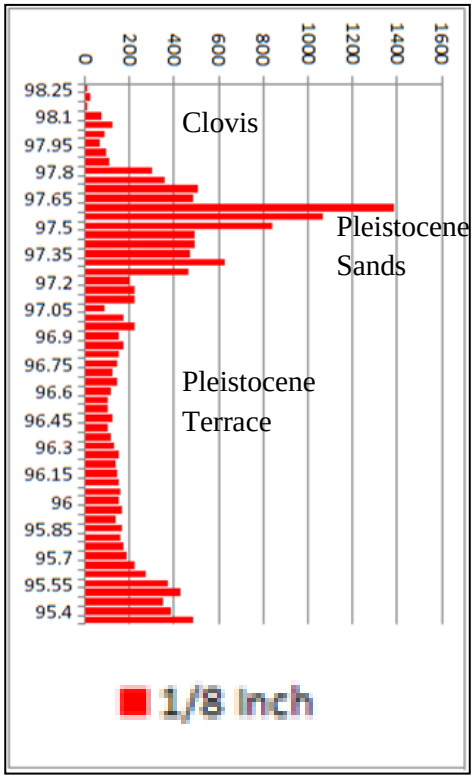


Figure A42–7
Distribution of quartz by mean weight per level for each size grade (continued).

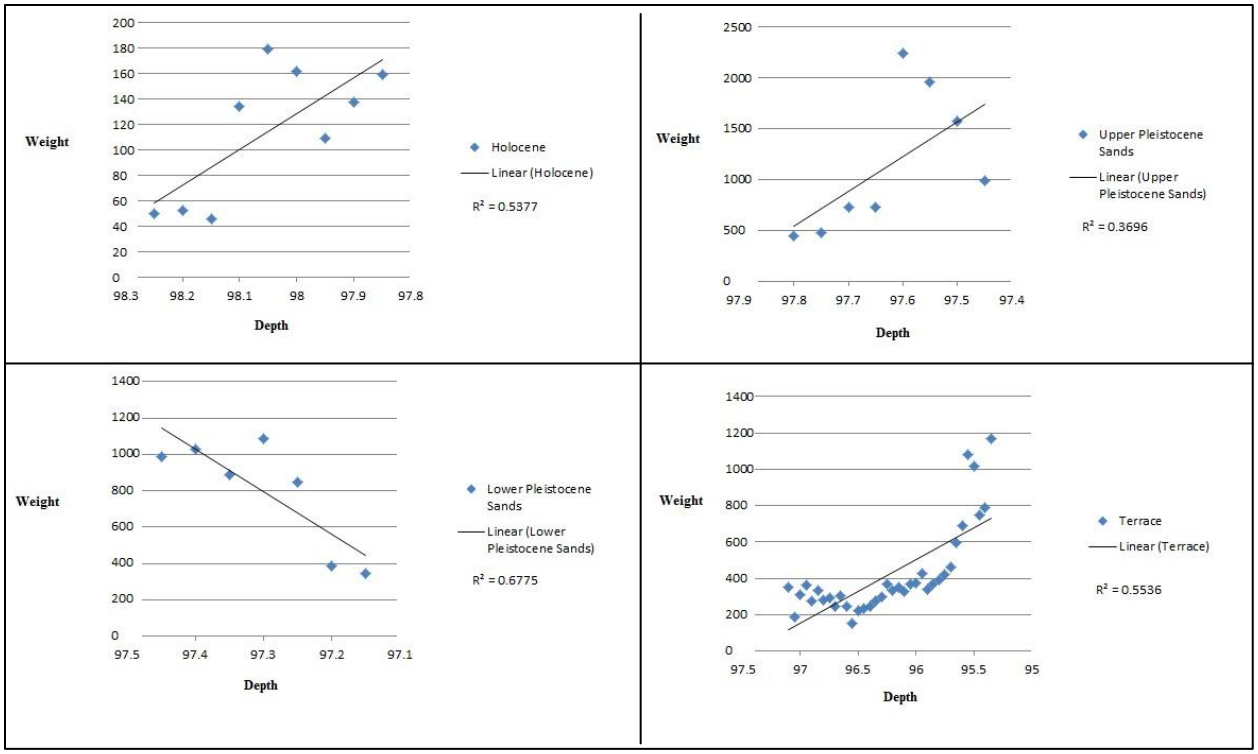


Figure A 42–8

Relationship between quartz weight per level and depth for different stratigraphic units at Topper. Results show a weak to moderate positive correlation in quartz weight by depth for all Units sampled. Quartz decreases in abundance with depth throughout the Lower Pleistocene Sands, and increases in abundance for all other stratigraphic units.

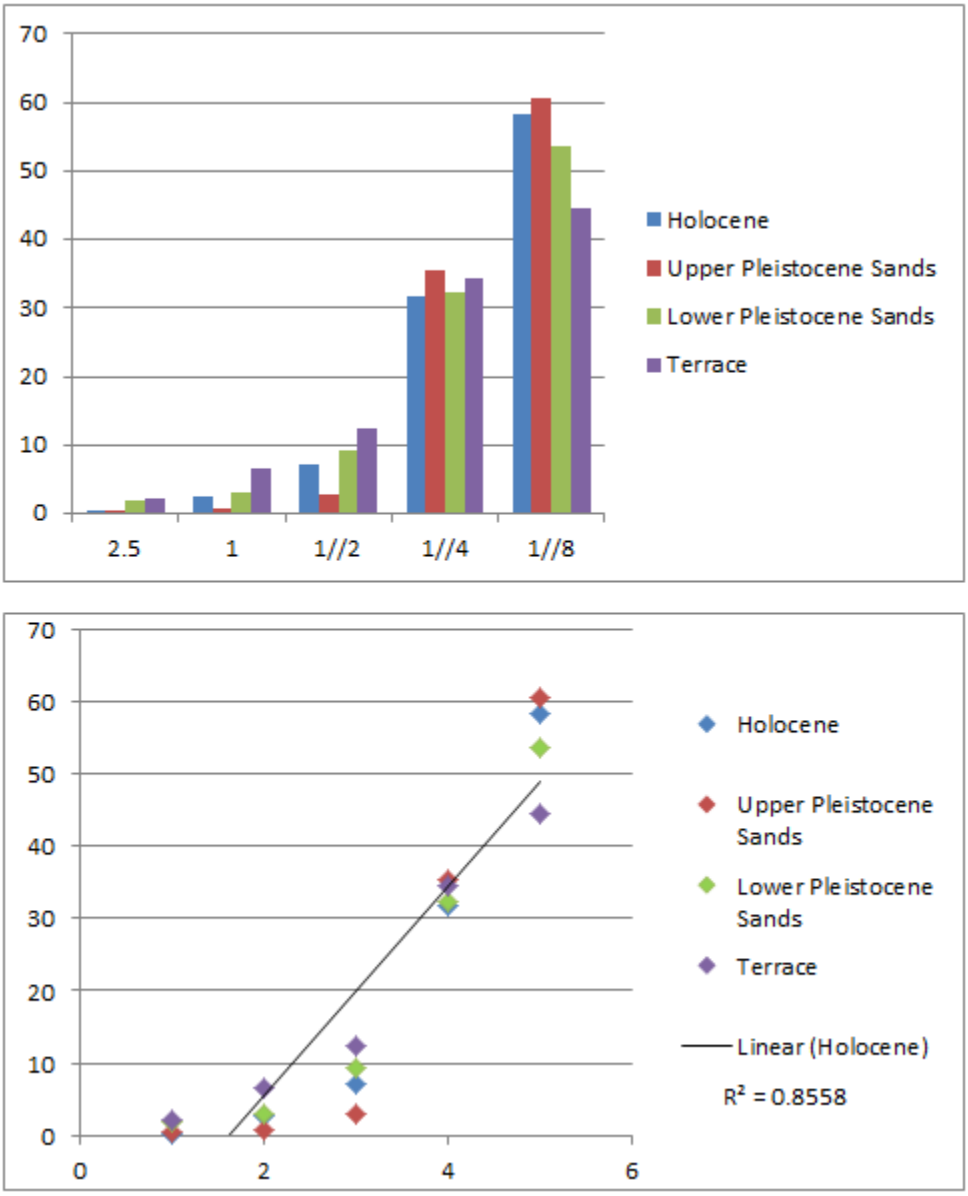


Figure A 42–9

Percentage of quartz by size grade for the Clovis (blue), Upper (red) and Lower (green Pleistocene Sands, and Pleistocene Terrace (purple). There is an increase in the amount by weight of smaller quartz pebbles with depth. The highest percentages of larger quartz only occur at the base of the Pleistocene Terrace.

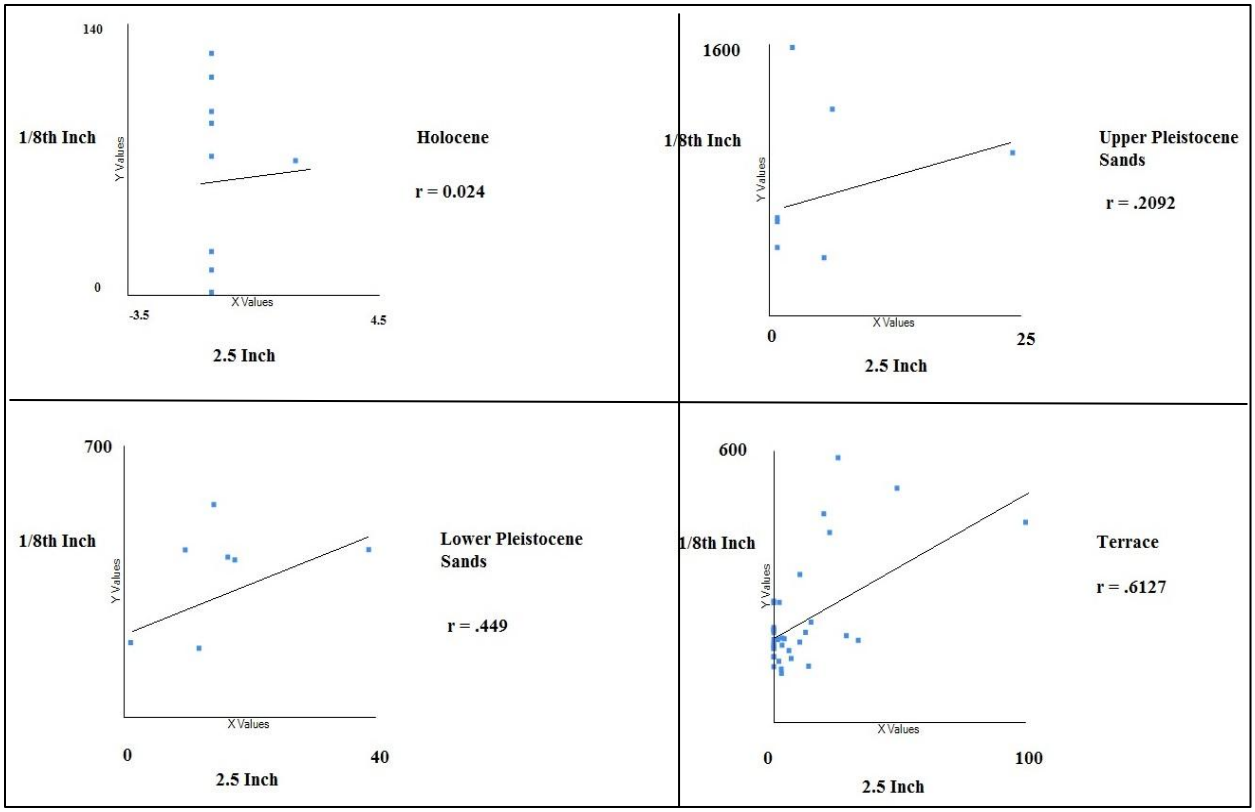


Figure A 42−10
Results of a Pearson correlation test showing the linear relationship between large and small quartz pebbles through the stratigraphic profile at Topper. The R value for the Pleistocene deposits reflect a moderate positive correlation suggesting a tenancy for high X variables to correlate with high Y variables. R values for the overlying Holocene deposits are lower indicating an absence of correlation in large and small quartz pebbles. Compare with correlation of flakes.

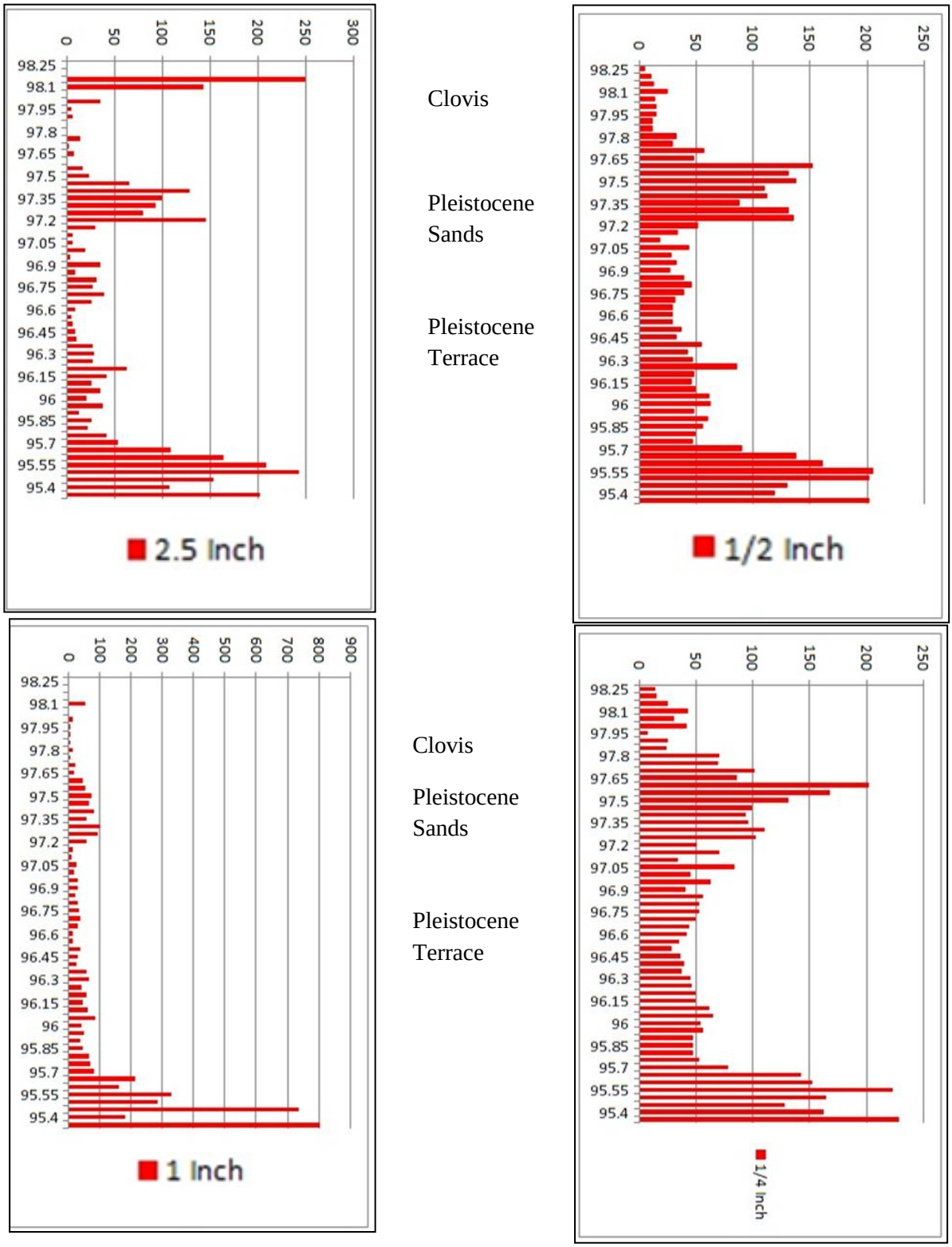


Figure A 42–11
Distribution of cortical pebbles by average weight for 2.5in, 1in, .1/2in, ¼ in. size grades.

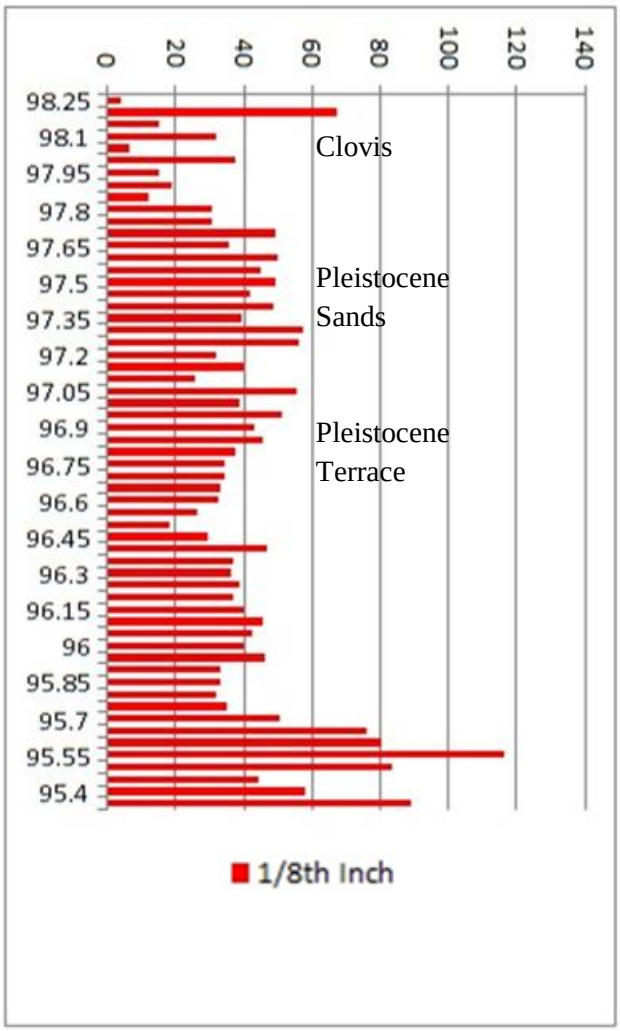


Figure A 42−11
Distribution of cortical pebbles by average weight for 1/8in. size grade.

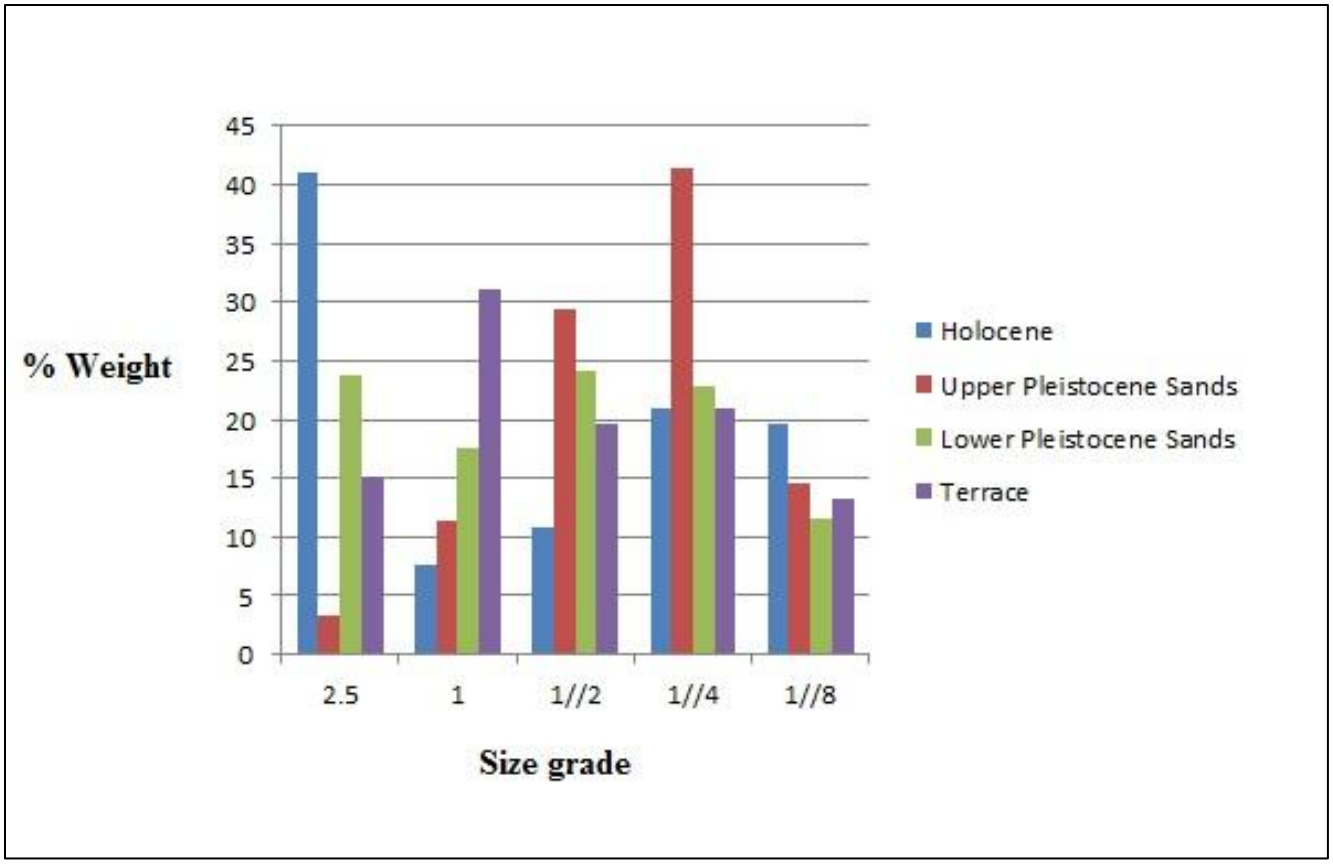


Figure A 42–12
Percentage of cortical pebbles by size grade for the Clovis, Upper and Lower Pleistocene Sands, and Pleistocene Terrace. High percentages of small cortical pebbles occur in the Clovis and Upper Pleistocene Sands.

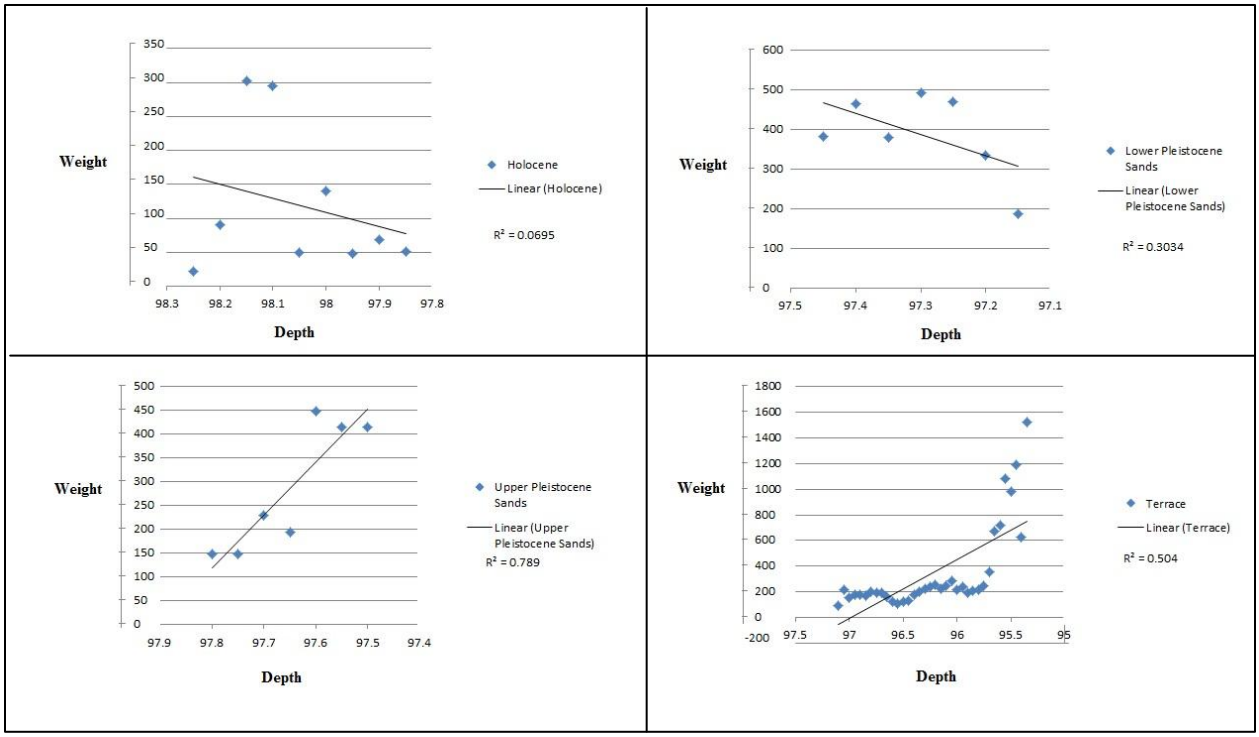


Figure A 42−13
Relationship between cortical pebble weight and depth for different stratigraphic units at Topper. Results show a weak correlation for the Clovis and Lower Pleistocene Sands deposits, a strong positive correlation for the Upper Pleistocene Sands and a moderate positive correlation for the Pleistocene Terrace. Cortical pebbles decreases in abundance with depth for the Clovis and Lower Pleistocene Sands, and increase for all other stratigraphic units.

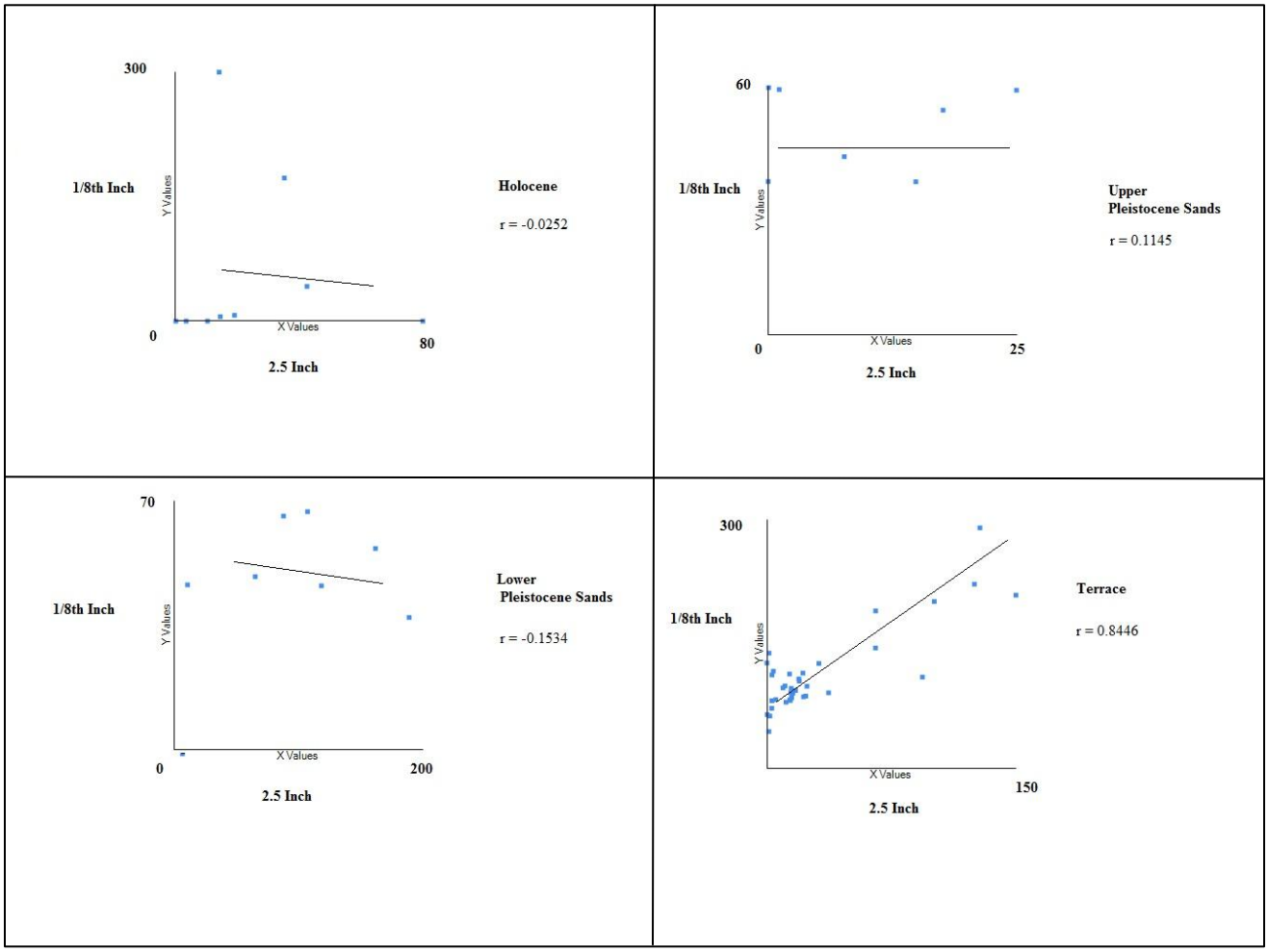
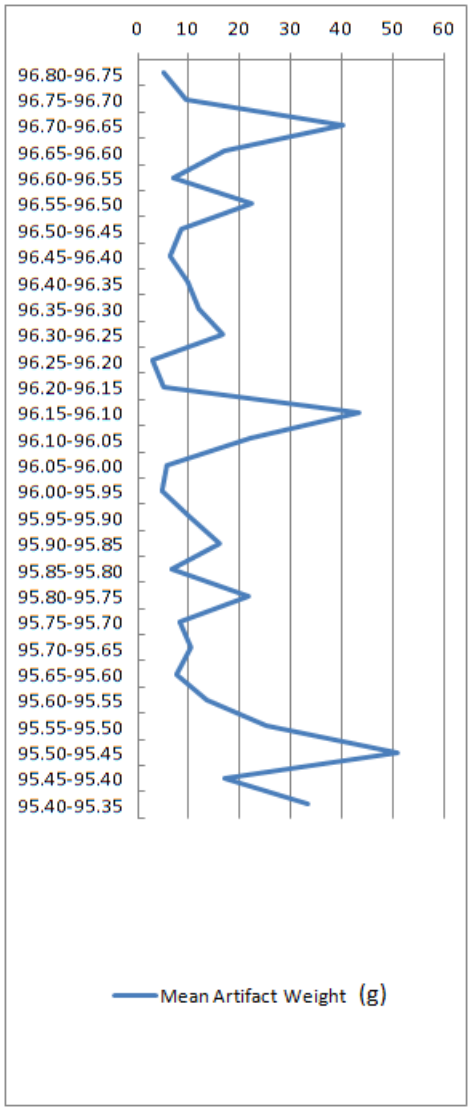


Figure A 42−14

Results of a Pearson correlation test showing the linear relationship between large and small cortical pebbles through the stratigraphic profile at Topper. The R value for the Pleistocene Terrace reflects a strong positive correlation suggesting that increases in large pebbles correlate with increases in small pebbles and vice versa.



Pleistocene Terrace

Figure A42–15
Mean mapped Artifact Weight per level for Pleistocene Terrace.

Table A42−1
Results of the size grade analysis for the flake deposits at Topper showing the average weights for each size grade by level.

	Flakes (g)				
Clovis	**2.5**	**1**	**½**	**1/4**	**1/8**
98.30-98.25	0	64.8	75.1	60.2	9.2
98.25-98.20	135.75	82	46.65	52.7	6.95
98.20-98.15	394	27.9	40.1	37.9	15
98.15-98.10	264.8	88.15	77.25	51.95	41.35
98.10-98.05	64.5	25.8	44.7	25.8	10.2
98.05-98.00	93.3	68.95	41.7	56.3	6
98.00-97.95	10.55	18.23	15.4	15.8	5.05
97.95-97.90	11.13	9.07	4.87	7.1	4.15
97.90-97.85	7.74	4.03	6.1	7.57	3.25
Total	**1081.77**	**388.93**	**351.87**	**315.32**	**101.15**
Percent	**48.31%**	**17.37%**	**15.82%**	**14.08%**	**4.51%**
U. Pleist. Sands					
97.85-97.80	5.03	4.61	5.32	8.66	4.57
97.80-97.75	2	1.4	5.3	14.8	4.3
97.75-97.70	7.39	6.05	7.31	14.32	5.81
97.70-97.65	7.92	8.87	16.96	21.43	6.58
97.65-97.60	8.3	7.4	16.2	26.1	6.9
97.60-97.55	11.77	11.18	24.23	35.25	7.85
97.55-97.50	11.18	11.35	23.53	23.73	10.25
Total	**52.99**	**50.86**	**81.89**	**144.29**	**46.26**
Percent	**14.08%**	**13.51%**	**21.76%**	**38.34%**	**12.29%**
L. Pleist. Sands					
97.50-97.45	15.96	13.8	15.39	13.92	5.03
97.45-97.40	13.68	9.87	14.65	14.96	4.9
97.40-97.35	8.25	10.76	13.43	12.86	6.79
97.35-97.30	3.52	5.65	14.05	15.73	6.5
97.30-97.25	28.03	11.58	11.98	18.2	6.87
97.25-97.20	4.56	7.48	8.18	8.61	2.17
97.20-97.15	6.48	8.98	8.41	18.51	6.07
Total	**80.48**	**68.12**	**86.09**	**102.79**	**38.33**
Percent	**21.41%**	**18.12%**	**22.90%**	**27.35%**	**10.19%**

Table A42–2
Results of the size grade analysis for the Flake deposits at Topper showing the average weights for each size grade by level

	Flakes (g)				
Terrace	**2.5**	**1**	**1/2**	**1/4**	**1/8**
97.1	2.58	2.63	3.52	4.51	1.42
97.05	3.78	2.03	4.34	7.71	4.12
97	5.12	6.24	2.1	4.88	1.7
96.95	6.77	5.8	4.11	8.15	3.18
96.9	2.79	3.9	3.68	4.68	4.21
96.85	3.14	5.28	2.5	5.04	1.68
96.8	0.52	0.595	2.74	4.57	2.37
96.75	6.75	2.85	3.99	8.27	3.15
96.7	7.95	2.66	2.92	4.23	3.06
96.65	1.55	2.53	5.51	7.53	3.28
96.6	0	0.74	3.68	3.9	2.26
96.55	0	1.47	1.5	6.12	2.47
96.5	0	0	1.93	4.66	1.64
96.45	0	2.55	2.81	3.28	1.65
96.4	0	0	1.5	4.33	1.41
96.35	0	1.81	4.1	7.53	2.51
96.3	0	0.58	2.42	5.84	2.51
96.25	3.65	2.88	2.88	8.38	3.05
96.2	3.28	1.35	8.26	9.71	3.93
96.15	1.85	3.17	6.13	5.81	3.41
96.1	0	0	3.96	5.36	3.2
96.05	0	2.28	5.66	7.25	1.8
96	2.41	0	3.9	3.3	1.25
95.95	0	4.76	8.45	11.15	3.2
95.9	0	0	1.7	4.64	1.88
95.85	0	1.61	5.58	4.58	1.64
95.8	0	0	0.66	2.92	1.3
95.75	0	0	0.52	4.18	1.48
95.7	0	1.68	4.15	7.66	3.55
95.65	0	2.45	3.83	5.68	1.7
95.6	1.81	1.56	6.28	7.15	5.28
95.55	3.24	5.06	8.38	18.18	7.38
95.5	0	9.14	7.68	17.06	8.96
95.45	0	4	7.62	8.95	2.57
95.4	0	4.05	0	5.65	1.35
95.35	7.28	13.5	19.7	15.16	4.53
Total	**64.47**	**99.155**	**158.69**	**248**	**104.08**
Percent	**9.55**	**14.70**	**23.53**	**36.77**	**15.43**

Table A42–3
Results of the size grade analysis for the Quartz deposits at Topper showing the average weights for each size grade by level.

	Quartz (g)				
Clovis	**2.5**	**1**	**½**	**1/4**	**1/8**
98.30-98.25	0	8.6	12.7	27.1	1.9
98.25-98.20	0	9.9	11.3	16.55	22.8
98.20-98.15	0	0	0	42.95	8.05
98.15-98.10	0	0	10.8	40.7	141
98.10-98.05	0	0	10.4	58.75	66.95
98.05-98.00	0	12	3.3	49.4	168.9
98.00-97.95	3.26	2.45	2.45	33.38	69.61
97.95-97.90	0	3.04	7.14	32.55	94.98
97.90-97.85	0	2.61	6.78	37.03	112.57
Total	**3.26**	**38.6**	**64.87**	**37.6**	**76.3**
Percent					
U. Pleist Sands					
97.85-97.80	15.03	3.52	11.01	131.58	296.05
97.80-97.75	0	0.82	10.7	114.53	355.1
97.75-97.70	0	4.44	16.49	201.68	507.68
97.70-97.65	0	3.84	15.66	217.95	488.2
97.65-97.60	1.5	1.98	24.1	831.28	1384.2
97.60-97.55	5.23	11.62	49.31	802.06	1070.57
97.55-97.50	23.47	34.62	104.79	568.73	842.26
Total	**45.23**	**60.84**	**232.06**	**2867.81**	**4944.06**
Percent					
L. Pleist. Sands					
97.50-97.45	9.79	37.15	111	334.34	494.3
97.45-97.40	33.54	36.53	99.27	362.83	495.56
97.40-97.35	15.31	26.34	65.1	308.3	473.09
97.35-97.30	13.49	33.12	93.03	318.66	627.88
97.30-97.25	16.21	25.62	74.45	266.5	465.38
97.25-97.20	11.57	6.03	49.06	112.18	204.8
97.20-97.15	2.74	3.02	26.55	89.9	222.98
97.15-97.10	2	10.76	23.03	95.08	221.9
97.10-97.05	1.39	9.46	25.67	78.78	133.64
Total	**106.04**	**188.03**	**567.16**	**1966.57**	**3339.53**
Percent					

Table A42–4
Results of the size grade analysis for the Quartz deposits at Topper showing the average weights for each size grade by level

	Quartz (g)				
Pleistocene Terrace	**2.5**	**1**	**1/2**	**1/4**	**1/8**
96.95	0	11.09	25.23	104.78	212.58
96.9	1.47	11.4	27.08	83.85	157.64
96.85	0	14.81	41.56	104.73	170.77
96.8	0	7.55	29.18	91.3	153.74
96.75	2.83	12.43	31.07	95.93	139.01
96.7	0	9.73	29.21	86.5	125.83
96.65	0	9.25	41.91	105.65	139.02
96.6	1.84	9.41	26.77	90.52	110.08
96.55	2.69	9.38	20.65	82.41	109.65
96.5	0	5.52	30.01	72.58	102.45
96.45	0	14.61	28.97	75.31	116.24
96.4	15.2	10.46	32.24	101.32	107.02
96.35	4.5	12.65	25.47	85.6	114.22
96.3	6.41	20.06	45.28	110.86	136.68
96.25	7.86	24.25	48.76	130.16	146.15
96.2	0	7.63	50.26	139	138.78
96.15	0	11.96	48.46	142.7	146.43
96.1	3.06	14.9	37.58	148.96	153.56
96.05	13.15	23.2	49.35	149.48	163.3
96	30.66	21.7	47.33	120.08	146.16
95.95	11.55	38.62	61.12	151.25	167
95.9	0	25.26	51.78	124.6	137
95.85	0	16.94	54.52	133.14	166.44
95.8	26.36	27.64	44.72	159.22	160.8
95.75	0	35.56	54.82	129.82	162.88
95.7	13.53	35.6	74.23	181	195.51
95.65	0	62.24	77.2	207.78	229.6
95.6	11.05	76.05	109.33	252.51	275.9
95.55	91.48	109.5	148.26	264.6	369.52
95.5	44.76	91.54	95.07	354.12	432.9
95.45	120.17	41.3	93.05	241.52	350.6
95.4	18.15	56	80.15	251.15	384.7
95.35	23.36	93.33	154.4	409.43	487.93
Total	**450.08**	**971.57**	**1815.02**	**4981.86**	**6310.09**
Percent	**3.09**	**6.68**	**12.49**	**34.28**	**43.43**

Table A42–5
Results of the size grade analysis for the Cortical Pebble deposits at Topper showing the average weights for each size grade by level

	Cortical Pebbles (g)				
Clovis	**2.5**	**1**	**½**	**1/4**	**1/8**
98.30-98.25	0	0	6.7	14.2	2.9
98.25-98.20	0	0	2.85	12.8	5.25
98.20-98.15	749.9	0	9.5	14.4	67.2
98.15-98.10	143.7	52.9	12.25	24.65	15.15
98.10-98.05	34.9	0	24.1	42.9	31.8
98.05-98.00	23.8	25.2	13.85	35.5	22.15
98.00-97.95	4.57	5.6	14.8	25.4	18.22
97.95-97.90	5.97	6.7	10.9	25.4	19.05
97.90-97.85	0.647	3.29	10.94	26.06	16.03
Total					
Percent					
U. Pleist Sands					
97.85-97.80	15.03	14.05	34.51	69.89	27.64
97.80-97.75	1.7	6.05	28.8	69.19	30.8
97.75-97.70	8.01	20.77	56.91	101.08	49.31
97.70-97.65	0.72	17.52	47.06	86.07	35.86
97.65-97.60	16.7	44.4	151.86	202.4	49.7
97.60-97.55	23.41	52.95	127.05	166.61	49.9
97.55-97.50	65.58	72.73	137.61	131.65	49.17
Total					
Percent					
L. Pleist. Sands					
97.50-97.45	128.25	67.4	109.09	99.6	41.76
97.45-97.40	100.03	82.93	111.53	94.3	48.54
97.40-97.35	92.85	57.34	87.29	95.24	39.58
97.35-97.30	80.3	85.15	130.47	110.42	57.44
97.30-97.25	145.78	95.05	135.4	102.85	56.34
97.25-97.20	30.34	56.9	51	50.07	31.92
97.20-97.15	6.65	16.35	33.21	70.07	39.8
97.15-97.10	17.5	22.1	34.4	85.3	56
97.10-97.05	5.87	17.15	24.83	36.32	28.91
Total					
Percent					

Table A42–6
Results of the size grade analysis for the Cortical Pebble deposits at Topper showing the average weights for each size grade by level

	Cortical Pebbles				
Pleistocene Terrace	**2.5**	**1**	**1/2**	**1/4**	**1/8**
96.95	34.53	27.99	32.01	62.08	51.03
96.9	8.73	16.65	26.1	39.98	43.36
96.85	31.31	34.8	42.56	60.31	47.11
96.8	27.58	28.32	41.1	49.87	37.03
96.75	38.99	33.98	38.76	53.08	34.33
96.7	26.125	36.04	32.64	51.36	35.93
96.65	8.09	28.18	31.44	46.61	35.64
96.6	4.6	15.31	21.65	33.54	26.82
96.55	5.45	12.38	29.58	36.03	26.83
96.5	5.74	33.74	34.01	27.02	19.05
96.45	9.75	30.07	32.92	37.62	29.81
96.4	12	27.18	62.68	45.44	52.36
96.35	23	50.27	37.44	33.31	34.38
96.3	28.76	66.63	49.85	44.06	40.2
96.25	27.13	40.58	87.5	46.15	35.43
96.2	49.33	56.71	47.91	49.25	36.6
96.15	38.93	46.23	43.5	49.2	39.76
96.1	26.22	63	49.24	60.94	45.7
96.05	34.98	85.41	60.91	64.35	42.35
96	21.21	41.4	62.03	55.36	39.9
95.95	38.42	49.57	47.07	56.12	46.15
95.9	12.44	38.8	59.42	46.62	33.42
95.85	26.18	46.86	55.06	46.82	36.94
95.8	22.16	64.5	48.4	53.72	37.68
95.75	41.14	69.1	45.98	61.62	40.86
95.7	53.71	82.61	89.6	90.5	58.16
95.65	108.25	176.16	137.38	142.83	87.41
95.6	164.51	188.61	160.36	151.83	80.6
95.55	208.3	328.8	204.58	223.44	16.1
95.5	242.88	285.4	201.56	164.78	83.62
95.45	153.12	183.8	129.65	128.37	44.27
95.4	108.05	180.25	118.35	162.15	58.2
95.35	202.96	267.5	201.93	228.93	89
Total	**1844.57**	**2736.83**	**2363.17**	**2503.29**	**1466.03**
Percent	**16.9**	**25.07**	**21.65**	**22.93**	**13.43**

Table A42-7
Results of Mass and Size Grade Analysis

N242 E130			Cortical					Quartz					Flakes		
SE	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
97.75-97.65	15.2	35.7	27.2	142.5	13.7	0	0	16.4	108.6	24.3	333.1	183	207	188.6	12.6
97.65-97.55	0	9.2	8.2	69.4	7.7	0	0	7	89.2	23.3	323.2	81.7	51.8	65.3	5.7
97.55-97.45															
97.45-97.35	0	120.7	209.4	387.9	150.6	0	10	13.3	680.1	2009.7	48	27.5	38.5	90.4	33.7
97.35-97.25	0	157.2	239.6	455.2	182.1	0	18.4	50.9	1997.1	3437.3	0	46.1	115.9	154.1	43.3
97.25-97.15	26.8	36.9	175.9	547.5	295.3	32.9	6.7	73.4	410.9	1658.6	58.1	66.3	49.5	176.5	56.2
97.15-97.05	191.2	198.7	366.8	916.2	545.2	34.1	77.2	108.7	461.8	1641.6	35	8.4	22.4	34.1	43.5
97.05-96.95	426.5	149.9	136	393.4	391.5	0	51.7	90.3	486.1	1677.9	87.1	61.5	25.2	55.2	23.9
96.95-96.85	440.1	225.3	281.3	387.3	342.1	0	50.7	190.9	460.9	942.7	50.3	48.6	24.6	51.7	45
96.85-96.80	330.9	158.8	97.4	131.2	95.6	0	16	61.1	175.2	260.8	10.4	5.5	8.8		4.6
96.80-96.75	201.6	172.4	186.6	228.7	142.9	0	81	136.4	306.5	644.7	57.9	20.8	20.2	33.4	13.2
96.75-96.70	117.4	15.3	28.5	45.1	37.5	0	0	0	5.2	60.7	117.1	13.6	0	10.3	8.1

Table A42-7 continued

N242 E130			Cortical					Quartz					Flakes		
NE	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
97.75-97.65	15.2	35.7	27.2	142.5	13.7	0	0	16.4	108.6	24.3	333.1	183	207	188.6	12.6
97.65-97.55	0	9.2	8.2	69.4	7.7	0	0	7	89.2	23.3	323.2	81.7	51.8	65.3	5.7
97.55-97.45															
97.45-97.35	0	120.7	209.4	387.9	150.6	0	10	13.3	680.1	2009.7	48	27.5	38.5	90.4	33.7
97.35-97.25	0	157.2	239.6	455.2	182.1	0	18.4	50.9	1997.1	3437.3	0	46.1	115.9	154.1	43.3
97.25-97.15	26.8	36.9	175.9	547.5	295.3	32.9	6.7	73.4	410.9	1658.6	58.1	66.3	49.5	176.5	56.2
97.15-97.05	191.2	198.7	366.8	916.2	545.2	34.1	77.2	108.7	461.8	1641.6	35	8.4	22.4	34.1	43.5
97.05-96.95	426.5	149.9	136	393.4	391.5	0	51.7	90.3	486.1	1677.9	87.1	61.5	25.2	55.2	23.9
96.95-96.85	440.1	225.3	281.3	387.3	342.1	0	50.7	190.9	460.9	942.7	50.3	48.6	24.6	51.7	45
96.85-96.80	0	59.9	65.4	58.9	32.2	0	21.2	26.6	61.9	106.7	0	0	9.5	13.7	4.9
96.80-96.75	110.7	75.1	55.5	121.1	54.4	0	29.2	43.1	149.3	174.8	0	2.8	10	12.4	2.8
96.75-96.70	131.6	117.9	45.6	144.6	68.9	0	23.4	56.6	19.3	218.4	0	0	14.4	5.4	9.4

Table A43-7 continued

N242 E130			Cortical					Quartz					Flakes		
SW	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
97.75-97.65	15.2	35.7	27.2	142.5	13.7	0	0	16.4	108.6	24.3	333.1	183	207	188.6	12.6
97.65-97.55	0	9.2	8.2	69.4	7.7	0	0	7	89.2	23.3	323.2	81.7	51.8	65.3	5.7
97.55-97.45															
97.45-97.35	0	120.7	209.4	387.9	150.6	0	10	13.3	680.1	2009.7	48	27.5	38.5	90.4	33.7
97.35-97.25	0	157.2	239.6	455.2	182.1	0	18.4	50.9	1997.1	3437.3	0	46.1	115.9	154.1	43.3
97.25-97.15	26.8	36.9	175.9	547.5	295.3	32.9	6.7	73.4	410.9	1658.6	58.1	66.3	49.5	176.5	56.2
97.15-97.05	191.2	198.7	366.8	916.2	545.2	34.1	77.2	108.7	461.8	1641.6	35	8.4	22.4	34.1	43.5
97.05-96.95	426.5	149.9	136	393.4	391.5	0	51.7	90.3	486.1	1677.9	87.1	61.5	25.2	55.2	23.9
96.95-96.85	440.1	225.3	281.3	387.3	342.1	0	50.7	190.9	460.9	942.7	50.3	48.6	24.6	51.7	45
96.85-96.80	89.1	68.2	196.7	147.1	109.8	0	25.6	86.2	211.1	453.2	0	0	22.8	11.3	6.6
96.80-96.75	241.6	77.6	87.2	98.7	51.8	34.4	19.9	58	141.9	175.6	50.1	7.2	10.9	8.7	4.8
96.75-96.70	66.7	97.5	28	95.2	72.1	0	35.5	63.5	154	219.5	0	0	12.6	11.3	3.2
96.70-96.65	0	0	16.2	29.4	32.8	0	0	16.3	49.6	121.6		2.2	2.1	12.6	6

