V. RESULTS OF BLOCK AREA EXCAVATIONS AT DRAWYER CREEK SOUTH SITE 7NC-G-143

A. INTRODUCTION

The Drawyer Creek South Site (7NC-G-143) occupies a gently sloping surface adjacent to wetlands bordering Drawyer Creek. The occupation surfaces are only a few meters in elevation above the current stream level. Interpretation of the sequence of site occupations relies on the analysis of both the soil layers which comprise the site and the distribution of artifact clusters within these soils. Analysis of the vertical distribution of ceramics, stemmed and notched projectile points, and other diagnostic artifacts recovered from the site shows somewhat compressed stratigraphy in the upper levels and some evidence that artifacts have dropped deeper in the profile through pedoturbation, i.e., mixing of soils and their contents through root penetration, rodent burrowing, and similar agents. This has not, however, drastically affected the patterning of cultural material across the site. The cultural components recorded on the site range from early Woodland I (Late Archaic, 3000 BC), to Woodland II (Late Woodland, AD 1400).

For the purpose of spatial analysis and discussion of the excavation results in various parts of the site, the site area has been subdivided into six sub-areas. Although the divisions are arbitrary, they account for the separation of the various excavation unit blocks by extensive unexcavated surfaces.

The largest excavation block areas are designated Block Areas 1, 2, and 3 (see Figure 2). The outlying individual units and unit clusters are designated Block Areas 4, 5, and 6. Block Areas 4 and 5 consist of a total of five 1-meter units at the southern end of the site. Block Area 6 consists of three 1-meter units and two 1x2-meter units at the northern end of the site, close to Drawyer Creek.

The results described below trace the various occupations within each block area. For all areas of the site, Levels 1 and 2 are combined into a single component and Levels 3 and 4 are combined into a second, or lower, component. These distinctions are based on preliminary analysis of the stratigraphic position of key diagnostic artifacts, as well as the depth and areal extent of lithic debitage concentrations. For example, jasper workshop debris is apparent in Level 1 and is even more distinct in Level 2. The concentrations drop off in Level 3 and below, but in a few instances can be traced into much deeper contexts through several levels.

The levels below Level 4 appear to contain portions of the occupation represented in Levels 3 and 4, as indicated by the presence of debitage types and raw material types consistent with what was found in these levels. Considering the degree of pedoturbation often found in sandy soils such as those that comprise much of the Drawyer Creek South Site, this type of mixture is understandable. To address this problem, key diagnostic artifacts are linked to associated features and lithic workshop areas to clarify associations and provide interpretable information.

Site Stratigraphy

Stratigraphy at the Drawyer Creek South Site (Figure 3) consists of an unplowed A-horizon underlain by an E-horizon. The E-horizon, or eluvial E-horizon, by definition underlies the A-horizon, is lighter in color, and contains less organic matter than the A-horizon. It also contains less clay than the argillic B-horizon soils which underlie it. A transitional layer designated the E/B stratum underlies the E-horizon and rests upon the argillic B-horizon. The upper portion of the argillic or Bt-horizon contains the most deeply buried cultural material on the site. This sequence of layers overlie the unweathered C-horizon which forms the parent material foundation for the site. This kind of soil horizon sequence is typically found in forested environments (Birkeland 1974:198).

The soil horizons vary somewhat in thickness across the site and have been subjected to postdepositional disturbances, in some areas by tree throws, slope erosion, and other natural agents. A typical profile, shown in Figure 3, and the one examined by Dr. Daniel Wagner for this study, represented in Unit 13. The profile shallow A-horizon shows a measuring 10 centimeters thickness overlying an E- and E/B-horizon transitional reaches a depth of 40 centimeters below surface. Most of the cultural material recovered from the site is

SOIL STRATIGRAPHY AT THE DRAWYER CREEK SOUTH SITE					
Horizon	Depth (in cm)	Description			
A	0-4	Loam/sandy loam (10YR 3/2)			
E	4-23	Loam/sandy loam (10YR 5/4)			
BE	23-39	Loam/sandy loam (10YR 4/6)			
Bt	39-74	Sandy clay loam with nearly continuous clay films (7.5YR 4/6)			
BC1	74-89	Sandy loam with patchy clay films (7.5YR 4/4-4/6)			
BC2	89-121	Sandy loam with patchy clay films and lenses of loamy sand (10YR 4/4-4/6)			

found in these layers, which represent Levels 1-4 in most areas of the site. The argillic (Bt) sandy clay loam horizon underlies the E/B-horizon, and in Unit 13 extends to a depth of 70 centimeters below surface. The upper portion of this horizon contains some cultural material. Most of the deeply buried cultural material, however, is found where the A/E/EB-horizon sequence is much thicker. The Bt-horizon is generally considered to be too old to contain cultural materials. The top of this horizon varies between 30 and 40 centimeters below surface. There is some mixture of loess within the Pleistocene-age deposits which underlie the cultural components on the site.

The C-horizon which underlies the argillic horizon extends to the base of the deepest excavations on the site. It includes the upper part of the Columbia Formation, a Pleistocene surficial deposit consisting principally of fluvial sands deposited over broad areas within shallow stream settings. The Columbia Formation overlies the Tertiary-age Hornertown Formation, a thick stratum of fine to medium fine silty sand and sandy silt (Pickett and Spoljaric 1971). In much of the Odessa area, this stratum may be identified by its red sands, and this characteristic is apparent at the Drawyer Creek South Site as well. The profile description shown in tabular form above is a summary of the profile described by Wagner (1995, see Appendix C of this volume) for Unit 13.

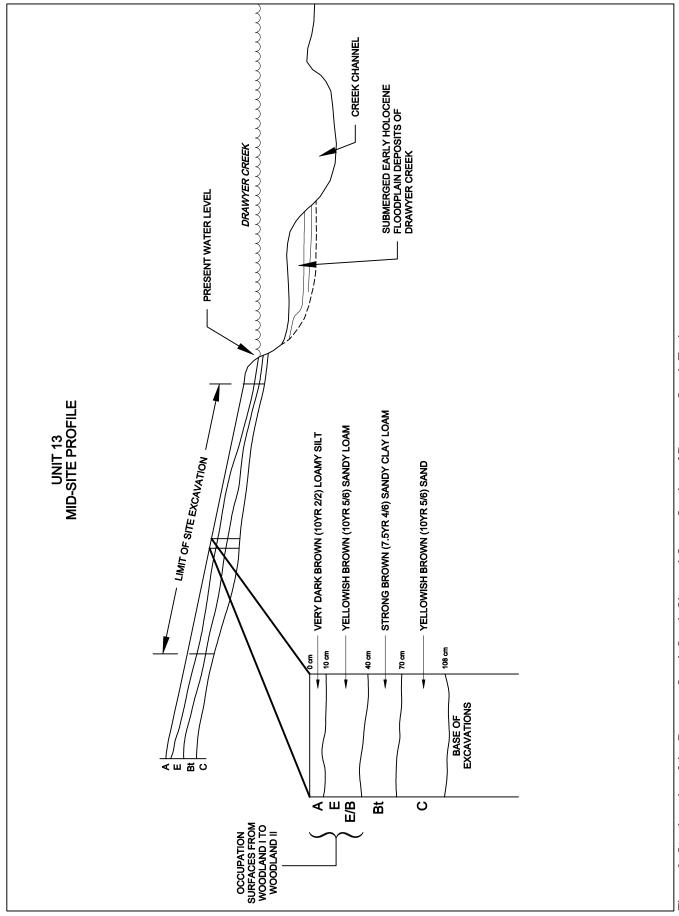


Figure 3: Stratigraphy of the Drawyer Creek South Site and Cross Section of Drawyer Creek Environs