Table A43-7 continued

N242 E130			Cortical					Quartz					Flakes		
NW	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
97.75-97.65	15.2	35.7	27.2	142.5	13.7	0	0	16.4	108.6	24.3	333.1	183	207	188.6	12.6
97.65-97.55	0	9.2	8.2	69.4	7.7	0	0	7	89.2	23.3	323.2	81.7	51.8	65.3	5.7
97.55-97.45															
97.45-97.35	0	120.7	209.4	387.9	150.6	0	10	13.3	680.1	2009.7	48	27.5	38.5	90.4	33.7
97.35-97.25	0	157.2	239.6	455.2	182.1	0	18.4	50.9	1997.1	3437.3	0	46.1	115.9	154.1	43.3
97.25-97.15	26.8	36.9	175.9	547.5	295.3	32.9	6.7	73.4	410.9	1658.6	58.1	66.3	49.5	176.5	56.2
97.15-97.05	191.2	198.7	366.8	916.2	545.2	34.1	77.2	108.7	461.8	1641.6	35	8.4	22.4	34.1	43.5
97.05-96.95	426.5	149.9	136	393.4	391.5	0	51.7	90.3	486.1	1677.9	87.1	61.5	25.2	55.2	23.9
96.95-96.85	440.1	225.3	281.3	387.3	342.1	0	50.7	190.9	460.9	942.7	50.3	48.6	24.6	51.7	45
96.85-96.80	89.1	68.2	196.7	147.1	109.8	0	25.6	86.2	211.1	453.2	0	0	22.8	11.3	6.6
96.80-96.75	241.6	77.6	87.2	98.7	51.8	34.4	19.9	58	141.9	175.6	50.1	7.2	10.9	8.7	4.8
96.75-96.70	66.7	97.5	28	95.2	72.1	0	35.5	63.5	154	219.5	0	0	12.6	11.3	3.2
96.70-96.65	0	0	16.2	29.4	32.8	0	0	16.3	49.6	121.6		2.2	2.1	12.6	6

Table A43-7 continued

N242 E138			Cortical					Quartz					Flakes		
SW	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
97.90-97.85	0	0	7.1	18.5	11.4	0	0	0	14.9	80.6	0	0	4	5.7	2.1
97.85-97.80	0	0	7.7	27.5	12.6	0	0	11.2	0	162.1	0	0	2.2	7.4	3.8
97.75-97.70	0	10.2	38.5	108.7	39.1	0	0	0	68	397.4	0	0	8.3	13.9	5.7
97.70-97.65	0	0	24.8	82.5	26	0	0	5.3	60.8	353.5	0	0	3.8	2.8	5.4
97.65-97.60	0	30.8	17.8	57.6	19	0	0	7.4	31.8	245.8	0	0	0	3.9	4
97.60-97.55	0	0	3.5	47.8	19.3	0	0	8.5	56.1	264.9	0	0	3.7	3.6	1.4
97.55-97.50	0	27.2	39.2	47.4	18.9	0	0	27.7	105.1	263.5	21.7	0	0	7.5	3.6
97.50-97.45	62.1	26.9	30.8	37.2	19.7	0	16.9	5.7	93.3	179.3	0	0	0	3.2	2.5
97.45-97.40	70.5	41.8	59.6	49	15.5	0	23.9	49.3	167.6	226.3	0	0	3.1	4.5	1.9
97.40-97.35	19.4	47.6	81.6	38	18.7	0	19.9	84.3	162.5	142.4	1.1	0	0	2.6	3.1
97.35-97.30															
97.30-97.25	191.3	138.4	109.4	79.7	21	30.7	43	95.5	203.7	323.8	17.7	0	11.7	2.6	1
97.25-97.20	98.2	51.1	110	73.8	36.5	0	0	98.2	185.7	290.4	0	9.7	0	2	2.6

Table A43-7 continued

N242 E138			Cortical					Quartz					Flakes		
SE	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
97.90-97.85	0	0	0	23.7	13.2	0	0	0	18.6	141.7	0	0	0	2.1	4.1
97.85-97.80	0	0	1.6	23.4	16.9	0	0	2.4	30.2	164.5	0	0	0	3.9	2
97.80-97.75	0	0	22.2	60.3	32.1	0	0	0	32.3	287.8	0	0	0	4.3	4.5
97.75-97.70	0	7.7	25.5	182.2	61	0	0	3.2	81	610.7	0	0	6.1	17.1	8.7
97.70-97.65	0	18.4	75.9	151.7	47	0	0	3.3	197.9	640.2	0	0	7.3	17.1	4.2
97.65-97.60	0	32.2	82.7	112.3	41.2	0	0	21.7	611.9	1008.9	0	4.2	22.4	55.5	12.5
97.60-97.55	0	0	90.6	52.6	20.6	0	0	50.8	132.7	247.7	0	0	19.5	2.8	2.9
97.55-97.50	166.	52.9	75.5	88.6	35.8	0	55.5	47.9	261.2	348.8	0	0	15.5	8	5
97.50-97.45	128.	49.8	119.9	103.1	36.3	35	10.9	81.6	352.3	329.5	0	0	15.6	4.2	4.9
97.45-97.40	450.	135.6	207.4	81.5	54.4	0	0	139.9	322.2	329.7	0	16.5	21.4	20.8	7.5
97.40-97.35	27.4	51.6	35	18.5	13.9	0	0	26.2	71.1	69.5	0	0	0	1.8	2
97.35-97.30															
97.30-97.25	100.	113.2	137.4	81.6	42.3	0	54.9	86	66.1	247.8	61.5	12.4	3.1	22.4	11.2
97.25-97.20	85.3	185.4	225.8	135	93.7	129.9	0	218.5	250	371.6	0	0	52.3	4	3.3

Table A43-7 continued

N242 E138			Cortical					Quartz					Flakes		
NW	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
97.90-97.85	0	0	13.7	56	32.5	0	0	0	71.4	331.2	0	0	0	10.3	5.3
97.85-97.80	0	10.2	4.8	81.3	51.9	0	0	19.1	87	442.5	0	0	6.4	12.8	5.3
97.80-97.75	0	0	59.3	166.5	67	0	0	8.5	240.9	1063.3	0	0	11.2	35.6	19.4
97.75-97.70	0	0	266	403.7	135.9	0	0	26.8	1619.9	2679.1	0	0	44.6	60.4	13.8
97.70-97.65	0	47.8	90	166	56.6	0	0	31.8	681.9	1328.6	0	0	7.7	18.7	14.5
97.65-97.60	0	0	46.4	86.7	28.8	0	0	23.9	451.9	801.4	0	0	7.7	8.7	3.6
97.60-97.55	0	0	46.2	47.4	20.8	0	0	47.8	173.7	365.5	0	0	6.8	5.1	3
97.55-97.50	167.8	70.9	87.8	61.8	27	114	0	58.4	271.6	344.1	0	0	23	3.1	1.4
97.50-97.45	209.1	48.3	108.8	72.1	33.1	0	56.6	73.4	291.6	385	0	0	5.8	8.7	2.8
97.45-97.40	158.9	107.7	83.4	60.1	42.9	85.7	76.3	127.1	303	400.7	0	0	0	6.4	2.4
97.40-97.35	37.9	57.3	60	79.1	38.4	0	19.8	53.3	218.4	257.9	0	0	0.8	2	1.8
97.35-97.30															
97.30-97.25	65.1	62.3	113.3	120.6	66.6	0	0	92.1	166.5	467.7	0	11.5	6.7	12.6	12.1
97.25-97.20	54.8	48.6	84.4	53	24.5	38.9	0	33.6	146.5	475.5	0	0	6.5	3.1	3.1

Table A43-7 continued

N242 E138			Cortical					Quartz					Flakes		
NE	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
97.90-97.85	0	0	10.2	30	15.6	0	0	3.4	28.7	152.6	64.6	5.7	8.4	5.2	4.1
97.85-97.80	0	0	5.3	31.6	19.8	26.1	0	27.1	0	176.2	0	9.8	4.4	14.4	5.3
97.80-97.75	0	0	16.9	111.4	68.2	0	0	5.6	63.9	689.5	8.9	0	4.6	8.4	9.3
97.75-97.70	0	0	52.3	153.3	71.8	0	0	2.9	151.2	909.8	0	0	13.2	16.1	7.9
97.70-97.65															
97.65-97.60	0	0	50.8	54	21.8	0	0	25.2	159.8	303.3	0	0	0	12.1	4.6
97.60-97.55	0	36.8	208.4	299.5	35	0	0	16.1	2210.7	1821	0	0	50.4	60.6	8.6
97.55-97.50	0	51.3	114.8	114.4	36	0	0	99.2	660.3	872	0	0	2	17.8	5.8
97.50-97.45	56.5	96	191.4	86.9	40.2	0	17.1	218.2	573.9	656.7	56.7	5.5	17.1	26.5	9.9
97.45-97.40	214.6	219.4	186.6	95.4	46.1	104.7	97.2	230.9	423.4	467.6	31.6	0	1.9	8.9	4.3
97.40-97.35	0	0	22.7	26.5	22.8	0	47.1	36.9	85.9	129.6	0	0	0	4.4	1.3
97.35-97.30															
97.25-97.20	234.8	436	143.7	134.5	32.7	0	0	200.7	306.8	470.5	0	0	13.8	14.3	3.7
97.04-96.95	0	6.2	9.4	21.6	19.1	0	10.9	13.4	30.9	57	0	0.6	2	3.6	1.3
96.95-96.90	0	12.8	10.5	15.7	14.8	0	11.6	9.1	27.3	47.5	0	0	0	3.5	1.6
96.90-96.85	0	4.6	14.6	11.6	18.2	0	0	7.9	28.8	46.6	0	0	0	1.6	1.1
96.85-96.80	0	6.5	12.5	34.9	27	0	8	36.3	45	85.1	0	0	1.3	2.4	2.1
96.80-96.75	0	14.3	14.3	23	17	0	0	20.8	42.4	63.9	0	0	0	3.7	1.2
96.75-96.70	0	9.2	14.3	34	25.1	0	0	22.2	44.4	71.8	0	0	0	2	1.1
96.70-96.65	0	6.1	16.9	20.3	14.9	0	0	23.7	44.9	83.5	0	0	0	0.9	0.5
96.65-96.60	38.8	31.1	34.8	29.5	20.1	0	0	27.6	59.6	75.1	0	0	0	1.8	1.7
96.60-96.55	47.1	32.3	57.6	41.5	23.9	35	28.8	22.8	86.2	97.5	0	9.9	2.6	3.6	0.9
96.55-96.50	13.8	33.6	39	16.6	10.4	0	0	2.7	48	66.4	0	0	0	0.6	0.8
96.50-96.45	0	0	28.4	22	35.8	0	44.6	11.5	43.6	59.4	0	0	3.6	0	4
96.45-96.40	0	0	35.8	21.4	36.4	30.8	0	29.4	64.7	83.1	0	0	2.2	0	1.3
96.40-96.35	0	19.1	19.6	30.1	20.1	0	0	18.9	64.1	78.6	0	0	10	5.8	1
96.35-96.30	0	65	54.2	31.2	25.1	0	36.1	32.2	89.9	95	0	3.5	1.2	8.8	3.5
96.30-96.25	65	34.9	43.4	44	29.6	0	12.3	50.8	80.7	119.9	0	0	1.9	5	1.7
96.25-96.20	0	65	32.3	31.3	29.9	0	9.3	37.5	99.8	113.9	19.7	8.1	14.8	9.7	1.3
96.20-96.15	61.4	66.1	33.2	8.1	21.2	0	0	14.2	42.9	68	0	19.6	3.8	5	0.8

Table A43-7 continued

N242 E138			Cortical					Quartz					Flakes		
NE	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
96.15-96.10	78.1	20	44.1	26.1	22.4	0	11.1	10.8	67.7	91.8	0	0	4	5.1	3
96.10-96.05	0	17.2	6	14	19.9	0	0	12	54.7	70.6	0	0	7.5	8.3	0.3
96.05-96.00	0	0	31.1	21.7	28.1	39.8	0	23.3	62.4	85	0	0	1.3	2.2	0.8
96.00-95.95	0	11.9	25.7	18.2	24	0	10.6	29.9	52.9	88.7	0	23.8	21.5	17.3	1.9
95.95-95.90	0	18.4	37.9	26.3	15.8	0	0	35.3	72.5	93.2	0	0	0	1.6	1.2
95.90-95.85	0	30.5	65.8	27.7	13.8	0	0	19.6	73.8	106.7	0	0	0.7	1.3	1
95.85-95.80	26.9	21.2	40.7	28.4	28.6	0	0	40.9	96.9	132.9	0	0	0	0.6	0.4
95.80-95.75	0	14.6	26	30.5	16.4	0	0	41.3	62.4	127	0	0	0	0	0
95.75-95.70	0	0	71.6	46.9	17.1	0	0	51.1	109.1	157.6	0	0	0	1	0.1
95.70-95.65	0	0	145.9	92.8	43.4	0	0	57	179.5	256	0	0	0	2.6	0.5
95.65-95.60	79	0	132.4	104.2	54.4	0	0	98.2	244.7	308.4	10.9	0	7.9	8.5	0.4
95.60-95.55	58	91.7	174	142.6	103.5	0	0	98.6	257.3	346.9	0	0	0	14.8	2.4
95.55-95.50	116.1	182.6	293.1	129.8	62.3	0	44.9	127.4	400.4	440.6	0	26.2	12.6	18.3	2.7

Table A43-7 continued

N242 E140			Cort					Quartz					Flakes		
SW	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
98.25-98.20	0	0	5.7	18.7	0	0	0	2.5	33.1	1.3	237.5	134.4	64.4	78.1	3.5
98.20-98.10	35.2	20.8	0	16.8	0.4	0	0	13.9	63.3	2.8	453.6	100.9	88.4	61.3	64.4
98.10-98.00	46	0	13.5	29.9	6.7	0	0	20.7	73.2	9	93.3	126.8	41.7	56.3	4.2
98.00-97.95	11.07	0	9.2	13	1.5	19.6	0	0	38.3	4.4	44.7	36	26.9	39.1	2.2
97.95-97.90	0	0	0	2.9	45	0	0	0	7.8	3.8	4.3	2	0	3.2	0.9
97.90-97.85	0	0	0	5.5	4.7	0	0	0	9.4	72	0	0	0	1.8	1.1
97.85-97.80	0	0	0	1.7	5	0	0	0	9.4	45.8	0	0	0	1.6	0.6
97.80-97.75	0	0	6.4	19.6	10	0	0	2.6	31.4	156.2	0	0	0	5.1	1
97.75-97.70	0	0	11.1	30.5	14.4	0	0	2.3	72.8	270.1	0	0	0	6.7	1.8
97.70-97.65	0	20.5	56.5	89.2	26.6	0	0	9.3	201.7	705.3	0	0	4.2	11.8	5.6
97.65-97.60	78.8	70.1	278.9	373.7	67.7	0	0	8.8	1895.4	2692.2	0	0	22.1	62.3	14.7
97.60-97.55	44.3	64.6	128.7	171	39	0	0	32.3	1645.7	2541	0	0	19.7	11.2	7.6
97.55-97.50	0	0	56	60.6	22	0	22	86.7	957.6	1289	0	0	1.9	13.2	4.9
97.50-97.45	0	44.1	24.2	20.1	17.4	0	9.8	31.5	170.4	293.2	0	0	0	2.6	3.2
97.45-97.40	190.5	58.6	157.2	74.9	31.1	0	86.5	59	234.7	353.8	0	11.7	11.1	17.4	7.2
97.40-97.35	204.3	82.3	55.8	74.6	59.7	0	14.3	56.7	200.2	386.6	14.4	2.2	4	4.7	27.4
97.35-97.30	65.4	200.1	221.8	113	72.4	0	56.1	169.1	315.9	617.5	0	0	4.5	11.5	5
97.30-97.25	1106.4	881.3	997.7	459.5	234.1	160.6	121.8	560.2	1065.6	1813.9	64.2	32.8	11.3	42.4	23.2
97.15-97.10	0	17.1	3.8	9.1	7.3	0	0	2.6	12.7	22.7	0	0	0	1.5	0
97.10-97.05	0	6.1	9.2	10.4	10.5	41.7	19.9	6.5	17.7	32.9	0	0	0	0.7	0.6
97.05-97.00	0	13.6	15.9	67.2	56.4	0	6.4	11.1	50.1	96	0	0	0	1.5	1.3
97.00-96.95	0	36.2	22.1	30.4	28.3	0	0	33.8	63.5	82.2	0	0	0	1.3	1.6
96.95-96.90	0	66.4	30.5	42.1	37.3	0	10.1	31.2	91.6	101.9	0	0	0	1.2	1.2
96.90-96.85	42.1	26.2	30	57.6	39.3	0	55.5	62.3	99	136	0	0	3.7	1.7	2.2
96.85-96.80	0	30.4	33.3	33.4	33.3	0	29.7	18.7	64.6	98.4	0	0	0	1	1.2
96.80-96.75	39.4	14.1	19.3	22.4	22.9	0	1.5	12.1	50.2	88.6	0	0	0	0	1.3
96.75-96.70	0	0	20.9	21.3	24.4	0	9.2	21.5	57.3	86.5	0	0	0	0.9	0.8
96.70-96.65	0	73.1	12.7	27.9	16.2	0	30.7	38	62.6	58.4	0	0	2.3	1	0.7
96.65-96.60	16.5	25.9	22.5	39.4	20.3	22.1	41.7	35.2	71.6	84.2	0	0	1.9	0.2	0.4
96.59-96.55	10.5	28	8.9	19.5	33.6	0	4.7	13.5	71.6	74	0	0	0	1.6	0.6
96.55-96.50	26.4	109.1	35.4	26.5	18.3	0	8.4	62.8	103.9	87.6	0	0	3.1	3.5	1.3

Table A43-7 continued

N242 E140			Cort					Quartz					Flakes		
SW	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
96.50-96.45	0	93.8	57	55.3	38.5	0	28.7	53.1	154.3	146.7	0	12.1	9.6	4.6	0.9
96.45-96.40	0	7.4	24	32.8	24.4	0	10.4	26.6	62.2	84.9	0	0	1.7	0.8	1.1
96.40-96.35	0	13.5	14.7	9	14.3	0	0	7.4	33	50.5	0	0	0	7.9	1.8
96.35-96.30	0	30.1	32.7	24.9	40.1	0	7.6	18.3	84.9	125.2	0	0	3.1	4.15	2.2
96.30-96.25	0	29.8	11.6	28.7	30.7	0	24.9	33.5	61.3	73.1	0	9.5	1.5	7.8	3
96.25-96.20	0	0	16.9	16.3	20.5	0	5.3	10.6	34.3	54.7	0	0	0	3.9	2
96.20-96.15	18.3	40.4	10	31.8	30.9	0	20	33	68	58.2	0	2.6	4.1	3.7	1.8
96.15-96.10															
96.10-96.05	112.8	108.8	31.6	33.5	34.9	0	6	47.9	114.7	107.4	0	0	2.7	0.5	0.6
96.05-96.00	16.9	63.4	63.5	56	40	21.8	14	84.2	126.3	164.1	0	0	5.7	4.3	0.3
96.00-96.95	16.5	30.7	20	41.3	25.8	27.7	32.4	66.7	155.2	167.4	0	0	2.7	6.9	0.9
96.95-96.90	30.4	35.4	23.9	33.9	22.6	0	28.7	72.2	87.5	139.3	0	0	1.3	4.2	1.4
96.90-96.85	0	52.2	37.6	23.1	16.3	0	39.6	42.1	64.4	96.8	0	0	0	5	0.6
95.85-95.80	0	38.6	27.1	28.8	21.9	0	28.5	39.6	99.4	101.6	0	0	2.2	4.3	0.6
95.80-95.75	0	26.3	37.6	66.7	35.4	0	0	21.8	112.8	158.4	0	0	1.8	6.3	2.5
95.75-95.70	109.2	74.9	46.8	64.5	45.7	0	39.1	73.9	118.7	155.7	0	0	0	3.2	4.8
95.70-95.65	114.9	194.7	85.1	91.8	81.6	0	51.7	66.2	158.8	209.9	0	0	0	2.7	1.2
95.65-95.60	52.1	79.3	33.5	66.2	53.8	0	11.7	31.9	95.9	190.9	0	9.4	0	3.9	2.8
95.60-95.55	0	50.3	37.7	48.9	33.9	0	0	34	91.7	178.8	0	0	2.1	7.3	1.5
95.55-95.50	93.9	163.8	131.7	156.4	74.7	24.4	64.3	81.9	296.5	436.1	0	17	13.8	16.5	1.9
95.50-95.45	51	26.6	36	65.7	22.3	0	21.9	95.5	72.9	116.5	0	3.9	0.9	0	0
95.45-95.40	121.8	211.5	96.7	144.8	50.3	0	37.2	46.2	204.1	298.9	0	8.1	0	4.9	0.8
95.40-95.35	341.1	427.4	327.9	303.4	131.6	30.1	115.3	185	480.8	480.4	0	25.3	22.6	17.4	8.5

Table A43-7 continued

N242 E140			Cortical					Quartz					Flakes		
NW	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
98.25-98.20	0	0	5.7	18.7	0	0	0	2.5	33.1	1.3	237.5	134.4	64.4	78.1	3.5
98.20-98.10	35.2	20.8	0	16.8	0.4	0	0	13.9	63.3	2.8	453.6	100.9	88.4	61.3	64.4
98.10-98.00	46	0	13.5	29.9	6.7	0	0	20.7	73.2	9	93.3	126.8	41.7	56.3	4.2
98.00-97.95	11.07	0	9.2	13	1.5	19.6	0	0	38.3	4.4	44.7	36	26.9	39.1	2.2
97.95-97.90	53.8	0	0	3.9	3.8	0	0	0	11.5	39.3	35.2	17.1	19.3	11.9	5.2
97.90-97.85	0	54.1	2.5	15.5	9.9	0	0	4.6	26.2	79.5	0	10.4	3.8	10.9	4.8
97.85-97.80	0	6.5	1.1	21.2	14.9	0	0	2.7	115.4	282.9	27.5	12.5	13.2	5	5
97.80-97.75	0	0	30.6	51.1	14.9	0	0	8.5	234.1	531.3	0	5.5	11.2	19.6	6.5
97.75-97.70	0	14.5	32.8	79.4	25.6	0	0	9.8	346.6	833.8	0	7	12	19.8	11.6
97.70-97.65	0	100	111.2	242.6	80.6	0	0	20	924.9	1762.6	0	0	8.4	34.2	27.5
97.65-97.60	0	135.1	1063.3	1014.1	165.1	0	0	26.7	5803.5	5378.6	0	0	50.6	128.6	27.1
97.60-97.55	109	160.1	514.7	666.2	174.2	79.2	27.6	72.4	4791.1	5470	24.1	0	30.2	105.6	18.4
97.55-97.50	238.8	85.6	414.3	201.5	61	118.9	54.8	111.5	2034.8	2747.4	46.7	0	13.7	54.9	16.9
97.50-97.45	301	187	252.8	365.4	139.8	0	135	346.1	889	1783.8	0	0	11.6	14.7	12.3
97.35-97.30	132.5	197.3	156.7	143.2	65.7	70.9	185.7	180.9	418.5	447.2	0	0	2.5	11	5.9
97.45-97.40	253.4	142.1	143.4	81.7	58.6	0	34.2	182.8	389.3	702.7	0	13.1	7.4	7.8	7.6
97.40-97.35	358.8	85.5	111.2	114.5	74.4	129.1	31	140.7	318.8	553.9	45.9	0	0	16.1	33.9

Table A43-7 continued

N242 E140			Cort					Quartz					Flakes		
SE	**2.5**	**1**	**1//2**	**1//4**	**1//8**	**2.5**	**1**	**1//2**	**1//4**	**1//8**	**2.5**	**1**	**1//2**	**1//4**	**1//8**
98.25-98.20	0	0	5.7	18.7	0	0	0	2.5	33.1	1.3	237.5	134.4	64.4	78.1	3.5
98.20-98.10	35.2	20.8	0	16.8	0.4	0	0	13.9	63.3	2.8	453.6	100.9	88.4	61.3	64.4
98.10-98.00	46	0	13.5	29.9	6.7	0	0	20.7	73.2	9	93.3	126.8	41.7	56.3	4.2
98.00-97.95	11.07	0	9.2	13	1.5	19.6	0	0	38.3	4.4	44.7	36	26.9	39.1	2.2
97.95-97.90	0	0	0	6.9	5.9	0	0	0	8.7	4	0	3.2	1	0.9	1
97.85-97.80	0	0	7.1	19.6	20	0	0	0	54	148.6	0	0	1.8	7.1	2.4
97.80-97.75	0	0	18.3	45.9	19.4	0	0	0	67.8	348.2	0	0	0.4	9.8	4.4
97.75-97.70	0	21.4	20.5	83.7	30.2	0	0	0	138	691.9	0	0	6.8	20	5.2
97.70-97.65	0	26.4	46.2	109.9	46.3	0	0	4.2	440.6	1623.3	0	0	12.7	28.9	14.7
97.65-97.60	72.3	145.1	**559.1**	877.6	136.7	0	0	42.5	4382.8	10968.7	0	20.3	69.3	114	29.6
97.60-97.55	0	39.3	82.2	134.7	39.3	0	20.7	34	921.6	1677.2	0	29.5	34	107.6	21
97.55-97.50	36	51.1	225.4	325.4	69.7	0	32.6	89.5	1110.9	1808.7	0	0	23.5	39.3	10.6
97.50-97.45	805.1	314.6	322.3	280.9	78.8	89.3	182.8	481.7	1118.1	1344.3	0	11	29.8	11.9	6
97.45-97.40	135.6	176.9	269.8	202.6	67.5	235.1	102.5	310.2	721.7	951.7	0	7.5	16.1	15.6	8
97.40-97.35	117.6	120.2	103.4	97.6	43	0	50.8	84	280.3	403.1	0	22.7	6.1	6.2	4.4
97.35-97.30	0	97.5	120.8	62.7	59.2	0	0	34.7	77.1	194.5	0	0	8.3	9.3	4.9
97.30-97.25	133.6	30.2	31.3	27.6	7.3	0	0	29.1	48.7	127.5	0	0	5.1	1.6	1.5
96.80-96.75	0	5.4	4.8	16.3	10.1	0	10.9	13.6	54.3	71.2	0	8.9	2.4	3.1	1.6
96.75-96.70	0	32.5	24.6	20.7	15	0	26.4	38.9	64.7	97.2	0	3.1	0	2.7	0.5
96.70-96.65	39	34.7	40.7	31.5	29.6	0	11.8	48.1	116.9	181.7	0	1.7	3.9	6.4	2.2
96.65-96.60	0	44.9	16.6	14.8	15.3	0	7.3	30.1	62.3	96.3	0	2.6	0	5.4	2.2
96.60-96.55	0	22.9	42.9	31.8	30.6	0	0	12.3	63	117.9	0	0	1.7	5.1	1.9
96.55-96.50	0	45.2	35.4	31.4	26.1	0	20.9	33.3	102.1	127.5	0	0	0	9.7	1.9
96.50-96.45	13.1	9.7	26.2	16.1	16.1	0	0	16.9	60.3	63.7	0	0	1.7	1.1	0.6
96.45-96.40	0	7.3	23.2	25.3	15.4	0	5.8	17	60.8	82.3	0	0	0	7.8	0.8
96.40-96.35	108.3	91.5	88.4	64.3	37.6	31.5	41.6	69.1	218	150	0	12.7	12.1	20.3	2.5
96.35-96.30	59.2	83.3	57.6	33	19.3	0	22.8	89.3	116.2	92.9	0	0	1	6	0.5
96.30-96.25	0	43.3	71.8	56.5	27	47.2	41	76.6	192.8	175.5	0	0.7	0	9.1	2.2
96.25-96.20	114.6	143.6	89	72.5	38.9	0	11.3	115.9	251.7	181.3	0	0	8.9	16.9	1.3
96.20-96.15	131.2	73.9	45.6	66.3	33.1	0	11.7	68.1	190.4	176.9	11.1	0	13.1	4.2	0.9
96.15-96.10	0	84.1	45.6	70.6	63.8	0	21.9	75.6	218.7	193	0	0	5.1	3.9	0.9

Table A43-7 continued

N242 E140			Cort					Quartz					Flakes		
SE	**2.5**	**1**	**1//2**	**1//4**	**1//8**	**2.5**	**1**	**1//2**	**1//4**	**1//8**	**2.5**	**1**	**1//2**	**1//4**	**1//8**
96.10-96.05	35.6	170.8	115.8	104.6	72.1	0	49	108.1	302.5	341.8	0	16	12.9	6.1	0.2
96.05-96.00	55.5	90.6	71.5	74.8	43.9	68.3	74.3	62	196.6	189.4	14.5	0	4.3	2.9	0.7
96.00-95.95	137.2	40.3	69	76.8	73	0	9.7	67.3	183.6	190.3	0	0	9.6	9.8	4.4
95.95-95.90	0	75.3	95.5	57.1	37.3	0	9.6	83.4	163.6	145.8	0	0	0	4.3	4.5
95.90-95.85	0	20.6	45.2	75.4	81.2	0	15	70.7	170.2	232.2	0	0	7	3.8	0
95.85-95.80	21.6	35.1	36.2	82.1	60.2	0	0	34.6	208.3	212.9	0	0	0	1.6	2.2
95.80-95.75	154.6	182.2	54.9	96	72.2	0	75	93.9	219	240.6	0	0	0	8.3	2
95.75-95.70	55.7	86.7	88.9	92.2	74.9	0	39.2	85.7	190.3	246.4	0	6.4	10	8.6	4.4
95.70-95.65	107.4	192.7	164.4	163.1	88.6	0	42.8	109.1	242.7	245.8	0	0	1.6	4.8	0.7
95.65-95.60	77.6	280.1	186.7	217	117.7	0	88.4	169.7	355.6	345.4	0	0	2.2	14.4	4.7
95.60-95.55	344.2	396.3	269.7	252.3	131.4	163.8	159.9	204	435.5	379.2	0	9	15.6	16.8	5.3
95.55-95.50	537.8	569.3	244.6	208.4	103.1	123.4	108.8	125..2	297.6	411.11	0	0	5.2	6.5	3.3
95.50-95.45	231.4	197.5	182.7	155.5	55.7	0	40.1	85.2	181.7	438.9	0	12.1	16.3	11.1	0.1
95.45-95.40	94.3	149	140	179.5	66.1	36.3	74.8	114.1	298.2	470.5	18.4	0	0	6.4	1.9
95.40-95.35	230	347.3	233.1	336.1	99.8	40	164.7	235.1	600.2	835.6	18	15.2	30.5	19.3	0.6

Table A43-7 continued

N242 E140			Cort					Qtz					Flakes		
NE	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
97.95-97.90	0	6.6	12.1	19.2	16.5	0	0	10.2	21.8	98	0	11.4	0	0	6.6
97.90-97.85	0	0	7.2	26.1	21.8	0	0	0	37	143.5	0	4.9	0	0	0
97.85-97.80	0	6.1	0	41.3	26.8	0	0	3.8	62	234	0	0	3.5	0	6.1
97.80-97.75	0	0	23.3	85.3	41.5	0	0	2.5	103.8	399.8	0	0	0	0	0
97.75-97.70	0	12.6	24.9	84.9	38.1	0	0	10.5	101.8	465.7	0	0	0	0	12.6
97.70-97.65	0	18.2	77.4	112.6	40.4	0	0	3.3	334.9	801.4	0	0	18.3	0	18.2
97.65-97.60	74.9	202.1	362.1	481.1	64	0	0	27.6	1241	1983.5	0	4.9	13.7	74.9	202.1
97.60-97.55	161	118.6	247.3	427.4	64.3	0	0	88.9	1099.5	1783.6	0	8.1	20	161	118.6
97.55-97.50	168.3	108.3	210.5	368.2	137.8	50.4	96.2	199.5	933.9	1944.2	0	0	30.8	168.3	108.3
97.50-97.45	168.5	56.2	166.7	104.6	63.2	35.2	79.7	162.3	626	916	0	0	3.5	168.5	56.2
97.45-97.40	118.1	74.2	83.9	149.2	66.9	0	78.2	115.5	332.4	827.6	13	0	8.2	118.1	74.2
97.40-97.35	41.3	103.4	132.7	152.5	83.8	0	120	174.9	439.2	738	0	25.7	1.7	41.3	103.4
97.35-97.30	125.9	112.6	116.8	166.9	58.5	0	51.1	64.7	166.3	269.8	0	0	11.6	125.9	112.6
97.30-97.25	50.7	43.7	14.3	13.8	10.6	0	75.7	29.4	160	274.8	312.7	0	0	50.7	43.7

Table A43-7 continued

N242 E142			Cortical					Quartz					Flakes		
SE	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
98.00-97.95	0	0	18	6.7	5.8	0	0	4.8	24.2	31.8	0	0	0	6.5	1.7
97.95-97.90	0	0	3.7	2.3	3.1	0	0	5.4	15	25.3	0	0	0	1.6	1.3
97.90-97.85	0	0	2	15.6	9.3	0	0	7.2	29.6	68.5	0	5.1	14.5	3.2	2.4
97.85-97.80	42.6	0	7.1	40.7	12.2	54.3	0	0	64.3	134.3	13.3	0	1.2	4	3
97.80-97.75	0	8.5	11.5	36	16.4	0	0	0	45.3	133	0	3.9	23.6	18	6
97.75-97.70	13.2	4.4	26.6	24.8	18.2	0	0	28	96.7	185.6	0	3.4	0.8	2.9	2.6
97.70-97.65	0	15.4	16.2	14.1	10.3	0	0	10.1	61.9	97.5	0	10	2.7	3.2	1.6
97.65-97.60	0	37.1	88.3	95.9	17.6	0	0	3.9	228.4	820.8	0	0	23.6	21.9	2.8
97.60-97.55	0	10.9	18.7	21.8	17.2	0	0	17.3	134.8	192.8	0	5.2	2.6	5.2	2.3
97.55-97.50	0	44.8	131.5	95.9	26.4	65.8	22.6	157.5	273.7	281.2	0	14.8	7.9	6.3	1.3
97.50-97.45	0	39.6	114.8	73.6	15.5	0	0	22.5	207	275	0	0	3.8	2.5	1.1
97.45-97.40	30.7	102.3	314.6	173.7	37.1	46.7	0	124.2	1745.7	1373.7	201.7	16.5	47.2	52	6.7
97.40-97.35	68.6	88.8	237.5	222.5	33.8	62.3	0	93.7	1622.1	1668.6	0	18.2	51.9	22.2	3.6
97.35-97.30	431.6	359.4	635.9	416.4	107.3	0	51.2	395.7	1623	2413.3	0	0	38.1	48.9	17.2

Table A43-7 continued

N242 E142			Cortical					Quartz					Flakes		
NE	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
98.00-97.95	0	26.6	4.2	11	9.2	0	0	0	36.5	45.4	29.2	40.7	35.5	30.2	12.7
97.95-97.90	0	32.8	22.9	19.2	8.7	0	27.4	20	40.4	67.2	60.7	22.5	18.8	21.7	10.3
97.90-97.85	0	0	25.5	32.3	1.9	0	21.1	28.8	73.1	97.1	21.7	23..3	12.6	21.4	10.8
97.85-97.80	200.2	6.5	19.4	46.7	20.6	0	0	6.6	81.5	190.5	49.9	12.5	10.9	18.5	12.4
97.80-97.75	0	8.5	11.5	36	16.4	0	0	0	45.3	133	0	3.9	23.6	18	6
97.75-97.70	40.6	0	41.2	29.3	18.9	0	0	36	78.1	121.4	0	24.4	18.5	20.2	7.9
97.70-97.65	0	11	22.4	27.8	17	0	26.1	15.5	88.8	129.9	0	39.8	11.4	10.5	5.3
97.65-97.60	61.9	0	26	47.7	13.5	30.5	0	40.2	96.1	106.2	16.5	7.8	1.3	6.6	2.6
97.60-97.55	81.1	83.1	45.5	64.7	30.2	0	38.5	50.5	158	194.9	33.5	5.7	10.5	11.2	4.2
97.55-97.50	0	56.2	204.6	100.3	30.2	75.1	79.5	304.3	337.8	315.3	0	10.9	21.2	10	4.4
97.50-97.45	413.8	244.4	259	125.5	45.2	0	116.1	144.5	436.5	458.1	85.1	24	20.8	53.5	9.7
97.45-97.40	262.8	254.7	211.8	154.8	66.6	186	102.9	260.5	444.4	389.3	0	85.4	73.1	41	7.2
97.40-97.35	152.4	174.1	297.2	213.4	86.4	69.7	108.3	213	540.9	472.8	46	16.7	29.7	21.2	8.3
97.35-97.30	323.9	190.2	470.7	361.1	149.2	0	116	362.3	861.6	1240.2	0	0	55.1	32.9	15.8

Table A43-7 continued

N242 E142			Cortical					Quartz					Flakes		
NW	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
98.00-97.95	0	0	6.3	5.9	6.1	0	0	0	20.5	49.9	0	10.5	7.2	5.4	3.5
97.95-97.90	0	0	10.4	14.8	9.3	0	0	9.9	27.9	94.7	0	21.7	4.8	6.5	4.2
97.90-97.85	0	0	3	29.6	9.3	0	0	0	30.3	116.4	0	0	0	5.2	2.7
97.85-97.80	0	0	26.3	48	17.3	0	0	2.1	71.8	220.1	0	0	9.6	9.4	4.3
97.80-97.75	0	11	14.1	44.6	16.8	0	0	11.6	77.2	195.1	0	0	0	11.5	2.5
97.75-97.70	0	0	28.4	39.6	20.1	0	0	16.8	140.5	196.8	0	0	4.8	11.8	2.6
97.70-97.65	0	0	5.6	30.9	15.1	0	0	16.1	98.2	177.7	0	0	8.1	7.2	3.4
97.65-97.60	0	12.2	39.6	30.3	14.8	0	0	17.5	116.2	166.9	0	0	3.1	5.6	2.2
97.60-97.55															
97.55-97.50	0	44.8	131.5	95.9	26.4	65.8	22.6	157.5	273.7	281.2	0	14.8	7.9	6.3	1.3
97.50-97.45	318.5	59.9	86.4	60	23.8	0	14.9	98.4	155.8	180	0	0	6.7	6.3	3.1
97.45-97.40	0	127.4	119.1	72.6	43.2	0	0	90.3	236.9	279.8		0	2.6	11.6	2.9
97.40-97.35	601.4	36.8	156	102.1	46.5	0	60.4	145	255.3	393.4	0	39.6	13.1	10.5	3.8
97.35-97.30	0	38.2	38.8	28.7	11.3	0	24.9	48.8	58	90	0	0	2.3	1.4	0.6
97.18-97.13	0	0	3.7	0.8	0.7	0	0	2.7	1	2.3	0	0	0	0.7	0.1
97.13-97.08	0	0	4.4	0.3	0.3	0	0	0	5.1	5.9	0	0	0	1.3	0.5
97.08-97.03	0	0	0	3.7	2.6	0	0	10.3	12.6	17.9	0	0	0	1.2	0.7
97.03-96.98	0	0	4.1	1.8	1.3	0	0	10.1	8.3	8.3	0	0	0	0.3	0.1
96.98-96.93	0	7.4	3.9	3.4	4.6	0	0	0	16	34.2	0	0	5.5	0.7	2.1
96.93-96.88	0	12	3.4	5.7	6.1	0	0	4	9.7	45.9	0	0	0	1.5	1.4
96.88-96.83	0	5.7	7.3	3.7	5.8	0	0	7.5	12.2	37.8	0	0	5.5	4	1.6
96.83-96.78	16.6	13.4	12.5	12.2	8.2	0	0	0	44.9	47.5	0	0	0	4.6	1.4
96.78-96.73	0	13.4	10.5	15.4	13.4	0	0	15.1	50.9	58.4	10.2	8.8	12.4	0.4	1
96.73-96.68	0	17.7	3.8	24.9	14.7	0	0	40.6	56.8	69.3	0	7.4	2.6	4.3	0.4
96.68-96.63	0	25	33.8	13	14.7	0	6.4	40.2	63.4	87	0	0	0	2.1	0.9
96.63-96.58	0	21.1	19.1	17.5	17.4	0	8.4	8.6	58.9	44	0	7.1	9.7	1.3	0.1
96.58-96.53	13.3	25.3	15.3	26	23.2	0	21.8	5.9	79.3	176	0	0	0	2.9	4.8
96.53-96.48	0	15.8	22	20	25.3	0	0	0	39	166.9	0	0	2	6.9	5.2
96.48-96.43	0	0	4	11.2	20.6	0	0	0	24.1	128.1	0	0	0	1.3	0.8
96.43-96.38	0	8.2	12.1	11	20.5	0	0	11	43.6	93.7	0	0	0	1.9	3.1
96.38-96.33	40.5	23.4	22.7	26.8	35.1	0	4.7	19.2	41.4	112.5	0	8.9	0	1.5	2.6

Table A43-7 continued

N242 E142			Cortical					Quartz					Flakes		
NW	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
96.33-96.28	35.7	89.4	68.1	41.1	59.2	38.5	13.2	15	95.5	158.6	0	0	2	3.4	2.5
96.28-96.23	50.9	28.6	278	40.7	35.2	0	15.7	49.9	110.5	131.2	21.9	10	8.8	12.8	7.7
96.23-96.18	43.5	55.2	51.9	43.7	33.5	0	19.9	34.6	87	120.6	0	0	13.3	16.8	7.9
96.18-96.13	22.7	55.1	49.4	45.4	48.2	0	14.9	54.9	116.7	141	0	0	15.8	6.7	8.6
96.13-96.08	53	45.8	46.8	61.8	53.8	0	8.3	8.7	99.1	146.5	0	0	4	5.2	5.2
96.08-96.03	14	57.8	71.7	84.9	48.4	61.3	20.1	26.4	140.6	187.6	0	0	5.8	17.5	7
96.03-96.00	11.7	18.9	66.7	43	34.9	0	13.5	31.1	90.6	130	0	0	7	2.1	0.2
95.00-95.95	37.8	27.8	44.8	47.3	35.6	0	0	43.1	147.3	147.8	0	0	6	8.8	4.5
95.95-95.90	31.8	54.2	51.1	53.5	46.7	0	58.4	51.3	162.6	216.3	0	0	5.5	8	0.6
95.90-95.85	80.6	51	64.1	67.6	48	0	50.3	53.3	170.8	206.1	0	9.7	8.1	3.8	0.3
95.85-95.80															
95.80-95.75															
95.75-95.70	50.6	109	150.2	121.1	66.1	50.1	82.2	88.2	274.7	255.6	0	3.7	5	6.8	2.2
95.70-95.65	117.3	277.9	136.3	157.2	68.5	0	216.7	125.3	261.6	268.9	0	0	6	8.8	4.5
95.65-95.60	463.8	453.8	285.3	259.2	108.2	41.4	209.6	202.2	367.5	424.8	0	0	1.4	5.3	0.3
95.60-95.55	431	434.4	235.7	244.7	121	276.2	177.7	176.6	600.8	607.1	0	13.5	19.9	20.3	8.9
95.55-95.50	108.5	244	148.1	162.8	96.2	40.4	60.4	78.3	486.1	567.7	0	0	0	32	27.8
95.50-95.45	276.3	432.5	229.8	218.4	55.8	81.1	74	150.1	564.2	609.9	0	0	13.3	16.8	7.9

Table A43-7 continued

N242 E142			Cortical					Quartz					Flakes		
SW	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
98.00-97.95	0	0	0	0	2.7	0	0	0	1.9	12.6	0	0	6.9	1.5	1.9
97.95-97.90	0	0	3.3	1.1	5.8	0	0	0	4.9	22.8	0	0	0	2.5	0.9
97.90-97.85	0	0	26.2	31.6	13.9	0	28.6	15.4	74.8	100.1	15.6	26.4	15.6	20.3	9.4
97.85-97.80	0	0	0.8	6.9	7.2	0	0	0	18.1	31	0	0	0	0.5	0.5
97.80-97.75	0	0	1.4	13.9	10.7	0	0	2.3	22.5	75	0	0	0	0.7	1.5
97.75-97.70	0	13.2	22.3	56.6	18.8	0	0	7.4	175.5	245	0	0	4.8	6.5	1.9
97.70-97.65	0	0	47.9	50.9	15.6	0	0	12	268.8	502.6	0	0	0	11.8	3.3
97.65-97.60	0	37.1	88.3	95.9	17.6	0	0	3.9	228.4	820.8	0	0	23.6	21.9	2.8
97.60-97.55	0	31.2	395.2	263.4	32.9	0	0	44.3	1937.1	2131.7	0	0	34.9	57.4	5.9
97.55-97.50	0	0	264.8	182.1	30.9	0	0	53	1559.4	1642.6	0	0	19.8	22.3	3.6
97.50-97.45	107.8	0	107.3	85.9	33.1	55.9	0	59.4	460.8	747.2	0	0	5.6	12.7	5
97.45-97.40	187.1	101.7	218.1	323.8	114.2	0	73.9	94.1	899.9	1717.3	0	0	21	26.9	5.3
97.40-97.35	463.8	91.1	284	318.9	77.1	66.8	67.7	114.3	1164.2	2117.3	0	9.1	16.3	27.5	6.1
97.35-97.30	423.4	207.9	612.3	517.1	295.4	212.4	143.3	417.5	1855.7	5508.1	0	16	45.3	85.7	51
97.15-97.10	0	0	0	1.6	4.2	0	0	0	3.2	22.1	0	0	0	0	0
97.10-97.05	0	0	12	22.6	16	0	0	12.2	51.2	81.8	0	0	0	0.6	0.8
97.05-97.00	16.8	45.3	28.5	38.6	44	0	28.6	41.1	113.5	29.5	0	0	0	1.4	3
97.00-96.95	0	13.7	11.4	29	23.9	0	14.2	7.4	69.1	143.6	0	0	0	11	1.8
96.95-96.90	0	13.3	18.8	28.9	29	0	5.5	23.4	64.3	178.3	0	0	0.6	0.1	0.6
96.90-96.85	0	29.1	19.5	30.5	40.9	0	0	20.8	98.4	211.4	0	4.4	3.5	7.5	3
96.85-96.80	0	31.7	23.3	24.3	24.3	0	0	28.5	78	147.8	0	0	0	9.4	4.6
96.80-96.75	24.6	23.2	24.4	20.3	18.7	0	0	17.5	102.3	120.3	0	0	9.4	13.6	14.5
96.75-96.70	11.3	43.4	37.7	21.7	28.5	0	0	25.9	91.9	142.2	0	0	0	4.4	4.5
96.70-96.65	0	18.8	45.5	46.9	43.6	0	0	51.7	203.5	256.7	0	0	5.6	7.8	2.8
96.65-96.60	0	0	19.3	26.6	37.1	0	0	38.9	132.7	229.2	0	0	6.8	2.4	3
96.60-96.55	0	5	20.5	13.2	22.4	0	12.3	12.8	93.3	190.3	0	0	4.5	14.2	4.8
96.55-96.50	0	27.1	16.1	23.5	23.9	0	9.4	24.5	78.1	122.7	0	0	5.4	3.6	0.1
96.50-96.45	16.8	50.3	34.7	70.2	68.3	0	13.6	28.9	77.7	253.1	0	0	0	5.4	1.1
96.45-96.40	10.6	69.4	55.2	75.9	77.6	0	19.6	42.9	160	239.8	0	0	2.2	4.9	1.9
96.40-96.35	12.2	92.8	56.1	61	90.6	0	42.3	36.2	153.5	254.8	0	0	0	1.5	4
96.35-96.30	77.7	65.3	60.9	108.2	73.9	0	40.7	102.7	243.4	283.7	0	0	2.1	10.2	4.6
96.30-96.25	46.9	106.9	97.9	94.8	76.5	0	51.6	76.3	288.5	317.8	0	0	5.1	14.9	3.6

Table A43-7 continued

N242 E142			Cortical					Quartz					Flakes		
SW	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
96.25-96.20	137.9	76.5	88	112.9	85.1	0	0	103	333.4	309.8	0	0	12.6	8.9	10.3
96.20-96.15	0	41.9	75.8	128.8	87.8	0	25.2	103.1	398.9	332.4	0	0	0	15.2	6.9
96.15-96.10	0	165.1	109.7	137.2	83.6	15.3	33.2	92.8	346.6	313.1	0	0	6.7	10.4	6.6
96.10-96.05	47.5	157.9	119.6	135.3	71.7	17.6	64.1	59.8	253.9	227.6	0	0	5.1	8.4	2.5
96.05-96.00	43.2	75.5	123.9	124.5	91.8	54.1	28.4	58.2	197.3	233.5	0	0	5.1	8.3	5.2
96.00-95.95	0	115.4	73.6	88.2	61.8	18.5	101.8	80.6	213.3	221.6	0	0	0	10.6	5.6
95.95-95.90	30.4	46.1	73.9	73.6	58.5	0	58.3	79.8	175.3	169.9	0	0	0	6.9	2.9
95.90-95.85	50.3	132.2	73.3	43.5	33.9	0	19.4	129	209.2	223.8	0	0	12.1	12.4	6.4
95.85-95.80	62.3	167	89.1	79.7	64.6	58.9	109.7	74.8	334.9	257.9	0	0	1.1	4.8	3
95.80-95.75	51.1	122.4	104.8	101.9	76.1	0	102.8	106.7	227.8	240.5	0	0	0.8	4	2.8
95.75-95.70	106.8	225.1	180.1	209.7	139	31.1	53.1	123.9	372.1	295.8	0	0	2.8	24.9	9.3
95.70-95.65	309.9	391.7	287.8	345.5	235.6	0	124,4	97.9	362.8	338.6	0	14.7	15.4	13.8	3.2
95.65-95.60	314.6	269.4	261.8	237	141.4	24.9	146.6	132.1	360.6	255.4	0	0	9.1	10.8	11.9
95.60-95.55	208.3	671.3	305.8	428.7	190.7	17.4	209.9	228.1	437.7	335.6	16.2	2.8	4.3	31.7	18.8
95.55-95.50	358.1	267.3	190.3	166.5	81.8	35.6	179.3	92.7	290	309	0	2.5	6.8	12	9.1
95.50-95.45	53.8	78.6	70.1	73.9	43.3	0	29.2	41.4	147.3	237.1	0	0	0	7.9	2.3

Table A43-7 continued

N244 E138			Cortical					Quartz					Flakes		
SE	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
97.12-97.07	0	0	20.3	6.3	2.8	0	0	0	20.4	13.8	0	0	0	0.2	0.2
97.07-97.00	0	0	50.8	40.1	33	0	0	38.9	84.4	142.5	0	0	3.1	1.9	1.5
97.00-96.95	0	0	29.7	27.6	26.9	0	0	5.1	57.7	120.1	0	0	0	1.8	2
96.95-96.90	0	0	54.7	30.9	22.6	0	0	27.5	45.8	102.9	0	0	0	1	0.5
96.90-96.85	0	19.8	23.2	27.4	31.9	0	0	30	59.9	96.6	0	0	0	2	2.3
96.85-96.80	54.3	0	12.5	29.8	24.4	0	0	15.5	57.5	105.7	0	0	1.6	1.3	2
96.80-96.75	0	7.9	30.8	24.4	23.6	0	0	7.1	34	67.9	0	0	0	3.6	0.6
97.75-97.70	0	0	52.7	20.6	19.2	0	0	23.1	34.8	61.5	0	0	0	1.5	0.9
97.70-97.65	0	0	24.8	27.2	31.7	0	17.9	44.9	80.6	114.6	0	13.9	14.8	0.7	1.4
96.65-96.60	0	0	14.2	11	16.3	0	13.7	17.6	43.5	52	0	0	6.9	3.4	1.6
96.60-96.55	0	0	28	33.2	26.3	0	0	10.4	58.2	43	0	3.7	2.1	15.4	4.9
96.60-96.55	0	0	30.3	24.8	12.7	0	0	18.4	44.1	61	0	0	0	6.1	0.8
96.55-96.50	0	0	70.1	42.5	13.6	0	0	62.6	78.6	81.3	0	0	3.1	5.9	1.3
96.50-96.45	38.4	49.4	62.4	62.7	8.5	0	0	68.1	77.6	98.5	0	0	4.8	7.8	1.7
96.45-96.40	49.4	51.8	175.2	71.8	108	45.2	16.5	45.3	158.9	45	0	0	4.4	11.2	2.6
96.40-96.35	0	103.4	48.5	31	22.5	0	0	16.5	45.6	59.5	0	0	2.5	7.8	2.7
96.35-96.30	0	66.7	25.6	26	23.6	0	0	14.2	35.3	64.7	0	0	0	4.4	1.7
96.30-96.25	0	0	22.3	12.2	13.6	0	0	5.5	47.2	59.4	0	0	0	0.7	0.1
96.25-96.20	0	0	9.4	18.8	11.7	0	0	0	27.8	52.4	0	0	0	2.1	0.8
96.20-96.15	0	0	47.2	14.8	17.4	0	0	17.5	39.3	100.9	0	0	0	0.1	1.5
96.15-96.10	0	0	0	9	4.9	0	0	0	12.7	22.4	0	0	0	2.2	0.3
96.10-96.05	0	0	20.8	13.8	7.1	0	0	41.9	30.5	44.8	0	0	0	2.7	0.2
96.05-96.00	0	0	15.5	12.2	0.7	0	0	25.2	47.3	75	0	0	0	0	0.3
96.00-95.95															
95.95-95.90	0	0	38.7	22.6	8.8	0	0	9.1	49	59.8	0	0	3	2.4	0.2
95.90-95.85	0	0	26.9	19.9	7.8	0	0	0	41.7	63.4	0	0	0	1.6	0.5
95.85-95.80	0	60.6	48.9	49.6	13.1	72.9	0	33.7	56.6	98.7	0	0	0	3.3	0.3
95.80-95.75	0	0	6.6	13	4.2	0	0	10.4	27.1	47.9	0	0	0	2.3	0.1
95.75-95.70	0	0	0	8.6	6.2	0	0	22.6	21.1	62	0	0	7.1	1.5	0.5
95.70-95.65	0	0	4.8	6.6	6.8	0	0	7.7	41.3	58.4	0	0	0	1.4	0.1
95.65-95.60	0	49.1	62.5	27.4	8.1	0	0	21.9	90.8	130.5	0	0	17.1	0	11.6

Table A43-7 continued

N246 E138			Cortical					Quartz					Flakes		
SE	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
97.92-97.80	0	0	2.8	9.1	7.7	0	0	7.4	30.5	90	0	0	0	3.2	0
97.80-97.75	0	3.9	5.2	27.9	12.2	0	0	0	32.4	108.9	0	3.7	5.7	7.8	2.1
97.75-97.70	0	8.7	10.8	46	26	0	0	0	98.8	215.8	0	6	0.7	7.1	3.1
97.70-97.65	0	30.5	7.4	37.9	21.7	0	0	2.1	64.3	192	0	3.7	7.2	17.5	3.4
97.65-97.60	15.9	17.6	13	65.8	27.1	0	0	6.6	152.5	347.1	0	3.1	30	16.8	1.5
97.60-97.55	0	10.7	37.7	71.1	29.3	0	0	0	120.1	330.3	0	8.4	10.3	14.2	4.8
97.55-97.50	72.7	56.7	74.1	230.6	81.7	40	101.5	134.1	662.1	925	58.6	69.7	75.4	74.6	11.3
97.50-97.45	16.7	21.3	27.9	66.1	34.9	0	13.6	84.5	189.8	333.8	79.8	17.1	32.2	11	4.4
97.45-97.40	0	15.9	13.2	37.4	34.3	0	42.2	5.9	140.5	242.5	41	8.3	14.2	14.5	4.8
97.40-97.35	17.4	42.2	20.2	45	38	24.3	16.7	39.6	198.9	231.1	26.6	2.1	9.1	11.4	3.4
97.35-97.30	103.9	117.5	57.9	83.9	38.4	0	19.3	61.9	238.6	224.5	67	38.3	8.2	15.3	2.2
97.30-97.25	20.7	27.5	23.9	61.1	30.9	0	13.9	22.5	140.8	188	0	15.5	3.8	10.5	2.7
97.25-97.20	24.1	20.9	28.3	47.6	30.6	0	0	21.3	109.2	171.7	0	3.8	6.3	40.8	2.3
97.20-97.15	37.8	8.8	14.3	26.4	16.5	0	0	11.3	56.6	98.7	0	0	10.8	3.9	1
97.15-97.10	0	0	5.3	3	4.9	0	0	7.3	19.3	28.9	0	0	0	0.7	2
97.30-97.25	0	6.3	6.8	5.1	5.8	0	5.5	6.2	22.6	42.1	0	0	3.2	3.4	0.1
97.25-97.20	0	0	1.8	7	5.6	0	0	0	15.3	24.7	0	0	5.6	1.5	0.4
97.20-97.15	0	0	9.1	4.7	4	0	0	7.8	15.2	30.8	0	0	1.8	1.4	0.6
97.15-97.10	0	15.7	18.9	49.5	38.4	0	9.5	28.9	101.8	180.8	0	0	1.4	3.9	0.4
97.10-97.05	0	16.3	29.7	29.9	25.8	0	0	16.4	87	156.6	0	7.9	0	2.1	0.8
97.05-97.00	0	22.4	17.9	16.8	20.2	0	0	26.6	68	96.2	0	0	0	2.3	0.7
97.00-96.95	0	28.2	50.9	80.6	51.4	0	6	22.8	166.2	245.6	0	0	1.2	6.5	1.2
96.95-96.90	0	11.1	13.9	35	33.2	0	16.7	13.8	90.5	159.4	0	3.5	0	7.2	3.3
96.90-96.85	0	6.9	30.7	64.1	42.8	0	5.8	36.8	148.1	205.4	0	0	1	7.5	2.4
96.85-96.80	0	0	21.2	62.5	43.7	0	11.6	12.9	112	174.1	0	0	0	9.1	4.5
96.80-96.75	0	15.9	14.1	45.9	30.7	0	6.1	20.2	80.1	103.5	0	0	0	10.9	0.2
96.75-96.70	0	0	38.8	66.9	43	0	0	19.7	108	149	0	4.5	1.3	9.2	3.7
96.70-96.65	0	10.6	20.9	43.4	36.4	0	0	22.7	73.2	112	0	0	0.8	4.1	1.2

Table A43-7 continued

N246 E140			Cortical					Quartz					Flakes		
SW	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
97.92-97.80	0	0	2	9.2	5	0	0	0	31	74.2	1	0	3.3	4	0.1
97.80-97.75	0	6	8.3	15.7	9.8	0	0	0	76.9	120	0	0	8.7	8.8	1.2
97.75-97.70	18.9	11.9	7.9	31.8	17.5	0	0	3	149.3	300.1	0	0	10	19.9	3.3
97.70-97.65	0	5.4	51.2	111.3	53.9	0	0	0	408.7	486.7	0	8.3	27.3	31.9	7.7
97.65-97.60	0	105.60	276.60	358.6	57.9	0	13.7	61.5	1440.3	1790.4	0	32.5	57.4	40.3	2.9
97.60-97.55	0	132.5	224.2	428.9	121.3	0	38	48.4	1799	2639.9	0	13.5	101.2	119.3	29.5
97.55-97.50	58.5	114.3	163.4	198.5	60	28.8	68.8	59.5	561.8	1522.6	0	26.8	26.1	29.2	31.5
97.50-97.45	19.8	60.6	65.30	113.8	50.4	0	0	15.2	76	1165.4	15.7	7.9	32.9	36.2	6.4
97.45-97.40	9.5	29.1	32.6	59.7	29.5	46.2	10.5	45.9	205	339.3	0	15.2	25.6	26.7	4.5
97.40-97.35	25.3	49	53.8	68	33.5	0	0	22.1	198.5	379.3	0	5.6	8.2	5.1	0.5
97.35-97.30	42.4	35.5	56.5	64.4	33.1	0	0	35.7	239.9	257.3	0	0	10.3	14.2	2.8
97.30-97.25	0	44	54.50	45.8	34.5	0	0	19	158.7	226.1	0	8.8	9	18.3	3.2
97.25-97.20	0	30.3	20.4	28.7	17.7	0	11.6	24.4	76.8	109	0	0	4.5	7.9	1.6
97.20-97.15	0	4.5	22.3	26.6	13.7	0	0	17.9	85	94.8	0	0	4.4	1.2	1.3
97.15-97.10	26.1	9.3	11	21.2	10.4	0	0	17.9	33.1	67.6	0	0	13.9	1.9	0.8
97.10-97.05	0	22.3	6.8	15.9	4.4	0	4.6	22.8	0	40.6	0	0	1.3	0.5	0.4
97.276-97.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
97.20-97.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
97.15-97.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
97.10-97.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
97.05-97.00	0	30	47.9	57.4	47.5	0	0	27	147.1	297.4	0	3.9	0	10.9	5
97.00-96.95	0	15.9	15	28.6	20.2	0	0	13.3	89	122.4	0	0	0	1.8	1.4
96.95-96.90	0	7	15.6	32.2	29.1	0	0	18.9	106.8	180	0	0	0	5.4	1.6
96.90-96.85	0	0	5.1	22.1	19.2	0	14.4	13	61.7	100.4	0	0	0	4.4	1.2
96.85-96.80	0	0	12..7	24.4	25	0	0	15.7	88.3	112.7	0	0	0	2.4	2.3
96.80-96.75	0	19.9	19.4	31.2	30.4	0	6.8	6.5	72.9	98.3	0	0	2.1	5.3	2.2
96.75-96.70	0	0	5.7	33.2	27.7	0	0	9.4	77.7	91.2	0	0	0	5.7	3.8

Table A43-7 continued

N246 E140			Cortical					Quartz					Flakes		
SW	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
98.30-98.25	0	0	6.7	14.2	2.9	0	8.6	12.7	27.1	1.9	0	64.8	75.1	60.2	9.2
98.25-98.20	0	0	0	6.9	10.5	0	4.7	20.1	0	44.3	34	29.6	28.9	27.3	10.4
98.20-98.15	749.9	0	9.5	14.4	67.2	0	9.9	0	22.6	13.3	394	27.9	40.1	37.9	15
98.15-98.10	252.2	85	24.5	32.5	29.9	0	0	7.7	40.7	141	76	75.4	66.1	42.6	18.3
98.10-98.05	0	0	24.1	42.9	31.8	0	0	10.4	44.3	124.9	64.5	25.8	44.7	25.8	10.2
98.05-98.00	23.8	25.2	14.2	41.1	37.6	0	0	3.3	49.4	168.9	0	11.1	27	15.8	7.8
98.00-97.95	16.4	7	51.1	116	67.3	0	0	9.9	83.8	273.6	0	22.2	4.3	12.1	8.3
97.95-97.90	0	20.9	45.7	158.3	73.4	0	0	18.8	155	499.8	0	3.8	0	10.9	8.7
97.90-97.85	12.3	8.5	20.2	24.2	2.6	0	0	0	50.6	82.3	0	0	0	0.4	0.7
97.85-97.80	0	53.1	171.3	292.4	53.5	0	0	25	827.6	1286.5	0	13.2	12.8	20.1	6
97.80-97.75	0	9.4	69.2	112.3	33.1	0	0	25.1	287.3	703.8	0	0	3.2	6.2	1.8
97.75-97.70	0	6.8	65.8	110.4	47	0	0	25.1	207.4	576.4	0	0	3.7	16	5.8
97.70-97.65	0	0	83.8	52	24.2	0	13.6	32.6	124.3	274.4	0	19.1	4.6	7.7	3.8
97.65-97.60	0	2.9	32.6	6.4	31.5	0	0	27.3	102	232.3	0	0	4.1	5.2	2.9
97.60-97.55	0	108.1	195.8	77.7	45.5	30.7	0	132.4	193.5	196.3	0	0	3.1	5.4	2
97.55-97.50	0	71.3	101.3	69.8	33.8	0	0	105.5	207.1	235.4	0	0	12.3	14.6	5.7
97.50-97.45	19.2	0	59.6	48.3	26.2	0	40.8	49.1	187.5	179.9	0	0	22.3	15.4	8.8
97.47-97.40	0	0	13.1	16.7	6.7	0	0	13.3	40.4	41.6	0	4.4	3.3	0.3	0.2
97.40-97.35	0	24.9	22.4	34	17.6	0	9.8	11.9	94.5	96.8		20.3	11.9	1.4	0.5
97.35-97.30	0	55.1	40.3	26.5	11	0	0	26.1	81.1	128.9	0	21.6	24	6.5	1.9
97.30-97.25	0	22.6	11.2	16.1	7.1	0	0	0	51	54.5	0	8.9	6.4	3.2	0.4
97.25-97.20	0	39.7	36.7	41.3	20.4	0	23.1	45.6	93.3	74	0	0	0	1.3	1.1
97.35-97.30	0	9	13	20.3	7.4	0	16	38.1	51.7	90.8	0	0	1.3	1.6	0.2
97.30-97.25	0	0	33.5	65.6	29.3	0	0	14.3	38.2	136.7	0	0	1	2.8	1.5
97.25-97.20	0	0	16.3	20.1	3.9	0	0	2.3	26.7	50.4	0	0	0	0.4	0.2
97.20-97.15	0	9.2	43.6	43.3	20.7	0	5.9	47.9	120.3	194.1	0	0	0	2.1	0.7
97.15-97.10	0	16.1	26.8	52.8	43.5	0	15.1	37.1	106.4	165.3	0	0	0	3.8	0.7
97.10-97.05	0	38.8	37.2	57.2	40.4	0	0	43.4	164.4	192	0	0	0	4.9	1.4
97.05-97.00	0	29	78.3	50.4	46.1	0	0	45.5	102.5	156	0	0	0	1	0.2
97.00-96.95	0	0	40.2	70.2	45.4	0	0	13.7	120.5	168.1	0	0	0	1	1.5
96.95-96.90	0	5.4	44.9	75.1	47.4	0	0	48.7	112.9	187	0	0	0	2.1	1.4

Table A43-7 continued

N246 E140			Cortical					Quartz					Flakes		
SW	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
96.85-96.80	0	6.6	31.4	55.8	37.1	0	0	46.1	103.6	135.2	0	0	0	2.3	1.2
96.80-96.75	0	21.3	46.9	59.3	42.7	0	4.6	45.1	128.2	155.1	0	0	0	17.8	4.5
96.75-96.70	0	7.9	22.9	59.9	44.5	0	0	38.1	132.7	153.8	0	0	3.4	3.2	1.8
96.70-96.65	0	4.6	15	52	39.9	0	0	23.9	71.7	121.4	0	0	0	4.7	2.6
96.65-96.60	0	0	8.8	48.2	38.4	0	0	47.1	104.9	113	0	0	2.3	2.5	3.2
96.60-96.55	0	0	34.6	77.9	50.2	0	7.1	49.9	138	135.1	0	0	2.1	7.5	2.8

Table A43-7 continued

N246 E140			Cortical					Quartz					Flakes		
SE	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
98.30-98.25	0	0	6.7	14.2	2.9	0	8.6	12.7	27.1	1.9	0	64.8	75.1	60.2	9.2
98.25-98.20	0	0	0	6.9	10.5	0	4.7	20.1	0	44.3	34	29.6	28.9	27.3	10.4
98.20-98.15	749.9	0	9.5	14.4	67.2	0	9.9	0	22.6	13.3	394	27.9	40.1	37.9	15
98.15-98.10	252.2	85	24.5	32.5	29.9	0	0	7.7	40.7	141	76	75.4	66.1	42.6	18.3
98.10-98.05	0	0	24.1	42.9	31.8	0	0	10.4	44.3	124.9	64.5	25.8	44.7	25.8	10.2
98.05-98.00	23.8	25.2	14.2	41.1	37.6	0	0	3.3	49.4	168.9	0	11.1	27	15.8	7.8
98.00-97.95	16.4	7	51.1	116	67.3	0	0	9.9	83.8	273.6	0	22.2	4.3	12.1	8.3
97.95-97.90	0	20.9	45.7	158.3	73.4	0	0	18.8	155	499.8	0	3.8	0	10.9	8.7
97.90-97.85	0	0	23.8	22	10.8	0	0	11.8	31.4	46.5	0	16.1	12.2	19.7	2.3
97.85-97.80	0	33.3	28.2	32.4	21.6	0	8	9.7	30.8	70.7	0	26.2	6.1	9.8	6.6
97.80-97.75	33.8	0	40.3	31.6	15	0	0	23.7	25.8	68.2	21.6	8.1	15.1	8.7	2.4
97.75-97.70	95.6	262.2	302.5	349.8	199	0	84.1	96.4	263.4	377.3	3.6	7	7.7	12.2	7.6
97.70-97.65	0	0	56.2	81.6	30.9	0	23.1	27.2	64.6	177.6	0	0	5.3	4.6	3.3
97.65-97.60	46.8	38.3	49.4	122.9	57.7	0	0	44.8	121.1	333.8	0	0	8.8	9.7	6.4
97.60-97.55	34.2	16.6	75.6	105.6	39.8	0	24.2	99.2	182	307.4	0	4.3	1.4	16.1	4.9
97.55-97.50	83	76	108.7	74.8	45.2	0	58.3	45.5	189.6	327.3	0	0	21.8	21.8	8.1
97.50-97.45	0	4.1	31.7	39.2	38.22	0	12.2	41.6	125.3	214.7	0	0	0	4.2	8.2
97.47-97.40	0	61.1	45.1	41.6	19.7	0	27.8	31.7	76.9	112.2	0	0	16.6	9.7	4.2
97.40-97.35	0	19.2	20.1	38.8	4.2	0	0	44.6	102.5	167.4	15.3	14	10.4	5.3	2.2
97.35-97.30	0	17	18.8	26.7	17.9	0	0	9.9	61	101.9	0	5.2	3.2	1.9	2.3
97.30-97.25	0	0	13.8	11.3	9.2	0	9.2	6.5	18	33.1	0	0	9.2	0.6	0.2
97.37-97.30	24.1	4.3	26.2	28.6	34.1	0	0	31.6	76.8	151.6	0	7.8	11.3	8.1	2.5
97.30-97.25	0	7.6	14.7	34	21.8	0	30.6	5.4	49.5	94	0	0	2.5	17.5	1.9
97.25-97.20	0	25.8	40.6	49.2	43.5	0	0	28	102.4	135.3	15.2	44.3	28	29.5	3.7
97.20-97.15	0	55.4	37	54	35.4	0	0	58.4	111.4	124	0	36.1	10.7	12	2.1
97.15-97.10	39.9	34.9	51.9	68.8	36.4	0	26.9	31.5	121.2	171.4	0	12.3	15.6	19.7	4.2
97.10-97.05	17.9	0	35.8	36.4	37.5	0	18.1	31.3	86	134.4	0	0	10.3	25.8	2
97.05-97.00	0	28.4	40.3	38.5	35.1	0	13	41.3	78.2	126.6	0	0	0	0	0
97.00-96.95	0	59.2	34.5	39.9	42.4	0	24.9	44.6	97	133.1	0	0	19.1	23.2	3.6
96.95-96.90	72.4	12.1	44.6	43.2	30.6	0	10.8	26.4	77.9	108.6	0	11.1	11.7	17.4	2.9
96.90-96.85	18.8	46.8	29.8	47.3	33.2	0	34.9	36.1	108.7	119	0	7.9	19.8	18.1	2.3
96.85-96.80	0	5.2	14.5	26.3	19.5	0	0	25.9	42.4	61.6	0	6.4	2.7	5.2	0.5

Table A43-7 continued

N246 E140			Cortical					Quartz					Flakes		
SE	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
96.80-96.75	0	48.1	20	51.1	35.9	19.4	51.1	43.5	118.4	109.7	0	0	12.7	8.5	1.6
96.75-96.70	0	8.2	5.7	23.1	14.5	0	4.6	16.8	64.4	67.6	0	0	0.9	1.7	0.4
96.70-96.65	0	64.7	97.2	102.9	57.3	0	37.7	122.4	263.9	221.2	0	0	3.5	14.9	5.2
96.65-96.60	0	25.1	40.1	62.9	31.6	0	6.6	26.4	160.6	133.9	0	0	14.1	12.3	4.6
96.60-96.55	0	22.8	23.5	61.8	26.9	0	16.9	30.8	130.8	130.9	0	0	3.3	8.4	3

Table A43-7 continued

N246 E140			Cortical					Quartz					Flakes		
NW	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
98.30-98.25	0	0	6.7	14.2	2.9	0	8.6	12.7	27.1	1.9	0	64.8	75.1	60.2	9.2
98.25-98.20	0	0	0	6.9	10.5	0	4.7	20.1	0	44.3	34	29.6	28.9	27.3	10.4
98.20-98.15	749.9	0	9.5	14.4	67.2	0	9.9	0	22.6	13.3	394	27.9	40.1	37.9	15
98.15-98.10	252.2	85	24.5	32.5	29.9	0	0	7.7	40.7	141	76	75.4	66.1	42.6	18.3
98.10-98.05	0	0	24.1	42.9	31.8	0	0	10.4	44.3	124.9	64.5	25.8	44.7	25.8	10.2
98.05-98.00	23.8	25.2	14.2	41.1	37.6	0	0	3.3	49.4	168.9	0	11.1	27	15.8	7.8
98.00-97.95	16.4	7	51.1	116	67.3	0	0	9.9	83.8	273.6	0	22.2	4.3	12.1	8.3
97.95-97.90	0	20.9	45.7	158.3	73.4	0	0	18.8	155	499.8	0	3.8	0	10.9	8.7
97.90-97.85	0	0	28.4	37	10.1	0	0	0	90.2	190.5	0	0	7.8	10.7	2.7
97.85-97.80	0	58.5	179.1	299.4	63.7	0	0	33.8	580.9	908.7	0	8.9	22	32.7	3.5
97.80-97.75	0	20.6	92.1	165.5	56.1	0	0	48	629	1174.6	0	0	1.9	21.7	5.1
97.75-97.70	0	18.2	56.6	52.9	33.1	0	13.7	39.2	307.7	736.7	0	0	12.1	30.5	9
97.70-97.65	0	0	41.4	34.5	31.4	0	0	26.7	100	242.6	0	0	0	1	2
97.65-97.60	0	33.7	23.4	52.6	34.9	0	13.2	13.9	103.4	228.5	0	0	0	1.2	1.6
97.60-97.55	0	55.3	40.8	53.9	35.9	0	10.9	40.4	108.9	232.3	0	2.6	24.8	3.2	3.1
97.55-97.50	25.1	149.6	50	74	38.5	0	52.6	57.3	206.5	213.8	0	2.8	23.9	15.3	10.6
97.50-97.45	0	11.7	3.1	34.2	23.2	0	25.8	47.7	102	138.2	0	0	14.9	10.8	1.4
97.53-97.40	106.8	59.9	47.5	110.8	25.6	0	41.9	64.8	216.6	268.7	0	55.8	28.8	21.7	3
97.40-97.35	0	24	18.1	30	9	0	0	23.3	84.5	86.9	0	0	6.3	1.1	0.7
97.40-97.35	0	23	7.7	29	8	0	12.3	30.8	95.9	116	0	8	44.2	3.3	1.8
97.376-97.25	0	16.9	9.9	18.2	4.6	0	0	8.1	39.3	69.2	0	0	0	0.4	0.4
97.25-97.20	0	43.7	28.2	29.5	13.1	0	0	13	54.5	83.3	0	0	0	0.4	0.7
97.20-97.15	0	6	12.3	11	10.8	0	0	14.4	48.6	125.1	0	0	0	0	0.1
97.15-97.10	0	0	44.9	47.7	15.5	0	0	23.1	76.2	134.9	0	0	2	3.3	0.7
97.10-97.05	0	21.7	29.4	45	19.8	0	0	26.7	84.6	126.9	0	0	0.6	5.4	2
97.05-97.00	0	11.8	12.5	32.5	24.1	0	18.1	9.6	81.3	87.7	0	0	0	0.5	0.7
97.00-96.95	0	0	28.5	49.5	30.8	0	8.5	20	80.2	83.8	0	0	0	0.7	1.6
96.95-96.90	0	14.2	22.6	41.8	24.1	0	0	17.3	72.5	81.6	0	0	0	1.1	1.3
96.90-96.85	0	18.4	37.1	53	21.2	0	0	29.8	84.7	112	0	0	0	5	0.7

Table A43-7 continued

N246 E140			Cortical					Quartz					Flakes		
NE	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
98.30-98.25	0	0	6.7	14.2	2.9	0	8.6	12.7	27.1	1.9	0	64.8	75.1	60.2	9.2
98.25-98.20	0	0	0	6.9	10.5	0	4.7	20.1	0	44.3	34	29.6	28.9	27.3	10.4
98.20-98.15	749.9	0	9.5	14.4	67.2	0	9.9	0	22.6	13.3	394	27.9	40.1	37.9	15
98.15-98.10	252.2	85	24.5	32.5	29.9	0	0	7.7	40.7	141	76	75.4	66.1	42.6	18.3
98.10-98.05	0	0	24.1	42.9	31.8	0	0	10.4	44.3	124.9	64.5	25.8	44.7	25.8	10.2
98.05-98.00	23.8	25.2	14.2	41.1	37.6	0	0	3.3	49.4	168.9	0	11.1	27	15.8	7.8
98.00-97.95	16.4	7	51.1	116	67.3	0	0	9.9	83.8	273.6	0	22.2	4.3	12.1	8.3
97.95-97.90	0	20.9	45.7	158.3	73.4	0	0	18.8	155	499.8	0	3.8	0	10.9	8.7
97.90-97.85	0	0	31.9	33.2	20	0	0	43.3	19	64	0	0	27.7	2.3	2.2
97.85-97.80	12.8	64.8	54.3	78	73.1	0	52	16.1	55.3	191.4	0	0	1.8	2.3	5.7
97.80-97.75	0	7.6	36.3	60.9	49.2	0	0	13.4	41.2	155.5	0	0	6.2	4.2	2.8
97.75-97.70	0	36.4	123.5	143.5	94.7	0	0	13.7	104.2	376.8	0	0	0	6.7	9.5
97.70-97.65	0	34.6	99.1	191.8	130.6	0	0	36.6	184.7	462.7	0	0	0	14	5.7
97.65-97.60	0	34.6	83.8	132.9	59.9	0	0	57.5	128.1	318.6	0	0	6.3	7.5	5.4
97.60-97.55	0	36.5	49.3	77.4	62.3	0	25.4	48.4	126.2	333.3	0	0	0	23.2	3.6
97.55-97.50	0	79.8	146.5	110	52.2	0	0	83.6	228.7	340.7	0	0	3.6	11.3	2.6
97.50-97.45	39.2	57.1	184.3	191.2	80	0	0	160.3	420.5	462.4	0	39.7	12.5	26.4	4.8
97.49-97.40	0	38.1	42.5	65.8	19.2	0	0	59.3	288.4	361.4	0	23.6	22.8	10.5	2.9
97.40-97.35	0	25.9	52.3	40.7	10.3	0	0	49.6	149	230.4	0	0	29.2	13.1	1.3
97.35-97.30	0	13.9	16.1	13.1	3.3	0	0	17	44.8	61					
97.30-97.25	0	0	15.2	9.2	2.5	0	0	11.5	13.3	33.1	0	0	3.2	0.7	0.2
97.37-97.30	0	14.1	21	37.4	36	0	0	17.2	70.9	149.9	0	7.5	14.4	15.4	1.5
97.30-97.25	0	9.9	13.1	36	31.1	0	26.8	8.3	85.8	135.5	0	0	3.2	6.5	2.4
97.25-97.20	18.6	5.5	27.8	46.8	27.2	0	19.8	16.7	57.9	118.3	0	0	3	10.3	3.1
97.20-97.15	15.2	21.8	14.8	31.8	29.6	0	0	21.2	66.3	111.4	0	0	16.2	11.5	2.3
97.15-97.10	0	16.7	13	41.1	30.1	0	21.6	23.7	88.5	116.4	38.8	0	13.5	10.6	3.3
97.10-97.05	38.4	17.1	10.1	33.6	20.6	0	0	26.5	76.4	90.4	0	8.2	9.5	11.7	2
97.05-97.00	0	25.9	9.2	33.6	30.7	0	9.9	28.5	90	110.5	0	0	6.2	21.5	3
97.00-96.95	0	41.6	23.8	50	13	0	0	7.7	56.2	103.8	0	0	0	6.6	0.8
96.95-96.90	0	24.5	37.6	53.9	14	0	65.6	30.6	81.6	155	0	0	0	2.8	0.7
96.90-96.85	0	31.7	51.9	80.4	20.7	0	9.2	23.8	78.2	163.6	0	0	0	12.3	1.6
96.85-96.80	0	6.8	29.2	66.2	28.3	0	8	48.9	133.6	115	0	0	0	1.2	0.9

Table A43-7 continued

N246 E140			Cortical					Quartz					Flakes		
NE	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
96.80-96.75	0	0	7.9	11.3	12	0	0	16.8	62.1	41.6	0	0	0	0.3	0.3
96.75-96.70	0	22.1	36.3	46.5	24.4	0	46	38.8	119.5	88.4	0	0	0	0.6	1.5
96.70-96.65	0	55.7	12	53.8	37.4	0	8.3	64.3	140.4	111	10.4	3.4	0	8.5	2.4
96.65-96.60	0	26.8	30.8	56	40.4	0	20	33.1	118.2	158	0	0	6.2	7.9	3.1
96.60-96.55	0	19.2	44.8	25	14.6	0	17.6	22.1	74	65	0	0	0	3.3	1.5

Table A43-7 continued

N246 E142			Cortical					Quartz					Flakes		
SW	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
97.41-97.35	0	0	3.7	8.8	4.7	0	0	0	13.5	39.5					
97.35-97.30	0	52.3	36.4	35.8	22.9	0	21.6	12.9	53	112.6					
97.30-97.25	31.7	18.6	33.1	46.8	32.2	0	0	34.4	122.4	151.8					
97.25-97.20	0	23.8	45.5	53.1	22.4	28	33.8	52.8	130.2	182.3	0	0	0	6.9	0.9
97.20-97.15	0	41.2	62.8	53.9	14.2	0	23.7	32.5	87.1	153.6	0	0	1.1	7	3.5
97.15-97.10		36.1	40	50	12.7	0	22.1	32.6	100.6	111.8	0	0	0	3.1	0.7
97.10-97.05	0	23	58.7	45.8	15	0	47	58.3	155.3	173.1	0	0	6.9	2.2	1.5
97.05-97.00	0	10	36.2	36.3	8.9	0	0	51.2	69.8	76.3	0	0	0	3.1	0.6
97.00-96.95	0	21.6	12.7	39	23.8	0	15.8	37.4	95	98.2	0	0	0	2.4	1.3
96.95-96.90	0	0	20.4	45.7	226.7	0	0	52.1	152.8	127.5	0	0	0	2.3	2
96.90-96.85	0	22.4	31.5	49.6	28	0	20.4	66.3	164	119.2	0	0	5.9	4.4	0.6
96.85-96.80	0	8.2	25.9	41.5	23.7	0	5.9	38.4	145.7	128.2	0	0	0	3.8	0.1
96.80-96.75	0	0	27	51.3	22	0	0	37.3	122.6	103	0	0	0	1.2	1.2
96.75-96.70	0	13	14.2	50.2	33.8	0	0	38.6	120.1	153.7	0	0	0	1.7	1.4
96.70-96.65	0	4.4	20	40.6	30.3	0	0	28.8	126.1	152.3	0	0	0	0.9	3.3
96.65-96.60	0	0	12	26.6	30.2	0	5.9	14.9	98.6	149.6	0	0	0	7.9	4.9
96.60-96.55	0	0	28.6	29.4	27.2	0	0	25.2	62.9	160.2	0	0	0	6.5	5.7

Table A43-7 continued

N263 E145			Cortical					Quartz					Flakes		
SW	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
97.90-97.80	0	0	1.4	74.4	85.3	0	0	7	71.5	418.4	0	0	0	1.3	10.4
97.80-97.70	0	0	7.3	74.4	95.5	0	0	0	119.6	686.3	0	0	0	2.3	8.1
97.70-97.60	0	3.4	37.6	171.3	114.3	0	0	4.1	145.8	923.9	0	0	1.7	10.6	8
97.60-96.50	0	7.4	44.6	136.3	124.9	0	0	31.6	233.4	1139.8	0	0	3	16.5	11.7
97.50-97.40	0	0	23.1	77.7	164	0	0	11.8	164.1	754.5	0	0	1.3	3.8	5.1
97.40-97.30	0	10	12.4	95.5	127	0	0	3	206.8	815.2	0	0	0	0.3	1.6
97.30-97.20	0	7.9	25.8	84.6	119.2	0	3.7	28.2	220.5	703.5	0	0	0	5.5	3.7
97.20-97.10	0	4.3	23.9	128.3	145.7	0	0	18.7	261.9	850.8	0	0	0	4.3	4.2
97.10-97.00	11.6	4.2	17.7	156	153.5	0	0	37.7	304.6	1076.9	0	0	1.7	3.5	2.4
97.00-96.90	0	0	27.4	98.2	104.4	0	0	27.7	167.2	731	0	0	2.1	3.2	3.2
96.90-96.80	0	0	8.1	46.1	55.4	0	0	8.8	85.2	355.2	0	0	0	2.6	1.3

Table A43-7 continued

N248 E140			Cortical					Quartz					Flakes		
SW	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
97.85-97.80	0	0	72.7	96.1	32.9	0	0	27.7	148.6	343.1	0	0	0	0	0.4
97.80-97.75	0	6.2	73.8	198	77	0	0	26.7	120.7	372	0	0	0	0	1.5
97.75-97.70	0	0	10.1	15.7	11.8	0	0	8.3	35.5	51.6	0	0	0	0	0
97.70-97.65	0	0	13.3	19.4	10	0	0	9	42.4	44.1	0	0	0	0	0.1
97.65-97.60	0	0	35.9	31.4	16	0	0	17.2	60.5	68.3	0	0	0	0	0
97.60-97.55	0	82.6	65.4	71	36.2	0	35	68.9	173	141.2	0	0	0	0	0.4
97.55-97.50	0	54.7	106.4	42.7	24.2	0	0	41.4	93.8	106.6	28.8	12.2	32.1	11.5	5.3
97.50-97.45	36.8	45.9	117.9	87.6	44.6	0	43.3	125.4	212.8	178.4	56.7	24.6	41.6	11	3.7
97.45-97.40	18.2	14.1	76.5	92.7	60.5	0	0	92.6	277.7	282.6	0	0	9.6	9.2	9.5
97.40-97.35	0	34.7	9.7	34.1	20.4	0	17.9	24.6	69.5	107.1	0	8.9	14.1	10	2.4
97.35-97.30	13.4	19.2	37.5	36.8	34.7	0	10.4	18.5	109.1	135.7	0	11.1	24.6	11.7	2.2
97.30-97.25	13.3	8.6	30.5	24.6	30.4	0	0	17.6	104.5	134.9	50.6	4	14.9	12.9	2.1
97.25-97.20	0	36.1	32.9	40.1	32.6	0	10.6	50.8	97.1	141.9	8.9	10.7	10.6	12.6	4.3
97.20-97.15	0	7.6	4.3	18.2	14.3	0	0	8.2	27.4	59	0	0	0	3.3	1.8
97.15-97.10	0	0	4.9	13.7	12.3	0	0	18.4	36.9	56.1					
97.10-97.05	0	11	12.1	28.6	27.4	0	0	41	66.1	120.5	21.7	8	14.6	17.6	1.8
97.05-97.00	0	13.4	8.1	24.9	21.9	0	0	11.5	66.4	97.3	0	0	17.1	9.3	2.3
97.00-96.95	68.7	8.8	13.2	45	35.4	0	8.3	18.2	77.1	133.4	0	23.4	14.9	10.7	4.4
96.95-96.90	0	0	8.6	22.6	24.6	25.1	27.2	18.2	57.3	83.3	0	7	1.8	13.3	2.7
96.90-96.85	0	11.3	16.4	27.8	24.7	0	6.5	30.3	68.7	109.1	0	23.7	3.2	3.9	3.1
96.85-96.80	0		13.2	28.7	25.4	0	0	13.6	56.3	80.6	0	0	0	3.3	1.4
96.80-96.75	0	16.9	25.1	58.2	36.3	0	0	32.9	70.2	108.5	0	0	0	2.1	1.4
96.75-96.70	0		22.6	30.1	28.7	0	0	15.1	65.2	109.6	0	0	0	0.8	1.5
96.70-96.65	0	6.8	13	40.2	33.7	0	5.2	21.9	80.3	108.8	0	2.4	1.4	1.6	3.2
96.65-96.60	0	8.9	16.1	38.1	29.2	0	9.4	21.9	76.3	102.1	0	0	0	0.9	1.6
96.60-96.55	0	5.5	42	57.5	43.3	0	5.1	25.1	114.2	116.6	0	0	0	2.9	1.4

Table A43-7 continued

N248 E140			Cortical					Quartz					Flakes		
SE	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
97.80-97.75	0.0	27.9	19.1	61.0	37.1	0.0	16.4	20.5	50.0	164.8	0.0	6.7	10.8	108.0	5.3
97.75-97.70	0.0	8.1	24.8	102.0	49.1	0.0	0.0	10.4	46.2	179.2	0.0	0.0	16.0	15.1	3.0
97.70-97.65	0.0	4.1	9.8	31.1	23.5	0.0	0.0	2.5	38.4	110.8	0.0	0.0	5.4	3.7	1.7
97.65-97.60	0.0	31.9	17.0	51.2	44.1	0.0	0.0	11.8	120.6	222.0	0.0	7.9	10.5	12.2	1.6
97.60-97.55	62.1	108.5	145.6	201.6	52.4	0	23.8	96.4	557	447.9	24.6	75.8	59.8	40.6	8.2
	0	104.9	101.2	51.6	20.2	0	56.6	152.7	457.9	276.9	9.7	40.2	31.6	13.2	1.3
97.55-97.50	360.1	330.2	169.5	115.9	61.6	0	82.7	371	704.9	459	79	101.2	118.5	37	4.6
97.50-97.45	0	41	75.7	72.6	40.9	0	0	116.7	411.9	308.3	41.3	118.2	26.9	13.9	2.5
97.45-97.40	0	23	19.3	19.8	11.9	0	0	25.9	69.3	74.1	0	0	0	10.5	3.7
97.50-97.45	12.2	14.4	2.7	12.5	8.8	0	0	12	38.4	76.8	0	0	6.3	0.1	0.8
97.45-97.40	0	18.3	21.9	49.7	29.5	0	11.2	14.5	136.1	178.4	0	5.1	1.2	5	1.3
97.40-97.35	0	16.7	13.3	16.2	15.6	0	0	14.5	45.2	83.8	0	16.3	0	0.1	0.9
97.35-97.30	0	20.2	20.2	22.7	16.9	0	0	0	42.2	106.4	0	0	2.1	5.6	1.8
97.30-97.25	0	7.1	17.8	52.1	41.4	0	0	33	112.5	226	0	7.7	3.5	11.2	6.3
97.25-97.20	0	12.6	0	17.6	19.2	0	0	0	34.2	79.3	0	0	8.5	6	2.2
97.20-97.15	0	4.9	2.2	23.5	23.2	0	0	25.7	50.1	97.7	19.7	5.4	6.5	3.3	3.3
97.15-97.10	22.9	0	15.6	29.7	31.1	0	10.6	14.6	78.2	142.9	0	27.2	6.4	13.4	3.6
97.10-97.05	14.2	32.8	17.2	38	28.7	0	24.8	29.9	42.2	90.5	0	0	3.9	9.3	3.6
97.05-97.00	30	4.4	23.5	31.8	24.1	0	11.5	18.1	74.7	107.7	0	11.6	3.1	12.2	3.5
97.00-96.95	11.7	28.5	34.5	28.1	24.1	0	0	22.4	80.4	102.2	21.3	7.3	5.5	4.1	3.6
96.95-96.90	27	8.4	22.2	31.8	28.2	0	0	10.8	80.9	105.6	0	0	18.7	14.1	3.3
96.90-96.85	0	0	18.7	29.1	17.2	0	0	32	54.1	79.9	0	0	0	0	2.3
96.85-96.80	0	0	33	37.1	12	0	0	36.4	85.6	125.3	0	0	0.6	2.4	0.6
96.80-96.75			17.7	23.4	14.4	0	7.6	10.2	62.3	103.8	0		1.5	5.3	0.3
96.75-96.70	0	7.5	47.6	33.8	31	0	10.7	19.7	98.6	110.5	0	0	1.7	1.7	0.7
96.70-96.65	0	24.9	29.6	40.6	29	0	14.1	41.5	66	91.2	0	0	8.9	2.8	0.2
96.65-96.60	0	0	25.6	31.9	25.6	0	0	19.9	99.1	83.6	0	0	0	0	0
96.60-96.55	0	0	7.6	26.9	14	0	7.7	19.3	55.8	58	0	0	1.8	3.7	1.4
96.55-96.50	0	5.4	20.1	28.7	15.8	0	0	24.2	58.4	64.8	0	0	0	4.7	0.9
96.50-96.45	0	7.3	17.8	25.9	20.9	0	15.4	24.3	89.6	64.2	0	3.2	0	2.8	1.6
96.85-96.80	0	0	33	37.1	12	0	0	36.4	85.6	125.3	0	0	0.6	2.4	0.6

Table A43-7 continued

N248 E140			Cortical					Quartz					Flakes		
SE	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8	2.5	1	1//2	1//4	1//8
96.80-96.75			17.7	23.4	14.4	0	7.6	10.2	62.3	103.8	0		1.5	5.3	0.3
96.75-96.70	0	7.5	47.6	33.8	31	0	10.7	19.7	98.6	110.5	0	0	1.7	1.7	0.7
96.70-96.65	0	24.9	29.6	40.6	29	0	14.1	41.5	66	91.2	0	0	8.9	2.8	0.2
96.65-96.60	0	0	25.6	31.9	25.6	0	0	19.9	99.1	83.6	0	0	0	0	0
96.60-96.55	0	0	7.6	26.9	14	0	7.7	19.3	55.8	58	0	0	1.8	3.7	1.4
96.55-96.50	0	5.4	20.1	28.7	15.8	0	0	24.2	58.4	64.8	0	0	0	4.7	0.9
96.50-96.45	0	7.3	17.8	25.9	20.9	0	15.4	24.3	89.6	64.2	0	3.2	0	2.8	1.6

APPENDIX 43

SPATIAL ANALYSIS

Appendix 43 presents the results of the Spatial analysis of mapped items from the study sample in addition to other selected excavation areas of the Topper Site. Figures A43–1 through A43–17 illustrate the horizontal spatial distribution of artifacts by type from the study sample. Figures A43–18 through A43–20 and A43–22 through A43–24 illustrate the vertical distribution of artifacts by type from the study sample. Figures A43–25 through A43–27 present the horizontal and vertical distribution of bend breaks and split quartz pebbles by strata followed by the spatial distribution of Taylor points in Figure A43–28. Figure A43–29 offers the spatial distribution of tested cobbles on the Pleistocene Terrace surface as identified by Goodyear and Wilkins (n.d.) followed by the spatial distribution of artifacts by type from the Upper and Lower Pleistocene Sands (Figures A43–30 through.

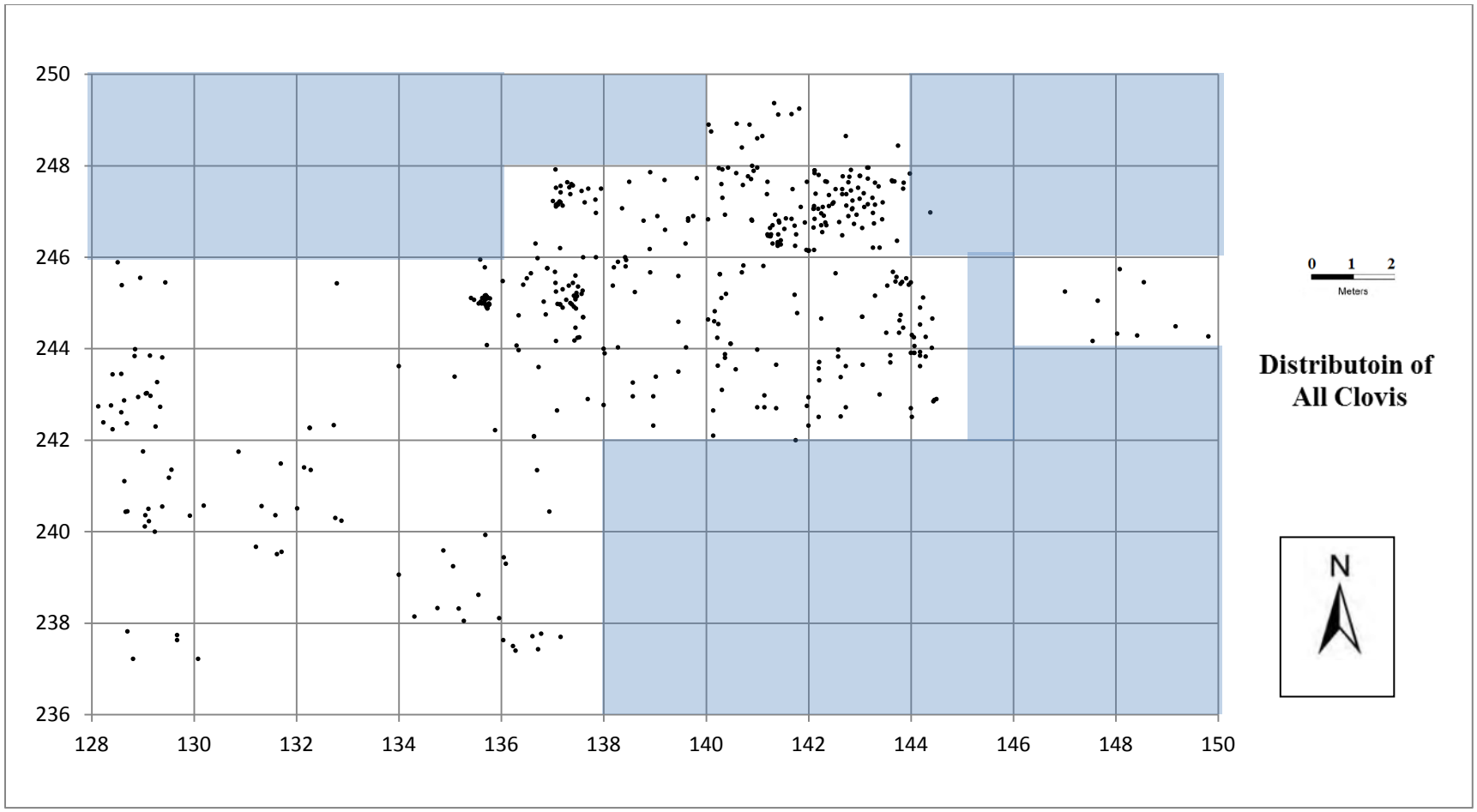


Figure A43-1
Distribution of all Clovis Artifacts (N=561). NN statistic = .779; p = <.0001.