Matching the cultural features and artifact concentrations with the various soil layers on the site, it can be shown that the majority of the prehistoric occupation surfaces are confined to the E- and E/B-horizons. Although a number of artifacts are also found in the surface layer, or A-horizon, many of them can be attributed to the deeper E-horizon. The high level of pedoturbation in the surface horizon results in some mixture with deeper soil contexts.

Soil chemistry analyses undertaken for the site were inconclusive (see Appendix D). For example, phosphorus values from features, which are normally good indicators of human activity, were very low. In contrast, phosphorus values from features at the nearby Whitby Site (7NC-G-151) were high. Differences in the values may perhaps be due to differences in leaching at each site as a result of textural differences and localized topographic factors.

Feature 1 is primarily associated with the E-horizon, which ranges in depth from 13 to 51 centimeters below surface. Feature 2 was recorded at the base of Level 1 and within Level 2, which is within the A- and E-horizons. Feature 3, recorded in Level 4, corresponds to the lower E- and E/B-horizons. Feature 5 was recorded in Levels 1-2, and Feature 6 in Levels 2-3, placing both within the A- and E-horizons. Feature 4, a tree-throw disturbance, is not considered in this analysis.

The stratigraphic position of the highest artifact densities also corresponds to the A- and E-horizons. For example, of the 48,732 grams of fire-cracked rock (FCR) recorded in Levels 1 through 7, 95 percent was found within Levels 1-3, with another 3 percent found in Level 4. Fire-cracked rock is less likely than other cultural materials to move downward through the profile, so it may serve as a benchmark to denote an established living surface. The debitage distribution across the site shows very similar patterns to that of the FCR. Unfortunately, the compressed contexts of the various occupations raises certain ambiguities in the data base with regard to cultural association.

Stemmed early Woodland I (Late Archaic) points and Woodland I ceramics are found in Level 1, for example, while Woodland II pottery is found in Levels 2 and 3 as well as in Level 1. The descriptions of the various excavation blocks below address these contextual questions in specific terms for each of the six arbitrarily defined excavation areas of the site. The information is subsequently summarized for the site as a whole in the concluding chapter of this report. Artifact assemblage descriptions are provided in Chapter VI.

B. RADIOCARBON AND OCR DATES

Two radiocarbon dates were obtained from the site, one from Feature 2 and one from Feature 5. The Feature 5 sample was dated to 610 ± 50 BP, calibrated to AD 1290 to 1425 (2 sigma, 95% probability) (Beta-102089). Although a Woodland II (Late Woodland) date was obtained for this feature, the clearest artifact associations are two stemmed projectile points of probable early Woodland I (Late Archaic) affiliation. No ceramics were directly associated with the feature. It is likely, however, that the projectile points were simply incidental to the hearth feature; that is, later Woodland II period occupants of the site simply placed the hearth in an area that had already contained, in shallow contexts, the earlier projectile points. Also recovered from the feature was a high density of wood charcoal and a few mulberry seeds. The wood species were identified as oak, hickory, maple, and birch (see Appendix E).

A second radiocarbon date was obtained from a sample recovered from Feature 2, Level 4. The closest diagnostic artifact of probable association with this feature is a triangular projectile point with slight side-notching. The date obtained is 1760 ± 60 BP, calibrated to AD 130 to 420 (2 sigma, 95% probability) (Beta-102088). There are no ceramic associations with the feature. This date may correspond to some elements of the Fox Creek occupation that are represented on the site. Based on the recovery of several species of wood charcoal, Feature 2 is believed to be a hearth feature.

To complement the two radiocarbon dates, a series of Oxidizable Carbon Ratio (OCR) dates (Frink 1992, 1994) were also obtained from column samples in Unit 53. The OCR procedure is based on the chemical analysis of charcoal within defined environmental contexts (Frink 1994). This method has been proposed as an alternative to radiocarbon dating; however, it is still very experimental and has not yet withstood the rigors of scientific scrutiny as a legitimate method for providing an absolute date for a site. In fact, recent serious critiques of the method have shown it to be fatally flawed and based on overly simplistic tenets (Killick et al. 1999). Despite the problems with the method, however, it was used in the spirit of experimentation. The unit from which the column sample was analyzed for OCR (Unit 53) is located just south of Feature 6. Four samples were analyzed—one from the E-horizon and three from the deeper Bt-horizon. The results show a date of 1042 BP for the E-horizon and a sequence of dates, including 3912 BP, 4646 BP, and 6277 BP, from the Bt-horizon.

C. BLOCK AREA EXCAVATIONS

The block area excavations conducted at the Drawyer Creek South Site are described below with regard to features represented, artifact clusters, and other associated residual remains. Feature distributions, plan views, profiles, artifact distribution patterns, and other findings are shown in Figures 4 through 18. Diagnostic ceramics from the site, illustrated in Chapter VI, consist primarily of Woodland II (both Middle and Late Woodland) sherds. The diagnostic lithic artifacts and tools are also illustrated in Chapter VI. The discussion in this chapter centers on artifacts retrieved from the A-horizon and the upper E-horizon (Levels 1-2), and within the middle to lower E-horizon (Levels 3-4).

Although this separation into two levels is admittedly arbitrary, it is used principally to discern more easily any associations among features and artifact clusters across the site. Preliminary analysis of the spatial distribution of debitage clusters showed that a minimum of two arbitrary 10-centimeter levels contain what appear to be single-event lithic workshop areas. In several instances, these workshop areas can be traced through three or more levels, but the majority of the workshop debris is confined to two adjacent levels associated with the uppermost occupation of the site. Since these two arbitrary components cannot be unambiguously assigned to a specific time frame, they are identified here as the upper component (Levels 1-2) and the lower component (Levels 3-4). Localized stratigraphic differences are addressed below for each block area, based on the association with diagnostic artifacts and the makeup and spatial distribution of features and artifact clusters.

The individual block excavation areas are discussed as six separate entities. The largest is Block Area 2 (Plate 4), which contains a block of 20 contiguous 1-meter units, a small block of five 1-meter units, and two separate 1-meter units.