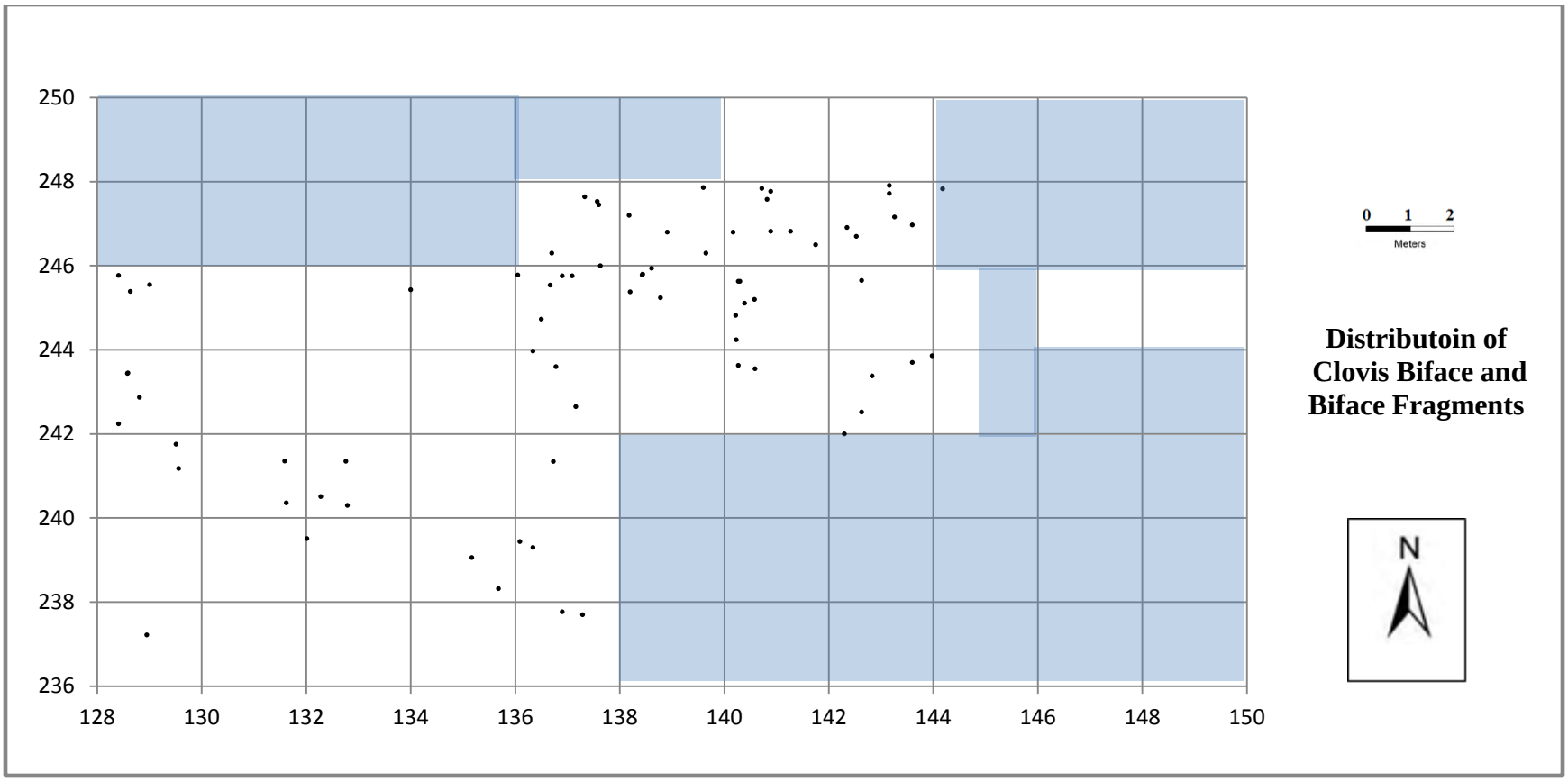


Figure A43-2
Distribution of all Clovis Bifaces. (n = 77).

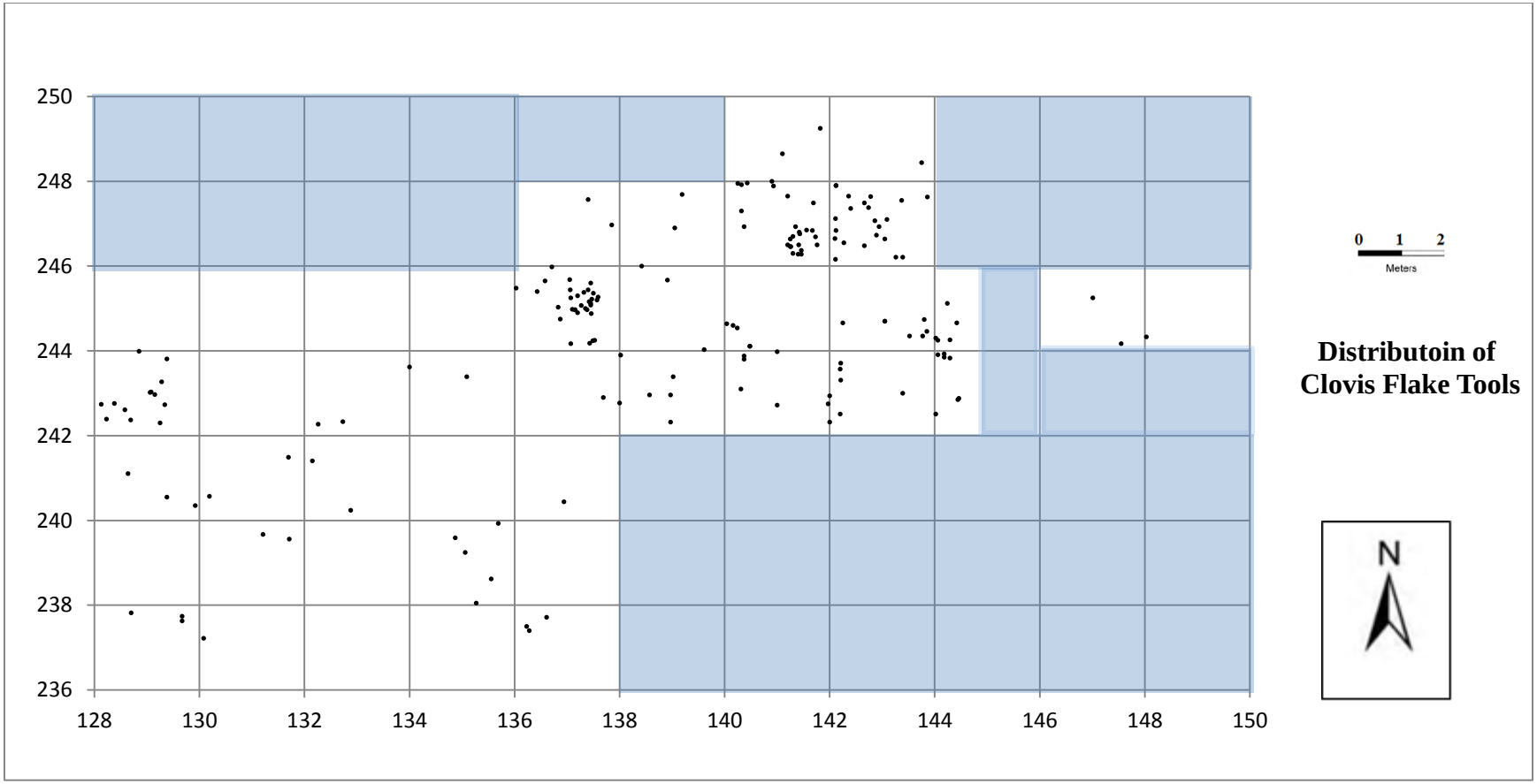


Figure A43 -3
Distribution of all Clovis Flake Tools. (n =179).

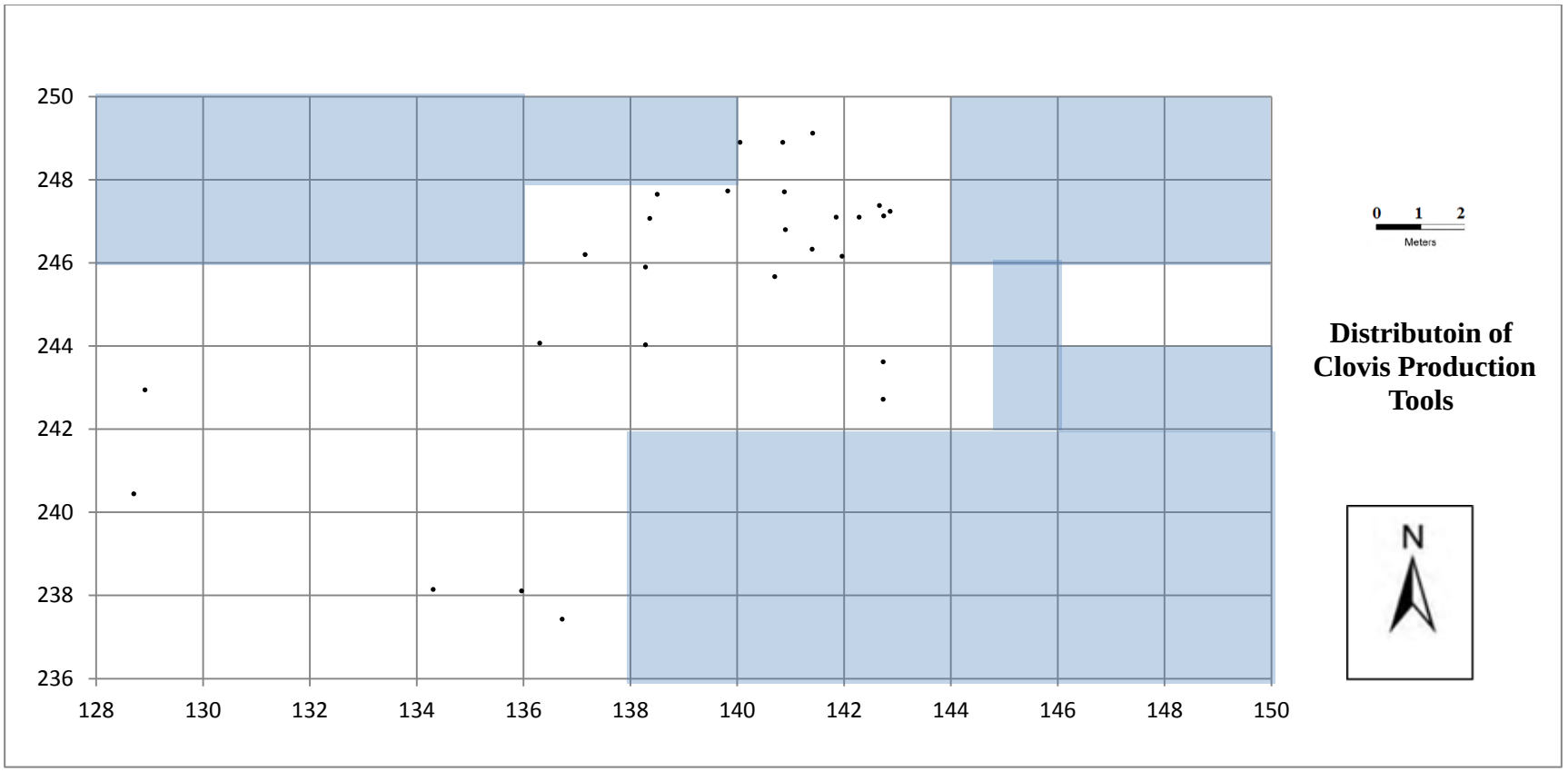


Figure A43-4
Distribution of all Clovis Production Tools. (n=27).

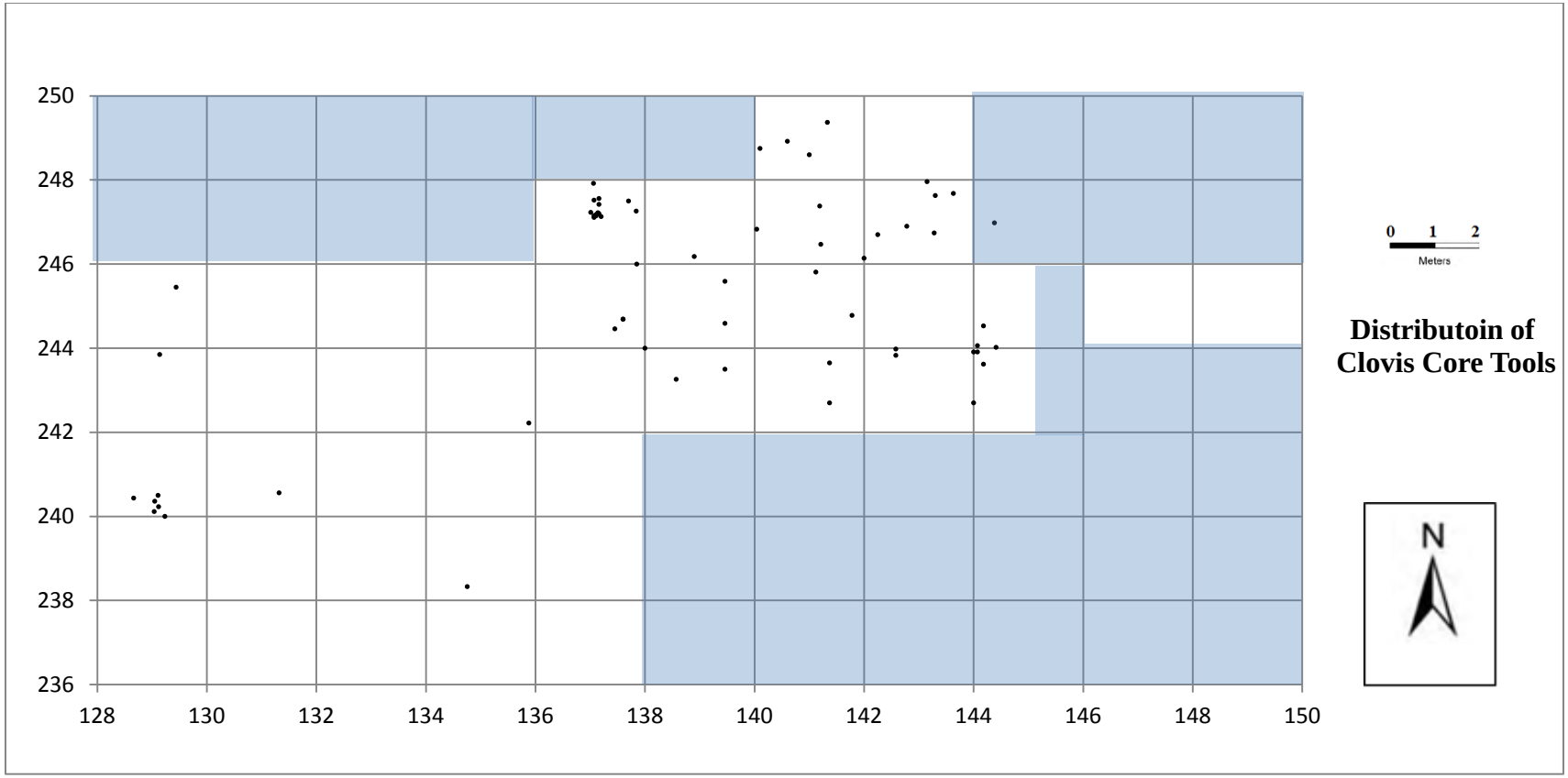


Figure A43 -5
Distribution of all Clovis Core Tools. (n = 64).

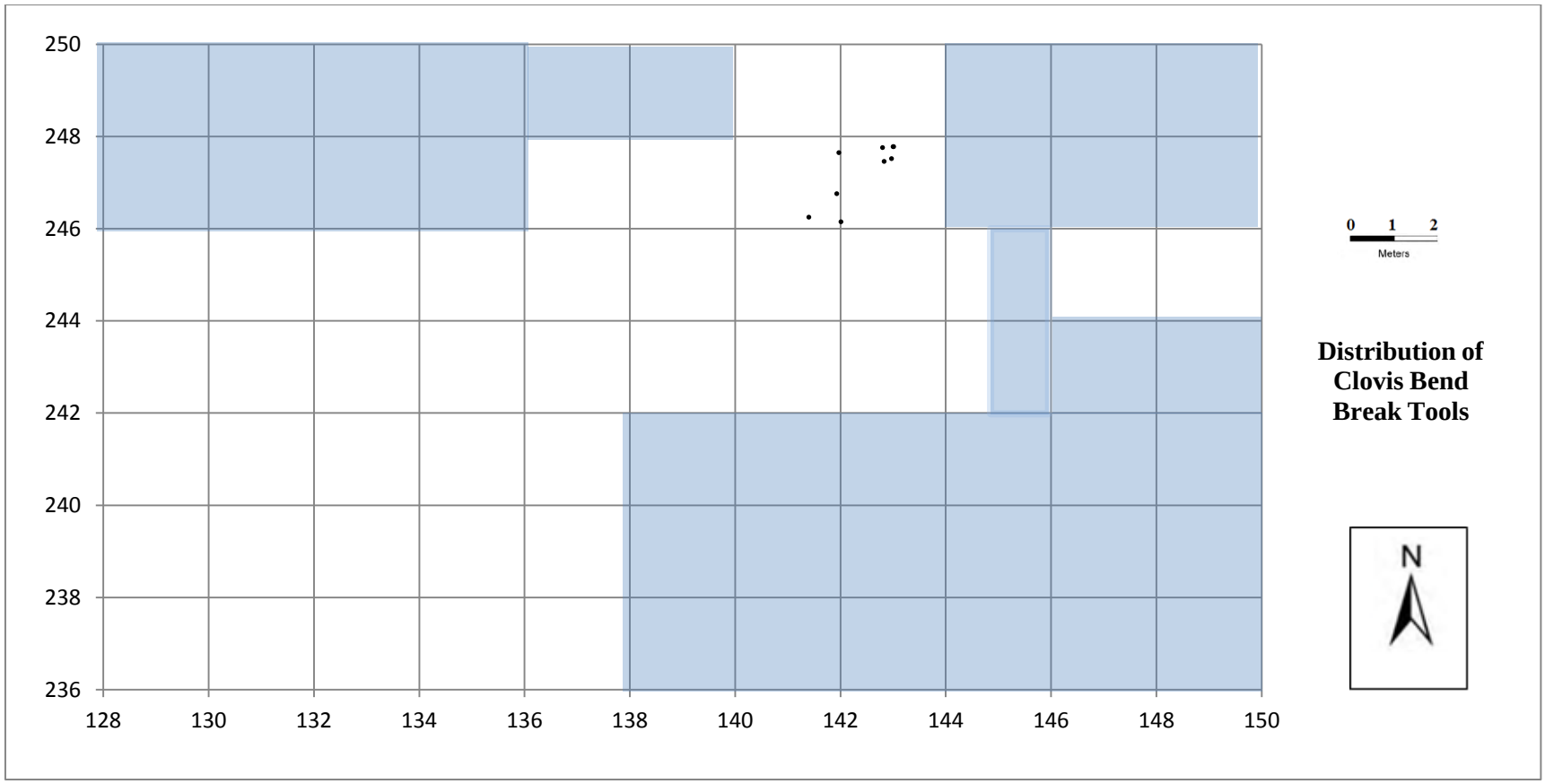


Figure A43 -6
Distribution of all Clovis Bend Break Tools. (n = 9).

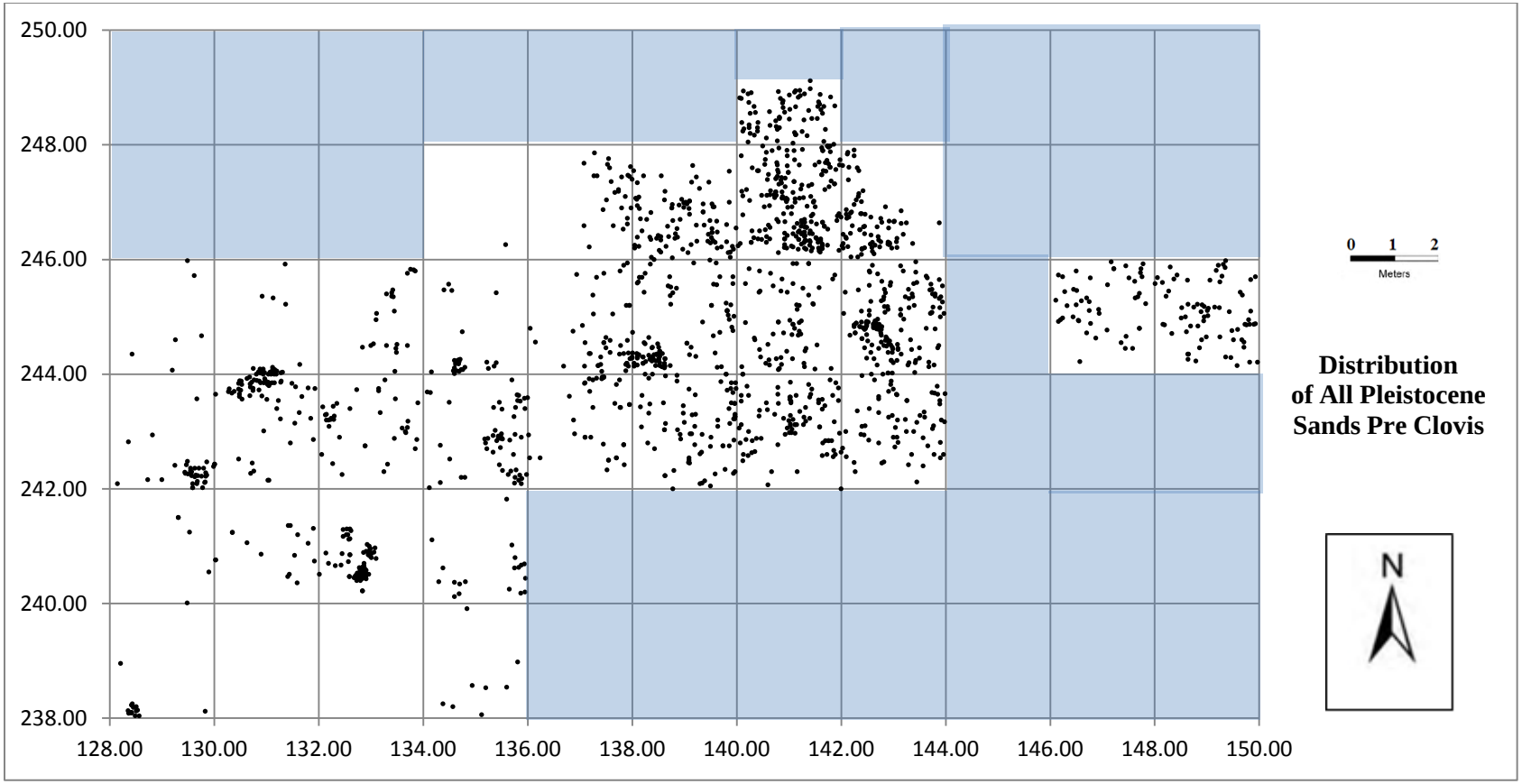


Figure A43 -7
Distribution of all pre Clovis mapped items from the Pleistocene Sands. (97.70-97.20m; n=1625).

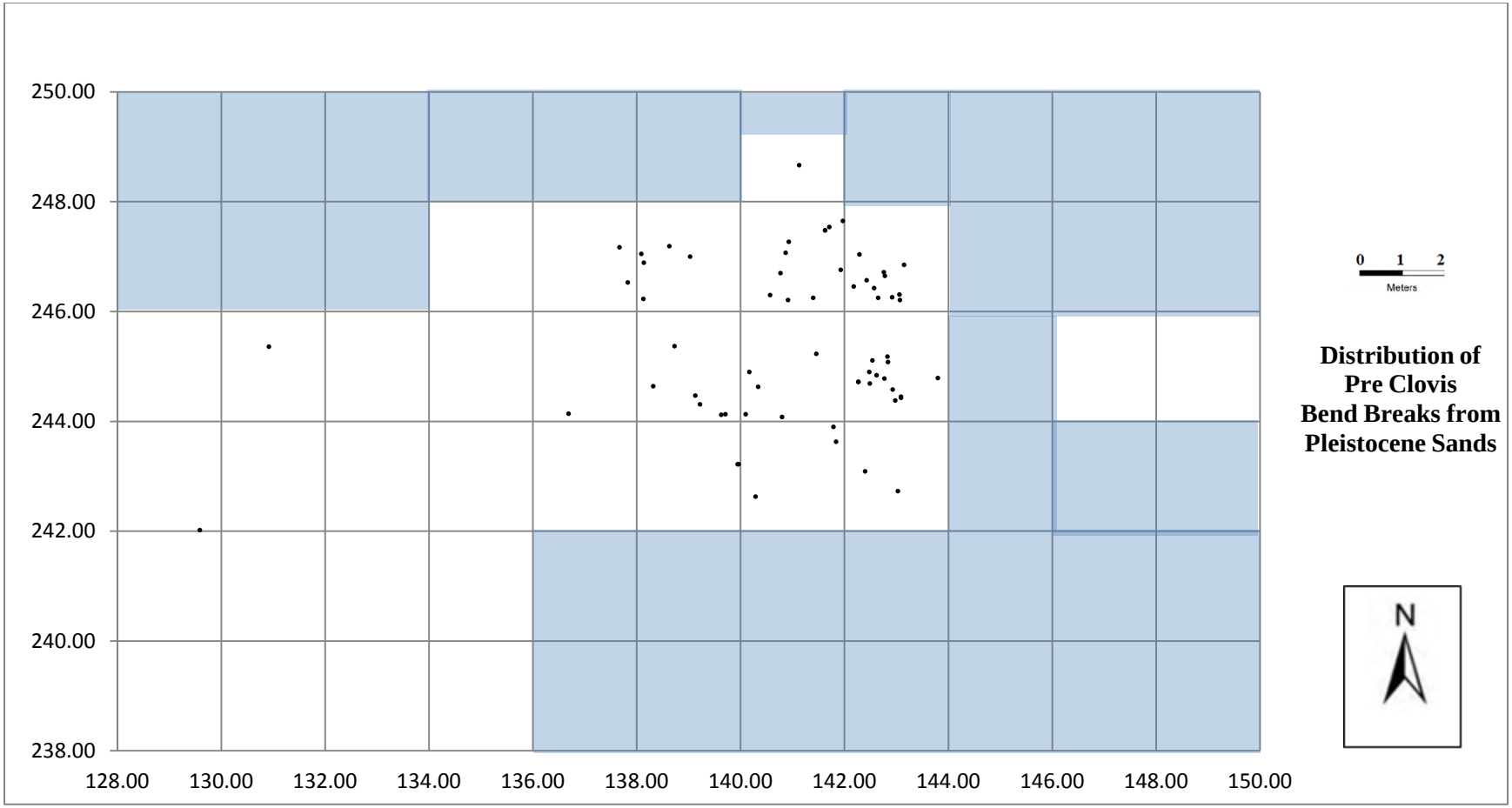


Figure A43 -8
Distribution of all pre Clovis Bend Break Tools from the Pleistocene Sands. (97.70-97.20m; n = 65).

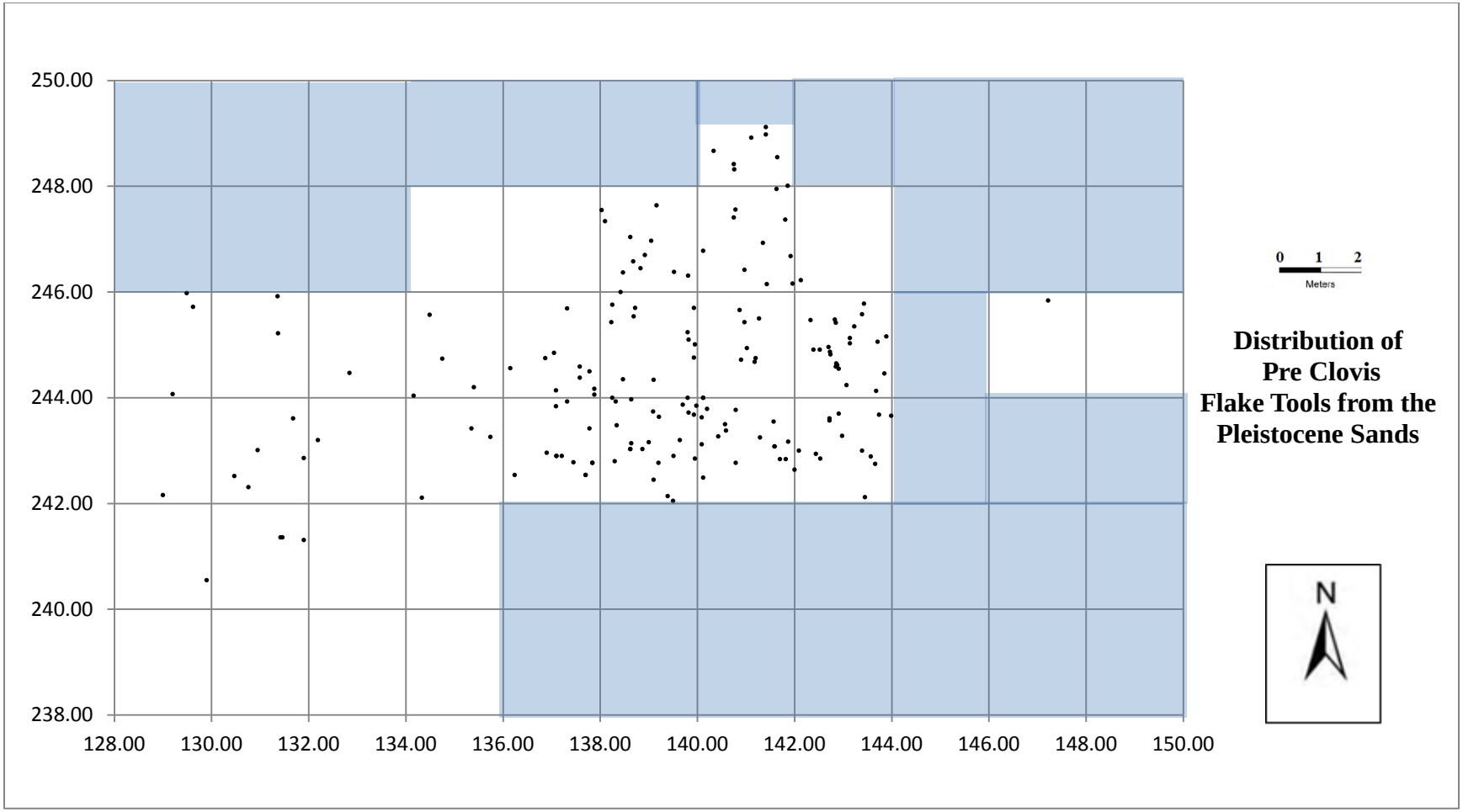


Figure A43 -9
Distribution of all pre Clovis Flake Tools recovered from the Pleistocene Sands. (97.70-97.20m; n = 175).

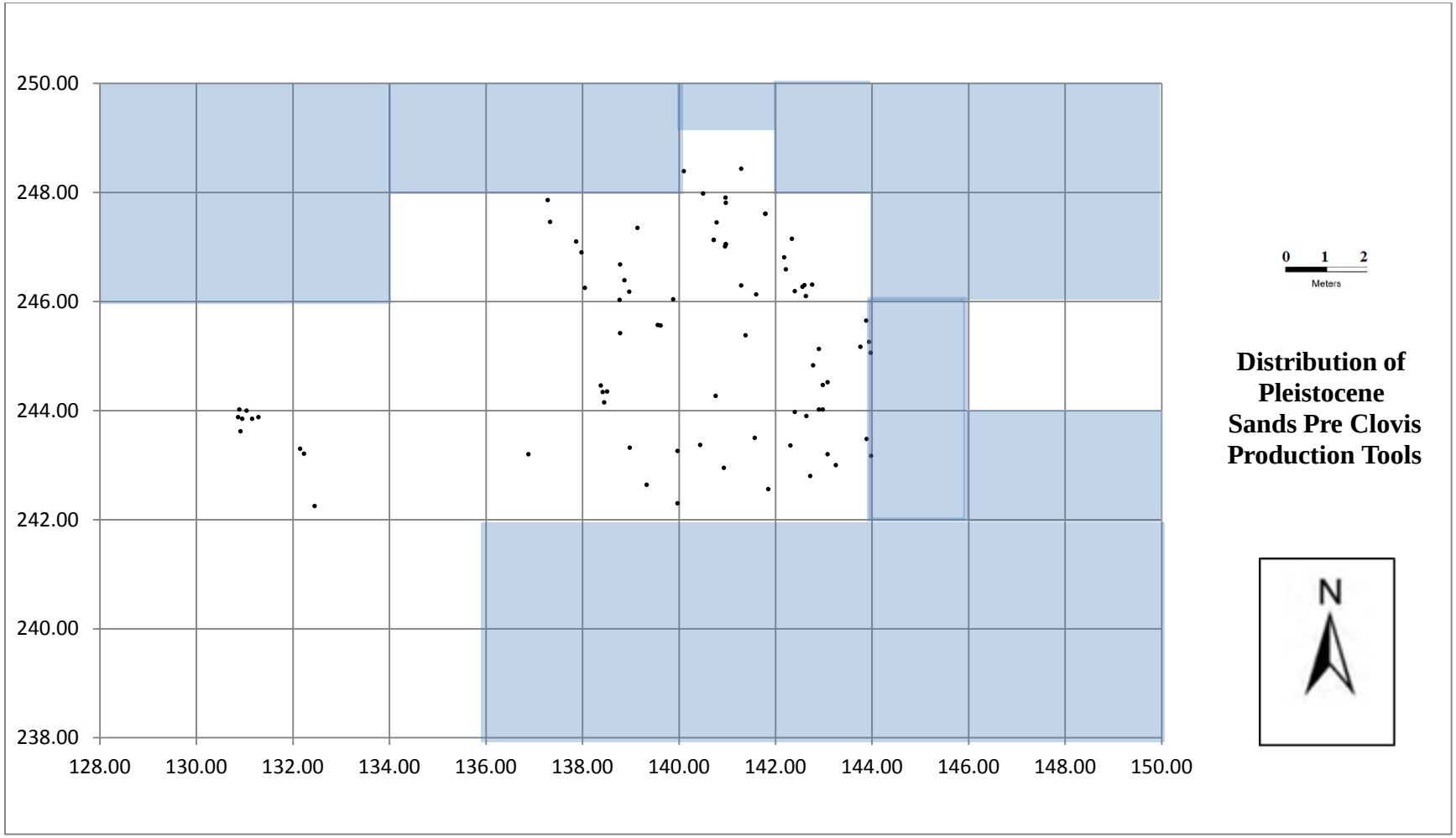


Figure A43 -10
Distribution of all pre Clovis Production Tools recovered from the Pleistocene Sands. (97.70-97.20m; n = 80).

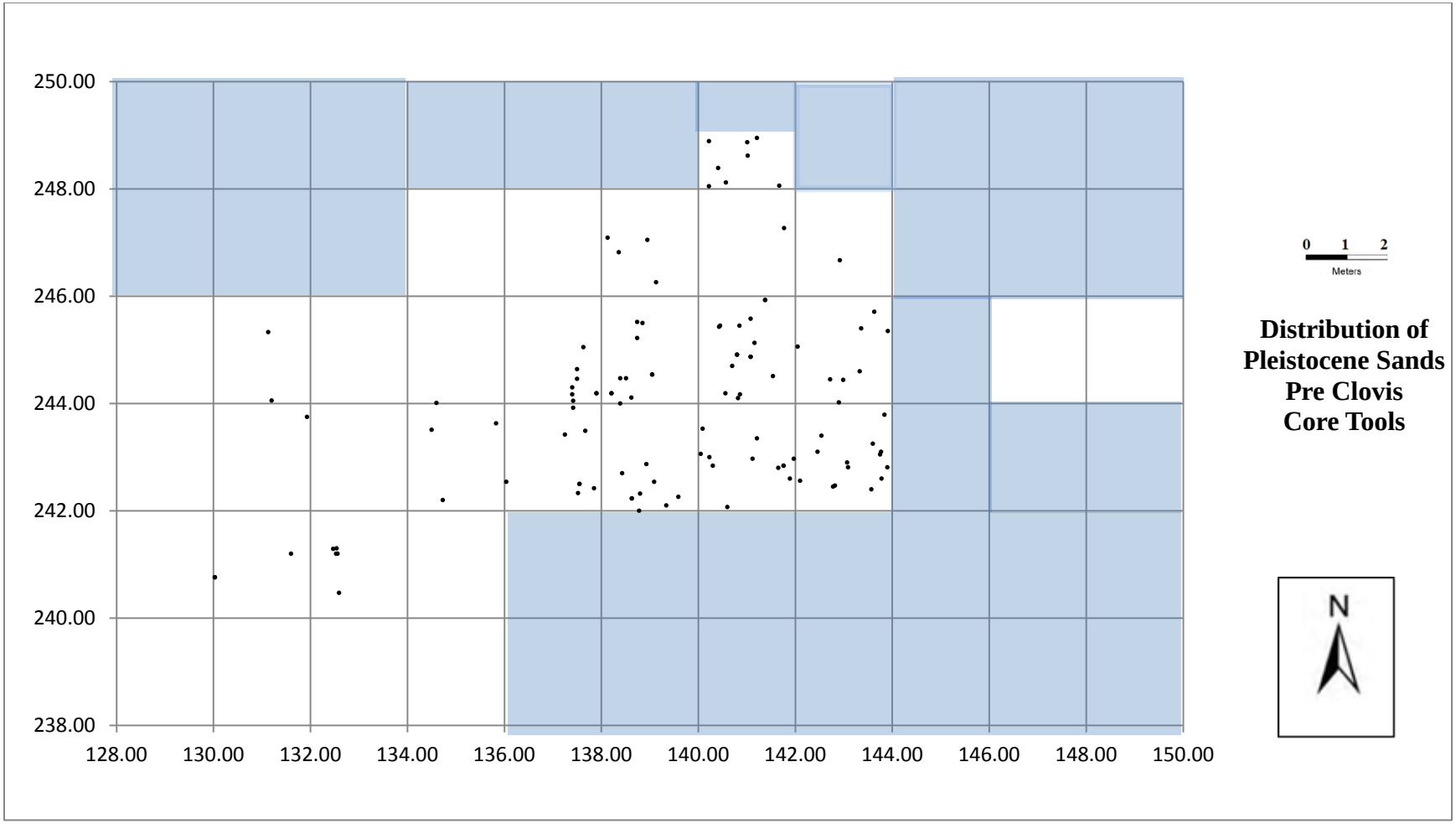


Figure A43 -11
Distribution of all pre Clovis Core Tools recovered from the Pleistocene Sands. (97.70-97.20m; n = 115).

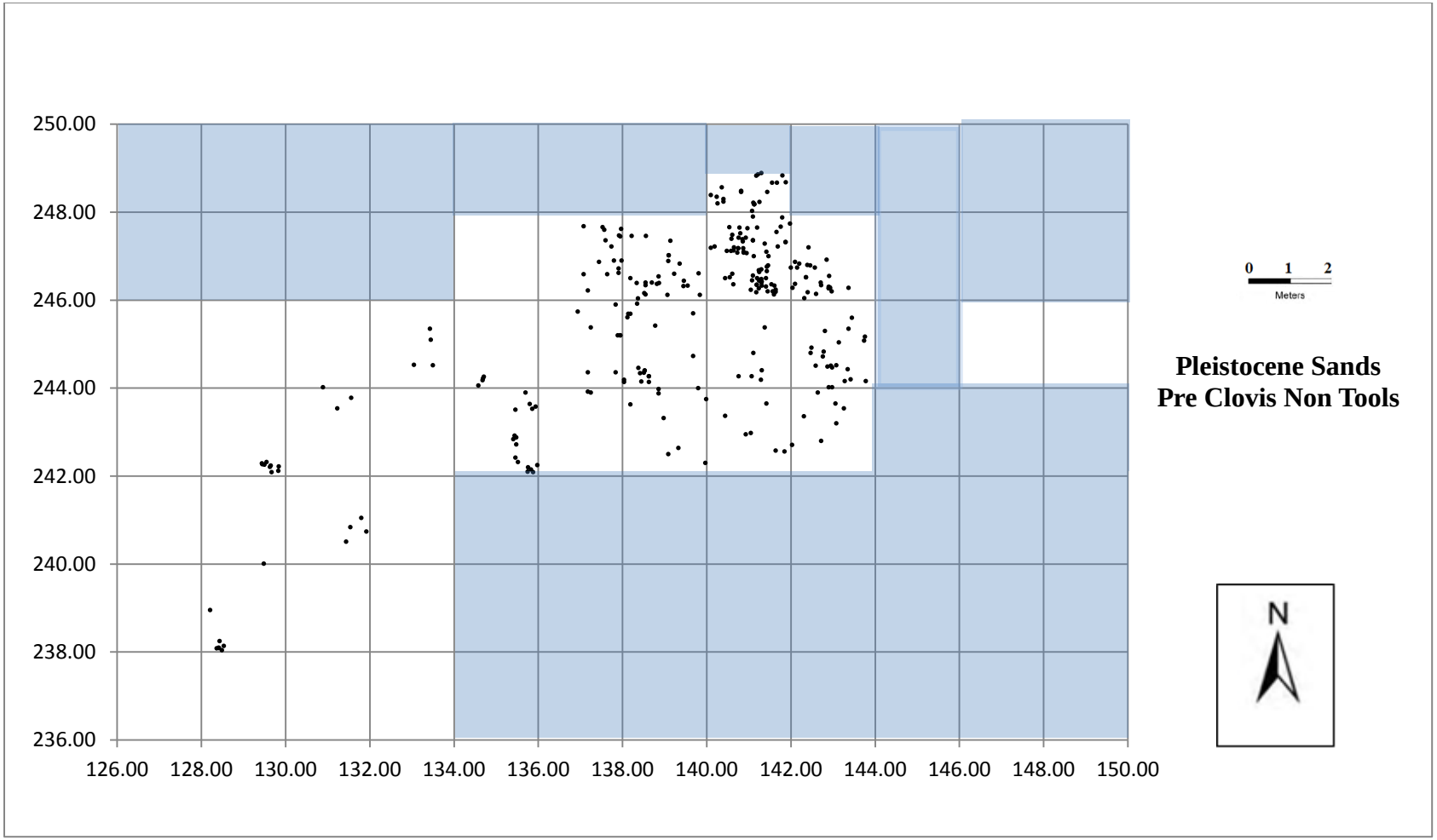


Figure A43 -12
Distribution of all pre Clovis Non-Tools recovered from the Pleistocene Sands. (97.70-97.20m; n = 256).

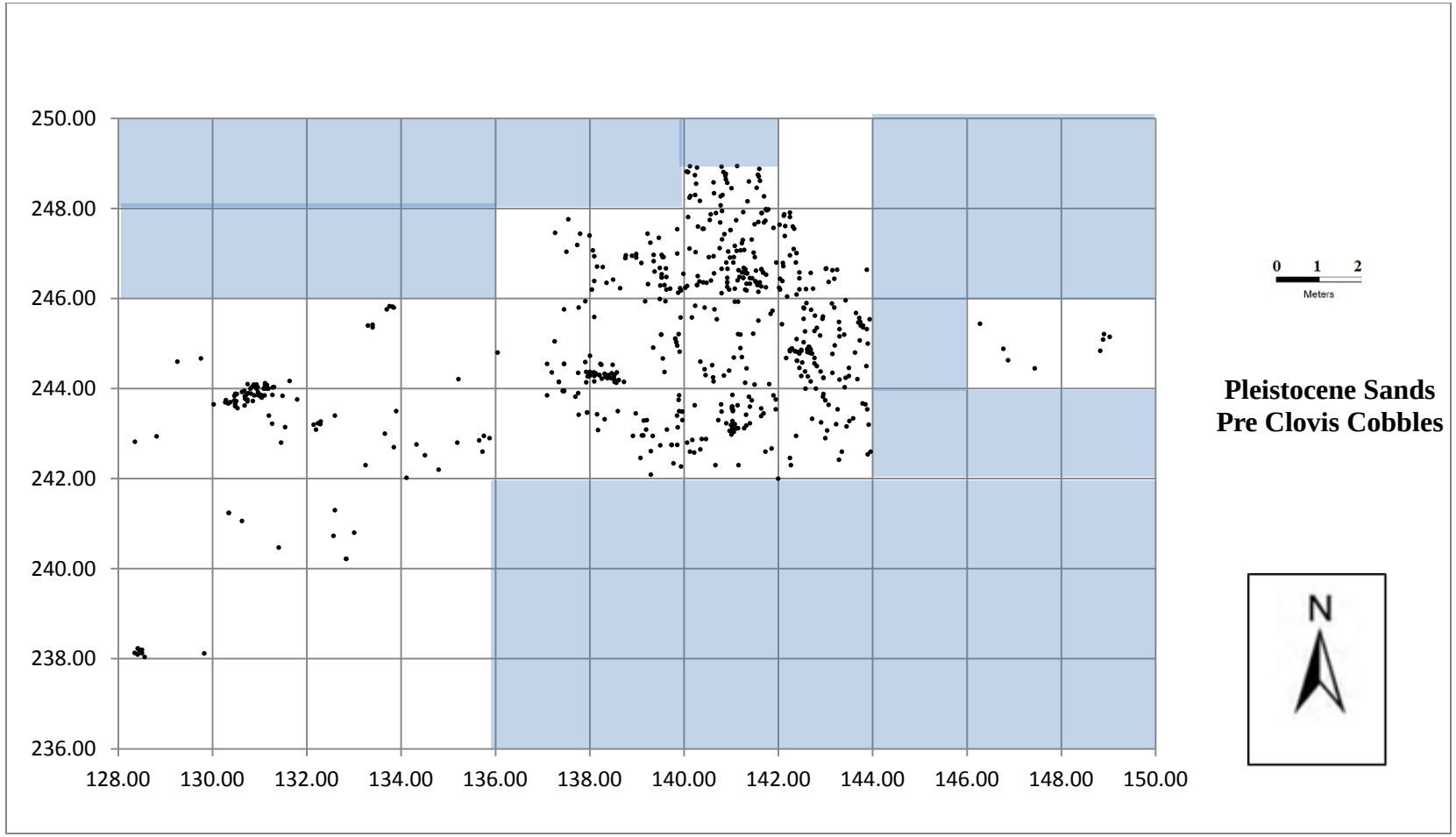


Figure A43 -13
Distribution of all pre Clovis Cobbles and Pebbles recovered from the Pleistocene Sands. (97.70-97.20m; n = 671).