Plate 4: Site 7NC-G-143, Excavations in Block Area 2, View to South. Crew members Paul Stansfield and Bruce Bourcy

Block Area 1 is comparable in size. It consists of a block of 22 1-meter units and two separate 1-meter units. Block Area 3 (Plate 5) is comprised of three subareas: east, center, and west. The largest of these is the center one, consisting of 24 contiguous 1-meter squares. Block Area 3 West consists of a block of 14 1-meter units and a separate 1-meter unit. Block Area 3 East contains a block of 11 1-meter units, a block of four 1-meter units, and a separate 1-meter unit.

The peripheral areas of the site are included in Block Areas 4, 5, and 6. Block Area 4 consists of a single block of four 1-meter units. Block Area 5 is a single 1-meter unit, and Block Area 6 contains two 1x2-meter units and three 1-meter units. A total of 105 square meters were excavated on the site as a whole during the Phase II and Phase III investigations. This includes the 14 one-meter units excavated in Phase II.

Matching diagnostic artifacts with occupation debris such as debitage is problematic on multicomponent sites with the relatively shallow stratigraphy characteristic of the Drawyer Creek South Site. Interpretations presented in this report are based on the association of artifacts with more or less discrete clusters of debitage. Much of the occupation is believed to be associated with the Woodland II (Late Woodland) component. The earlier, Woodland I (Late Archaic), component appears to be represented by smaller and less concentrated patterns of workshop debris. Since locally available raw material appears to have been used throughout the site during all periods of occupation, it is difficult to separate the upper and lower components.



Plate 5: Site 7NC-G-143, Excavations in Block Area 3, View to Northwest. In foreground, crew members Jim Skocik, Robert Shaw, and Catherine Skocik

1. Block Area 1, Upper Component

The positive shovel tests that initially defined this area of the site were Shovel Tests 61 and 62, near the southern edge of this arbitrarily defined block area, and Shovel Test 40d. Shovel Tests 61 and 62 contained very sparse finds: only one jasper and one chert flake from Shovel Test 61, a single fragment of FCR from Shovel Test 62, and a single flake from Shovel Test 40d. During Phase II, three 1-meter units were placed in this same area: Units 8 and 14, in the southern edge of the block area, and Unit 11, which is within what was later expanded into a 22-square meter-block excavation.

The two peripheral units, Units 8 and 14, showed some evidence of prehistoric occupation in the upper component, but a denser occupation was defined in Unit 11. Unit 8 contained no tools in the upper component; but Unit 14 contained a jasper scraper made on a split pebble and a jasper indeterminate biface in Level 1, and a chert projectile point in Level 2. Associated debitage in the upper component of these two peripheral units included early reduction chert, quartz, and quartzite flakes.

In Unit 11, a number of jasper early reduction flakes were recovered from the Phase II excavations. The high counts compared to other units provided some indication that this unit should be the focus of further excavations. As a result, additional units were placed in this area during Phase III.

Evidence from the Phase III units in Block Area 1 (Tables 1-3) shows several lithic workshop areas, some of which are positioned adjacent to the only feature in this area—a small hearth designated

Feature 2. A concentration of wood charcoal in the feature clearly identified it as a hearth (see Appendix E). Feature 2 (Figure 4) is contained within Unit 30 and adjacent Units 23, 11, and 29, and begins at the bottom of Level 1. Several layers of FCR were removed in three arbitrary The hearth appears to have been constructed within a shallow pit measuring 60 centimeters in diameter (north-south) by 42 centimeters (east-west). The feature was initially encountered during the Phase II excavation of Unit 11. In the southeastern corner of the unit, near where the feature was initially encountered, a concentration of FCR, cobbles, a projectile point, ceramics, and debitage were recorded.

Table 1: Site 7NC-G-143, Block Area 1: Stone Tool and Core Assemblage, Levels 1-2				
TOOL AND CORE TYPE	COUNT			
Argillite Early-Stage Biface	1			
Jasper Tested Cobble	1			
Chert Triangular Projectile Point	1			
Jasper Scraper	2			
Quartzite Middle-Stage Biface	1			
Jasper Indeterminate Biface	1			
Chert Projectile Point	1			
TOTAL	8			

Surrounding the feature, and possibly associated with it, were a jasper split-cobble scraper and a quartzite middle-stage biface. The most discrete patterns in lithic workshop activities relate to the jasper debitage recorded in the upper component (Figure 5). A concentration of biface reduction flakes was recorded on the eastern side of Feature 2, and early reduction flakes were mapped on the western and northern sides. The early reduction activities appear to be more broadly distributed in the vicinity of the hearth, overlapping somewhat with the biface reduction area. One can envision a broadly scattered activity centering on raw material testing and initial reduction and resulting in the scatter of jasper early reduction flakes. The biface reduction activity appears to be more focused, however—perhaps the output of a single individual working next to the hearth. It is also interesting to note that chert biface reduction flakes were concentrated in this same area east of the hearth. It is possible that the same individual was using several varieties of raw material to produce bifaces.

TOOL AND CORE TYPE	COUNT
Jasper Bipolar Core	1
Chert Freehand Core	1
Chert Triangular Projectile Point	1
Jasper Bifacial Core	1
Sandstone Abrader/Hammerstone	1
Argillite Freehand Core	1
Quartzite Middle-Stage Biface	1
TOTAL	7

Two meters southwest of the hearth, an argillite late-stage biface, a large chert triangular projectile point, and a jasper tested cobble were recovered. In the same area, and centered in the western and southwestern edges of the block, jasper early reduction flakes predominate.

The jasper tested cobble may be a part of this workshop area. A few jasper biface reduction flakes found in this same area may indicate that, at least in this one instance, a jasper biface was near completion. Chert early reduction flakes were also found in this area, although they were not as numerous as the jasper debitage. Quartzite and quartz debitage were found in the block as well, but in small numbers, and they are not clearly associated with the hearth. Isolated