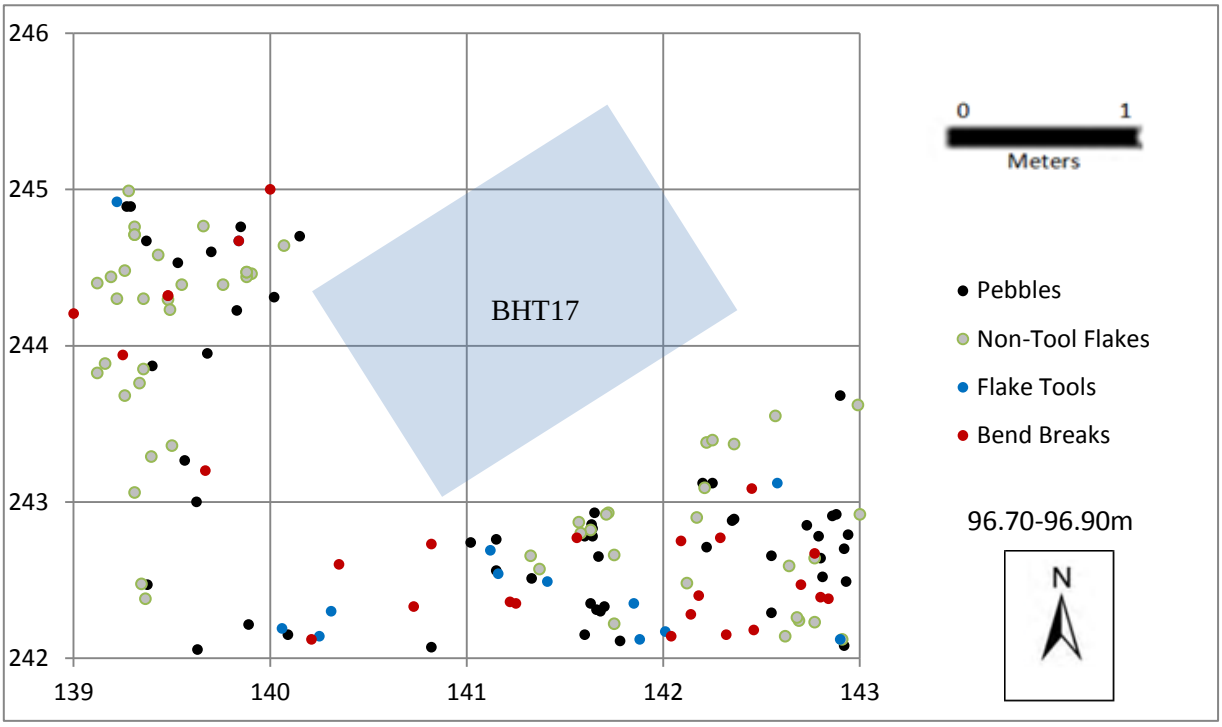


Figure A43 -14
Plan view Distribution of Plotted items from the Southern Terrace Excavation (96.70-96.90m). BHT 17 Highlighted. NN statistic = 1.334333; p = 0.00.

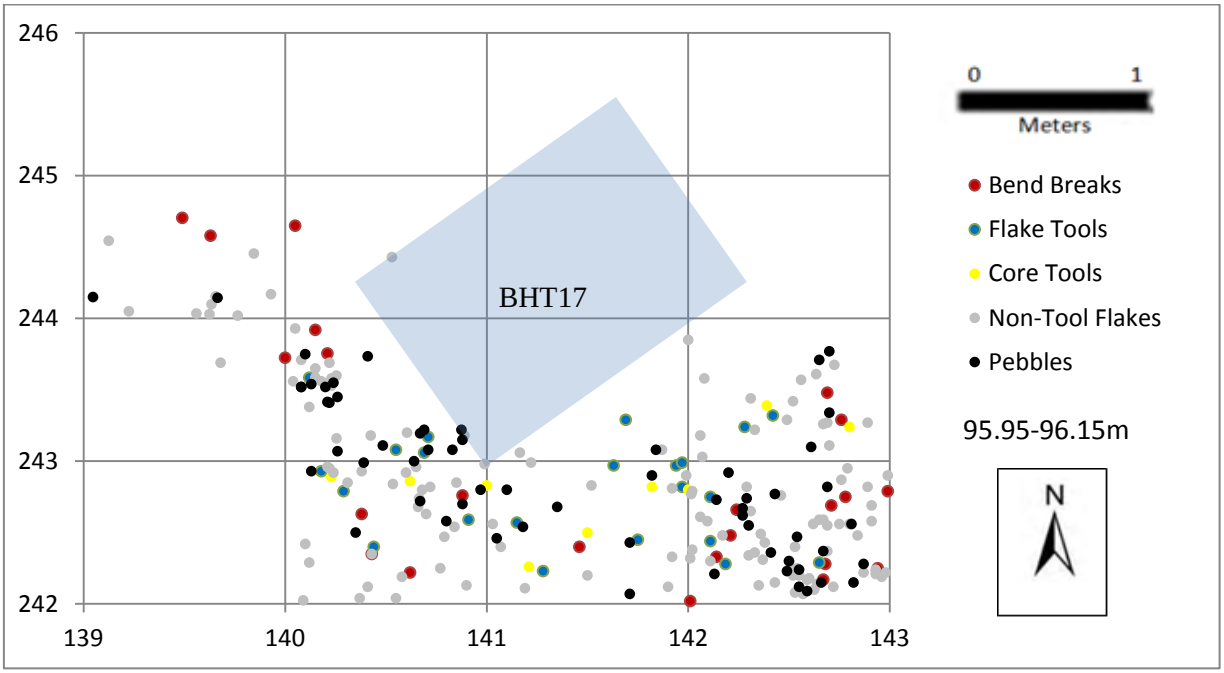


Figure A43 -15
Plan View Distribution of Plotted items from the Southern Terrace Excavation (95.95-96.15m). BHT 17 Highlighted. NN statistic = 1.334333; p = 0.00.

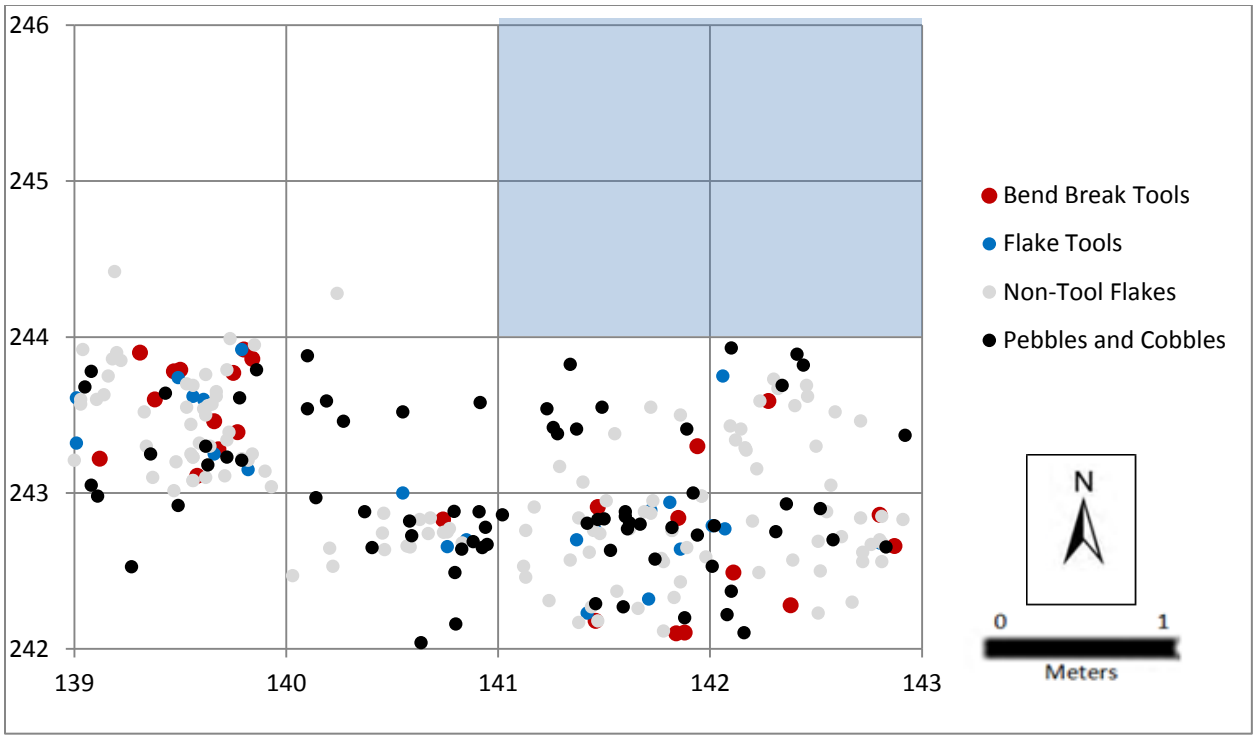


Figure A43 -16
Plan View Spatial Distribution of Plotted items from the Southern Terrace Excavation (95.25-95.95m).

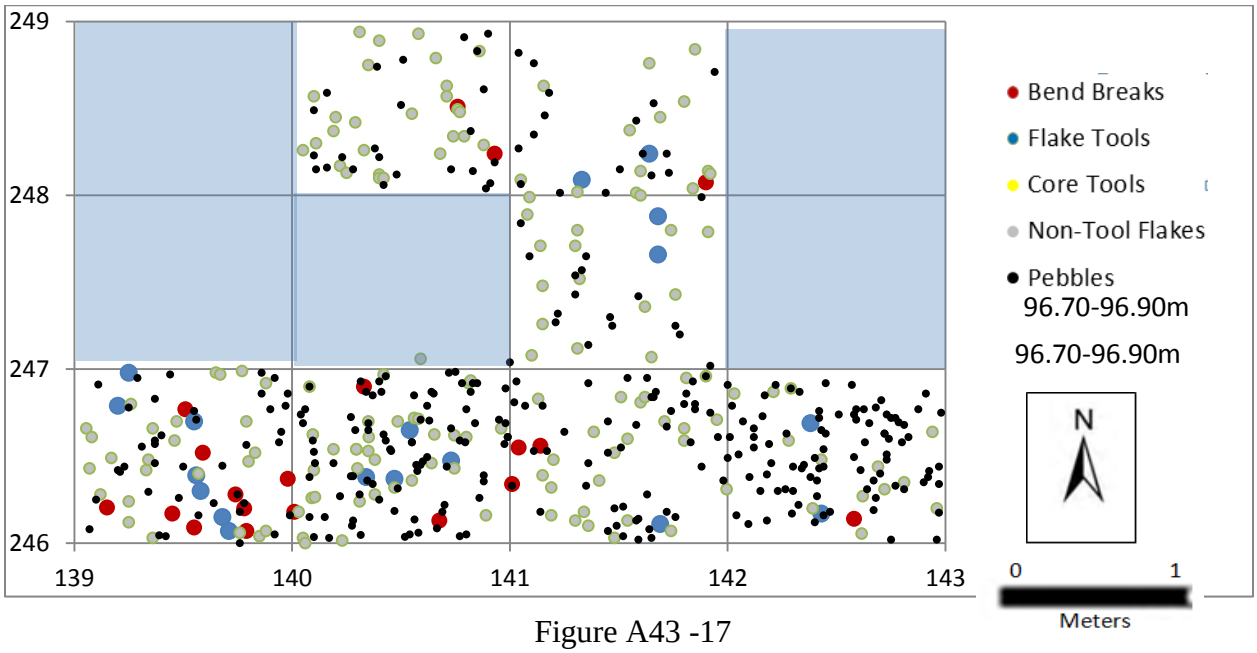


Figure A43 -17
Plan View Spatial Distribution of Plotted items from the Northern Terrace Excavation (96.90-96.70m). NN statistic = 1.334333; p = 0.00.

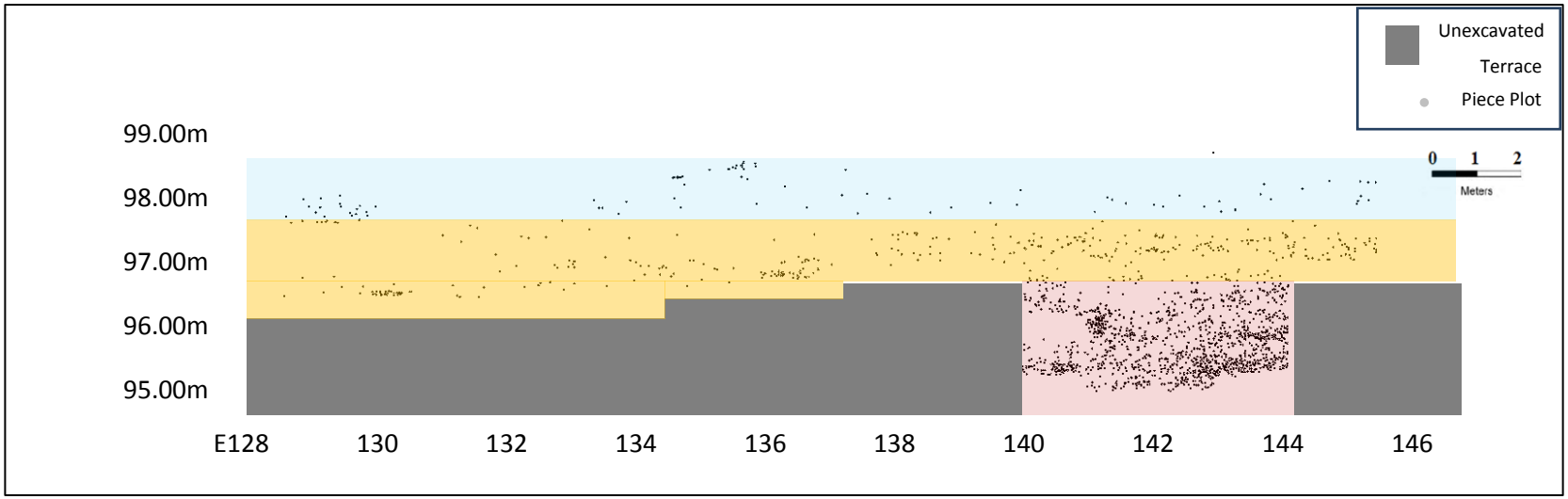


Figure A43 -18
Distribution of all mapped items along the N242 gridline from the 2002-2012 5m x 9m block excavation at the Topper Site (38AL23).

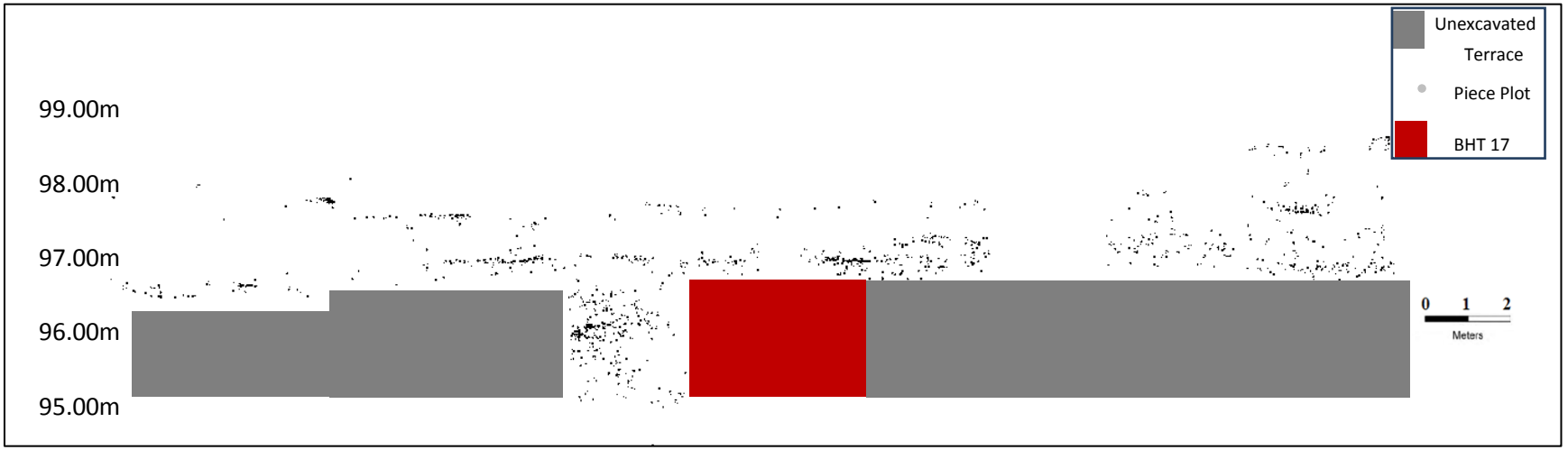


Figure A43 -19
Distribution of all three dimensionally mapped items along the N244 gridline from the 2002-2012 5m x 9m block excavation at the Topper Site (38AL23). Terrace surface is at 97.20m.

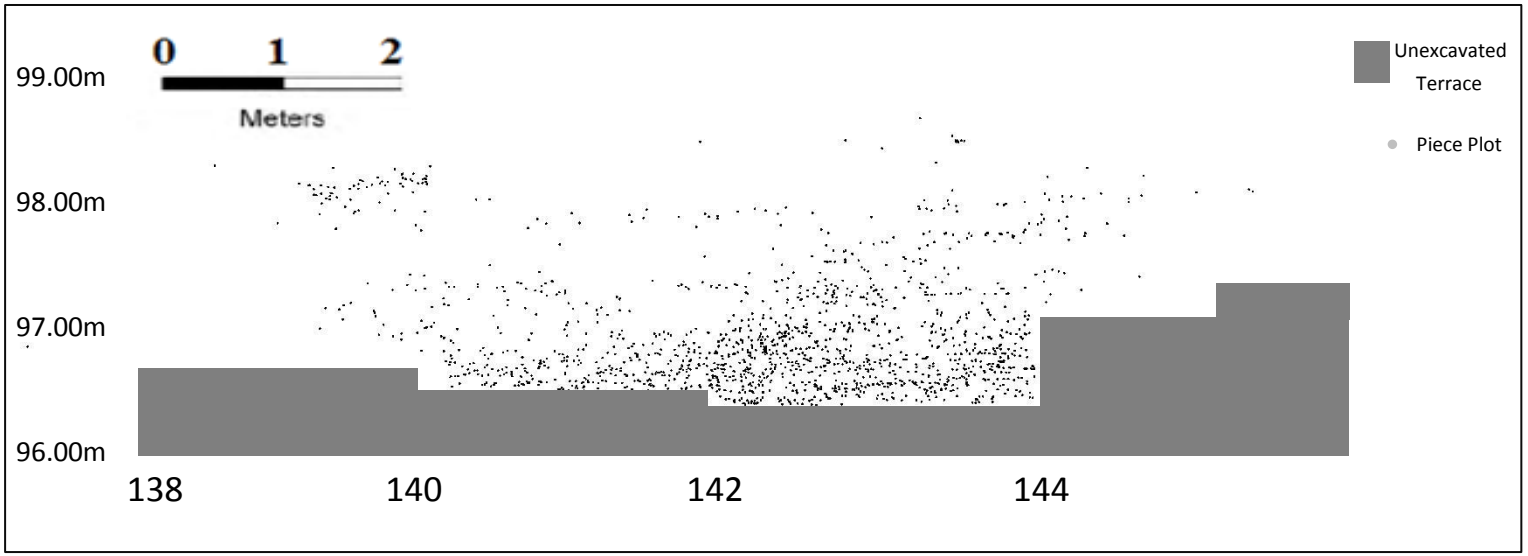


Figure A43 -20A

Distribution of all mapped items along the N246 gridline from the 2002-2012 5m x 9m block excavation at the Topper Site (38AL23).

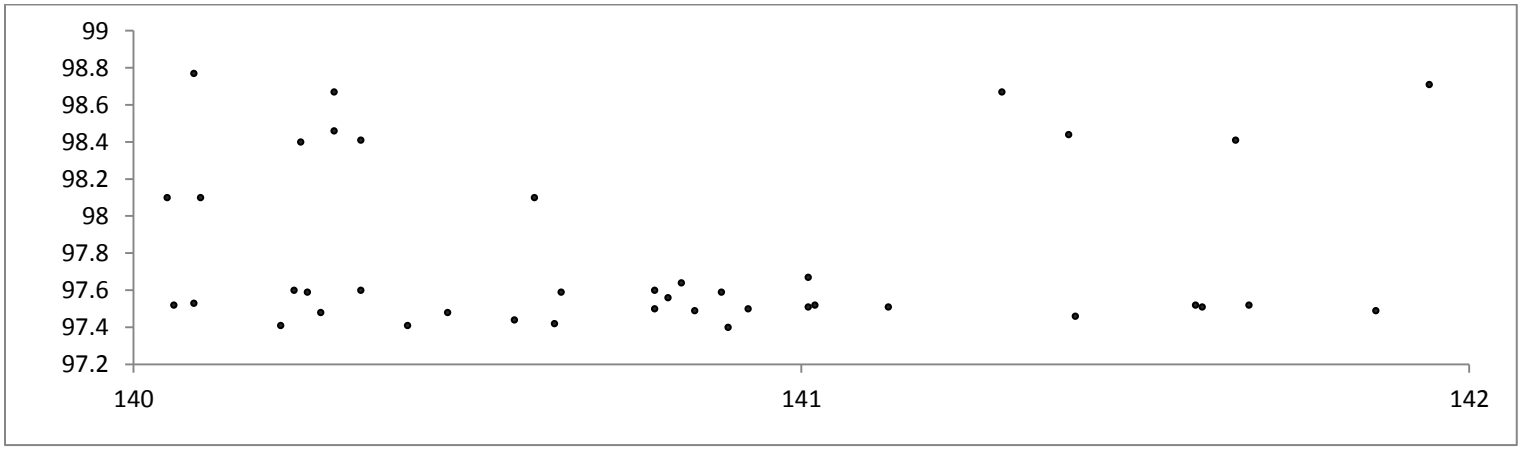


Figure A43 -20B

istribution of all mapped items along the N248 gridline from the 2002-2012 5m x 9m block excavation at the Topper Site (38AL23).

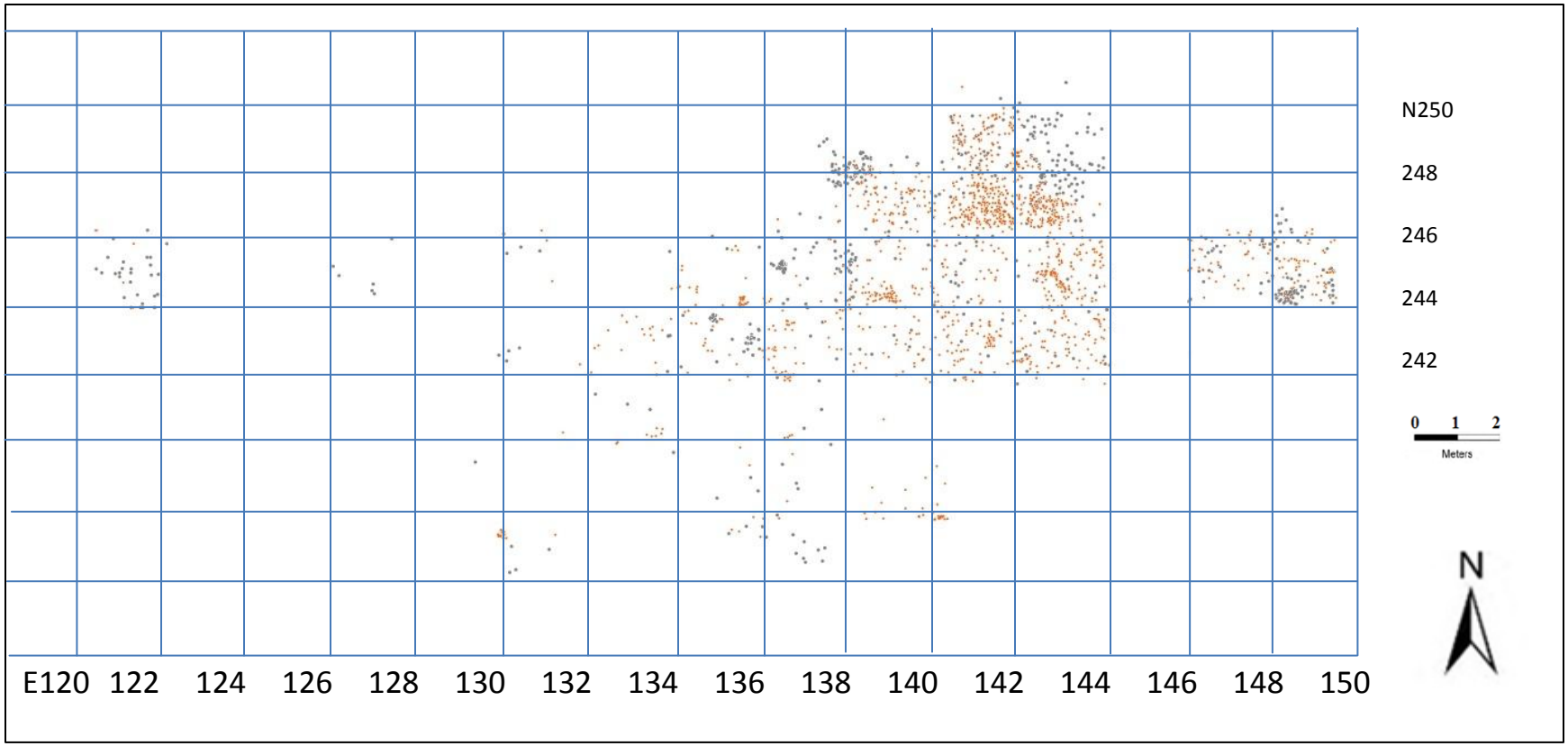


Figure A43 -21
Plan view map of the distribution of all mapped artifacts from the Clovis (Black) and Pleistocene Sands (Red) deposits from the primary 2002-2012 block excavation.

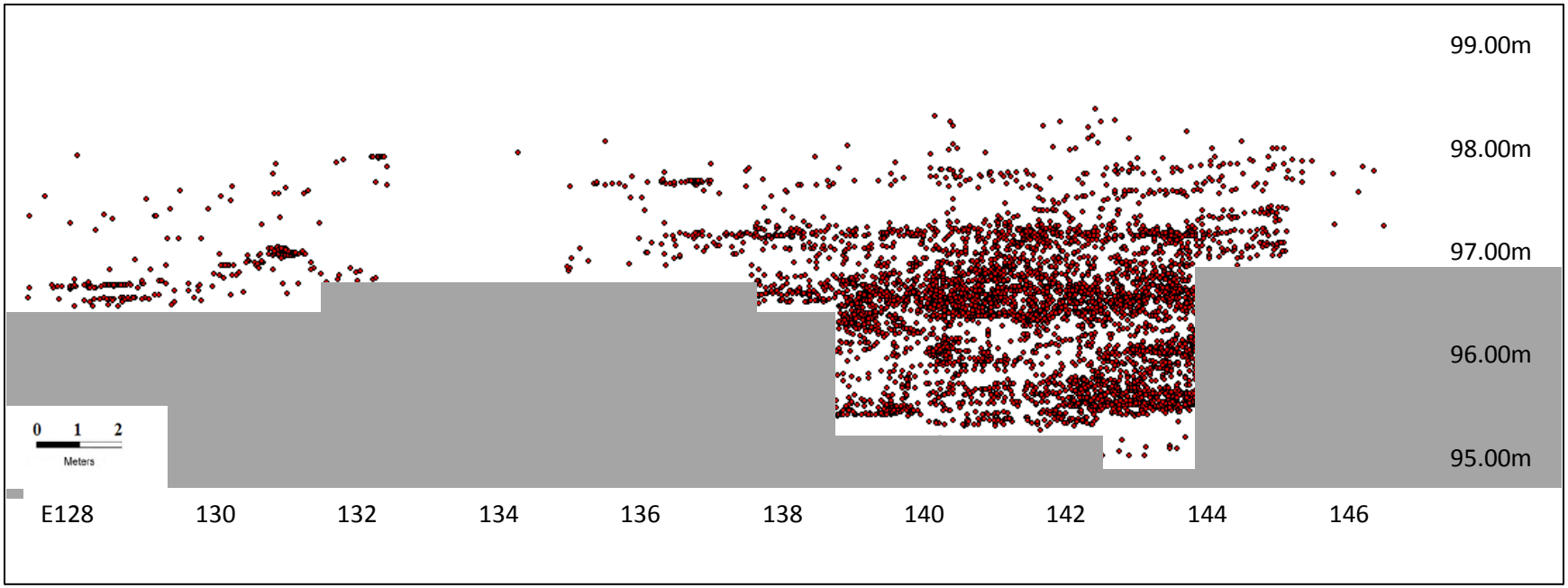


Figure A43 -22
Profile map showing the distribution of all mapped items from the 2002-2012 5m x 9m block excavation including Pleistocene Terrace deposits (below 97.00m).

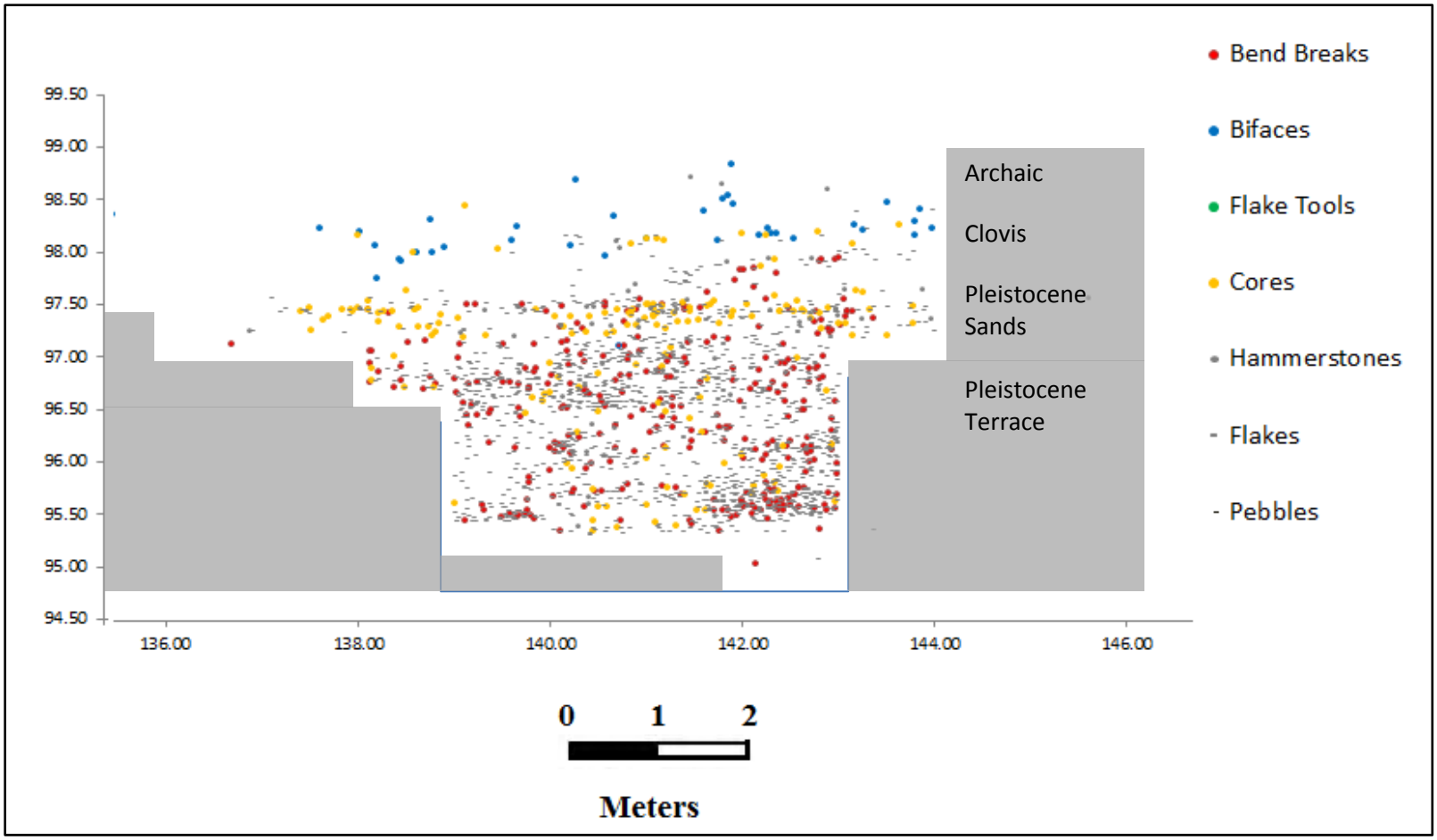


Figure A43 -23
Spatial Distribution of mapped artifacts from the Pleistocene Terrace at the Topper Site (28AL23).

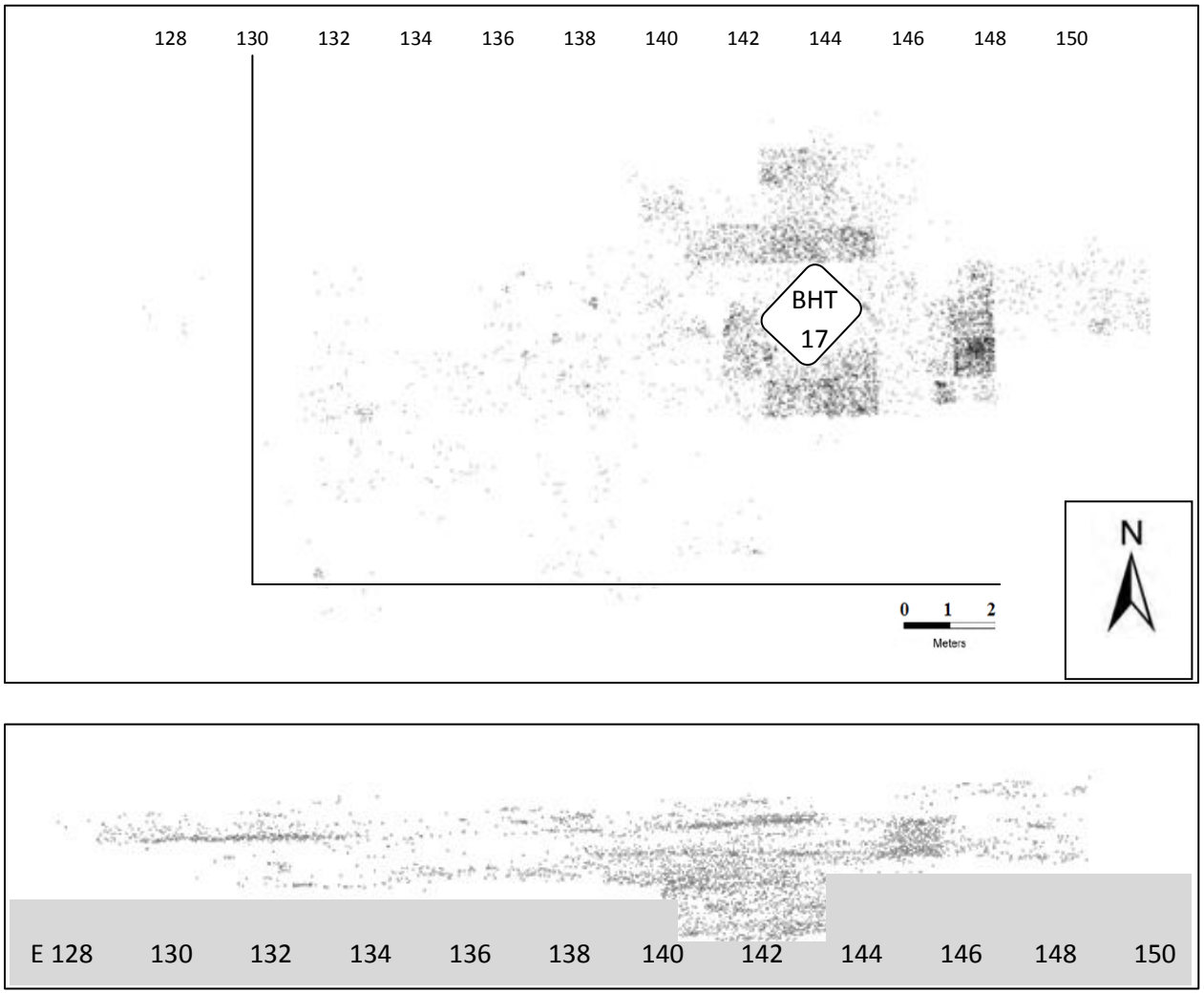


Figure A43 -24
Plan view (top) and profile (bottom) map of the spatial distribution of all mapped artifacts from the 2002-2012 5m x 9m block excavation at the Topper Site (38AL23).

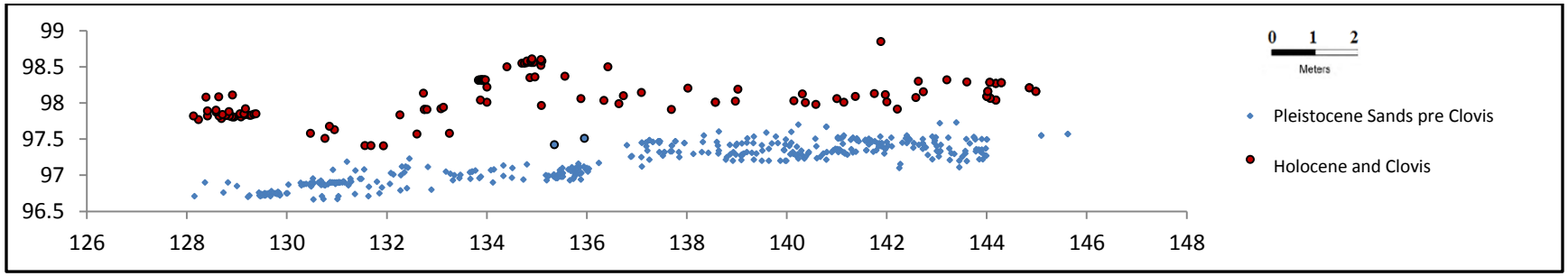
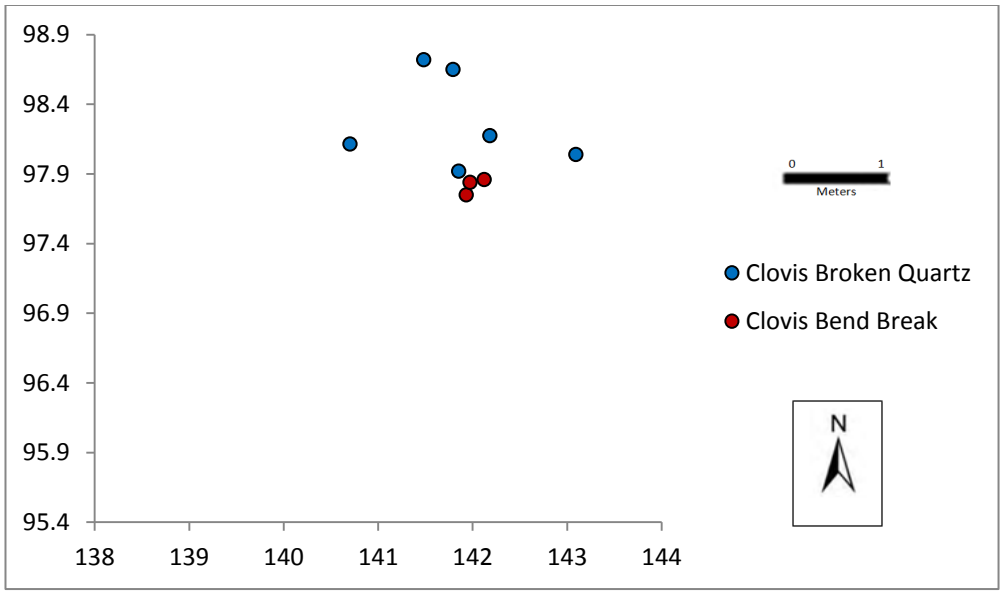
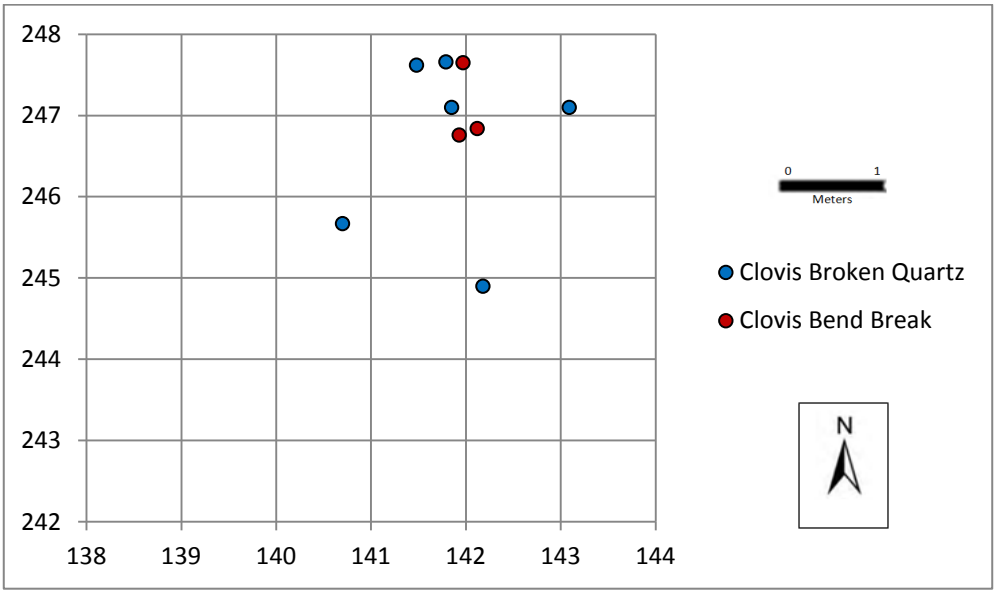


Figure A43 -24B
Profile view of the spatial distribution of mapped artifacts from the 2002-2012 5m x 9m block Holocene and Pleistocene Sands excavation at the Topper Site (38AL23).

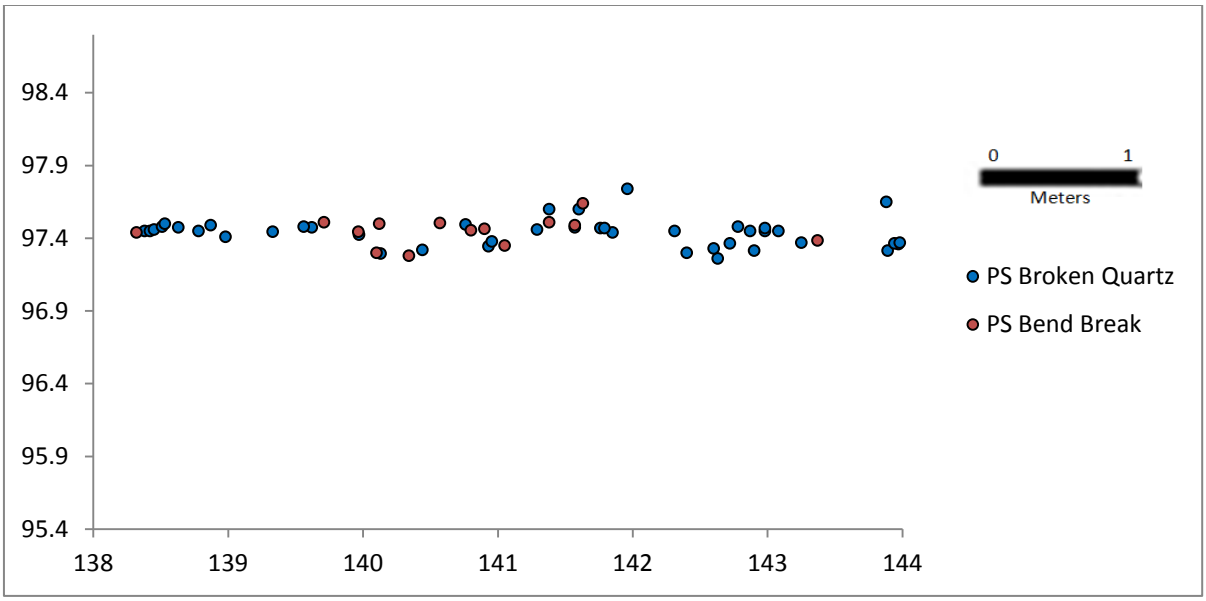


A

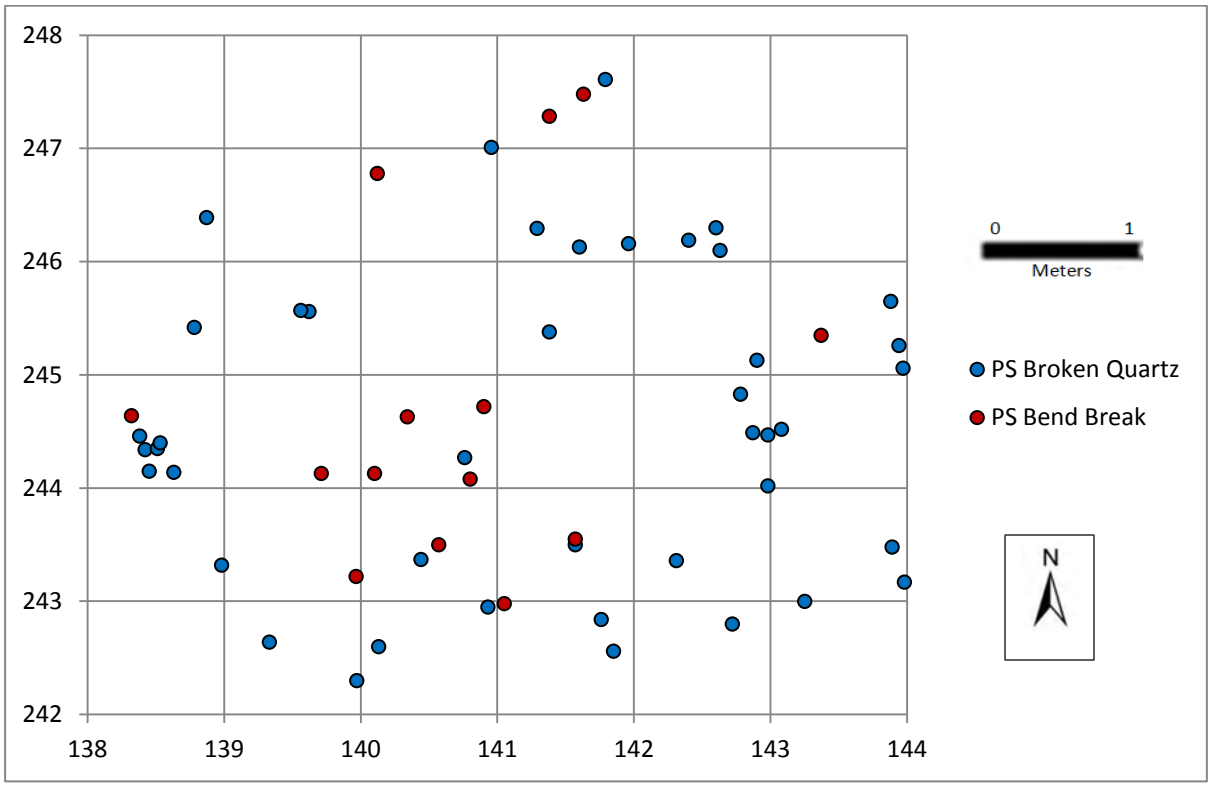


B

Figure A43-25
Spatial distribution of Clovis bend breaks and split quartz pebbles at the Topper Site (Profile A and Plan view B).

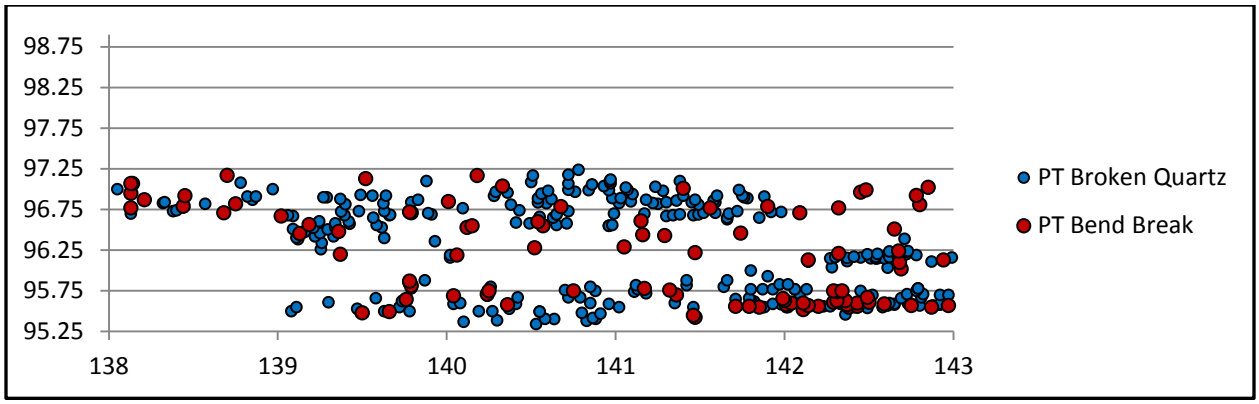


A

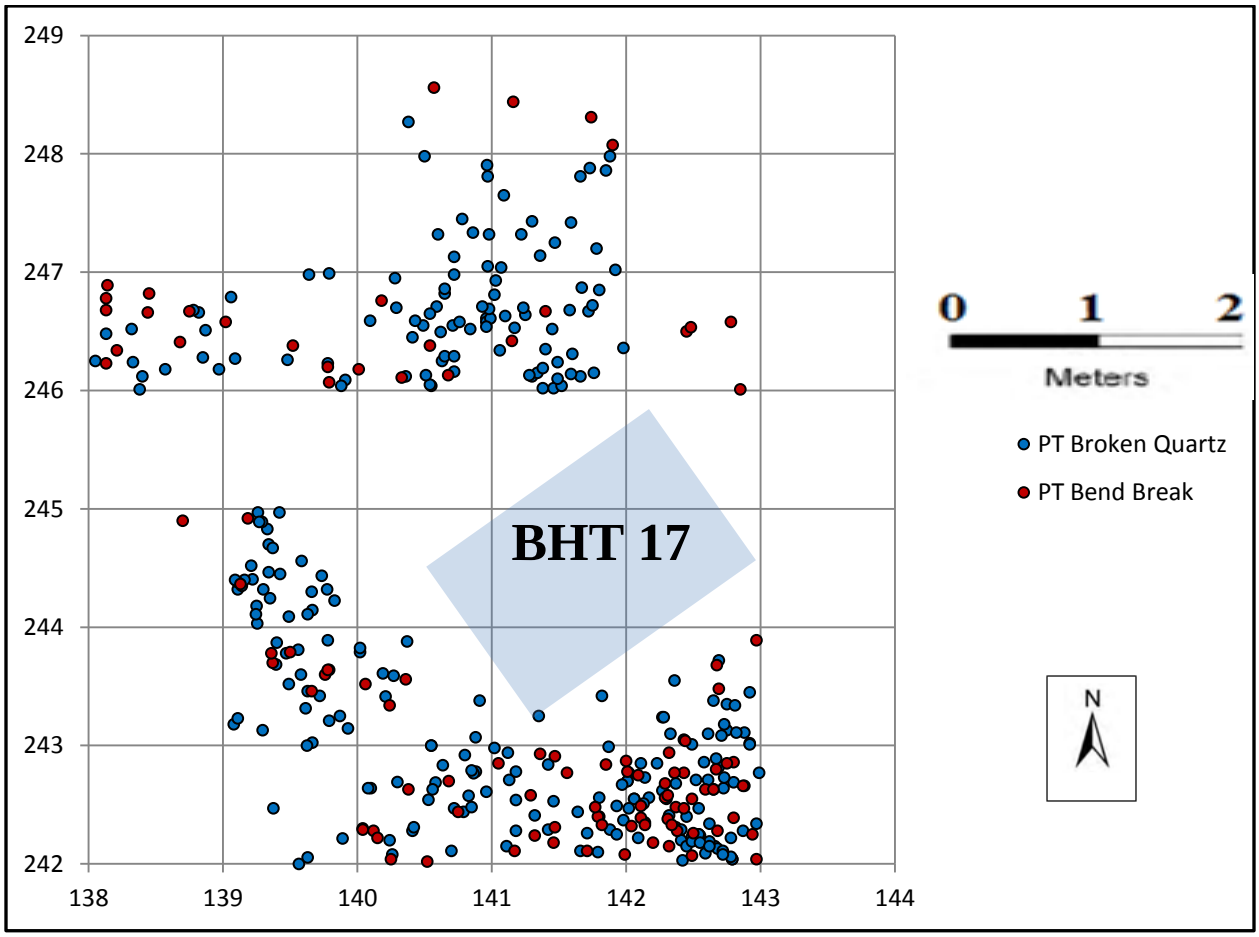


B

Figure A43-26
Spatial distribution of Pleistocene Sands bend breaks and split quartz pebbles at the Topper Site (Profile A and Plan view B).