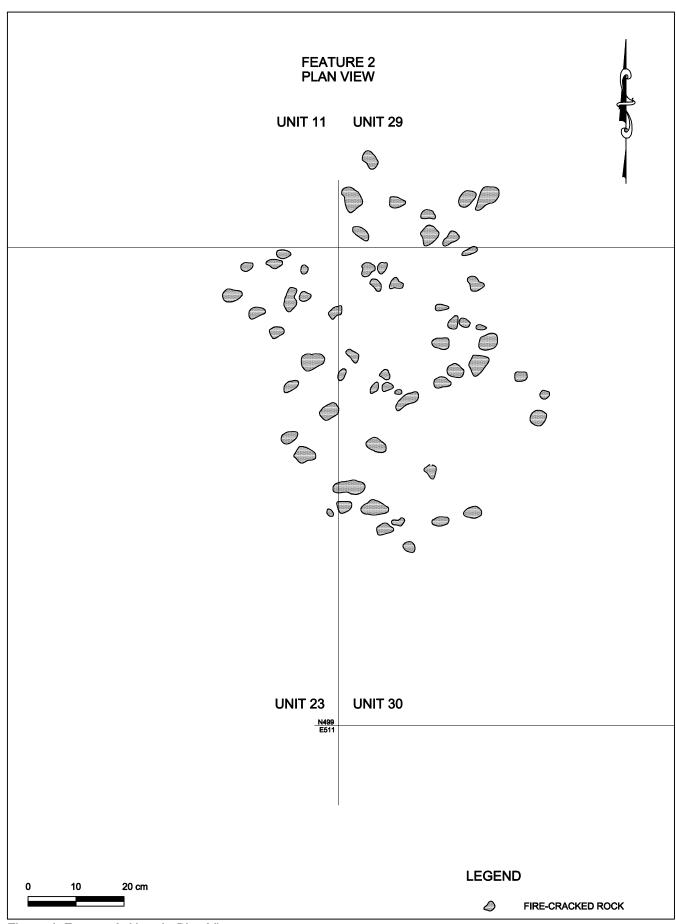


Figure 4: Feature 2, Hearth, Plan View

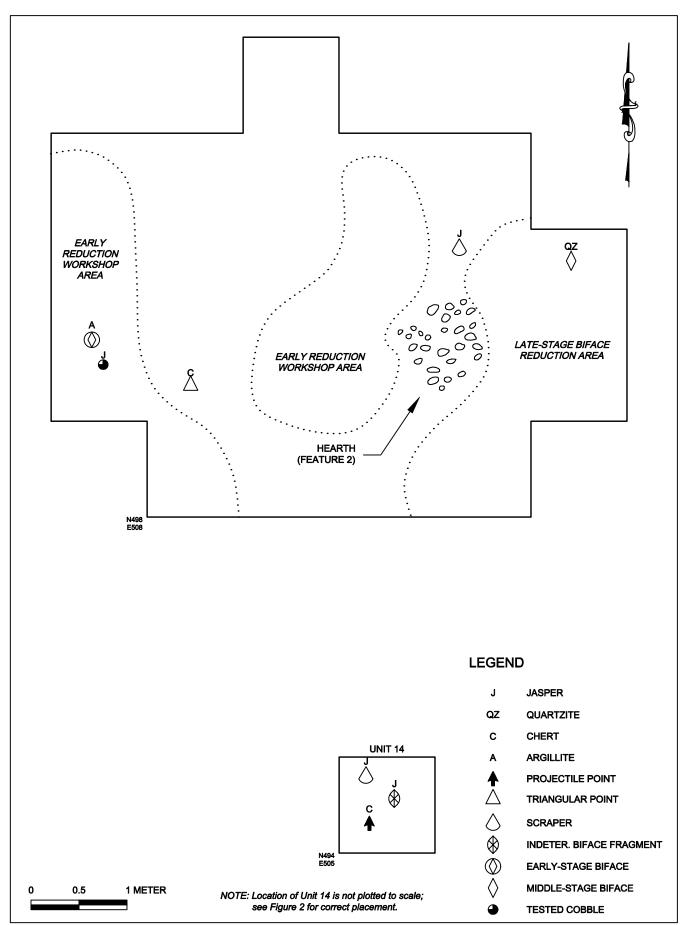


Figure 5: Block Area 1, Upper Component Artifact and Feature Distributions

early reduction and decortication flakes of rhyolite and siltstone, respectively, were also recovered, which may indicate that a variety of raw materials were being tested and reduced in this location, perhaps during a single-event occupation. The sparse debitage recovered indicates a very temporary occupation.

Table 3: Site 7NC-G-143, Block Area 1: Debitage Totals, All Levels

TOTAL COUNT	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVELS 6-8
Chert	39	72	37	38	18	14
Jasper	57	148	84	59	51	36
Quartzite	10	18	3	3	-	1
Quartz	27	28	15	8	-	-
TOTAL	133	262	139	108	69	51

The ceramics recovered from Block Area 1 are primarily Woodland II (Late Woodland) wares, although identification of individual ware types is difficult because of the poor condition of the sample. A few sherds of earlier ceramic wares (Woodland I) were also recovered. The distribution of these wares across Block Area 1 is shown in Figure 6 as distinct vessel scatters rather than as individual sherd plots. Mapping individual sherd concentrations from unrelated ceramic vessels often leads to obscuring any spatial patterning in vessel manufacture, firing, use, and discard. Five ceramic vessels were apparent in this area.

Fragments or sherds representing Vessels 1 and 2, both Woodland II vessels, were found broadly scattered in the northern and western portions of the block. It is not clear whether these vessels relate to the hearth mapped as Feature 2, but the vessel remains do show that either ceramic vessel manufacturing or use occurred in this area. Vessel 3, also a Woodland II vessel, is more confined in its distribution, located in the south-central portion of the block. The location of Vessel 4 corresponds well to Vessel 3, but is clearly a separate ceramic container. Vessel 5 is a much earlier vessel than the others (Woodland I or Early Woodland) and is represented only by two sherds on the northern side of the hearth (Feature 2). The presence of these isolated sherds may simply be an incidental occurrence unrelated to most of the activities that occurred in Block Area 1. It is also possible that a more extensive Woodland I activity area lies nearby in an unexcavated portion of the site. In a few of the units in this area (e.g., Unit 28), deep finds of artifacts may relate to disturbances from natural agents such as tree roots.

2. Block Area 1, Lower Component

Units 8 and 14 on the southern edge of this block area show evidence of core reduction and bifacial tool reduction (Figure 7). A chert bipolar core was recovered from Unit 14 and a quartzite middle-stage biface was recorded in Unit 8. No significant amount of debitage other than shatter fragments was recovered from these two units, but a few jasper and quartz early reduction flakes were recorded.