A



B

Figure A43-27
Spatial distribution of Pleistocene Terrace bend breaks and split quartz pebbles at the Topper Site (Profile A and Plan view B).

Table A43-1
Spatial Distribution of Taylor Points from the Early Archaic Deposits at the Topper Site

Year	Northing	Easting	Depth	Type	Figure Label
2001	235.48	107.27	97.36	Taylor Point base	
2002	243.6	136.73	98.1	Taylor Point base	
2003	289.07	137.49	97.67	Taylor Preform	
2005	247.58	140.72	98.15	Taylor Point	H
2010	264.83	146.59	98.22	Taylor Point	
1985	220.45	88.835	97.935	Taylor Point	
1998	245.23	106.63	97.49	Taylor Point	
2001	241.755	129.005	97.87	Taylor Preform	
2001	241.18	129.51	97.89	Taylor Point	C
1999	210.95	137.02	97.75	Taylor Preform	
	241.6	136.1		Taylor Point	
	212	130		Taylor Point	
2001	241.345	136.7	98.05	Taylor point	G
1986	B		97.42	Taylor Point	
1986			97.5	Taylor Point	
2000	242	128	98	Taylor Point	B
2001	238.32	135.17	98.07	Taylor Point	E
2001	236	136	98	Taylor Point	F
	240	132	97.95	Taylor Point	D

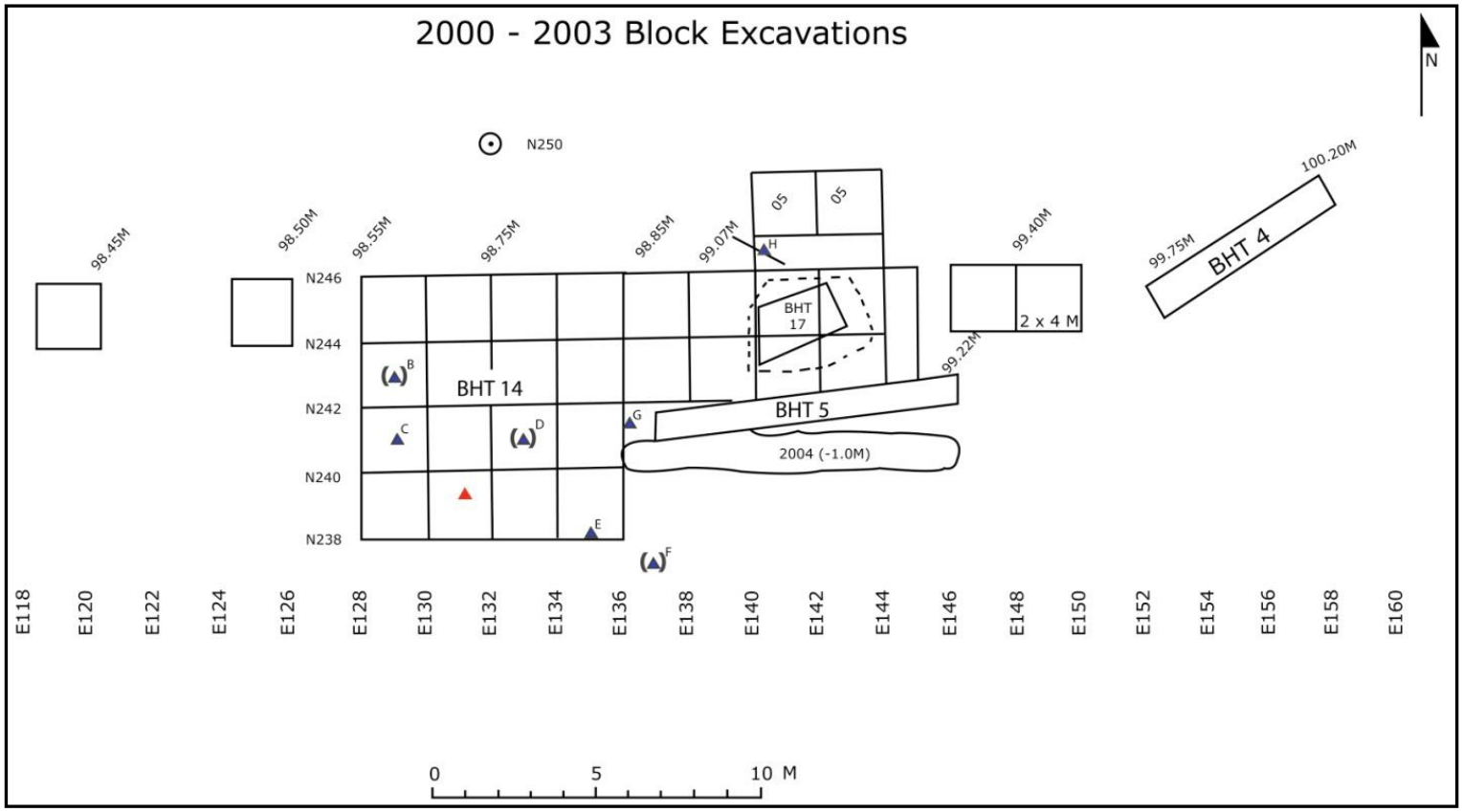


Figure A43-28A
Spatial Distribution of Taylor Points from the Early Archaic Deposits at the Topper Site

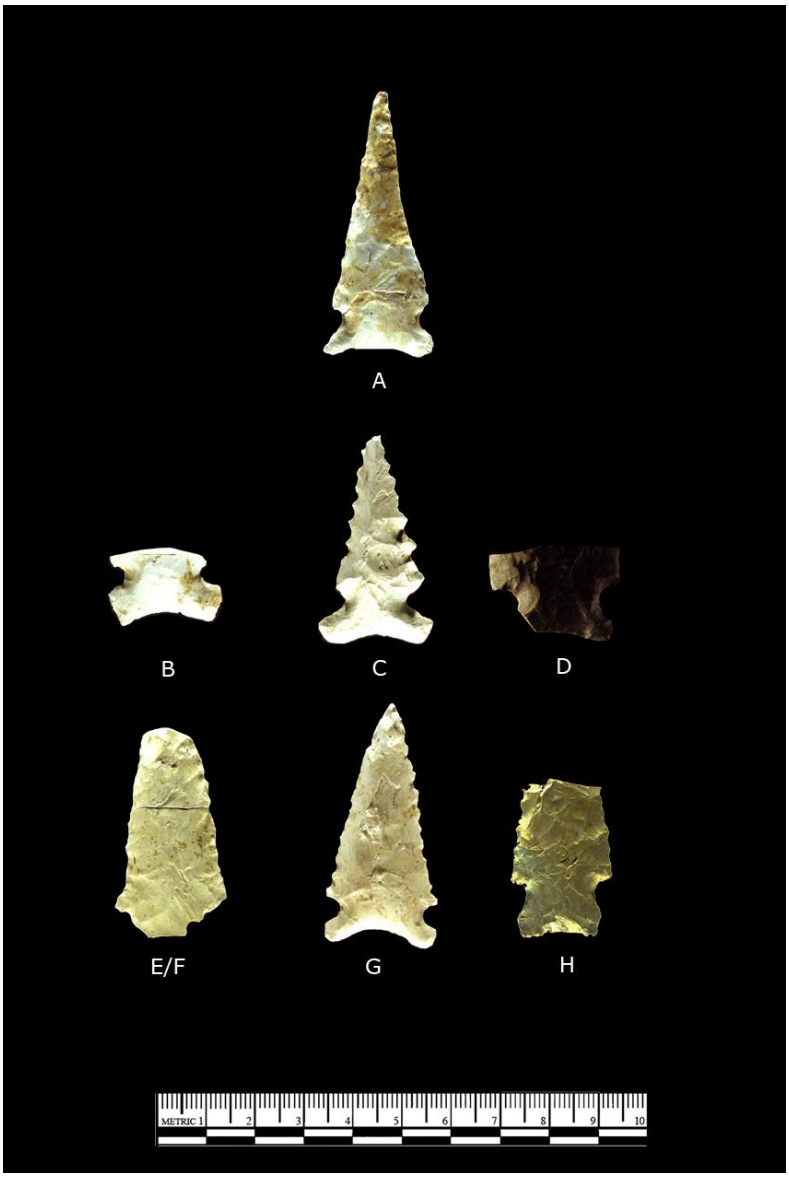


Figure A43-28B
Taylor Points from the Topper Site (38AL23).

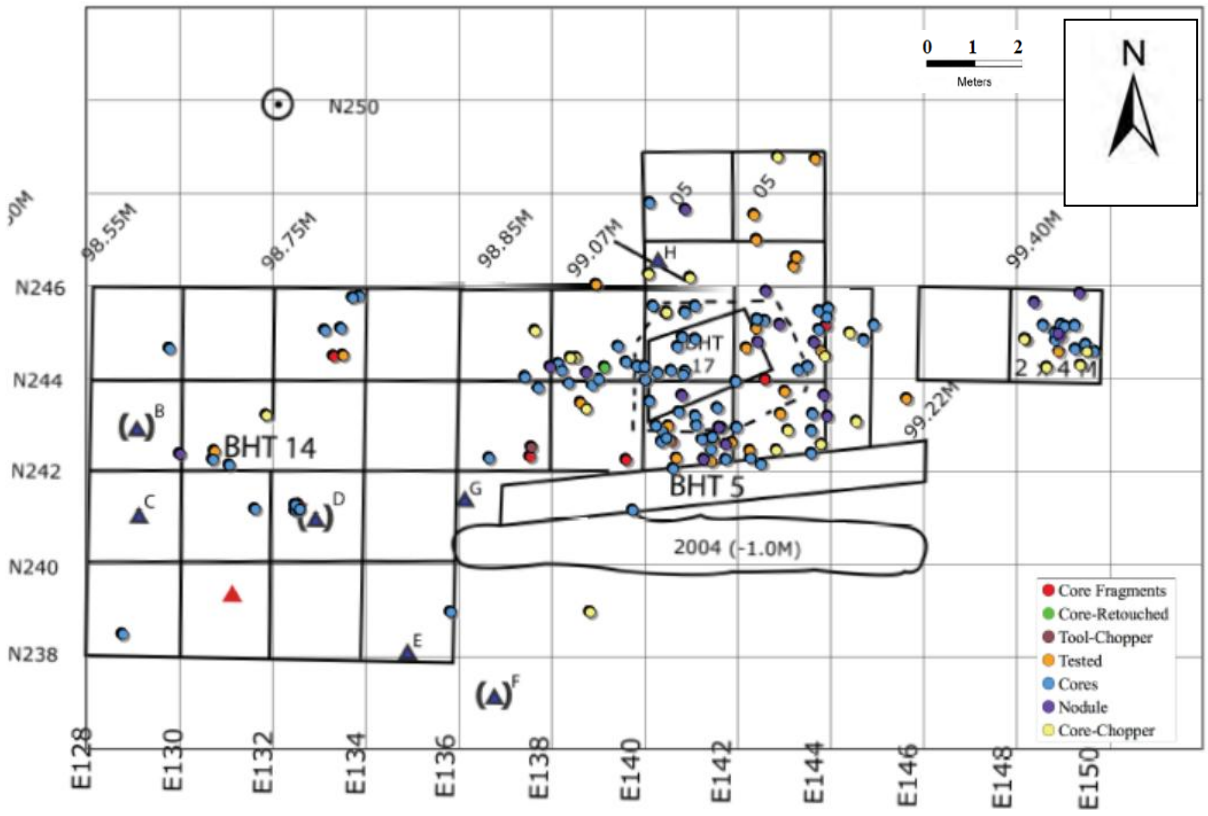


Figure A43-29A
Spatial Distribution of Cores, Core tools, and tested cobbles from the pre Clovis Pleistocene Sands at the Topper Site (38AL23) . Data from 1998 – 2008 from a 2013 study by Goodyear and Wilkinson (n.d.). (Image courtesy of Al Goodyear).

Category	Frequency	Percentage	Thermal Alteration	
			Definitive	Possible
Core	119	52.89%	1	7
Core Fragment	8	3.56%	0	0
Core-Chopper	28	12.44%	0	0
Core-Tool Retouched	3	1.33%	0	0
Tested	41	18.22%	0	0
Nodule	26	11.56%	0	0
Totals	**225**			

Figure A43-29B
Frequency of Cores, Core tools, and tested cobbles from the pre Clovis Pleistocene Sands at the Topper Site (38AL23) . Data from 1998–2008 from a 2013 study by Goodyear and Wilkinson (n.d.). (Image courtesy of Al Goodyear).

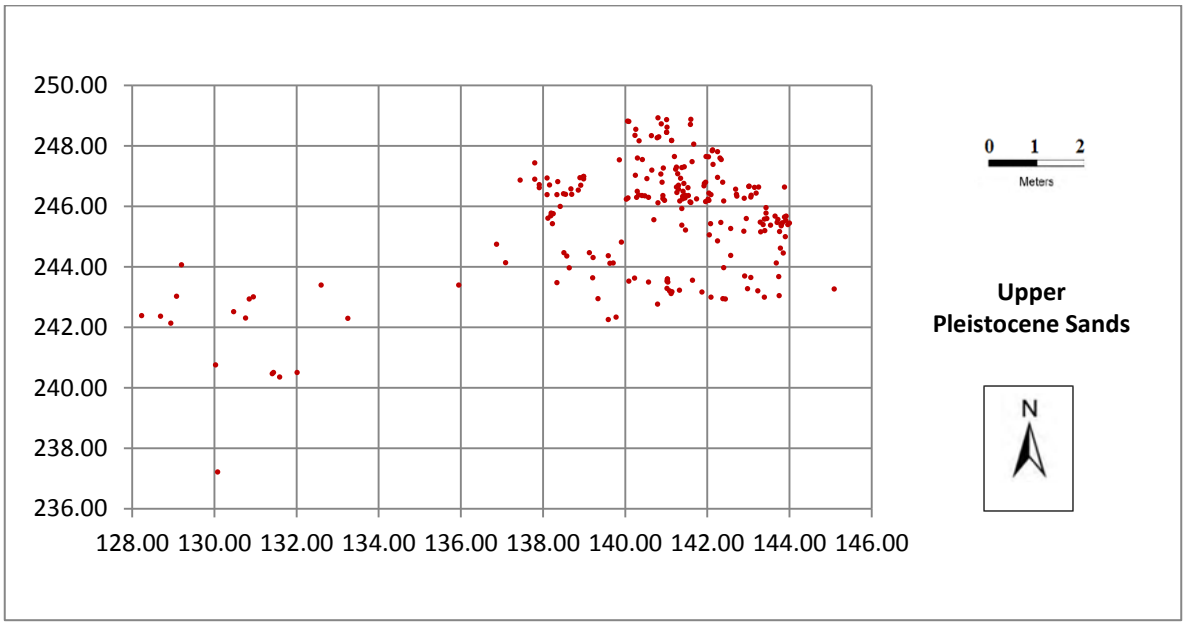


Figure A43-30
Spatial Distribution of all mapped items from the Upper Pleistocene Sands from the study sample at the Topper Site (n = 423). NN Statistic = 0.6024.

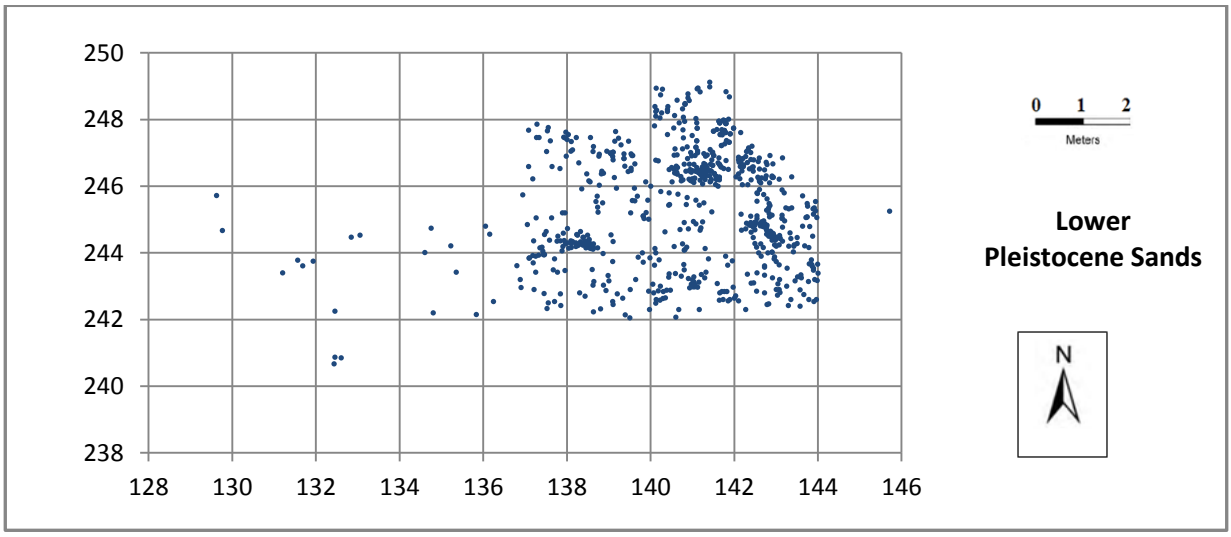


Figure A43-31
Spatial Distribution of all mapped items from the Lower Pleistocene Sands from the study sample at the Topper Site (n = 939). NN Statistic = 0.6060

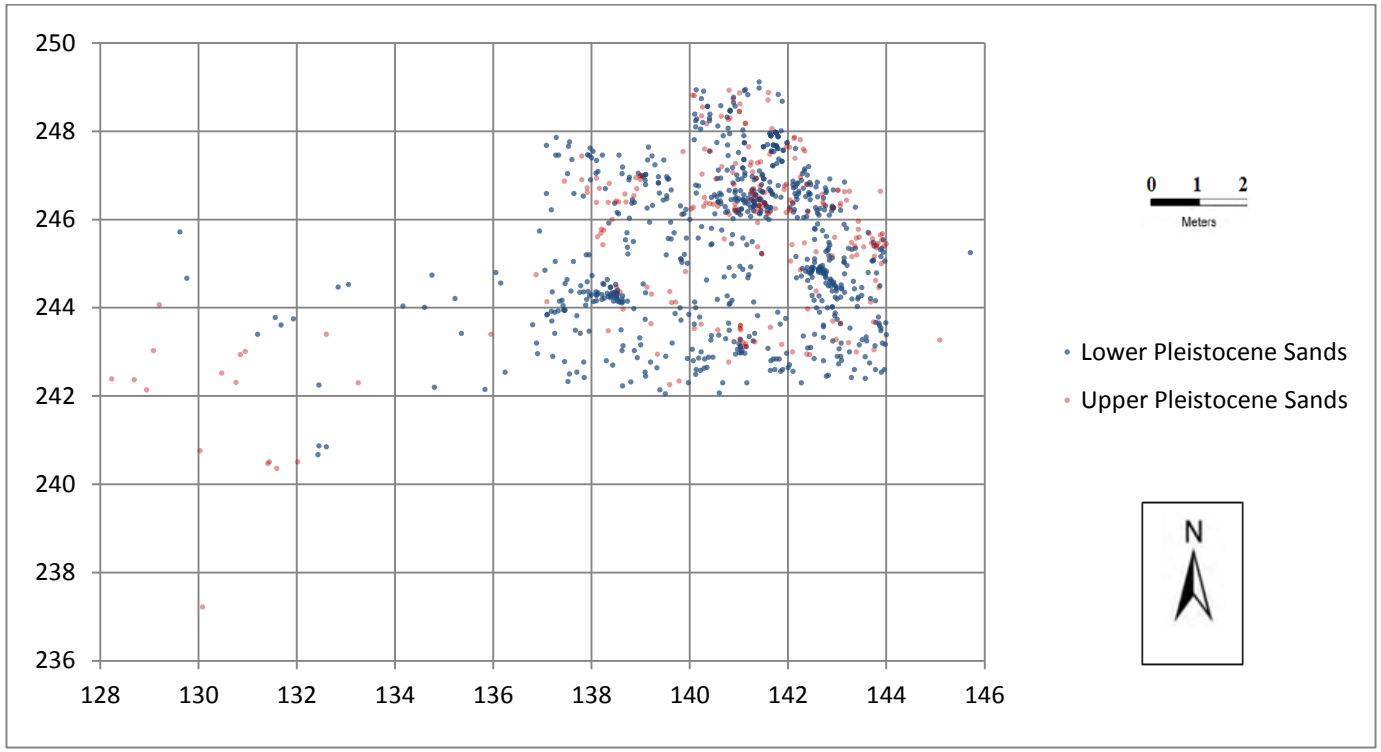


Figure A43-32
Spatial Distribution of all mapped items from the Upper and Lower Pleistocene Sands from the study sample at the Topper Site (n = 1,362).

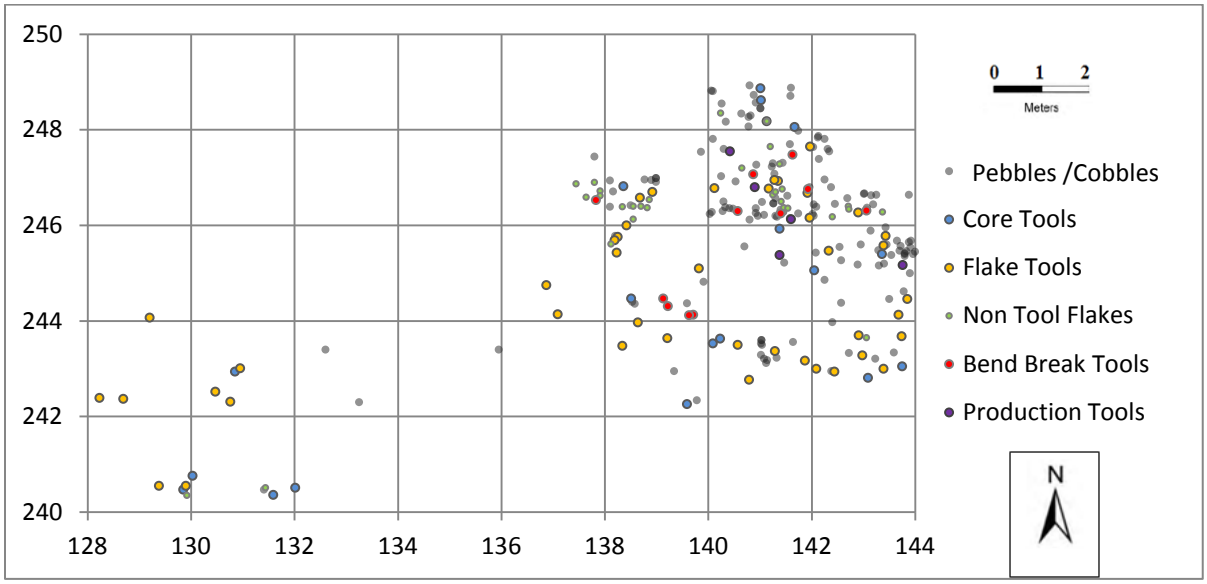


Figure A43-33
Spatial Distribution of all mapped items from the Upper Pleistocene Sands (97.80 – 97.50 m) from the study sample by type at the Topper Site (n = 423).

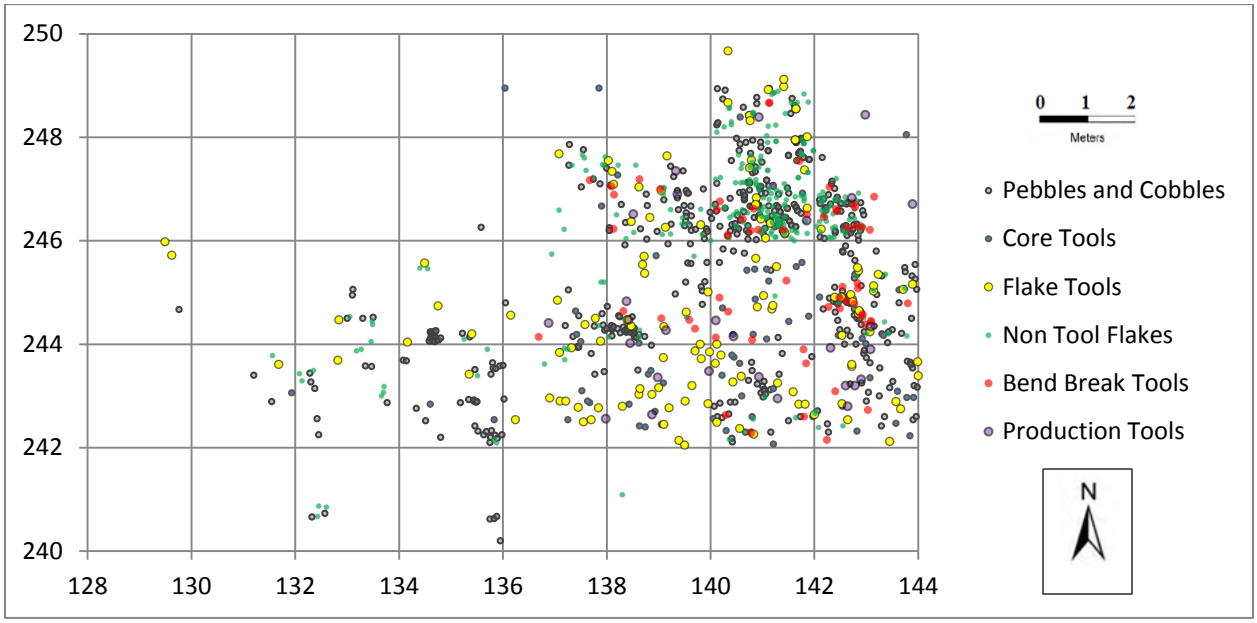


Figure A43-34
Spatial Distribution of all mapped items from the Lower Pleistocene Sands (97.50 – 97.00 m) from the study sample by type at the Topper Site (n = 939).

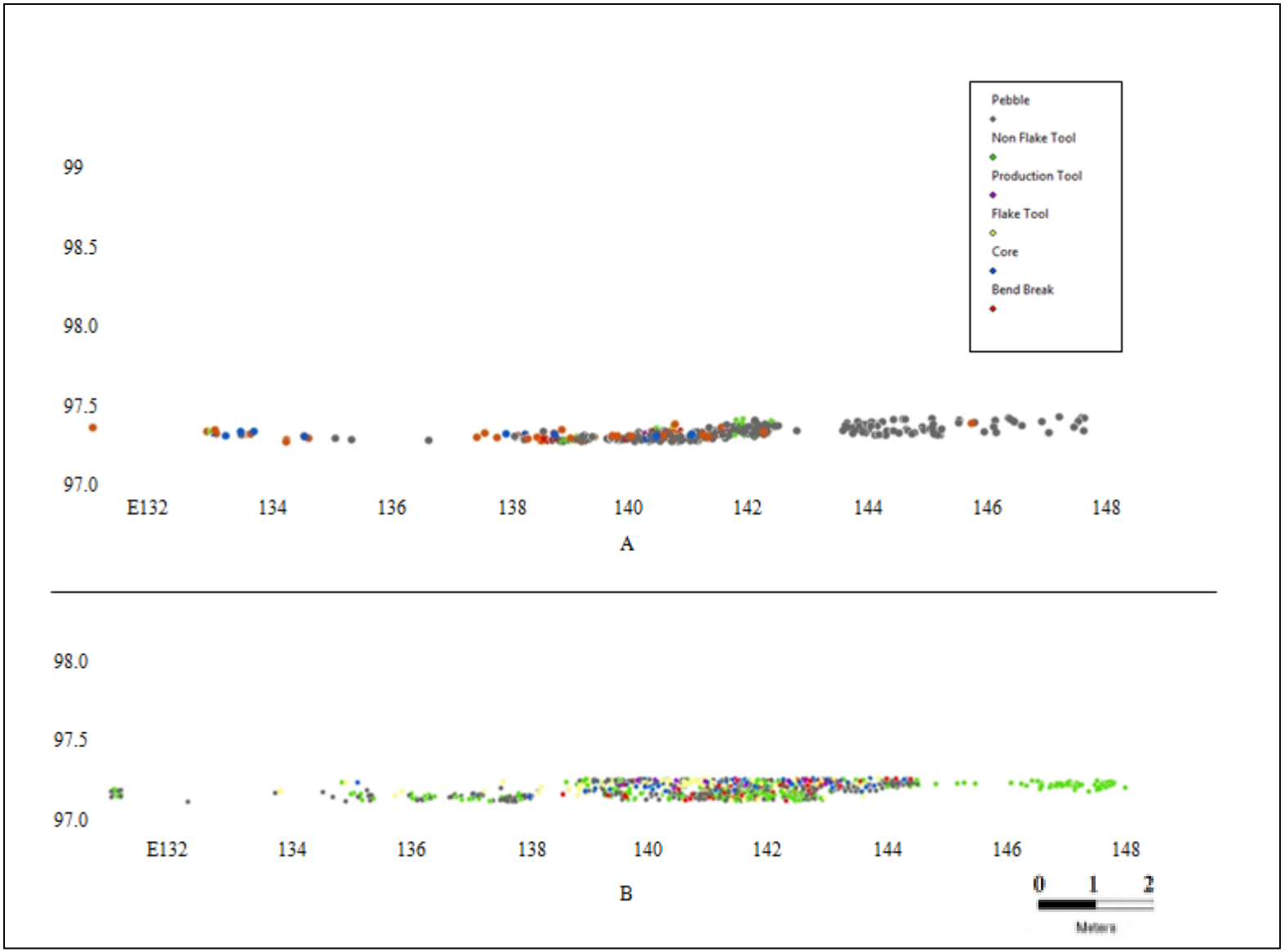


Figure A43–34B
Vertical Distribution of Artifacts from the Upper (A) and Lower Pleistocene Sands at the Topper Site (38AL23).

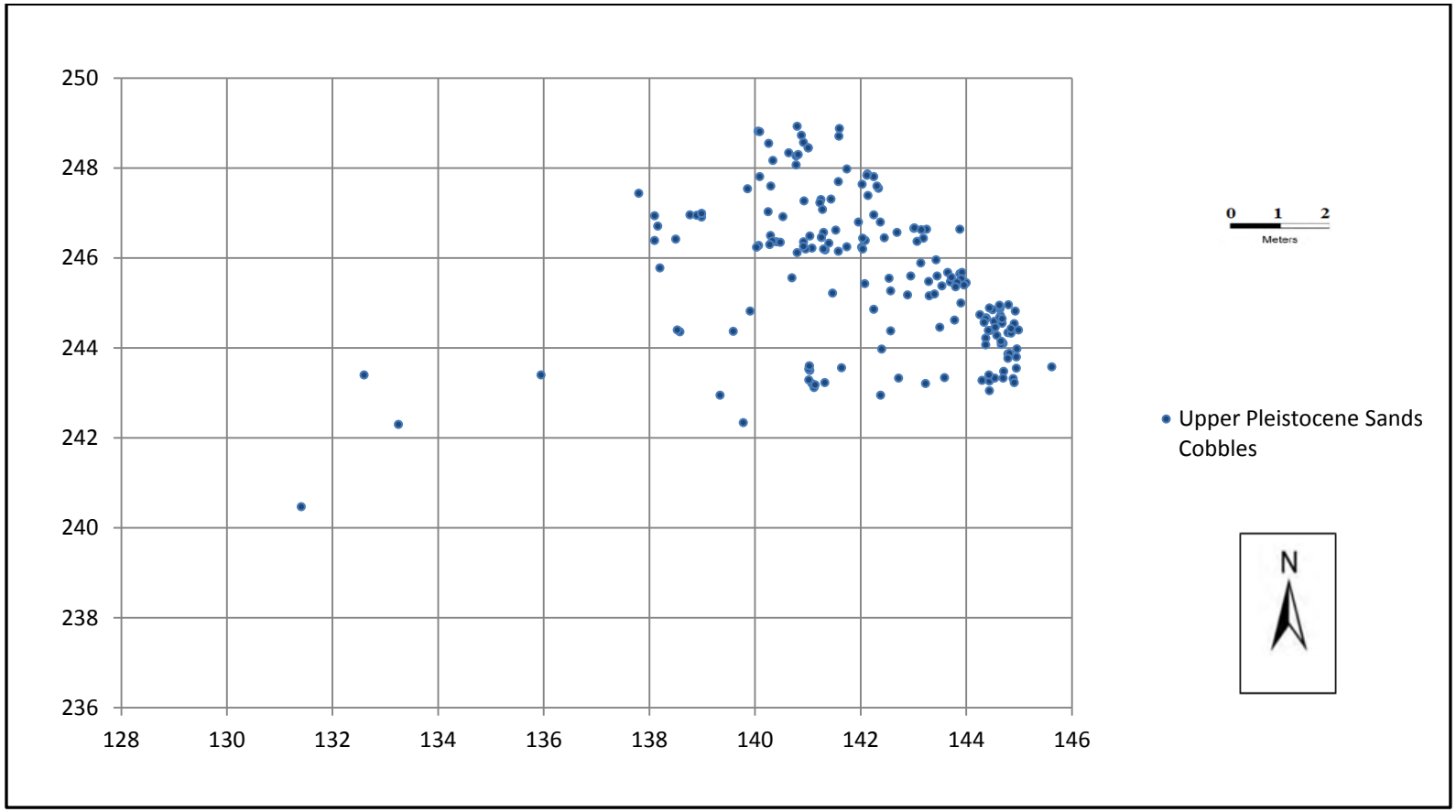


Figure A43-35
Spatial Distribution of Cobbles from the Upper Pleistocene Sands (n = 291). NN Statistic = 0.5555.

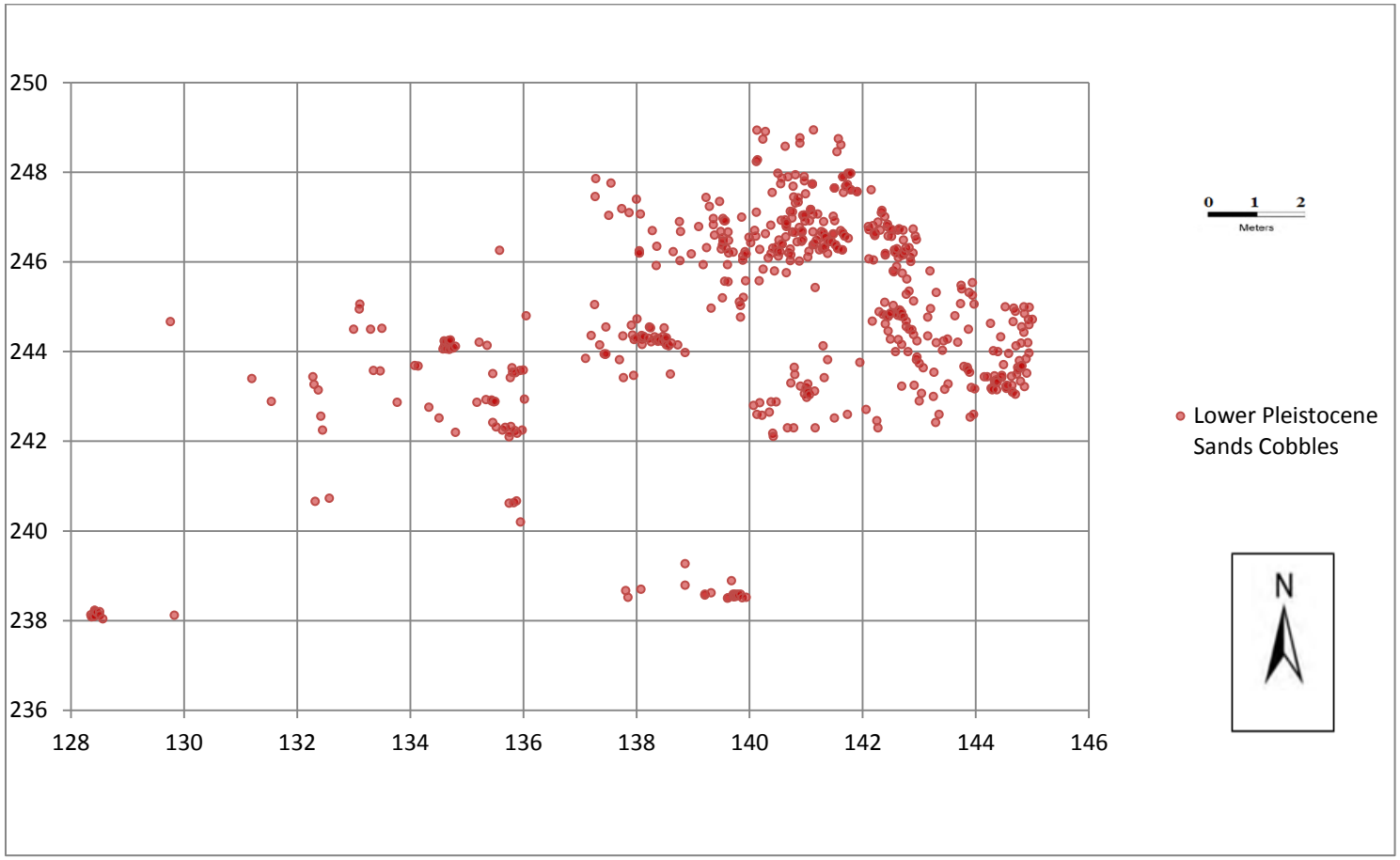


Figure A43-36
Spatial Distribution of Cobbles from the Lower Pleistocene Sands (n = 380). NN Statistic = 0.5014

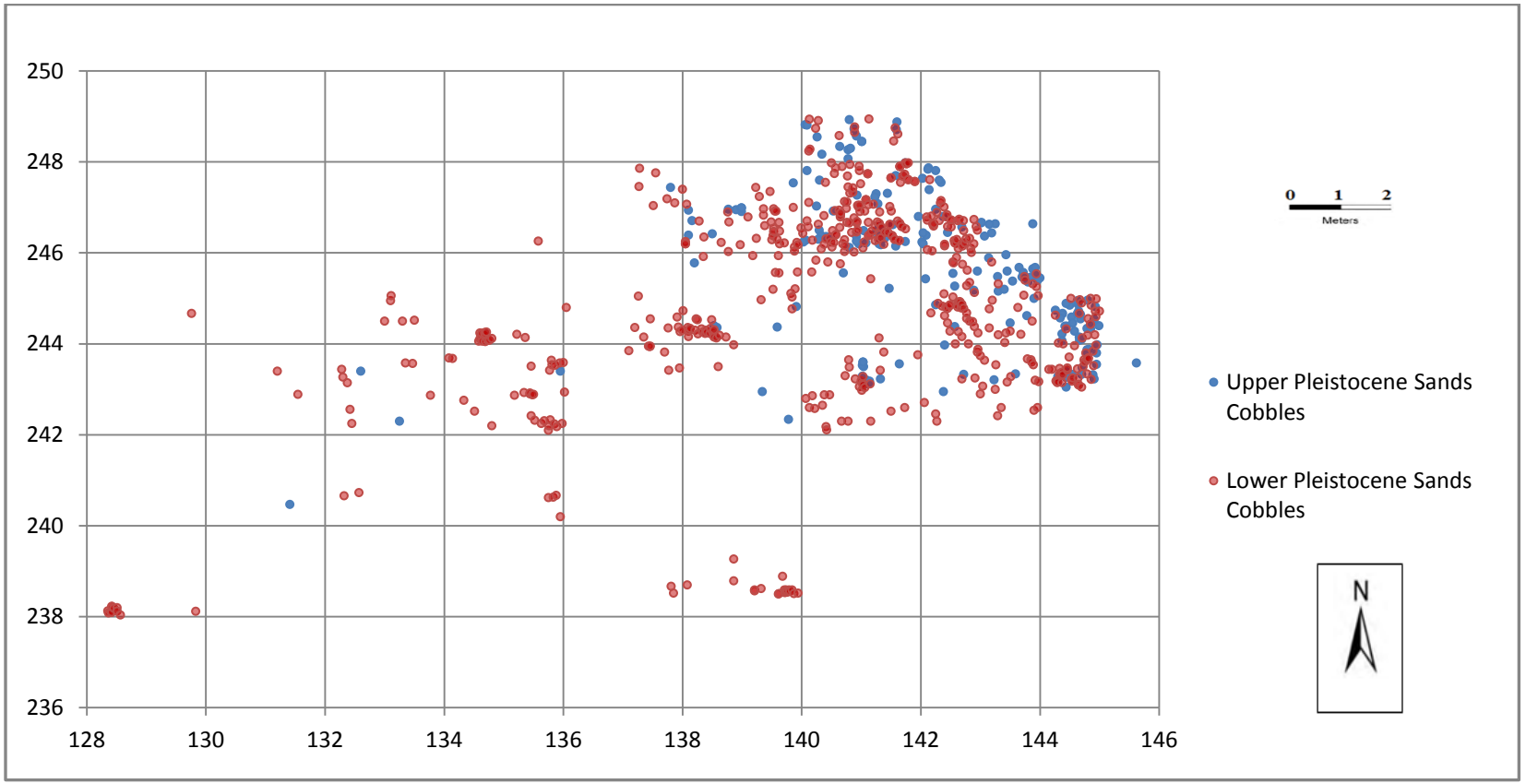


Figure A43-37
Spatial Distribution of Cobbles from the Upper and Lower Pleistocene Sands.

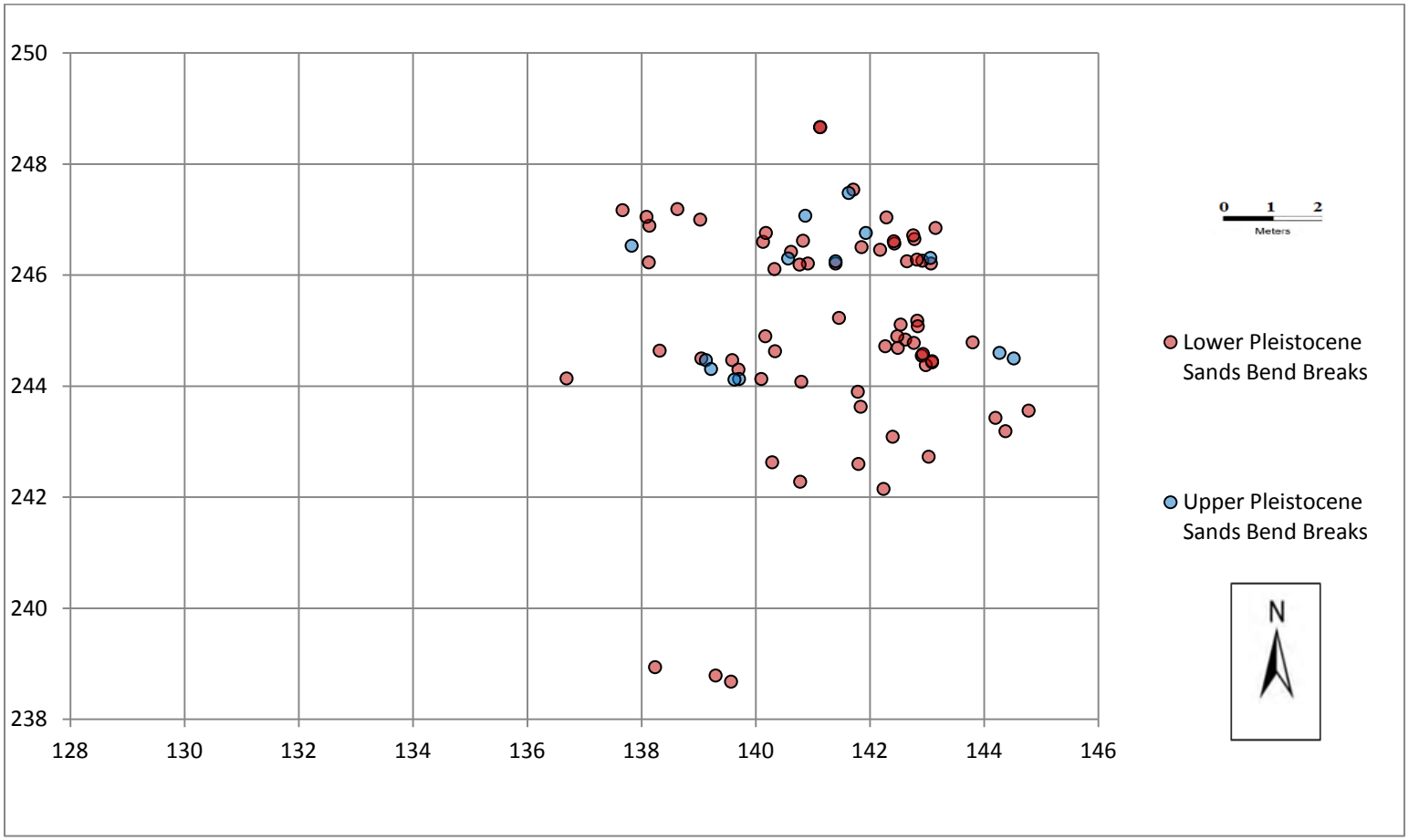


Figure A43-38
Spatial Distribution of bend breaks from the Upper (n = 13) and Lower (n = 52) Pleistocene Sands. NN Statistic Upper Pleistocene Sands = 0.4277. NN Statistic Lower Pleistocene Sands = 0.4961.

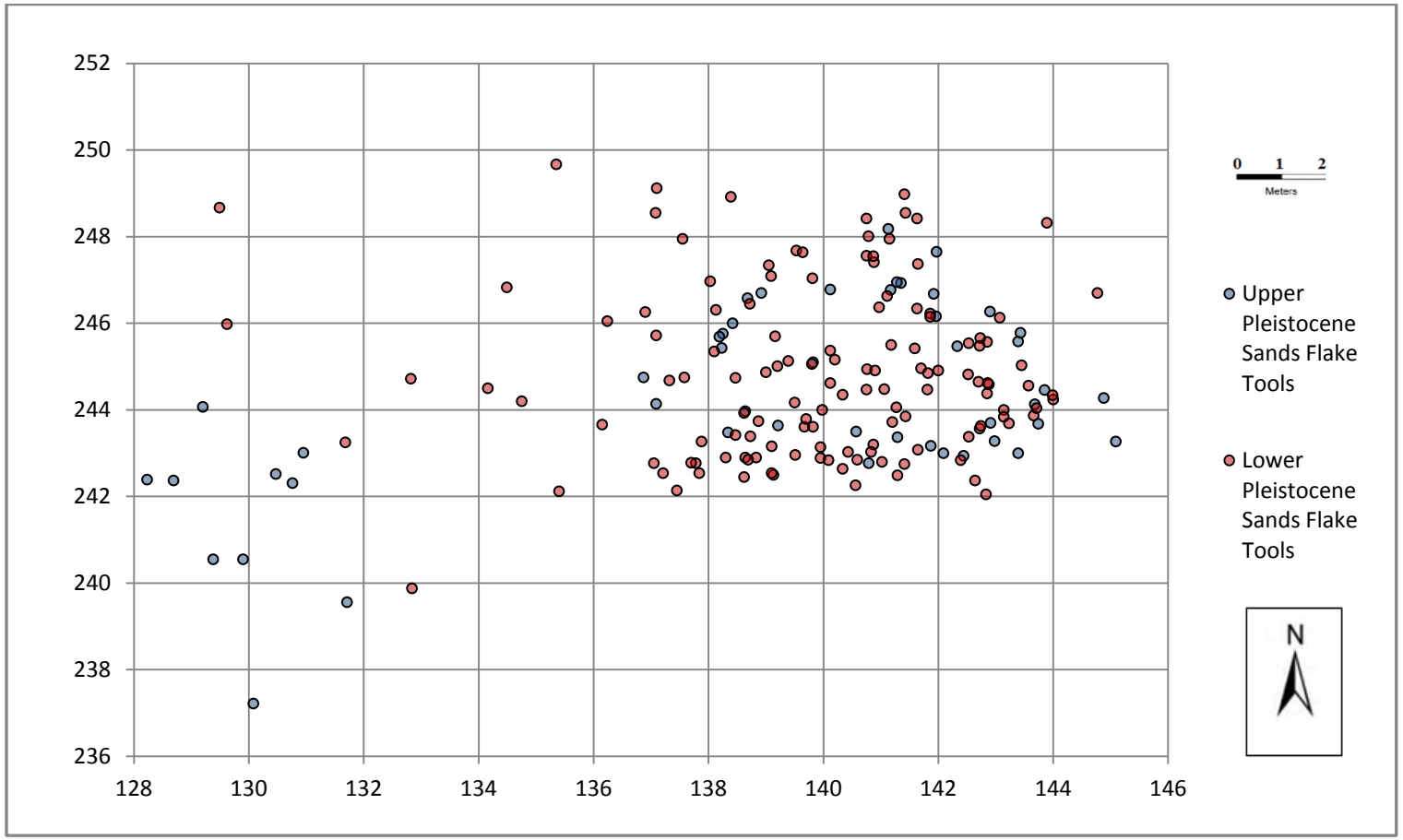


Figure A43-39
Spatial Distribution of flake tools from the Upper (n = 49) and Lower (n = 126) Pleistocene Sands.
NN Statistic Upper Pleistocene Sands = 0.8467. NN Statistic Lower Pleistocene Sands = 0.6448.

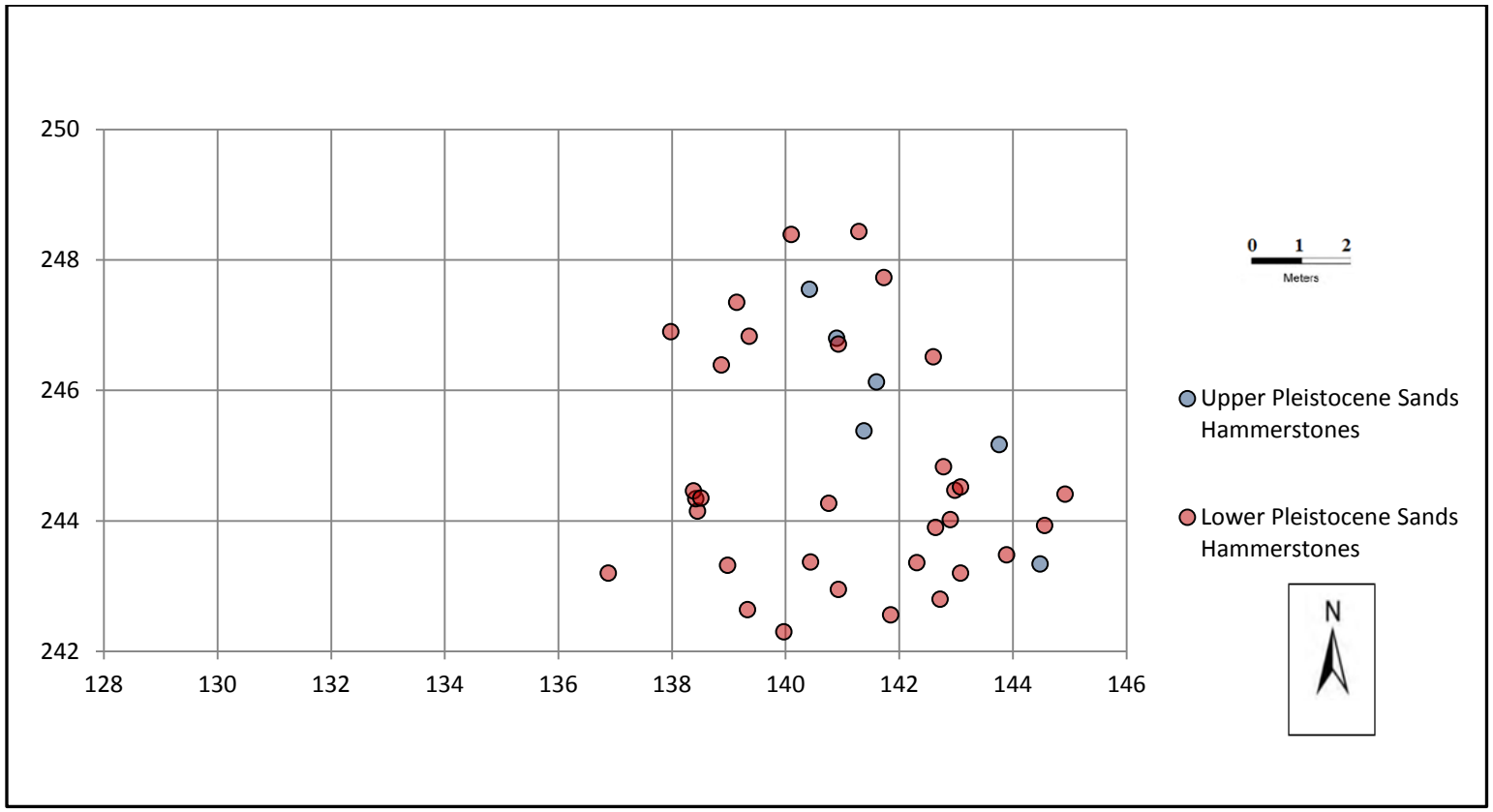


Figure A43-40
Spatial Distribution of hammerstones from the Upper (n = 6) and Lower (n = 74) Pleistocene Sands.
NN Statistic Upper Pleistocene Sands = 0.5251. NN Statistic Lower Pleistocene Sands = 0.6587.

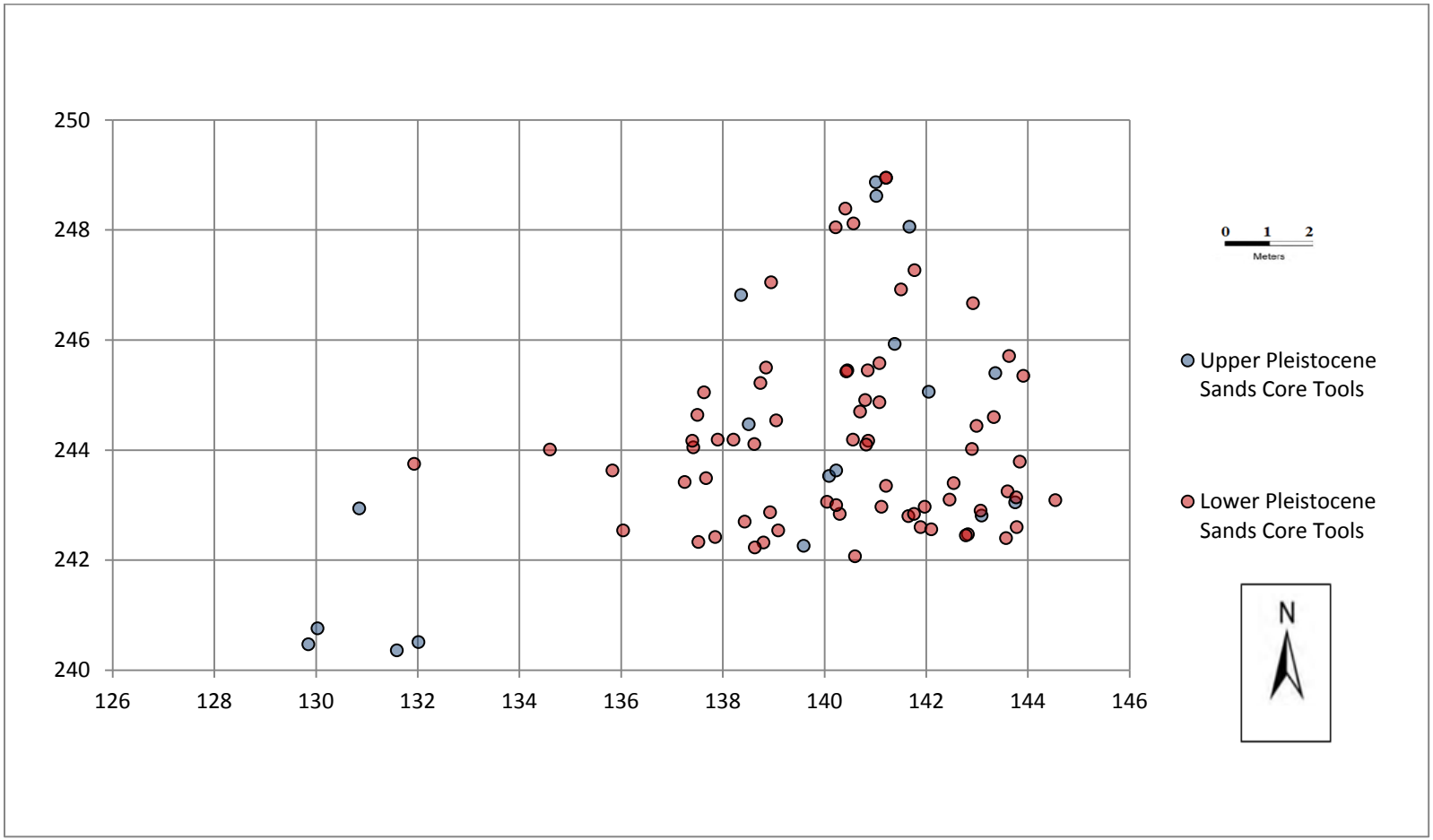


Figure A43-41
Spatial Distribution of core tools from the Upper (n = 18) and Lower (n = 97) Pleistocene Sands.
NN Statistic Upper Pleistocene Sands = 0.6719. NN Statistic Lower Pleistocene Sands = 0.5913.

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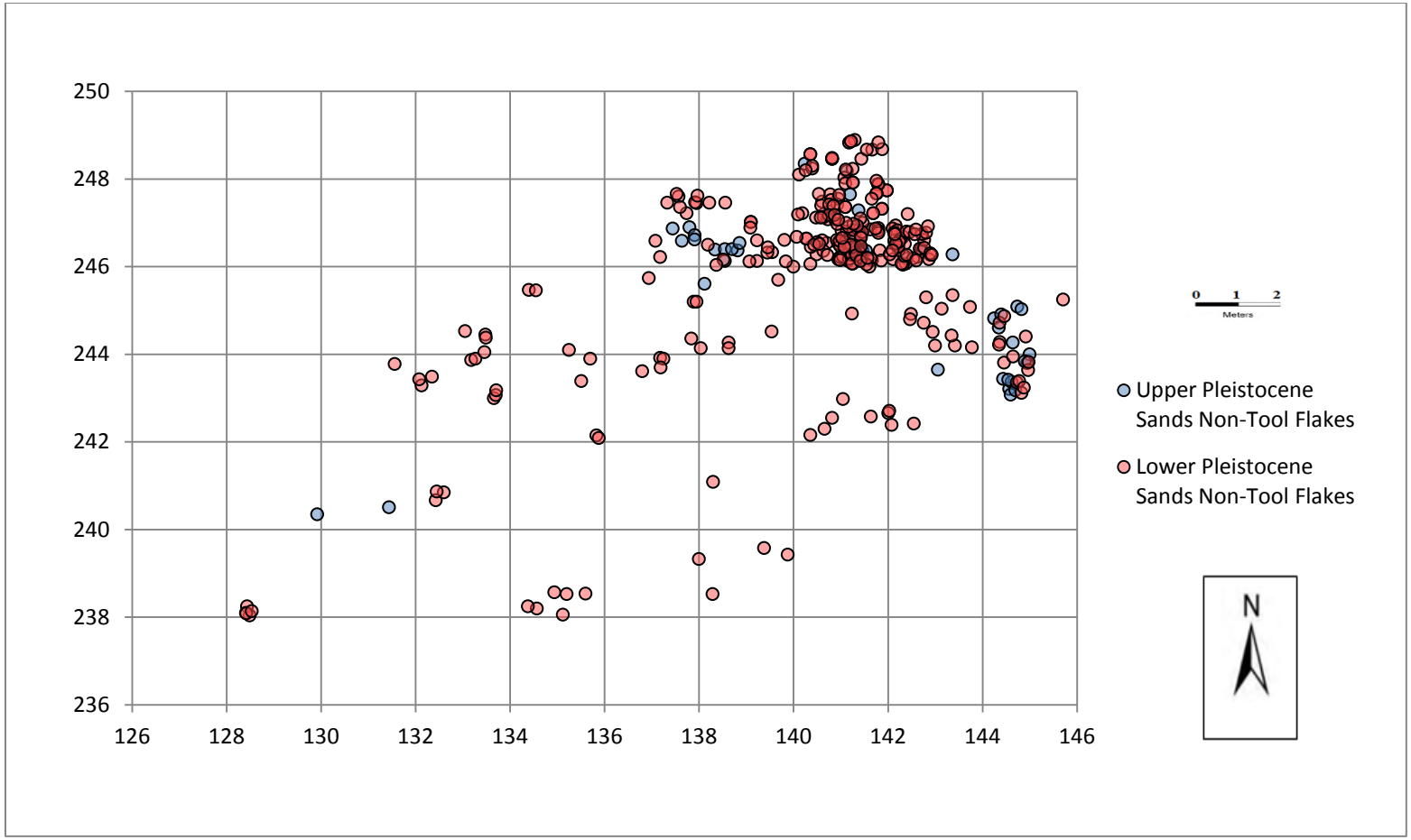


Figure A43-42
Spatial Distribution of non-tool flakes from the Upper (n = 46) and Lower (n = 82) Pleistocene Sands.
NN Statistic Upper Pleistocene Sands = 0.3711. NN Statistic Lower Pleistocene Sands = 0.4901.

Table A43-2
Distribution of piece plotted artifacts by type from the Upper (97.80-97.50 m) and Lower (97.50-97.00 m) Pleistocene Sands at the Topper Site (38AL23). Percentage of stratum that comprise each artifact category.

Category	**Upper Pleistocene Sands**		**Lower Pleistocene Sands**		**Total**
	n	%	n	%	
Pebbles and Cobbles	291	68.8	380	40.4	671
Core Tools	18	4.3	97	10.3	115
Flake Tools	49	11.6	126	13.41	175
Non-Tool Flakes	46	10.9	210	22.4	256
Bend Break Tools	13	3.0	52	5.5	65
Production Tools	6	1.4	74	7.9	80
Total	**423**		**939**		1,362

Table A43-3
Distribution of piece plotted artifacts by type from the Upper (97.80-97.50 m) and Lower (97.50-97.00 m) Pleistocene Sands at the Topper Site (38AL23). Percentage of artifacts by type for each stratum.

Category	**Upper Pleistocene Sands**		**Lower Pleistocene Sands**		**Total**
	n	%	n	%	
Pebbles and Cobbles	291	43.4	380	56.6	**671**
Core Tools	18	15.7	97	84.3	**115**
Flake Tools	49	28	126	72	**175**
Non-Tool Flakes	46	18	210	82	**256**
Bend Break Tools	13	20	52	80	**65**
Production Tools	6	8	74	92	**80**
Total	423		939		1,362

Table A43-4A
Results of a chi-square test comparing distribution of cultural material from the Upper and Lower Pleistocene Sands at the Topper Site (38AL23). Chi – square statistic = 17.06.p – value = .0018. The result is significant at $p < 0.05$.

Category	**Upper Pleistocene Sands**	**Lower Pleistocene Sands**	**Row Totals**
Core Tools	18 (21.97) [0.72]	97 (93.03) [0.17]	115
Flake Tools	49 (33.43) [7.25]	126 (141.57) [1.71]	175
Non-Tool Flakes	46 (48.90) [0.17]	210 (207.1) [0.04]	256
Bend Break Tools	13 (12.42) [0.03]	52 (52.58) [0.01]	65
Production Tools	6 (15.28) [5.64]	74 (64.72) [1.33]	80
Column Total	132	559	691

Table A43–4B
Results of Nearest Neighbor Analysis by Artifact Category for Upper and Lower Pleistocene Sands.

	NN stat	p value	Z Score	Result	Artifacts	Area m^2
Upper PS						
Flake Tool	0.8467	0.040092	-2.052	Clustered	49	132
Production Tool	0.5251	0.026081	-2.225	Clustered	6	132
Core Tool	0.6719	0.00776	-2.662	Clustered	18	132
Bend Break Tool	0.4277	0.000068	-3.981	Clustered	13	132
Bend Break Tool A	0.6074	0.006777	-2.707	Clustered	13	62
Non Tool Flake	0.3711	0.000000	-8.159	Clustered	46	132
Pebble/Cobble	0.5555	0.000000	-13.629	Clustered	291	132
Entire Sample	0.6024	0.000000	-15.000	Clustered	423	132
Lower PS						
Flake Tool	0.6448	0.000000	-7.834	Clustered	126	132
Production Tool	0.6587	0.000221	-3.693	Clustered	74	132
Core Tool	0.5913	0.000000	-6.494	Clustered	97	132
Bend Break Tool	0.4961	0.000000	-7.771	Clustered	52	132
Bend Break Tool A	0.7128	0.000090	-4.428	Clustered	52	62
Non Tool Flake	0.4901	0.000000	-18.168	Clustered	82	132
Pebble/Cobble	0.5014	0.000000	-21.922	Clustered	380	132
Entire Sample	0.6060	0.000000	-26.065	Clustered	939	132



Figure A43-43
Photograph showing 2002 5m x 9m excavation block and lithic clusters examined for the study sample. (Image courtesy of Al Goodyear).View Northeast.

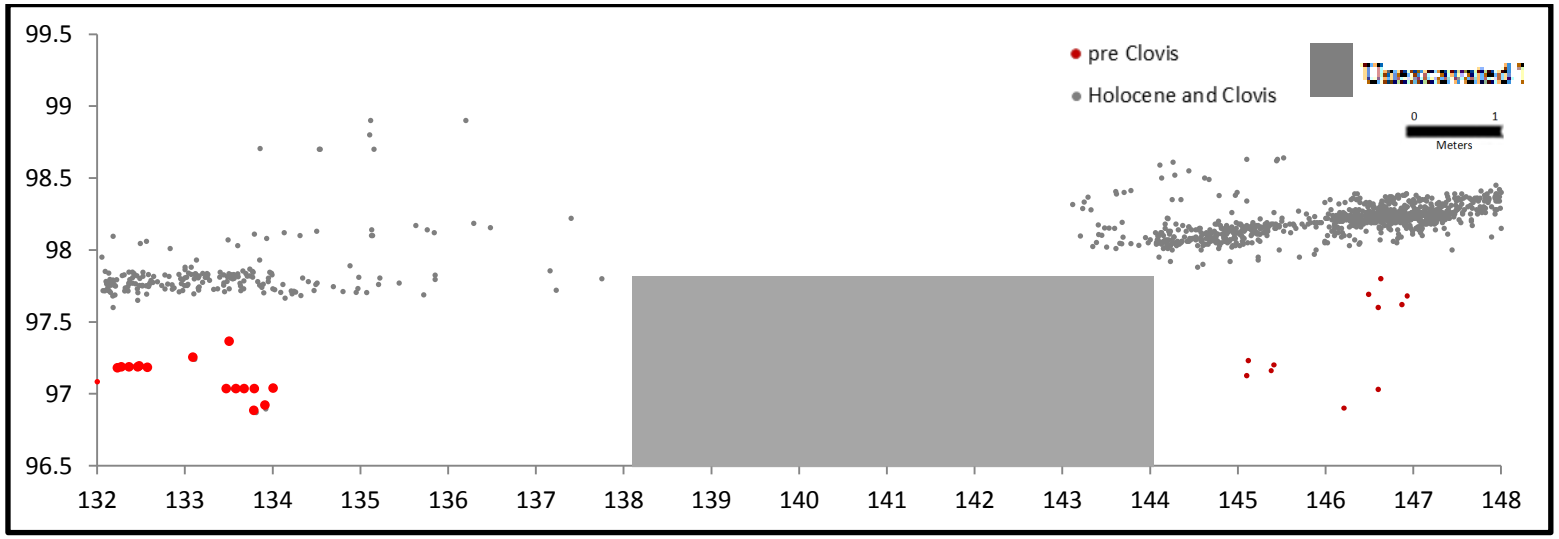


Figure A43-44
Vertical Distribution of mapped items along the N265 E130 – E148 gridline on the alluvial terrace at the Topper Site (38AL23).

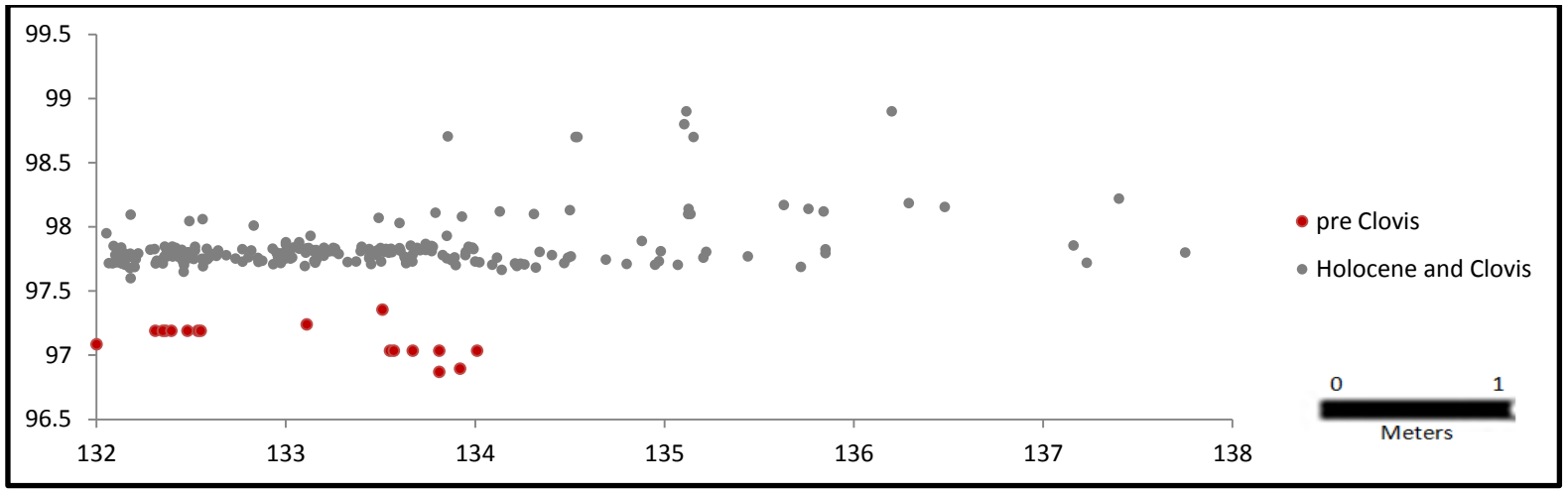


Figure A43-45
Vertical Distribution of mapped items along the N268 E130 – E138 gridline on the alluvial terrace at the Topper Site (38AL23).

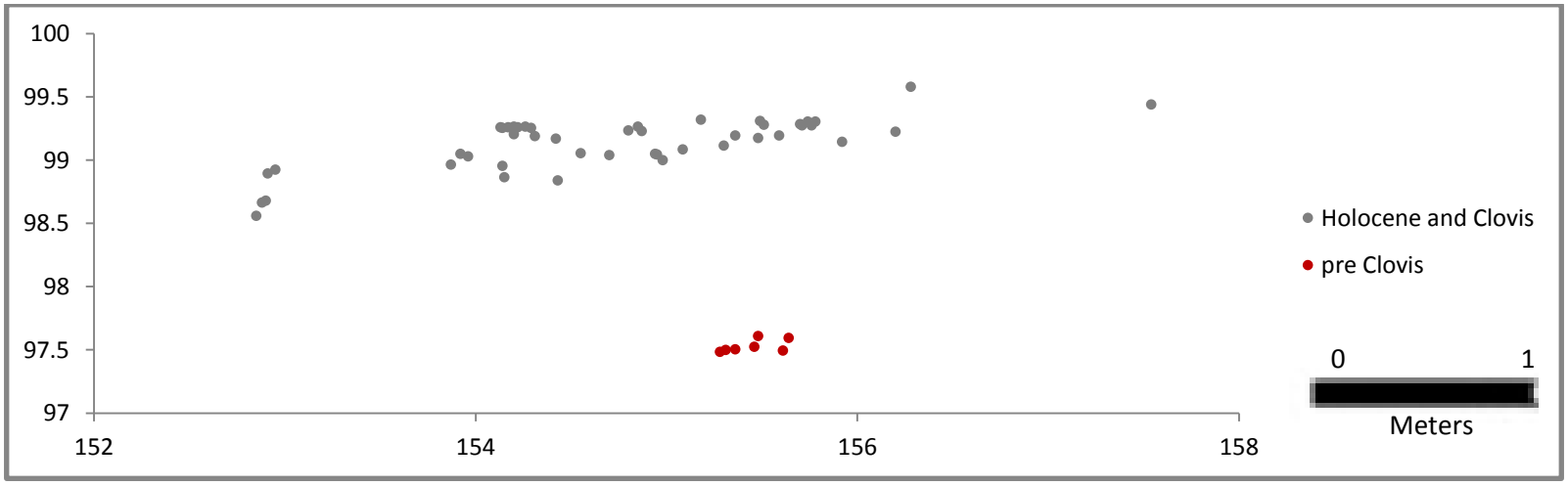


Figure A43-46
Vertical Distribution of mapped items along the N270 E150 – E158 gridline on the alluvial terrace at the Topper Site (38AL23).

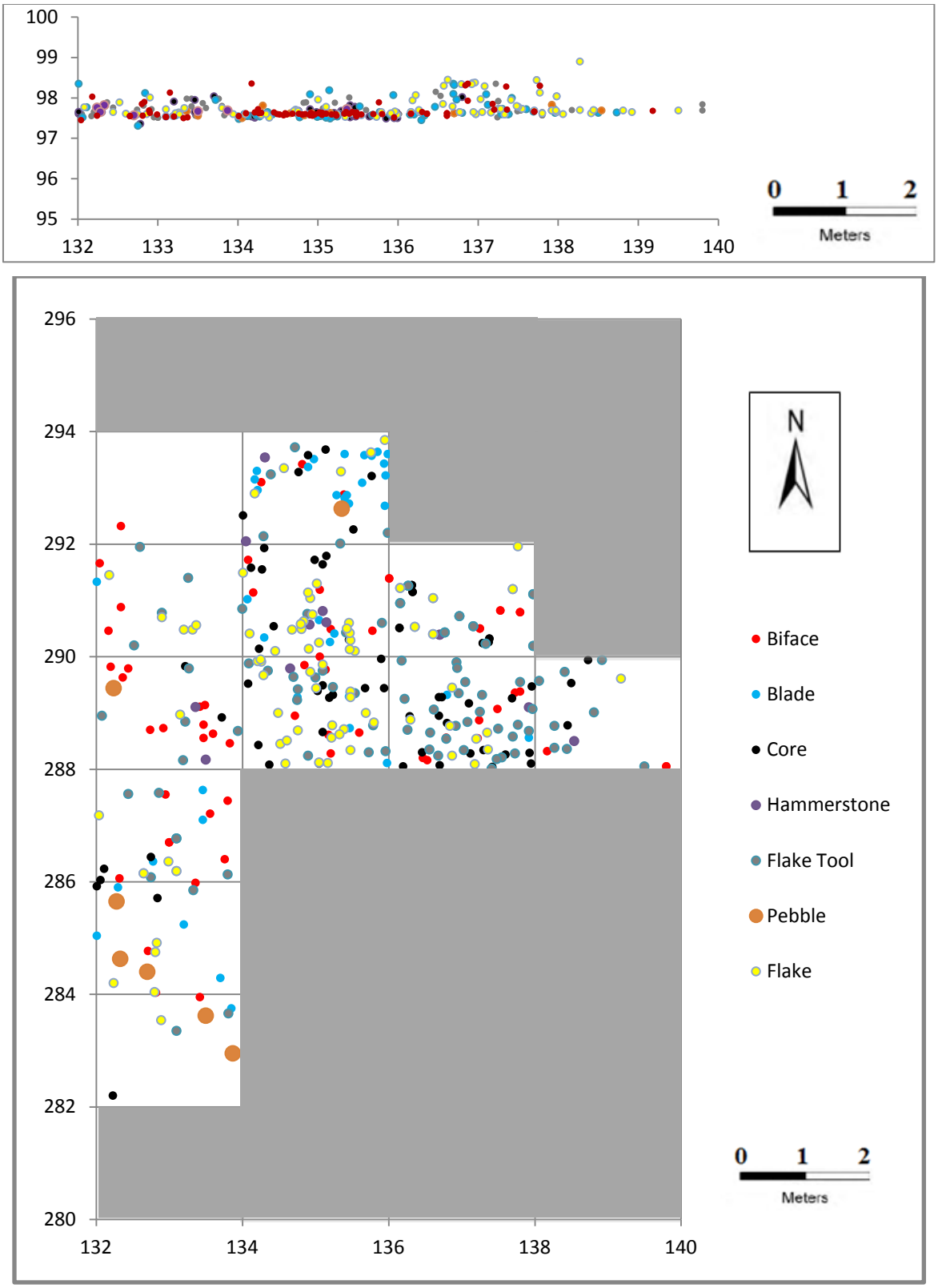


Figure A43-47

Vertical (top) and spatial (bottom) distribution of mapped items along the N280 E132–E140 gridline on the alluvial terrace at the Topper Site (38AL23).

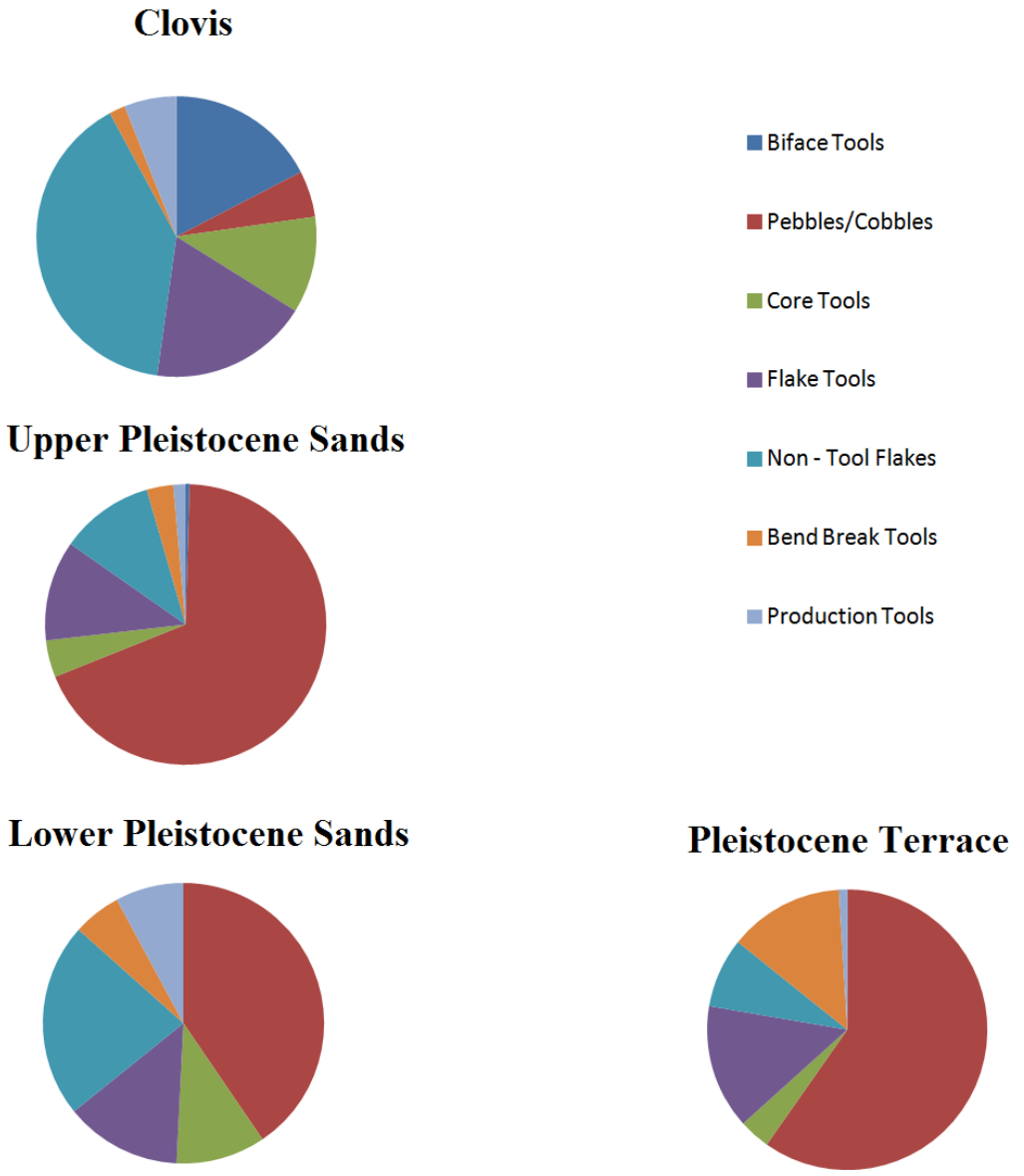


Figure A43–48
Frequency distribution of artifacts by depositional unit from the study sample at the Topper Site (38AL23).

APPENDIX 44

QUARTZ PEBBLES AT THE TOPPER SITE (38AL23)

Table A44-1
Quartz Pebbles at the Topper Site (38AL23)

Type	N	E	Depth	Wt.	L	W	Th	Scars
Broken Quartz Pebble	242.78	140.882	95.406	4.3	26.1	9.5	9.8	1
Broken Quartz Pebble	242.64	140.1	95.37	26	38.5	29.9	27.1	3
Broken Quartz Pebble	242.84	141.42	95.82	5.5	20.6	17.2	14.9	2
Broken Quartz Pebble	243.61	140.19	95.5	19.2	39.7	22.1	12	1
Broken Quartz Pebble	244.11	139.63	96.4	13	30.07	24.95	15.66	3
Broken Quartz Pebble	244.52	139.21	96.525	24.4	35.96	31.18	27.86	1
Broken Quartz Pebble	246.02	141.46	96.68		36.2	29.4	14	
Broken Quartz Pebble	242.41	142.32	95.75	4.2	30.6	19	15.2	2
Broken Quartz Pebble	244.97	139.42	96.603	9.7	26.29	21.35	12.49	2
Broken Quartz Pebble	242.67	141.97	95.83	12.4	25.6	20.7	16.3	2
Broken Quartz Pebble	242.3	140.04	95.59	5.1	20	17.8	15.4	2
Broken Quartz Pebble	246.55	140.71	96.58	6.5	22.9	16.2	13.4	1
Broken Quartz Pebble	247.32	141.22	96.83	3.9	23.63	15.87	8.94	2
Broken Quartz Pebble	247.43	141.3	96.84	9.2	32.64	16.16	12.79	2
Broken Quartz Pebble	247.14	141.36	96.86	1	12.1	9.59	6.03	2
Broken Quartz Pebble	247.2	141.78	96.89	2.5	17.23	12.15	8.68	1
Broken Quartz Pebble	247.13	140.72	97.068	12.1	33.3	25	13.6	1
Broken Quartz Pebble	247.905	140.965	97.098	3.9	21.6	14.3	10.8	1
Broken Quartz Pebble	246.13	140.51	97.168	3.4	20.03	15.74	8.51	2
Broken Quartz Pebble	242.92	140.8	95.48	13.2	36.2	21.7	16.5	2
Broken Quartz Pebble	242.25	141.93	95.59	12.8	37.6	25.2	10.6	6
Broken Quartz Pebble	242.79	140.85	95.6	10.5	25	21.9	15	0
Broken Quartz Pebble	242.1	141.79	95.66	13.9	27.8	24.5	19.4	2
Broken Quartz Pebble	242.48	140.85	95.8	3.5	17.7	13.4	11.1	1
Broken Quartz Pebble	244.3	139.66	96.68	11.5	34.21	20.55	13.23	5
Broken Quartz Pebble	242.11	140.7	95.76	2	15.7	12.4	6.9	1
Broken Quartz Pebble	244.89	139.29	96.9	59.7	44.68	36.86	28.1	1
Broken Quartz Pebble	242.53	141.46	95.55	30.5	43.9	26.4	22.2	3
Broken Quartz Pebble	242.98	141.02	95.55	11.2	28.9	16.9	18.1	1
Broken Quartz Pebble	242.61	140.96	95.59	8.2	27.2	18.8	13.1	1
Broken Quartz Pebble	242.28	140.41	95.59	25.5	34.2	23.4	22.4	2
Broken Quartz Pebble	243.25	141.35	95.6	16.4	29	25.6	21.4	1
Broken Quartz Pebble	243.42	141.82	95.62	9.5	26.2	17.7	15.8	5
Broken Quartz Pebble	242.28	141.18	95.72	3.1	19.7	16.2	10.2	1
Broken Quartz Pebble	242.99	141.87	95.77	4.4	22.8	13.7	13.5	4
Broken Quartz Pebble	242.56	141.8	95.77	5.8	22.8	16.1	14.5	2
Broken Quartz Pebble	242.08	140.26	95.8	7	22.9	14.3	14.1	1
Broken Quartz Pebble	242.11	141.66	95.88	2.8	18.4	16.5	5.7	1
Broken Quartz Pebble	242.54	141.18	96	13.6	32.2	21.7	12.3	0
Broken Quartz Pebble	243.415	140.21	96.12	6.9	21.7	21.2	13.5	2
Broken Quartz Pebble	243.79	140.02	96.16	6.2	32.3	12.8	13.9	1
Broken Quartz Pebble	243.825	140.02	96.19	8.3	27.5	19.6	12.5	2
Broken Quartz Pebble	244.7	139.34	96.58	26.8	33.78	27.1	21.49	6
Broken Quartz Pebble	244.67	139.37	96.88	19.8	28.38	25.33	23.42	7
Broken Quartz Pebble	244.09	139.49	96.93	2.7	15.14	15.04	8.81	1
Broken Quartz Pebble	242.29	141.42	95.88	14.2	27.4	27.8	15.7	3
Broken Quartz Pebble	243.25	139.87	95.88	4	24.59	20.08	89.6	1

Table A44-1 continued

Type	N	E	Depth	Wt.	L	W	Th	Scars
Broken Quartz Pebble	244.32	139.3	95.61	1.6	19.38	10.24	5.19	1
Broken Quartz Pebble	242.542	140.529	95.342	19.5	32.2	24.7	22.1	0
Broken Quartz Pebble	242.688	140.582	95.406	10.8	28.6	19.4	17.7	2
Broken Quartz Pebble	243.55	142.36	95.46	2.6	19..9	17.5	9.5	3
Broken Quartz Pebble	243.18	139.08	95.5	20	33.05	34.27	13.49	4
Broken Quartz Pebble	243.01	142.49	95.54	14.2	35.8	24.2	14.8	2
Broken Quartz Pebble	243.23	139.11	95.55	13.4	36.27	19.15	15.02	2
Broken Quartz Pebble	243.35	142.75	95.57	11.4	29.2	22.1	17.8	4
Broken Quartz Pebble	243.11	142.88	95.57					2
Broken Quartz Pebble	243.05	142.43	95.58	9.9	24.9	17.3	18.8	4
Broken Quartz Pebble	243.1	142.33	95.59	26.4	32.1	29.2	21.4	1
Broken Quartz Pebble	243.38	142.65	95.59	16	33.8	23.7	15.8	1
Broken Quartz Pebble	243.01	142.92	95.59	10.6	26.7	17.6	15.3	2
Broken Quartz Pebble	243.13	142.75	95.59	12.7	27.1	24.3	12	1
Broken Quartz Pebble	243.18	142.73	95.595	11	25.8	22	15.3	2
Broken Quartz Pebble	243.6	139.58	95.66	3.1	21.22	12.2	11.94	3
Broken Quartz Pebble	243.72	142.69	95.66	18.7	28.5	27.3	20.6	1
Broken Quartz Pebble	242.2	140.24	95.69	9.9	28.6	19.6	15	1
Broken Quartz Pebble	242.71	142.52	95.7	0.5	12.5	10.3	6.8	2
Broken Quartz Pebble	243.45	142.92	95.7	71	59.7	37.7	35.3	2
Broken Quartz Pebble	242.15	141.11	95.74	0.6	14.8	8.9	4.1	9
Broken Quartz Pebble	243.21	139.79	95.78	6.1	20.3	21.97	9.68	1
Broken Quartz Pebble	242.23	142.49	95.97	6.6	21.7	20.3	17.8	2
Broken Quartz Pebble	242.25	142.51	96.15	2.7	21.5	2.4	9.6	3
Broken Quartz Pebble	242.55	142.3	96.165	1.9	22.6	8.8	7.9	1
Broken Quartz Pebble	242.25	142.54	96.169	4.3	20.9	15.6	8.9	2
Broken Quartz Pebble	242.89	142.67	96.17	6.4	23.3	17.4	11.1	2
Broken Quartz Pebble	242.19	142.49	96.2	1.9	18	7.4	6.9	1
Broken Quartz Pebble	242.18	142.55	96.205	4.4	20.4	14.4	12.3	1
Broken Quartz Pebble	244.032	139.255	96.262	3.3	16.62	10.22	13.02	2
Broken Quartz Pebble	244.97	139.26	96.34	8.3	25.28	18.41	15.12	2
Broken Quartz Pebble	244.375	139.12	96.385	22.4	26.26	23.97	19.63	2
Broken Quartz Pebble	244.18	139.25	96.46	11	28.72	18.22	15.3	5
Broken Quartz Pebble	244.4	139.16	96.475	24.1	35.09	29.66	18.69	4
Broken Quartz Pebble	244.38	139.11	96.48	32.8	39.05	33.6	20.92	0
Broken Quartz Pebble	242.47	139.375	96.725	4.3	17.65	11.8	11.21	1
Broken Quartz Pebble	243	139.625	96.825	3.1	23.44	14.44	8.21	1
Broken Quartz Pebble	246.15	141.76	96.9	8.2	40.58	16.45	8.54	4
Broken Quartz Pebble	246.72	141.75	96.92	7.4	22.1	18	16.3	2
Broken Quartz Pebble	246.31	141.6	96.92	3.8	17	17.5	10.6	2
Broken Quartz Pebble	246.35	141.4	96.92	4.9	22.5	15.8	13.3	2
Broken Quartz Pebble	246.63	141.1	96.94	10.5	26.7	23	12.5	3
Broken Quartz Pebble	246.52	140.84	96.988	5.9	26.3	21.7	6.8	3
Broken Quartz Pebble	246.7	141.235	97.03	15.7	36.8	22.1	14.3	1
Broken Quartz Pebble	243.3	132.15	97.115	74.2	49	29.2	32.2	1
Broken Quartz Pebble	242.56	142.17	95.17	4.1	22.9	18	10.9	0
Broken Quartz Pebble	242.576	140.828	95.382	12.5	49.5	38.4	22.6	1

Table A44-1 continued

Type	N	E	Depth	Wt.	L	W	Th	Scars
Broken Quartz Pebble	243.46	139.63	95.5	8.3	25.35	14.93	18.33	1
Broken Quartz Pebble	243.89	139.78	95.5	13.8	26.73	18.16	20.91	3
Broken Quartz Pebble	242.29	141.88	95.55	14.1	23.7	22.1	19.7	1
Broken Quartz Pebble	242.7	142.01	95.55	18	35.4	25.2	13.6	5
Broken Quartz Pebble	242.2	142.41	95.55	15.8	26.9	22.5	17.5	2
Broken Quartz Pebble	242.86	142.58	95.55	36.2	33.5	28.3	28.1	2
Broken Quartz Pebble	242.85	142.23	95.56	39.4	47.5	30.3	25.4	3
Broken Quartz Pebble	242.71	142.61	95.57	8.3	26	20.3	11.7	1
Broken Quartz Pebble	242.69	142.8	95.57	55.4	51	28.8	26.6	1
Broken Quartz Pebble	242.7	142.01	95.58					5
Broken Quartz Pebble	242.85	142.11	95.6	28.3	39.6	27	19.1	2
Broken Quartz Pebble	242.34	142.62	95.6	36.5	38	31.5	23.4	3
Broken Quartz Pebble	242.34	142.97	95.7	0.7	11.2	10.3	10.5	1
Broken Quartz Pebble	242.22	142.09	95.71	1	18.9	13.5	7.5	1
Broken Quartz Pebble	243.07	140.88	95.75	37.6	40.4	26.3	21	1
Broken Quartz Pebble	242.41	141.32	95.75	4.2	30.6	19	15.2	3
Broken Quartz Pebble	242.15	142.45	95.75	0.6	14.7	11.2	2.8	1
Broken Quartz Pebble	242.22	142.78	95.75	11.2	27.3	23.1	14.5	0
Broken Quartz Pebble	242.71	141.13	95.77	3.6	21	17.2	7.8	2
Broken Quartz Pebble	242.55	142.06	95.77	5	23.7	22	13.2	1
Broken Quartz Pebble	242.55	142.06	95.77	5	23.7	22	13.2	1
Broken Quartz Pebble	242.51	142.13	95.77	8.6	24.1	22.4	10.7	1
Broken Quartz Pebble	242.04	142.79	95.78	2	21.2	19.8	6.8	3
Broken Quartz Pebble	242.44	141.64	95.8	21.1	36.2	27.3	15.9	1
Broken Quartz Pebble	242.94	141.12	95.82	10.9	10.8	4.4	0.7	1
Broken Quartz Pebble	244.32	139.775	95.845	12.1	29.29	19.15	16.66	1
Broken Quartz Pebble	244.245	139.35	95.86	3.3	19.64	13.74	8.56	1
Broken Quartz Pebble	242.66	142.88	95.87	35.6	42.2	28.7	24.7	0
Broken Quartz Pebble	242.03	142.42	95.91	14.3	31.5	26.4	14.4	1
Broken Quartz Pebble	246.85	141.8	96	8.2	23.5	19.4	15.4	5
Broken Quartz Pebble	242.73	142.14	96.11	10.8	27.1	23.7	14.2	1
Broken Quartz Pebble	242.62	142.27	96.15	3.1	14.6	13.8	10.9	1
Broken Quartz Pebble	242.47	142.54	96.15	10.2	25.5	19.3	16.7	1
Broken Quartz Pebble	242.09	142.59	96.15	3.1	19.3	14.7	9.6	1
Broken Quartz Pebble	242.68	142.37	96.155	4.5	21	13.7	11.1	2
Broken Quartz Pebble	242.4	142.45	96.16	6.1	24.2	18.3	11.9	1
Broken Quartz Pebble	242.06	142.78	96.19	3.7	17.1	15.2	11.5	1
Broken Quartz Pebble	242.08	142.72	96.23	12.9	31.2	20.5	15.1	3
Broken Quartz Pebble	244.35	139.14	96.47	73.6	56.79	43.09	28.92	1
Broken Quartz Pebble	243.315	139.615	96.53	14.8	27.3	23.94	15.94	2
Broken Quartz Pebble	246.61	140.96	96.55	5.6	24	15.8	10.4	7
Broken Quartz Pebble	246.58	140.96	96.55	8	25.7	20.3	15.2	
Broken Quartz Pebble	247.32	140.98	96.56	16.5	32.1	29.7	14.9	0
Broken Quartz Pebble	246.82	140.65	96.56	23.8	46.3	21.3	19	5
Broken Quartz Pebble	246.45	140.41	96.59	7.4	22.1	18.1	17.2	3
Broken Quartz Pebble	246.12	141.66	96.63	14.3	33.9	23	11.8	1
Broken Quartz Pebble	246.25	140.63	96.65	5	34.8	37.2	18.7	1