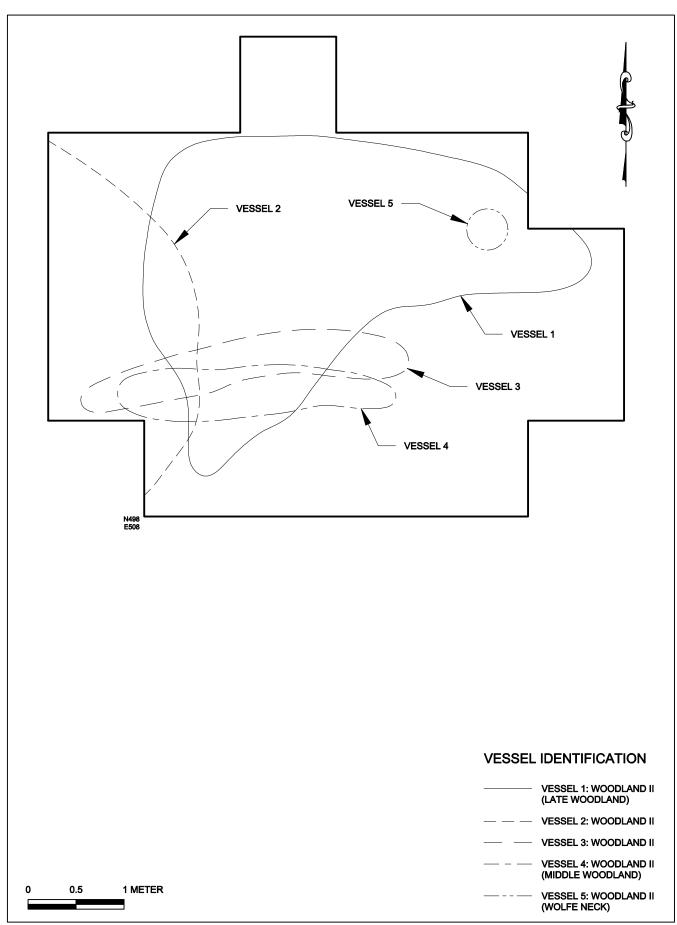


Figure 6: Block Area 1, Ceramic Vessel Distributions

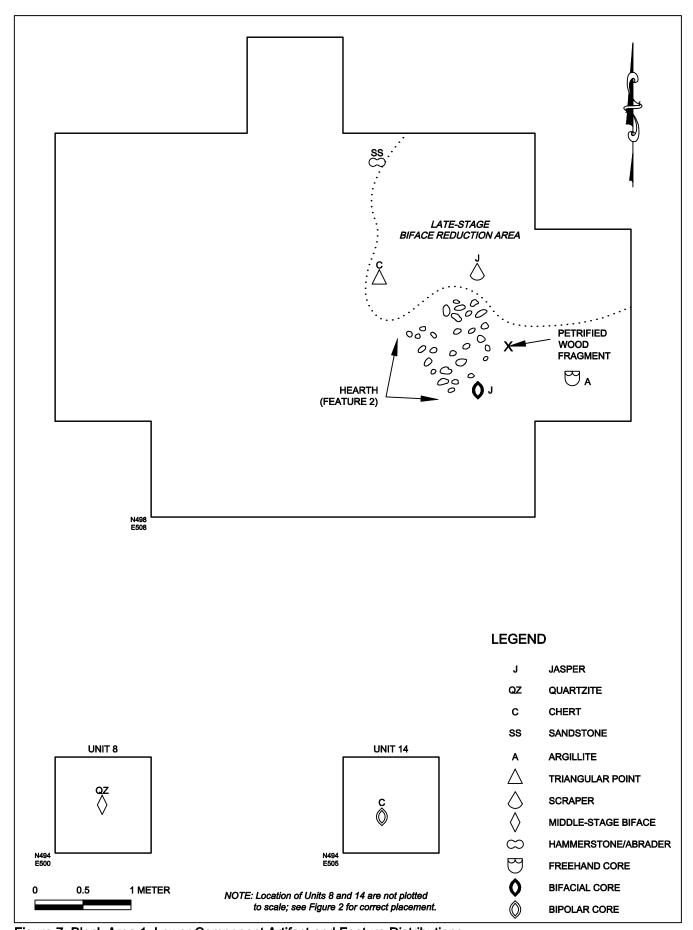


Figure 7: Block Area 1, Lower Component Artifact and Feature Distributions

In the main excavation block, particularly in the areas adjacent to Feature 2 on the northern side, the most abundant debitage recorded was jasper, followed by chert. Both biface reduction flakes and early reduction flakes constitute this cluster north of Feature 2, which would seem to indicate that multi-stage bifacial reduction—from early- through late-stage processing—took place in this area. The cluster is fairly discrete and even includes an abrader/hammerstone, although the latter was found in Level 5. The remainder of the block shows a very thin scatter of chert and jasper early reduction flakes and biface reduction flakes, and only a few examples of quartz and quartzite flakes, all early reduction specimens. These finds may be incidental to the activities that occurred adjacent to Feature 2: shatter from the hearthside activities may have carried into these peripheral areas which are only a few meters away from the core of the workshop area.

The identification of a distinct upper and lower component in Block Area 1 is problematic, in that the location of the majority of the workshop debris and tools is close to Feature 2 in both components. This suggests that perhaps all of the debris relates to a single occupation, and that post-depositional disturbances have succeeded in expanding the depth range of what was once a concentrated surface scatter from a single occupation. It appears that this surface scatter or two-dimensional living surface has been expanded via various pedoturbational processes to form what becomes almost a three-dimensional puzzle. All of the debitage in Levels 1-4, for example, appears to hang together once the focal point of the hearth feature is introduced. Consequently, although upper and lower components are arbitrarily defined here for the sake of convenience, it is likely that all of the lithic debris surrounding Feature 2 relates to a single event or a short-term series of events. This event or events included the initial testing and shaping of lithic raw material, the production of cores, and the manufacture of bifaces from early through late stages. Although jasper predominates as a raw material in this locality, other raw materials were utilized as well.

3. Block Area 2, Upper Component

This area of the site was initially defined by Shovel Tests 50 and 51, located near the eastern edge of the block area. Shovel Test 50 contained a pitted sandstone cobble, and Shovel Test 51 encountered the shallowly buried FCR cluster that was later defined as Feature 5. In Phase II, one test unit (Unit 4) was placed between Shovel Tests 50 and 46c, but produced very little cultural material. Excavations were subsequently opened in a noncontiguous area west of Unit 4. The area designated Block Area 2 comprises a large block of excavations on the western side of the site consisting of 20 contiguous 1x1-meter units, a smaller block of five 1x1-meter units, and an isolated unit designated Unit 59. Unit 59 contained a few jasper, quartzite, and chert flakes in both the upper and the lower components. Artifact tabulations from this block area are shown in Tables 4-6.

In the larger and westernmost block of Block Area 2, it is apparent that most of the tools recovered from the upper component lay at the edge of a late-stage biface reduction area containing primarily jasper and quartzite biface reduction flakes (Figure 8). The tools and worked flakes are predominantly manufactured from jasper and quartzite, which perhaps indicates that this workshop area was used for the purpose of tool manufacturing. The only exception is a single chert small side-notched projectile point that closely resembles one made from jasper found less than a meter away. These finds suggest that tools were perhaps being discarded and replaced in this area. The remaining distributions of debitage form no clear patterns or clusters.