Table A44-1 continued

Type	N	E	Depth	Wt.	L	W	Th	Scars
Broken Quartz Pebble	246.04	140.55	96.66	4.4	27	12.8	10.3	2
Broken Quartz Pebble	246.27	139.09	96.67		23.2	17.6	13.3	3
Broken Quartz Pebble	246.79	139.06	96.68		23.9	30.1	19.8	1
Broken Quartz Pebble	246.15	141.34	96.68		28	13.2	8.7	
Broken Quartz Pebble	246.09	139.91	96.69		25.5	12.6	11.5	1
Broken Quartz Pebble	246.24	141.49	96.69		25.2	16	12.3	
Broken Quartz Pebble	246.02	141.38	96.69		41.6	35.9	28.2	
Broken Quartz Pebble	246.29	140.65	96.69	3.4	17.4	10.5	7.3	2
Broken Quartz Pebble	246.86	140.65	96.69	5.6	41.6	35.9	28.2	1
Broken Quartz Pebble	246.48	138.13	96.7		20.7	17.4	13.4	1
Broken Quartz Pebble	246.61	140.99	96.7	3.3	18.4	14.4	10.7	
Broken Quartz Pebble	246.14	141.59	96.71		34.2	18.9	16.3	
Broken Quartz Pebble	246.04	141.52	96.71		17.4	10.5	7.3	
Broken Quartz Pebble	246.23	139.78	96.72		20.7	19.5	12.1	1
Broken Quartz Pebble	246.36	141.98	96.72	2.7	17.6	14.2	10.6	2
Broken Quartz Pebble	242.055	139.63	96.73	3.8	19.27	15.89	11.23	1
Broken Quartz Pebble	246.01	138.38	96.73		22.8	16	10.6	1
Broken Quartz Pebble	246.98	140.72	96.73	26.9	38.1	32.1	19.7	
Broken Quartz Pebble	246.59	140.43	96.74	7.8	23.1	19.8	14.3	
Broken Quartz Pebble	246.59	140.095	96.766	5.8	18.4	17.7	13.5	1
Broken Quartz Pebble	248.27	140.38	96.81	10.3	26.1	20.9	16.8	3
Broken Quartz Pebble	243.87	139.4	96.815	7.3	36.36	16.79	8.11	2
Broken Quartz Pebble	246.71	140.59	96.828	22.3	40.1	25.4	14.4	1
Broken Quartz Pebble	246.52	138.32	96.83		13.4	22.7	8.5	1
Broken Quartz Pebble	246.99	139.79	96.84	21.2	37.4	29.2	12.1	1
Broken Quartz Pebble	247.65	141.09	96.85	8.7	31.08	15.44	14.97	7
Broken Quartz Pebble	246.495	140.62	96.878	5.5	26.3	17.1	10	5
Broken Quartz Pebble	246.69	140.98	96.89	10.8	27.5	20.5	16	6
Broken Quartz Pebble	246.93	141.03	96.89	20.4	36.9	27.7	17.2	1
Broken Quartz Pebble	243.88	130.865	96.9	25.5	40.3	22.3	21.4	1
Broken Quartz Pebble	243.88	130.865	96.9	25.7	40.2	20.8	22.5	1
Broken Quartz Pebble	243.85	131.155	96.9	31.8	40	32.7	20.2	1
Broken Quartz Pebble	243.85	130.95	96.9	13	24.3	23.7	24.4	1
Broken Quartz Pebble	244.89	139.27	96.9	6.7	23.53	18.74	14.98	3
Broken Quartz Pebble	243.62	130.915	96.9					1
Broken Quartz Pebble	243.88	131.285	96.91	15.4	30.2	21.7	18.2	1
Broken Quartz Pebble	247.98	141.88	96.91	12.9	28.7	22	15.8	1
Broken Quartz Pebble	243.81	139.56	96.92	15	34.29	22.17	16.48	3
Broken Quartz Pebble	246.98	139.64	96.92	5.3	25.1	26.4	10.7	3
Broken Quartz Pebble	246.12	140.36	96.958	8.9	35.1	20.3	13.4	1
Broken Quartz Pebble	246.58	140.76	96.968	8.5	29.2	15.4	12.7	1
Broken Quartz Pebble	246.7	140.29	96.968	9	30.5	15.4	12.8	0
Broken Quartz Pebble	247.04	141.07	96.993	15.4	30.8	26	16.7	1
Broken Quartz Pebble	246.25	138.05	97	36.5	42.9	29.1	22	2
Broken Quartz Pebble	247.81	140.97	97.073	12.7	24.21	23.86	19.17	3
Broken Quartz Pebble	246.68	138.78	97.08	20.2	34	28.6	14.7	2
Broken Quartz Pebble	247.98	140.5	97.088	4.2	16.18	12.82	10.55	4

Table A44-1 continued

Type	N	E	Depth	Wt.	L	W	Th	Scars
Broken Quartz Pebble	246.29	140.72	97.178	12.4	20.25	16.49	21.61	4
Broken Quartz Pebble	247.45	140.78	97.238	6.7	21.6	15.2	16.1	5
Broken Quartz Pebble	243.21	132.23	97.12	27.1	46.3	31.2	14.4	1
Broken Quartz Pebble	242.04	142.79	95.78	2	21.2	19.8	6.8	0
Broken Quartz Pebble	247.335	140.86	97.058	2.8	18.11	16.16	9.65	2
Broken Quartz Pebble	242.63	142.65	95.58					1
Broken Quartz Pebble	247.42	141.59	96.84	3.3	21.49	11.51	11.3	3
Broken Quartz Pebble	244.32	139.11	96.405	33.2	34.87	31.99	17.1	1
Broken Quartz Pebble	244.435	139.735	95.625	15.8	29.88	32.26	12.38	1
Broken Quartz Pebble	244.465	139.34	96.53	23.3	35.67	33.19	12.06	1
Broken Quartz Pebble	243.52	139.49	95.48	82.1	79.51	41.1	22.34	1
Broken Quartz Pebble	243.21	142.79	95.63	86.6	60.6	37.4	28.5	1
Broken Quartz Pebble	246.23	139.92	97.14	27.4	30.5	29.4	20.8	0
Broken Quartz Pebble	247.86	141.85	96.65	4.8	29.6	15.1	7	
Broken Quartz Pebble	247.81	141.66	96.65	12.6	29.5	21.2	16.3	
Broken Quartz Pebble	246.1	141.49	96.81	13	31.7	26.2	15.5	6
Broken Quartz Pebble	246.52	141.45	96.84	14.1	41.8	21.8	12.7	2
Broken Quartz Pebble	246.68	141.58	96.86					1
Broken Quartz Pebble	246.18	138.97	97	9.2	27	17	11.8	1
Broken Quartz Pebble	246.04	139.88	97.1	7.4	22.4	18.6	12.2	1
Broken Quartz Pebble	246.34	141.06	97.02	26.9	44.5	35.3	14.5	1
Broken Quartz Pebble	242.49	141.93	95.77	1.3	12.9	14.1	4.8	3
Broken Quartz Pebble	243.05	141.92	95.5	20.1	31.6	23.3	20.5	4
Broken Quartz Pebble	242.87	140.3	95.79	1.3	16.5	8.4	4.7	1
Broken Quartz Pebble	244.77	139.59	95.92	1.9	18.78	13.28	8.31	1
Broken Quartz Pebble	243.75	140.1	96	1.6	14.1	13.9	7.8	3
Broken Quartz Pebble	242.58	140.8	96.055	28.5	36.7	32.6	19.2	1
Broken Quartz Pebble	242.68	141.35	96.1	12.8	29.7	21.1	16.2	1
Broken Quartz Pebble	242.65	141.31	96.5	3.5	19.9	15.4	12.7	1
Broken Quartz Pebble	242.11	141.89	96.65	10.7	31	23.2	10.7	3
Broken Quartz Pebble	242.35	141.63	96.7	40.2	37.4	26.1	30.4	1
Broken Quartz Pebble	242.31	141.66	96.71	2.5	20.2	13.5	8.9	1
Broken Quartz Pebble	242.3	141.68	96.71	16.9	36.1	31.7	15.4	1
Broken Quartz Pebble	242.655	142.55	96.71	2.9	16.5	14.9	7.3	2
Broken Quartz Pebble	244.7	140.15	96.72	3.3	22.8	12.9	8.4	2
Broken Quartz Pebble	244.76	139.85	96.815	0.5	12.7	9.93	4.84	2
Broken Quartz Pebble	244.225	139.83	96.87	0.4	17.11	4.44	3.93	4
Broken Quartz Pebble	243.33	142.225	95.61	13	27.9	19.6	18.1	2
Broken Quartz Pebble	243.16	142.92	95.61	55.5	45.7	37.2	25.7	1
Broken Quartz Pebble	243.36	142.575	95.61	12.1	28.6	23.1	17.6	1
Broken Quartz Pebble	242.82	142.69	96.15	12	32.7	18.9	18.1	4
Broken Quartz Pebble	244.45	139.425	96.575	26.3	39.34	28.9	15.06	5
Broken Quartz Pebble	244.11	139.245	96.605	3.2	22.54	15.41	6.13	3
Broken Quartz Pebble	242.527	140.925	95.404	15	25.1	24.3	15.3	2
Broken Quartz Pebble	242.808	140.94	95.41	32.7	41.2	34.3	24.9	2
Broken Quartz Pebble	242.25	132.45	97.23	35.3	39.9	33.7	22.1	1
Broken Quartz Pebble	243.21	132.29	97.12	64.4	41.3	38.5	31.3	1

Table A44-1 continued

Type	N	E	Depth	Wt.	L	W	Th	Scars
Broken Quartz Pebble	243.09	132.2	97.12	12.8	25.4	30	12.4	1
Broken Quartz Pebble	242.4	141.8	95.63	10.4	28.4	23.7	14	4
Broken Quartz Pebble	243.1	142.61	96.035	2.2	24.7	15.1	6.5	1
Broken Quartz Pebble	244.56	139.585	96.56	1.8	18.23	14.95	6.64	1
Broken Quartz Pebble	243.11	142.82	95.71	14	32.8	25.1	23	8
Broken Quartz Pebble	242.78	142.79	96.815					1
Broken Quartz Pebble	243.1	142.35	95.58	8.8	31.1	14.7	13.4	1
Broken Quartz Pebble	242.86	142.15	95.61	4.3	22.4	18.8	7.1	3
Broken Quartz Pebble	243.22	142.1	95.66	55	49.8	32.4	26.1	1
Broken Quartz Pebble	243.38	142.89	95.69	53.3	45.5	35.7	22.9	0
Broken Quartz Pebble	243.61	139.76	95.7	35.6	33.9	35.1	21.2	1
Broken Quartz Pebble	242.22	142.28	95.75	11.2	27.3	23.1	14.5	1
Broken Quartz Pebble	242.56	142.3	96.18	9	22.1	21.8	17.7	2
Broken Quartz Pebble	242.25	142.87	96.235	5.9	22.4	18.3	11.9	1
Broken Quartz Pebble	243.47	142.79	96.35	52.1	34.5	21.5	52.4	0
Broken Quartz Pebble	243.91	142.36	96.435	24.3	19	14.5	7.4	1
Broken Quartz Pebble	244.545	139.31	96.455	21.3	32.78	27	19.32	1
Broken Quartz Pebble	246.65	141.93	96.61	9.5	22.6	19.4	17.2	3
Broken Quartz Pebble	246.76	141.44	96.67		32.5	26.7	14.7	
Broken Quartz Pebble	246.05	140.95	96.67	9	19.5	8.4	4.1	1
Broken Quartz Pebble	246	139.76	96.72		20	18.2	11.8	1
Broken Quartz Pebble	246.565	139.79	96.745		34.4	29.2	16.9	1
Broken Quartz Pebble	246.54	140.45	96.773	8.5	27.6	16.1	11.7	2
Broken Quartz Pebble	246.355	140.88	96.777	16.4	41	19.7	14.6	7
Broken Quartz Pebble	246.77	139.9	96.78		25.4	15.7	13.9	0
Broken Quartz Pebble	246.08	141.64	96.78		21.9	16	10.8	
Broken Quartz Pebble	246.25	140.4	96.788	15.3	30.7	23.1	12.9	0
Broken Quartz Pebble	246.036	140.518	96.789	15.5	27	27.9	20.9	5
Broken Quartz Pebble	246.98	139.86	96.8		27.4	21.1	11.1	1
Broken Quartz Pebble	246.74	140.04	96.808	5	21.5	18.8	9.1	1
Broken Quartz Pebble	246.8	138.64	96.81		22.5	13.7	11.4	1
Broken Quartz Pebble	246.93	140.4	96.828	24.8	35.8	32	19	3
Broken Quartz Pebble	246.44	139.5	96.84	6.3	27	18.3	10.5	1
Broken Quartz Pebble	242.76	141.15	96.85	38.3	35	34.1	24.9	1
Broken Quartz Pebble	243.755	130.745	96.865					1
Broken Quartz Pebble	246.05	140.8	96.868	17.6	31.5	30.6	18,6	4
Broken Quartz Pebble	243.65	130.03	96.87					1
Broken Quartz Pebble	243.89	130.82	96.875	18.8	29.4	22.7	18.5	0
Broken Quartz Pebble	243.88	130.99	96.9					0
Broken Quartz Pebble	243.85	130.89	96.9					0
Broken Quartz Pebble	246.18	138.1	96.91	12.3	25.4	20.6	16.4	2
Broken Quartz Pebble	246.32	140.855	96.938	11.4	26.5	17.6	16.8	2
Broken Quartz Pebble	246.31	140.62	96.938	13.1	31.2	21.5	15.9	2
Broken Quartz Pebble	246.2	138.05	97.11	19	28.2	21.7	21.3	2
Broken Quartz Pebble	244.405	139.22	96.42	16.5	30.24	22.62	17.7	3
Broken Quartz Pebble	242.766	140.865	95.417	24.1	31.3	25.3	24.7	0
Broken Quartz Pebble	243.42	139.72	95.55	3.6	23.9	12.8	11.5	6

Table A44-1 continued

Type	N	E	Depth	Wt.	L	W	Th	Scars
Broken Quartz Pebble	246.13	141.28	96.98	6.8	27.7	20.8	11.7	2
Broken Quartz Pebble	242.28	142.87	96.11	9.6	28.7	15.7	15.6	1
Broken Quartz Pebble	247.32	140.6	96.98	8.8	26	21.4	16.8	1
Broken Quartz Pebble	242.834	140.636	95.404	7.2	34.5	18.7	20	1
Broken Quartz Pebble	243	140.55	95.495	11.8	28.1	13.4	16.3	2
Broken Quartz Pebble	243.38	140.91	95.47	6.5	22	12.5	14.3	6
Broken Quartz Pebble	243.59	140.27	95.5	5.8	17.7	23.3	17.1	2
Broken Quartz Pebble	243.88	140.37	95.53	5.2	16.6	16.5	14.5	2
Broken Quartz Pebble	241.37	141.9	95.93	27	33.2	29.5	25.8	2
Broken Quartz Pebble	242.73	142.73	96.24	3.7	15.4	11.7	11.3	1
Broken Quartz Pebble	247.25	141.47	96.87	8.9	24.63	20.32	13.03	3
Broken Quartz Pebble	243.085	142.71	96.39	0.7	15	13.8	6.6	1
Broken Quartz Pebble	244.4	139.09	96.51	15.3	32.24	23.94	19.14	2
Broken Quartz Pebble	244.145	139.665	96.1	1.2	12.45	12.77	6.71	1
Broken Quartz Pebble	244.27	140.76	97.495	83.6	83.6	41.8	36.3	4
Broken Quartz Pebble	245.26	143.94	97.365	32.5	43.12	33.15	19.06	2
Broken Quartz Pebble	245.56	139.62	97.475	37.8	41.3	31.6	21.5	1
Broken Quartz Pebble	245.57	139.56	97.48	55.8	40.1	32.4	27.2	3
Broken Quartz Pebble	242.84	141.76	97.47	42.1				2
Broken Quartz Pebble	247.61	141.79	97.47					4
Broken Quartz Pebble	247.01	140.955	97.378	2.8	19.7	9.3	9.8	4
Broken Quartz Pebble	246.19	142.4	97.3	2.5	16.6	13.7	8	1
Broken Quartz Pebble	245.06	143.97	97.36	10.4	31.28	19.22	13.15	3
Broken Quartz Pebble	246.1	142.63	97.261	10.6	38.43	21.99	96.3	3
Broken Quartz Pebble	246.295	141.29	97.46		33.1	17.4	10	0
Broken Quartz Pebble	243.5	141.57	97.475	69	61.69	36.79	27.63	2
Broken Quartz Pebble	245.65	143.88	97.65	15.7	29.3	19.5	16.9	3
Broken Quartz Pebble	246.39	138.87	97.49	37.5	45.3	32.9	18.3	1
Broken Quartz Pebble	245.38	141.38	97.6	73.4	54.9	36.5	24.8	3
Broken Quartz Pebble	243.32	138.98	97.41	53.3	45.2	38.19	26.45	1
Broken Quartz Pebble	245.42	138.78	97.45	30.1	33.6	29.6	19.5	1
Broken Quartz Pebble	244.15	138.45	97.46	126.6	68.7	42	29.8	0
Broken Quartz Pebble	243.48	143.89	97.315	17.3	32.2	28.4	24.6	1
Broken Quartz Pebble	242.3	139.97	97.425	23	32.1	24.17	21.83	1
Broken Quartz Pebble	246.81	142.18	97.45	14.5	42.1	16.1	16.4	2
Broken Quartz Pebble	246.31	142.76	97.47	14.4	31.6	23.4	13.6	1
Broken Quartz Pebble	246.27	142.56	97.47	4.5	21.2	15.9	10.5	2
Broken Quartz Pebble	246.16	141.96	97.74	3.5	23.77	13.02	7.54	1
Broken Quartz Pebble	244.35	138.51	97.48	9.1	27.7	18.3	16.3	3
Broken Quartz Pebble	244.35	137.76	97.455	27.4	43.2	26.6	16.2	1
Broken Quartz Pebble	244.87	142.62	97.465	25.8	43.8	24	15.7	2
Broken Quartz Pebble	244.81	142.62	97.48	18.8	34.6	27.1	11.8	1
Broken Quartz Pebble	244.83	142.78	97.48	33.4	44	27.2	22.8	2
Broken Quartz Pebble	244.46	138.38	97.45	24	32.6	24.4	24.4	2
Broken Quartz Pebble	244.34	138.42	97.45	22.1	32.5	20.3		1
Broken Quartz Pebble	244.68	142.77	97.45	7.3	30.8	15.7	11	3
Broken Quartz Pebble	244.14	138.63	97.475	7.4	17.6	22.4	12.9	5

Table A44-1 continued

Type	N	E	Depth	Wt.	L	W	Th	Scars
Broken Quartz Pebble	244.4	138.53	97.5	18.1	32.8	23.3	17.2	1
Broken Quartz Pebble	244.49	142.87	97.45	11.2	33	19.8	12.8	1
Broken Quartz Pebble	243.26	139.97	97.45	11.7	24.8	22.5	13.1	1
Broken Quartz Pebble	247.1	143.09	98.04	28.8	45.24	28.76	17.15	3
Broken Quartz Pebble	247.66	141.79	98.65	141	56.94	45.82	40.83	2
Broken Quartz Pebble	247.38	142.66	97.95	39.5	44.44	34.86	25.11	2
Broken Quartz Pebble	247.1	142.28	97.95	35.1	32.86	32.02	24.77	3
Broken Quartz Pebble	242.82	141.97	96.04	1	10.4	9.4	5.4	1
Broken Quartz Pebble	242.77	142.43	95.56	7.6	23.9	20.8	12.2	4
Broken Quartz Pebble	242.47	142.02	95.83	7.6	31.2	21.5	8.5	2
Broken Quartz Pebble	244.83	139.33	96.42	4.9	16.72	19.36	11.05	5
Broken Quartz Pebble	243.78	139.47	95.53	4.6	20.95	16.15	12.05	6
Broken Quartz Pebble	246.65	140.54	96.888	18.6	38.4	31.2	15.8	6
Broken Quartz Pebble	243	140.55	95.495	26.3	33.8	29.3	21.1	3
Broken Quartz Pebble	243.24	142.28	96.04	12.1	39.5	17.9	11.8	3
Broken Quartz Pebble	242.56	141.85	97.44	37.5	46.12	37.09	21.92	1
Broken Quartz Pebble	246.13	141.6	97.6	10.5	23.4	24	14.4	5
Broken Quartz Pebble	244.9	142.18	98.175	7.5	30.1	24.4	9	11
Broken Quartz Pebble	242.11	142.72	96.2	1.6	17.7	11.4	6.5	3
Broken Quartz Pebble	246.55	140.49	96.58	2.1	18.4	13.7	6.2	2
Broken Quartz Pebble	242.59	142.64	96.8					3
Broken Quartz Pebble	245.13	142.9	97.315	40	41.1	36.7	23	5
Broken Quartz Pebble	242.63	140.56	96.945	90.6	52.2	49.4	23.3	1
Broken Quartz Pebble	246.71	140.93	97.038	33.4	40.8	25.5	26.9	0
Broken Quartz Pebble	242.99	141.68	95.55	33	48.2	27.2	20.8	0
Broken Quartz Pebble	243.095	140.58	96.06	22.9	40.1	26.8	14.7	0
Broken Quartz Pebble	247.88	141.73	96.99	53.7	51.9	33.2	27.1	2
Broken Quartz Pebble	244.35	140.41	95.6					0
Broken Quartz Pebble	242.17	142.99	96.29	35.1	39.5	31.2	18.8	0
Broken Quartz Pebble	242.8	131.46	96.95	61.2	39.2	37.7	28.3	0
Broken Quartz Pebble	243.09	139.64	97.2	67.1	51.36	39.21	27.4	0
Broken Quartz Pebble	243.37	140.44	97.32					2
Broken Quartz Pebble	242.8	142.72	97.365	59.4	48.8	35.9	21.1	1
Broken Quartz Pebble	243	143.25	97.37	17	38.7	18.9	14.7	1
Broken Quartz Pebble	243.17	143.98	97.37	26.7	32.9	27.7	19	1
Broken Quartz Pebble	242.95	140.93	97.345	50.5	55.21	33.63	22.64	1
Broken Quartz Pebble	242.64	139.33	97.445	37.7	53.95	51.7	29.76	2
Broken Quartz Pebble	244.02	142.98	97.47	50.5	45.4	31.9	25.1	0
Broken Quartz Pebble	242.6	140.13	97.295	91.7	69.35	35.52	21.64	1
Broken Quartz Pebble	247.31	141.44	97.555	81.6	50.3	37.5	27.2	1
Broken Quartz Pebble	246.37	143.07	97.65	64.8	48.75	40.62	26.64	0
Broken Quartz Pebble	247.1	141.85	97.92	36	41.4	29.5	23.4	2
Broken Quartz Pebble	245.67	140.7	98.115	146.7	70	51.2	27.2	0
Broken Quartz Pebble	247.62	141.48	98.72	44.2	44.5	32.3	25.5	1
Broken Quartz Pebble	244	131.04	96.75	56.4	38.8	43.3	28.7	5
Broken Quartz Pebble	242.31	140.42	95.67	19.2	35.8	29.2	14.3	6
Broken Quartz Pebble	242.37	141.98	95.585	19.7	37.2	26.5	14.3	2

Table A44-1 continued

Type	N	E	Depth	Wt.	L	W	Th	Scars
Broken Quartz Pebble	246.19	141.38	97.1	38.9	37.75	40.89	19.59	1
Broken Quartz Pebble	242.692	140.298	95.388	20.2	33.4	29.1	14.5	1
Broken Quartz Pebble	242.78	141.18	96.87	92.4	60.8	36.9	31	2
Broken Quartz Pebble	243.27	142.28	95.62	59.5	41.1	34	28.8	1
Broken Quartz Pebble	244.035	131.31	96.755	87.6	58.7	38.8	27.4	3
Broken Quartz Pebble	243.36	142.31	97.45	199.9	80.3	45.2	33.7	2
Broken Quartz Pebble	246.3	142.6	97.33	15				1
Broken Quartz Pebble	244.47	142.98	97.45	48.6	46	40.5	18.4	1
Broken Quartz Pebble	243.72	133.84	98.315	33.1	37.8	33.1	21.8	1
Broken Quartz Pebble	247.13	142.74	97.95	29.5	37.99	32.54	17.43	4
Quartz Pebble	246.67	141.72	96.73	7	23.9	22	12.8	0
Quartz Pebble	247.05	140.97	97.118	16.6	30.6	21.5	18.8	0
Quartz Pebble	243.02	142.92	95.58					0
Quartz Pebble	243.34	142.81	95.67	33.2	56.8	28.1	18.2	0
Quartz Pebble	242.24	142.55	96.15	4.4	22.6	14	8.,3	0
Quartz Pebble	242.77	142.02	95.55	28.1	31.3	28.7	21.5	0
Quartz Pebble	242.64	142.725	95.71	6.4	40.3	24.9	9.5	0
Quartz Pebble	242.15	142.66	96.15	10.4	33	15	13.3	0
Quartz Pebble	242.77	142.99	96.16	5.7	24.5	13.2	11.6	0
Quartz Pebble	242.29	142.41	96.17	7.9	26.6	20.1	12.4	0
Quartz Pebble	242.13	142.68	96.175	3.5	26	14.1	6.8	0
Quartz Pebble	243.145	139.93	96.36	2.8	23.2	11.1	10.4	0
Quartz Pebble	246.12	141.3	96.67		20	16	10.8	
Quartz Pebble	243.685	139.395	96.68	0.8	15.04	10.92	4.08	0
Quartz Pebble	243.025	139.665	96.685	1.2	19.53	5.94	5.03	0
Quartz Pebble	246.87	141.67	96.7	2.6	18.8	11.8	8.8	2
Quartz Pebble	246.53	141.17	96.7	2	17.8	11.9	6.5	1
Quartz Pebble	242.215	139.89	96.705	2.4	18.03	12.2	7.15	0
Quartz Pebble	246.12	138.4	96.74		16	10.6	7.4	0
Quartz Pebble	246.18	138.57	96.82		12.5	12.7	6.4	0
Quartz Pebble	246.05	140.54	96.838	3.5	24.6	17.6	6.1	0
Quartz Pebble	246.24	138.33	96.84		17	15.4	11.7	0
Quartz Pebble	246.28	138.85	96.87	2.8	15.3	13.1	11.2	0
Quartz Pebble	246.66	138.82	96.91	3	24	14.8	7.1	0
Quartz Pebble	246.51	138.87	96.91	5.2	21.2	18.6	9.1	0
Quartz Pebble	246.54	140.96	96.988	0.8	17.6	11.6	4.2	0
Quartz Pebble	246.16	140.72	96.993	3.6	25.7	12.1	9.4	0
Quartz Pebble	243.24	142.27	95.56	42.6	33.4	31.6	29.7	0
Quartz Pebble	243.13	139.295	96.505	0.7	11.9	6.1	7.3	0
Quartz Pebble	242	139.565	96.65					0
Quartz Pebble	242.16	142.72	96.16	7.8	29.8	15.9	10.9	0
Quartz Pebble	246.1	140.275	96.843	9.7	25.8	22.1	12.6	0
Quartz Pebble	246.705	140.09	97.038	3.2	21.7	11.1	7.6	0
Quartz Pebble	247.43	141.58	96.59	21.5	33.1	29.8	19.6	1
Quartz Pebble	247.26	141.3	96.6	9.9	25.8	19.5	11.7	3
Quartz Pebble	247.06	141.45	96.6	14.3	31.4	22.5	17.9	1
Quartz Pebble	246.35	138.36	97	11.6	32.6	19.9	12.4	0

Table A44-1 continued

Type	N	E	Depth	Wt.	L	W	Th	Scars
Quartz Pebble	246.18	139.94	97.13	7.9	16.7	16.8	20.1	0
Quartz Pebble	247.02	141.92	96.72	5	18.9	19.4	10	
Quartz Pebble	246.64	141.25	96.82	10.1	25.2	23.5	17.3	0
Quartz Pebble	246.81	141.02	96.83	8.4	29.9	19.7	13	4
Quartz Pebble	244.31	140.02	96.74					0
Quartz Pebble	243.49	142.79	95.64	25.7	35	28.7	23.5	0
Quartz Pebble	242.79	142.83	95.53	37.8	54.8	27.9	18.1	0
Quartz Pebble	246.95	140.28	96.918	24.2	27.5	23.5	19	0
Quartz Pebble	242.19	142.62	96.165	3.7	21.1	14.4	10	0
Quartz Pebble	247.65	141.35	96.86	4.2	27.73	17.74	6.04	0
Quartz Pebble	243.3	139.23	95.57	36.6	49.6	34.7	16.2	0
Quartz Pebble	242.21	142.69	95.72	11.5	43.8	22.4	11.7	0
Quartz Pebble	243.77	142.7	96.01	8.6	27.5	21.9	12.1	0
Quartz Pebble	243.34	142.7	96.04	3.6	25.4	12.1	7.1	0
Quartz Pebble	244.3	139.3	96.1775	2.5	18.49	14.7	8.04	0
Quartz Pebble	244.355	139.44	96.39	22.8	38.15	24.12	18.19	0
Quartz Pebble	243.15	139.59	96.41	8.3	32.22	17.45	7.78	0
Quartz Pebble	244.17	139.75	96.41	93.1	58.66	34.95	36.06	0
Quartz Pebble	244.665	139.78	96.42	29.2	35.25	29.43	19.2	0
Quartz Pebble	243.11	142.24	96.5	1.3	21.6	10.1	5.8	0
Quartz Pebble	243.79	139.35	96.515	20.9	29.87	27.86	19.75	0
Quartz Pebble	243.865	139.37	96.56	37.9	38.86	33.8	20.35	0
Quartz Pebble	244.62	139.265	96.57	53.2	45.59	35.35	23.54	0
Quartz Pebble	244.53	139.37	96.58	14.7	34.18	22.34	13.17	0
Quartz Pebble	244.29	139.035	96.58	20.9	33.57	28.53	17.3	0
Quartz Pebble	246.13	140.51	96.59	8.9	25.6	21.9	12.8	0
Quartz Pebble	246.52	141.42	96.65		39.2	27	11.6	
Quartz Pebble	246.04	141.54	96.66		19.4	18.3	13.4	
Quartz Pebble	246.48	140.36	96.67	5.2	39.1	25.5	13	0
Quartz Pebble	246.33	140.07	96.68	5.9	25.2	7.7	5.7	0
Quartz Pebble	246.99	140.72	96.69	3.7	29.2	11.7	5.2	0
Quartz Pebble	246.4	138.65	96.71		19	10.3	6.2	0
Quartz Pebble	246.86	141.81	96.71		26.4	18.7	10.8	
Quartz Pebble	246.77	141.85	96.71		18.8	15.5	7.9	
Quartz Pebble	246.79	141.07	96.72	3.6	18.3	12.4	10.8	2
Quartz Pebble	246.29	138.91	96.74		18.4	14.3	10.7	1
Quartz Pebble	246.22	140.7	96.748	9.8	28.8	17.3	17.6	0
Quartz Pebble	246.92	140.78	96.758	19.3	34.7	23.5	19.2	0
Quartz Pebble	246.27	138.11	96.79		19.1	19.6	9.6	0
Quartz Pebble	246.02	141.59	96.79		27	12.8	10.3	
Quartz Pebble	246.39	140.88	96.803	17.4	33.3	25.4	17.5	0
Quartz Pebble	243.12	142.25	96.81					0
Quartz Pebble	243.12	142.2	96.81					0
Quartz Pebble	246.84	138.87	96.84		18.4	9.5	10	0
Quartz Pebble	246.83	139.37	96.84	11.9	32.7	18.9	14.3	0
Quartz Pebble	246.53	140.455	96.858	9.4	24	20.1	14.4	0
Quartz Pebble	243.775	130.695	96.87	17.8	27.3	21.72	23.7	0

Table A44-1 continued

Type	N	E	Depth	Wt.	L	W	Th	Scars
Quartz Pebble	246.58	139.94	96.88	6.8	19.8	19.9	12.5	0
Quartz Pebble	247.3	141.46	96.88	24.4	33.9	23.2	21.5	0
Quartz Pebble	246.625	140.42	96.88	5.2	23.1	13.3	10.3	0
Quartz Pebble	246.11	138.09	96.89	10.4	26.5	19.2	14.4	0
Quartz Pebble	246.29	138.27	96.89	5.2	18.3	17.6	10.3	0
Quartz Pebble	246.45	140.57	96.898	7.5	26.8	16.4	13.6	0
Quartz Pebble	243.81	131.045	96.9	20.4	34.4	26.5	17.4	0
Quartz Pebble	246.79	139.97	96.9	28.4	32.7	32	24.5	0
Quartz Pebble	247.56	141.935	96.94	7.3	24	18.7	12.1	0
Quartz Pebble	247.755	141.6	96.94	14.5	33.3	24.1	15.1	0
Quartz Pebble	246.88	139.885	96.95	9.9	27.6	23.7	11.6	0
Quartz Pebble	247.69	140.77	97.178	32.7	37.9	25.9	22.4	0
Quartz Pebble	243.14	139.87	97.2	67	44.52	42.69	27.04	0
Quartz Pebble	242.15	142.62	96.235	28	38.5	24.9	21	0
Quartz Pebble	246.9	140.08	96.898	10.3	32	20.4	15.4	0
Quartz Pebble	246.57	139.37	96.78		22.6	15	9.6	0
Quartz Pebble	246.13	140.28	96.833	7	27	18.1	11.6	0
Quartz Pebble	246.33	140.47	97.028	5.6	25.2	14.7	11	0
Quartz Pebble	246.88	140.655	97.028	5.9	18.6	17.4	11.2	0
Quartz Pebble	247.43	140.86	97.01	13.8	32.1	18.3	15.3	0
Quartz Pebble	247.15	142.34	97.45	5.9	25.8	19.9	6.9	0
Quartz Pebble	246.33	141.33	97.44		22.5	15.9	7	0
Quartz Pebble	244.26	138.34	97.44	15.9	29.4	23.7	17.2	0
Quartz Pebble	244.86	142.49	97.48	31.6	32	27.8	24.6	0
Quartz Pebble	244.73	138.01	97.485	43.5	46.4	37.1	17.1	0
Quartz Pebble	246.38	141.52	97.278					0
Quartz Pebble	244.78	142.72	97.44	10.9	25.2	24.9	13.5	0
Quartz Pebble	244.23	138.38	97.45	9.7	25.9	20.3	13.7	0
Quartz Pebble	246.205	142.45	97.5	141.6	70.9	61.2	23.6	0
Quartz Pebble	246.64	143.88	97.6					0
Quartz Pebble	246.67	143.02	97.62	6.8	31.79	13.83	11.07	0
Quartz Pebble	245.36	143.8	97.745	35.6	43.45	32.68	15.78	0
Quartz Pebble	244.52	143.08	97.45	60.7	38.4	32.4	35.4	0
Quartz Pebble	247.71	140.88	97.81	18	27.3	26.8	20	0
Quartz Pebble	247.24	142.86	97.93	14.8	25.26	19.79	17.98	0
Broken Quartz Pebble	242.26	141.71	95.65	11.7	27.9	22.5	18.1	1
Broken Quartz Pebble	242.44	140.79	95.67	11.7	25	21.1	17.9	1
Broken Quartz Pebble	242.25	142.54	96.15	1.2	22.7	8.7	4.6	2
Broken Quartz Pebble	242.31	142.37	96.115	16	33.8	26.5	19.2	3
Broken Quartz Pebble	242.47	140.72	95.67	2.7	20.7	9.8	10.6	2
Broken Quartz Pebble	242.64	140.08	95.6	1.3	18.2	12.2	6.9	4
Broken Quartz Pebble	246.26	139.48	96.73		24.6	9.5	7.8	3
Broken Quartz Pebble	242.69	141.12	96.88	29.7	40.6	27	21.7	0

APPENDIX 45

GLOSSARY OF KEY TERMS

Alluvium: A term for sediment deposited in a streambed, floodplain or other bottomland feature. An unconsolidated, stratified deposit laid down by water.

Amorphous Debris: Lithic specimens that have a discernible interior surface, yet lack compression rings, bulb of force, point of applied force and intact margins.

Anvil: A stone or lithic object, typically flat, that is used as a support on which lithic materials to be struck are placed. Anvils are frequently used in the bipolar technique of lithic reduction.

Archaic: The period of prehistory in North America that begins approximately 11,700 cal yr. B.P. during the Early Holocene and reflects those cultures who subsist primarily by way of hunting and gathering. The end of the Archaic is defined by the adoption of sedentary farming.

Argilliturbation: Mixing in soils or sediments that occur as the result of alternating wetting and drying cycles in clays that shrink and swell.

Arrises: Ridges on the exterior surface of a flake that result from the intersection of two or more flake removals.

Bend Break Flake: In lithics, a non-conchoidal fracture that is the product of flexing that exceeds the elasticity of the material. According to Andrefsky (2005), the fracture is identified by an absence of a bulb of force, fracture initiation near the center of the artifacts face, and fracture plane propagation oriented perpendicular to the initiation face. Attributers of bend breaks include compression rings, and radial striations, and lips at the artifact margin.

Bending Initiation: In lithic reduction, fracture that occurs when applied pressure of an indentor produces a crack near, but not at the initiation face and develops downward at a 90 degree angle.

Biface: A type of lithic artifact that is lenticular in shape that has had flakes removed from two opposing sides or faces of the artifacts surface. Bifaces are objective pieces that have two sides that converge to create a single margin that circumscribes the entire artifact.

Biface Thinning Flake: A percussion flake that has multi-faceted striking platform remnants, that are small and thick, acute platform angles, a curved and thin longitudinal section and cross section, and parallel expanding margins. Biface Thinning Flakes are a product of shaping and thinning a biface.

Bioturbation: The physical rearrangement of sediment particles forming the soil and subsoil fabric by disruption through organic or biophysical processes of resident life forms.

Bipolar Reduction/Manufacture: A type of lithic reduction whereby a core or objective piece to be flaked is placed on an anvil and subsequently struck with a hammerstone or indenter. Bipolar fractures are initiated wedging and propagate under compressive force. A form of core technology that employs the use of compressive forces to detach a flake from a core.

Blade: An elongated lithic detachment with parallel margins, and two or more unidirectional removal scars on its exterior surface.

Bladelet: An elongated lithic detachment that is less than 50mm in length and has parallel margins, and two or more unidirectional removal scars on its exterior surface.

Braided Stream: A stream with a wide, horizontal channel bed, over which water forms an interlacing pattern of splitting into numerous small conveyances that coalesce a short distance downstream.

Broken Flake: Lithic specimens that have a discernible interior surface, compression rings, bulb of force, and a point of applied force, yet lack intact margins.

Bulb of Force: An attribute on the interior surface of a conchoidal flake that is positioned towards the proximal end, and below the striking platform remnant. The bulb of force is typically found on flakes detached by way of conchoidal fracture, although its morphology may vary dependent on reductive technique and degree of force application.

Burin: A lithic tool flaked into a chisel like point used for inscribing or grooving bone, wood, stone or antler.

Chert: A form of sedimentary rock composed of microcrystalline quartz.

Chopper: A core tool manufactured by percussion flaking the margins or ends of a cobble or boulder. Choppers are thought to have been used for cutting, crushing, or chopping activities.

Clay: A fluvial sediment defined to be of particle diameter no greater than 0.002 mm.

Clovis Culture: A prehistoric North American culture complex that first appears in the archaeological record approximately 13,250 cal. years ago. Clovis was first identified near Clovis New Mexico in the 1920's and 1930's by the recovery of long, lanceolate, fluted projectile points in recovered association with large extinct megafauna. Clovis is considered to be the ancestors of most indigenous cultures in North America.

Cobble: Lithic objects that range in size from 64-256 mm.

Colluvium: A a layer, of unconsolidated weathering products deposited following sheet erosion by unconcentrated surface runoff and by gravitational processes, physical weathering, and bioturbation.

Compression Flake: Flakes that are a product of wedge initiation whereby the application of force is focused away from the margin of the objective piece, and upon what is considered the center of the hertzian cone.

Compression Rings: undulations on the interior surface of a flake and radiate in the direction away from the bulb and point of applied force.

Complete Flake: Artifacts that have a single interior surface, compression rings, a bulb of force, a complete or partial striking platform, and intact margins with a clear point of termination.

Conchoidal fracture: A breakage in rock that produces concentric circles on the detachment face resulting from pressure or percussion flaking.

Context: The exact location of a site, artifact or other discovery in time and space.

Core: A Lithic object from which flakes or detachments are removed by some means of reductive technology. The core is also referred to as an objective piece in lithic reduction. Detachments from a core may be used as flake tools or flake blanks.

Core tool production: The removal of flakes from an objective piece in either a unidirectional or multidirectional form.

Cortex: Natural exterior material surface of stone that is the product of weathering or some other formation process.

Cortical pebble: Small sub rounded to angular lithic fragments that were part of the cortex or outer rind of a rock and have subsequently been detached from the parent material, either by weathering or by lithic manufacture.

Crazing: Thermal damage on a lithic object or detachment that is is product of differential expansion. Crazing consists of a series of small intersecting cracks in the surface of the lithic object.

Cryoturbation: The mixing of sediments from multiple soil horizons as a result of freezing and thawing.

Datum: Any point or surface to which other landscape points can be related, either horizontally or vertically, to locate the points on the earth's surface, usually for purposes of topographic mapping.

Debitage: Waste material from the manufacture of chipped stone tools. All stone artifacts of cultural origin that are not cores or tools, a major subset of which are flakes.

Debris: Lithic specimens that have a discernible interior surface and compression rings, but lack a bulb of force, point of applied force and intact margins.

Deposition: The c process of accumulation into beds or irregular masses of loose sediment or other rock material by any natural agent.

Distal: An orientation term that denotes the termination end of a flake, detachment, core, or lithic tool.

Eluviation: A hydrologic process by which water percolates downward and out of a soil zone, transporting organic material from the surface through the A horizon into the B horizon.

Eraillure Scar: An eraillure scar is the negative of a removal flake that separates from the mid-point of the bulb of force as a flake is detached from a nucleus.

Exterior Surface: The face of a lithic flake or detachment that corresponds with the outer portion of the artifact from which it was detached. Also referred to as the dorsal surface.

Faunalturbation: Modification of soils and sediments caused by animals.

Flake: any lithic material detached from a given mass of stone. Complete flakes have a striking platform, bulb of force, intact margins, and compression rings indicative of applied force.

Flake Class: In lithic reduction, the position in the reduction sequence to which a particular flake belongs. Flake classes often include primary, secondary or tertiary.

Flake Fragment: Lithic specimens that have a discernible interior surface, compression rings, and bulb of force, yet lack a point of applied force and intact margins.

Flute: A long, narrow groove resulting from the removal of an elongated channel flake and extending from the basal margin of a projectile point preform or point some distance along the face.

Fluvial Processes: The movement of material agents generated by the activities of rivers, streams and associated flow.

Frost Wedging: The mechanical weathering of stone induced by stresses created by the freezing of water into ice.

Graver: A small tool with a sharp tip used to groove or engrave bone, stone, wood, or other materials.

Hammerstone: A lithic percussor or indenter that is used in chipped stone tool production to detach flakes from a core.

Hard Hammer percussion: Lithic reduction technique employed with the use of a hard indenter such as a quartzite hammerstone. Hard hammer percussion is often employed during early stages of lithic reduction and results in detachments that are thick and have prominent points of applied force.

Hertzian Initiation: In lithic reduction, hertzian initiation occurs when increased loads between an indentor and brittle solid ultimately lead to the formation of cracks in the surface of the solid.

Hydric Forces: Forcing mechanisms that influence the structural integrity of stone through the addition or reduction of moisture.

Illuviation: The movement of soluble and fine-grained material downward into sites of the B horizon.

In Situ: In place.

Interior Surface: The face of a lithic flake or detachment that corresponds with the inner portion of the artifact from which it was detached. Also referred to as the ventral surface.

Interpretation Free Model: A method of lithic analysis developed by Sullivan and Rozen (1985) that is based on the examination of a set of lithic attribute categories that have three dimensions of variability, each with two possible outcomes. The method is thought to be objective and to enhance replicability.

Kurtosis: Peakedness of a grain-size distribution and compares sorting in the central portion of a given population with that in the tails.

Lithic: Relating to stone.

Lithic Analyst: Those interested in examining stone or chipped stone artifacts to obtain some information about prehistoric life-ways and behavior.

Lithic Manufacture Technique: The means by which force is applied during detachment, and includes the implements used, as well as the direction, angle, and amount of applied force.

Lithic Taphonomy: The effect that natural processes have on stone materials.

Lithic technology: The extensive array of methods employed to manufacture usable tools from a variety of lithic raw material types.

Margin: The edge of a flake or tool.

Mechanical Weathering: The erosion or breakdown of rock into smaller fragments by natural and physical agents, but without significant change in chemical or mineralogical makeup.

Medial: Orientation term that denotes the midsection of a flake, detachment, core or lithic tool.

Mississippian: The period of North American prehistory from ca. A.D. 1000 to European contact in the sixteenth century that represents a time of increased social complexity consisting of chiefdom level societies.

Morphological Attributes: In Lithic analysis, a term used to describe attributes that define artifact size or shape.

Multidirectional: Core or flake reduction technique with detachments removed in more than one direction or from more than one striking platform.

Non Tool Flakes: Lithic detachments or Flakes that do not exhibit evidence of modification, use, or rejuvination

Overshot Flake: A flake with a reverse hinge termination that removes part of the core or biface on the opposite margin from which it was initiated.

Palynology: The study of pollen and pollen grains.

Patina: A surface discoloration or adhesive outer crust of an artifact due to chemical changes resulting from weathering.

Pebble: Lithic objects that range in size from 4-64 mm. A general term for a small rock fragment that has been rounded through the process of stream transport.

Pebble/Cobble: Lithic specimens that lack a discernible interior surface, compression rings, bulb of force, point of applied force and intact margins.

Pedogenesis: The mode of origin of a soil, with emphasis on the processes of soil-forming factors responsible for the development of the soil from the unconsolidated parent material.

Percussion Flaking: A lithic reductive technique that produces discriminate interior attributes and remnant percussion scars on the exterior surface of the lithic flake or detachment.

Postdepositional Processes: All natural and anthropogenic processess that have occurred after the deposition of archaeological materials and which could have transformed them into their present state.

Potlid: The scar on a lithic detachment, core, or lithic tool that is formed by thermally induced differential expansion.

Preform: An unfinished flaked tool that reflects a stage in the manufacture process.

Pre Clovis: Term used by archaeologists to refer to Early Paleoindian cultures that are thought to be the founding populations of the Americas.

Pressure Flaking: A lithic reductive technique that uses direct force by pressing as opposed to striking an objective piece, and results in flake detachments that are typically smaller, thinner, and lighter than percussion flakes.

Primary Detachment: A lithic detachment that is entirely covered by cortex on the exterior surface.

Proximal: Orientation term that denotes the striking platform or platform remnant end of a lithic detachment, core, or tool.

Quartz: Macrocrystaline silicate.

Radial Break: Fracture caused by the application of force to the midpoint of a flake or tool supported on an anvil.

Removal Scars: The negatives of prior flakes or detachments that occur on the exterior surface of a flake.

River Stained Cortex: The staining of the outer rind of lithic materials when submerged in or subjected to fluvial activity for an extended period of time.

Scraper: A unifacial lithic tool that exhibits use-wear or microwear that is a product of use or rejuvenation. Scrapers are thought to have been used for scraping organic materials such as hide, bone, or grass.

Seondary Detachment: A lithic detachment that is partially covered by cortex on the exterior surface.

Sediment: Detached fragmental material that originates from either the chemical or physical weathering of rocks and minerals and is transported, suspended in, or deposited by water or air or is accumulated in beds by other natural agencies.

Sediment Consolidation: The process(es) by which sediment volume is reduced in response to increased sediment density with natural overburden loading.

Sheet Flow: overland flow or downslope movement of water that is not concentrated in channels.

Site: A a place containing the remains of previous human activity.

Sorting: the process by which sediment particles of similar characteristics are selectively separated from other particles.

Skewness: the degree of symmetry or asymmetry of a grain-size distribution, which is a function of the mean, median, mode, and kurtosis. A numerical measure or index of the lack of symmetry in a frequency distribution.

Striking Platform: The striking platform or point of applied force is the point on a core or objective piece at which a "single flat surface" is struck or hit to remove a detachment.

Stress Release Weathering: The release of compressional stresses that are active on a body of lithic material at depth when the weight of overlying sediment is removed by erosion.

Taphonomy: The study of geological processes of the transition of animal remains from the biosphere into the lithosphere.

Thermal Stress: The strain in a body or structure due to inequalities of temperature. Insolation, natural wildfire, and human-controlled fire features are all conditions that can cause thermal stress.

Termination: The end of a flake or core that has been struck during lithic reduction.

Termination Type: A set of attribute types that describe the manner in which the distal end of a flake is detached from a nucleus.

Tertiary Detachment: A lithic detachment that lacks cortex on the exterior surface.

Trampling: The treading, walking, or stepping upon lithic materials by prehistoric peoples or animals.

Unidirectional: Core or flake reduction technique with detachments removed in a single direction or from a single striking platform surface.

Uniface: A type of lithic artifact that has had flakes removed from a dingle side or face of the artifacts surface.

Utilized Flake: A Flake that displays edge modification resulting from use or intentional retouch. Removal scars on utilized flakes extend 2 or more millimeters from the margin of the tool.

Weathering: The destruction or alteration, through chemical and biochemical processes, of near-surface rock and sediment.

Wedging Initiation: In lithic reduction, initiation that occurs when an indentor strikes anobjective piece well away from its margin, or if the edge angle is greater than 90 degrees. Wedging initiation often results in the formation of multiple cracks and fractures from the area surrounding the primary crack and can also occur from the bottom of the objective piece.

Winnowing: The preferential transport of fine particles from those of the coarse fraction of a sediment deposit by fluid motion.

Woodland: The period of North American prehistory that begins approximately 3,200 cal yr BP and was traditionally distinguished from the preceding Archaic period by the widespread adoption of pottery.

VITA



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