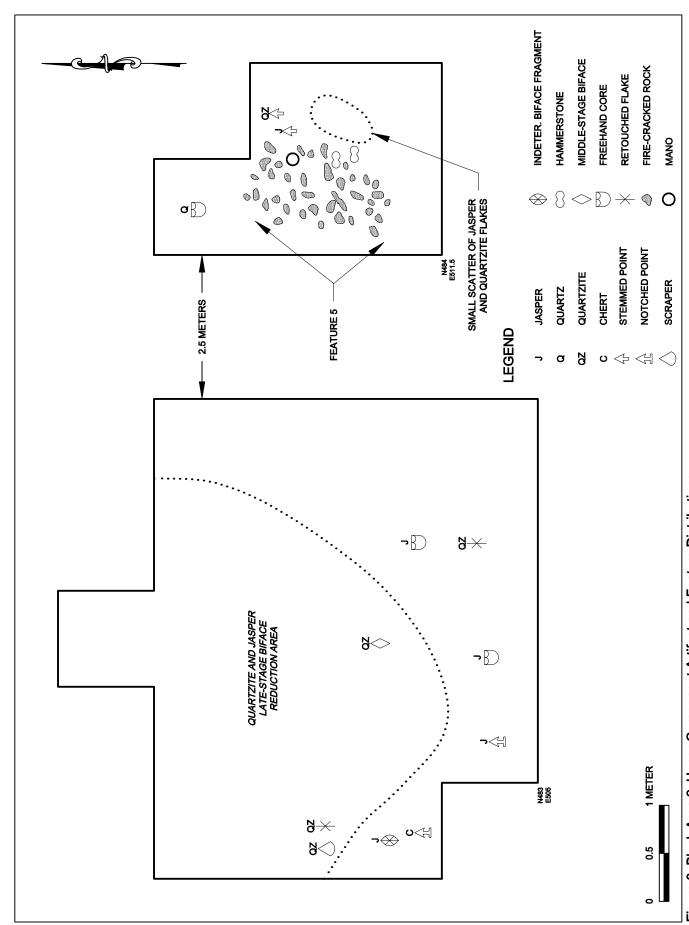


Figure 8: Block Area 2, Upper Component Artifact and Feature Distributions

The tool recoveries in the upper component of this 20-meter block may all be regarded as part of a lithic tool manufacturing area directed toward the production of bifaces and flake tools. The two projectile points recovered are less clearly related to this activity area, but could represent finished products manufactured here, or, as already indicated, discards to be replaced by new tools. Biface reduction of quartzite and iasper is represented by the recoveries of a quartzite middle-stage biface and a jasper indeterminate biface fragment. Finds of two freehand cores, retouched flakes, and a single quartzite flake scraper would perhaps indicate an emphasis on the production of expedient flake tools in this area of the site.

Debitage distributions in the upper component of the 20-meter excavation block are dominated by jasper and quartzite, as indicated in Figure 8. The jasper biface reduction flake concentrations are heaviest in the very center of the block, with recoveries extending to the north and west. Concentrations of early reduction flakes are also found within this same cluster, with the heaviest concentrations appearing in the northwestern quarter of the block. Lower densities of jasper early reduction flakes are scattered throughout the rest of the block as well. If all of this can be tied together, it indicates that multi-stage biface production as well as flake tool production occurred in this spot, using jasper as a principal raw material. Very similar patterns are evident for quartzite (see Figure 8), suggesting that the workshop activities for jasper and quartzite reduction were contemporaneous in this

Table 4: Site 7NC-G-143, Block Area 2: **Stone Tool and Core Assemblage, Levels 1-2** TOOL AND CORE TYPE COUNT 1 Quartzite Middle-Stage Biface Jasper Freehand Core 1 **Ouartz Freehand Core Ouartzite Freehand Core** 1 Jasper Side-Notched Point 1 Chert Side-Notched Point 1 Jasper Stemmed Point 1 Quartzite Stemmed Point Jasper Indeterminate Biface 1 Quartzite Flake Scraper 1 Quartzite Retouched Flake 1 Jasper Retouched Flake 1 TOTAL 12

Table 5: Site 7NC-G-143, Block Area 2: Stone Tool and Core Assemblage, Levels 3-5			
TOOL AND CORE TYPE	COUNT		
Jasper Middle-Stage Biface	1		
Quartz Point Tip	1		
Quartzite Flake Scraper	1		
Chert Utilized Flake	1		
TOTAL	4		

location. As with the jasper flakes, the quartzite late-stage biface reduction flakes are primarily in the northern part of the block, and the early-stage debitage is more ubiquitous.

It is interesting to note that in spite of its sparse distribution, chert debitage is found within the same areas as the jasper and quartzite workshop debris. The chert debitage consists primarily of early reduction flakes. Quartz debitage is almost entirely absent (6 flakes total) from the upper component.

Dating the workshop is more problematic, given the near association of different diagnostic artifacts. For example, ceramic recoveries just east of the workshop area consist primarily of Woodland II

ceramics identified as Minguannan or one of its cognates (Figure 9). Within the confines of the workshop, however, a few sherds of Woodland I Marcey Creek pottery were recovered. The projectile points found along the southern edge of the workshop are relatively ambiguous in form and could be associated with either component. Small notched points are certainly not unknown in Woodland II deposits, and are common in Woodland I assemblages as well. Also found within the confines of the workshop area, in Unit 82, was wood charcoal identified as hickory (*Carya* sp.) and ash (*Fraxinus*), walnut (*Carya* sp.) fragments, and mulberry (*Morus* sp.) and grape (*Vitis* sp.) seeds. Egan-Bruhy (see Appendix E of this volume) identifies these recoveries as typical of "kick" zones around hearths. While no hearths were recorded in this block, there may have been hearth features nearby in unexcavated locations to the north and west.

Table 6: Site 7NC-G-143, Block Area 2: Debitage Totals, All Levels

TOTAL COUNT	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVELS 6-8
Chert	23	39	13	2	1	1
Jasper	448	705	259	70	17	-
Quartzite	442	707	276	70	19	4
Quartz	2	4	17	6	-	-
TOTAL	915	1,455	565	148	37	5

The smaller excavation block in Block Area 2 contained a feature (Feature 5) that was originally encountered in Phase I. Feature 5 (see Figure 8; Figure 10), which was encountered in Units 86-90, was first observed within a few centimeters of the surface. In horizontal dimensions, the feature measured 160 centimeters in diameter north-south by 125 centimeters east-west. It may be defined as a shallow and scattered cluster of several hundred fragments of FCR. Two Bare Island-like points (early Woodland I) were found in adjacent Unit 87. Most of the feature was located within the confines of Unit 86. Botanical remains recovered from the feature include wood charcoal identified as hickory (*Carya* sp.) and white oak (*Quercus* sp.), hickory nut (*Carya* sp.) and walnut (Juglandaceae) fragments, and mulberry (*Morus*) seeds (Egan-Bruhy 1997, see Appendix E of this volume). This suggests that near-hearth areas were being used for food preparation and or consumption.

A quartz freehand core was recovered on the northern side of Feature 5 (see Figure 8). The two stemmed points noted above were recovered from the eastern edge of the feature area. Within the feature itself, two sandstone hammerstones and one quartzite mano were recorded. It would appear from most of the tools recovered that lithic workshop-related activities occurred in the vicinity of the hearth. The mano recovery suggests food preparation, and flotation recoveries of hickory and walnut provide further support for this possibility. Although the stemmed points would suggest an earlier occupation, radiocarbon samples from the feature dated to AD 1290-1425.

The actual workshop debris found surrounding the hearth consisted of jasper, quartzite, and chert. The jasper debitage included a small number of early reduction flakes. The quartzite recoveries were

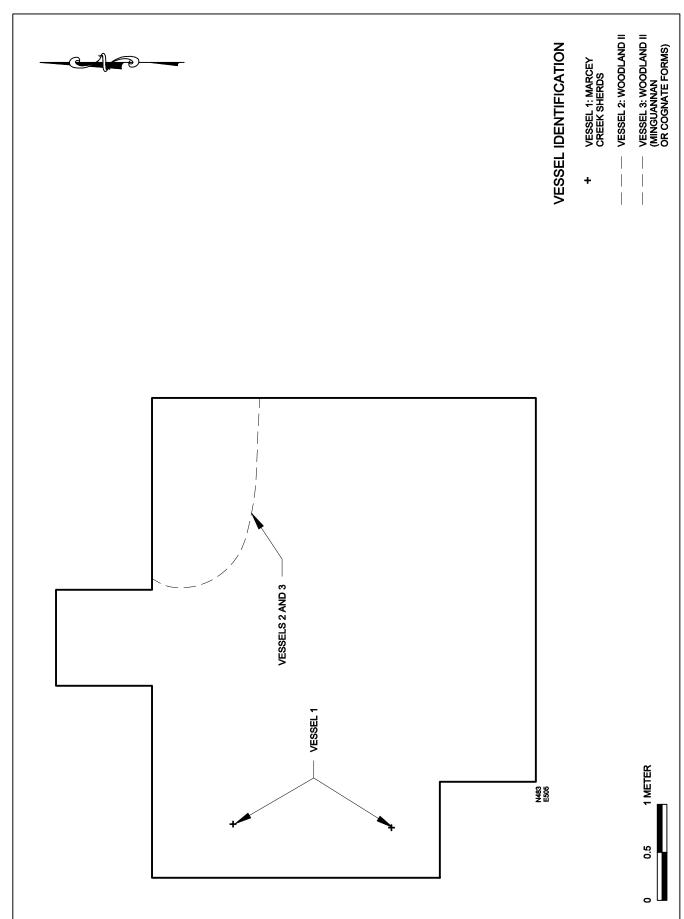


Figure 9: Block Area 2, Ceramic Vessel Distributions

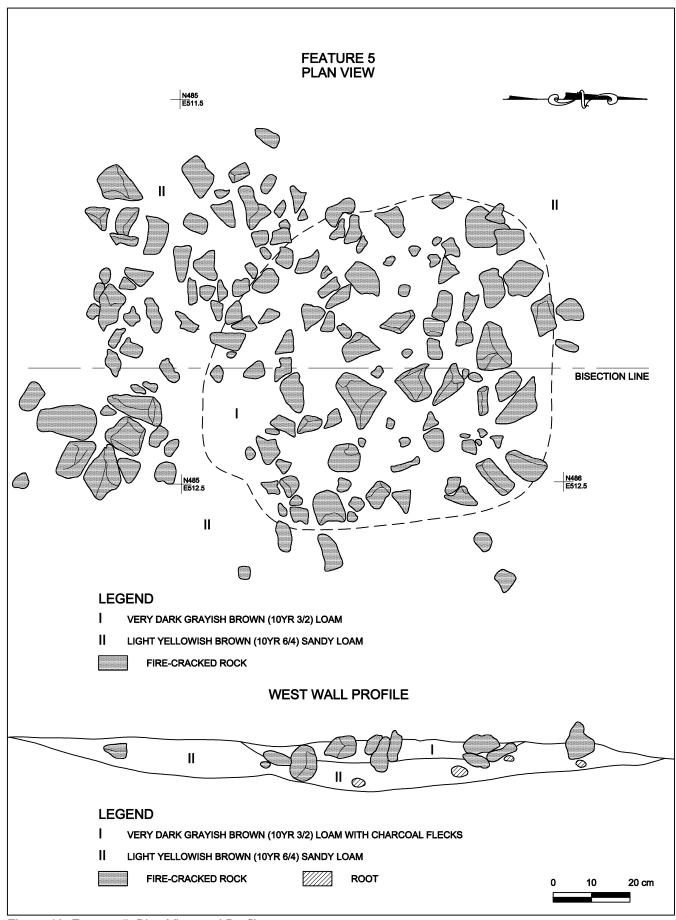


Figure 10: Feature 5, Plan View and Profile

more substantial and also included biface reduction flakes, principally from the area on the eastern side of the hearth. Chert debitage was very sparse but was also found on the eastern side of the hearth. The co-variation of debitage frequencies across the block area appears to suggest that the knapper was using more than one kind of raw material to produce tools. It is also possible that these workshop activities were occurring at hearthside locations, similar to what was observed in Block Area 1. The role of the ceramic vessels recovered in this location is less clear. Although two Woodland II vessels are represented, they were recovered from the corner of the larger excavation block, a distance of about three meters from the hearth (Feature 5). This is certainly close enough to suggest an association with the hearth; however, it is possible that unexcavated areas to the north may have provided more certain affiliations.

4. Block Area 2, Lower Component

Very few tools were recovered from the lower component of Block Area 2 (Figure 11). Finds of a jasper middle-stage biface and a quartz point tip indicate that some biface reduction activities took place, but the congruence of the quartzite-jasper workshop debris clusters in the upper and lower components indicates that much of this material may represent the basal portion of the upper component mixed with a sparse collection of debris from earlier occupation of the site. Separation

is problematical here, and it seems very evident that most of what appears to have taken place in the lower component is simply an extension of the upper component activities.

5. Block Area 3 West, Upper Component

The Phase III excavations conducted in this block area focused on the area between Phase I Shovel Test 59 and Phase II Unit 13. The latter unit lies along the north wall of the Phase III excavation block, and was excavated to a depth of more than one meter below surface. Fire-cracked rock found in Shovel Test 59 at approximately 50 centimeters below surface showed this area of the site to have a high potential for more deeply buried components. Consequently, additional units were placed adjacent to Unit 13 during Phase III.

Block Area 3 West was composed of 14 contiguous 1x1-meter squares, including the Phase II unit. In the upper component (Figure

TOOL AND CORE TYPE	COUNT
Jasper Point Tip	1
Jasper Middle-Stage Bifaces	3
Jasper Late-Stage Bifaces	1
Jasper Early-Stage Bifaces	4
Jasper Indeterminate Bifaces	2
Quartz Indeterminate Bifaces	1
Argillite Late-Stage Bifaces	1
Quartzite Chopper	1

Jasper Freehand Cores

Jasper Utilized Flakes

TOTAL

Sandstone Hammerstone

3

3

1

21

12), jasper bifaces and cores predominate, and jasper workshop debris is also found in the lower component. As has been mentioned, some pedoturbation may have expanded the stratigraphic limits of components on the site. Artifact tabulations are shown in Tables 7-9.

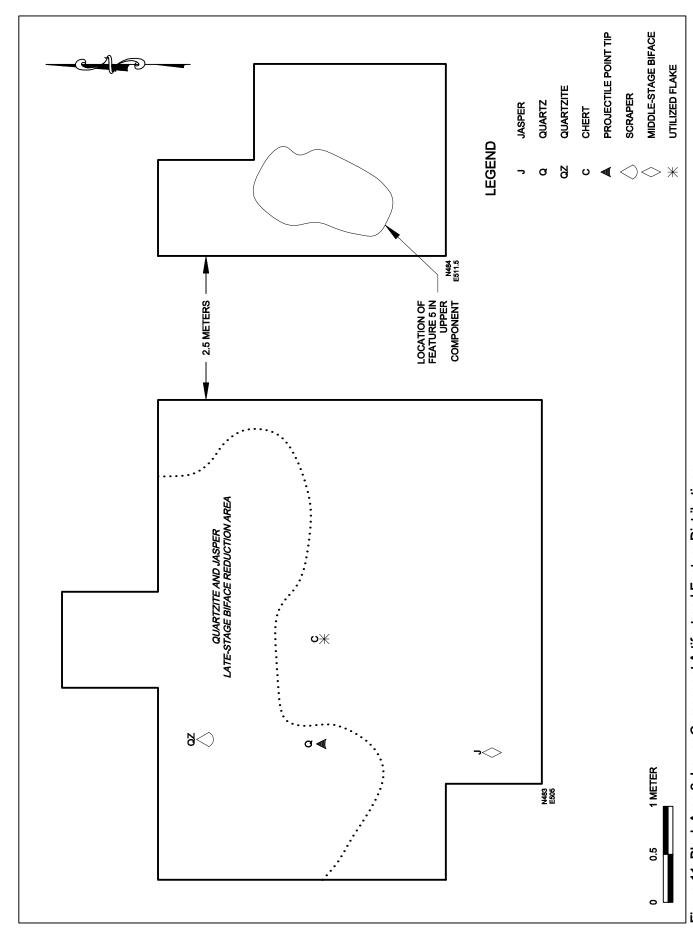


Figure 11: Block Area 2, Lower Component Artifact and Feature Distributions

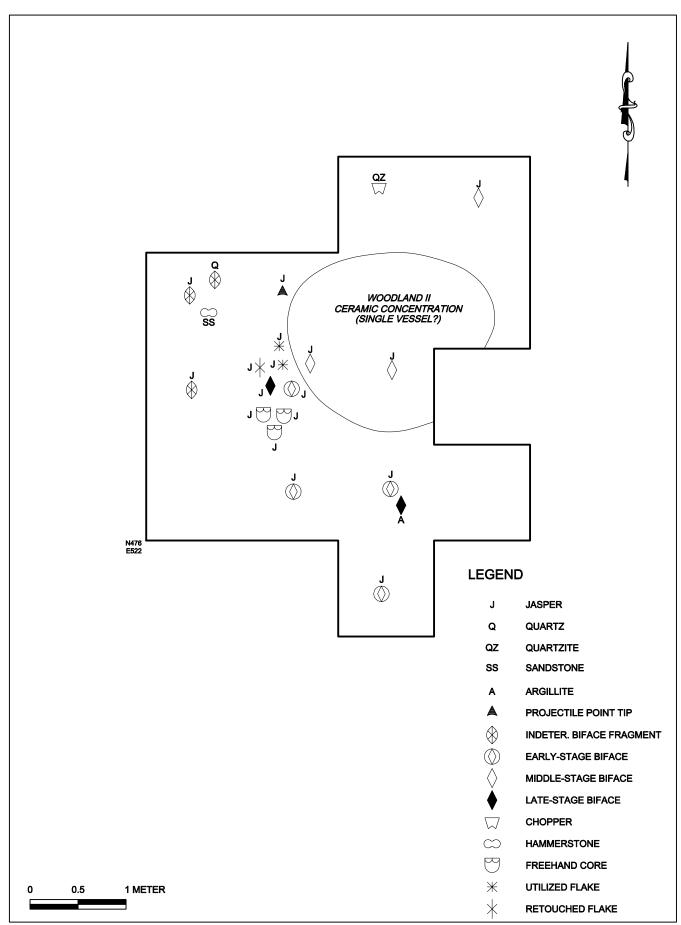


Figure 12: Block Area 3 West, Upper Component Artifact Distributions

Table 8:	Site 7NC-G-143,	Block Area 3	West:
Stone To	ool and Core Asse	mblage, Level	3*

TOOL AND CORE TYPE	COUNT
Chert Projectile Point	1
Jasper Point Base	1
Jasper Projectile Point	1
Jasper Bifacial Core	1
Steatite Sherd	1
TOTAL	5

^{*} A single jasper early-stage biface was also recovered from Level 6 in the lower component of the site.

A ceramic concentration of Woodland II sherds, most likely representing the remains of a single vessel, lies on the east-central edge of the block. As there are no features associated with the block, it is not certain what type of activity the ceramics represent. At best, they serve to date the occupation.

The presence of jasper bifaces, cores, and flake tools in this assemblage suggests that biface production, from early to late stages, was conducted here as well as the manufacture of flake tools. A sandstone hammerstone recorded within this cluster of jasper artifacts was most likely used for the early-stage work and

subsequently discarded. While jasper dominates the workshop assemblage in the upper component, quartz and argillite are also represented as biface fragments. As in other areas of the site, several types of raw material were being utilized for biface and flake tool production, but jasper was clearly the primary raw material utilized in this workshop event.

While specific activity areas are difficult to define clearly within this block, a few concentrations of jasper debitage are worth noting. Most of the early reduction flakes of jasper, for example, are concentrated in the central part of the block, and actually cover much of the living surface in the block (Figure 13). More than 1,300 jasper flakes were found in the upper component alone, and approximately one-third of this total is represented as early reduction debitage in the center of the block.

Table 9: Site 7NC-G-143, Block Area 3 West: Debitage Totals, All Levels

TOTAL COUNT	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVELS 6-8
Chert	10	24	23	9	2	4
Jasper	345	1,000	85	172	130	78
Quartzite	5	5	3	2	3	-
Quartz	1	2	2	2	2	1
TOTAL	361	1,031	113	185	137	83

Biface reduction appears to have occurred in two areas of the block (see Figure 13): the south-central area, and close to the west wall of the block. These two areas contain much lower frequencies of debitage than the early reduction area, and the debitage in these areas is probably the result of two very brief episodes of late-stage biface reduction and/or tool resharpening. Debris from these two activity areas appears to have followed trajectories away from the source of the biface reduction, as indicated by the arrows in Figure 13.

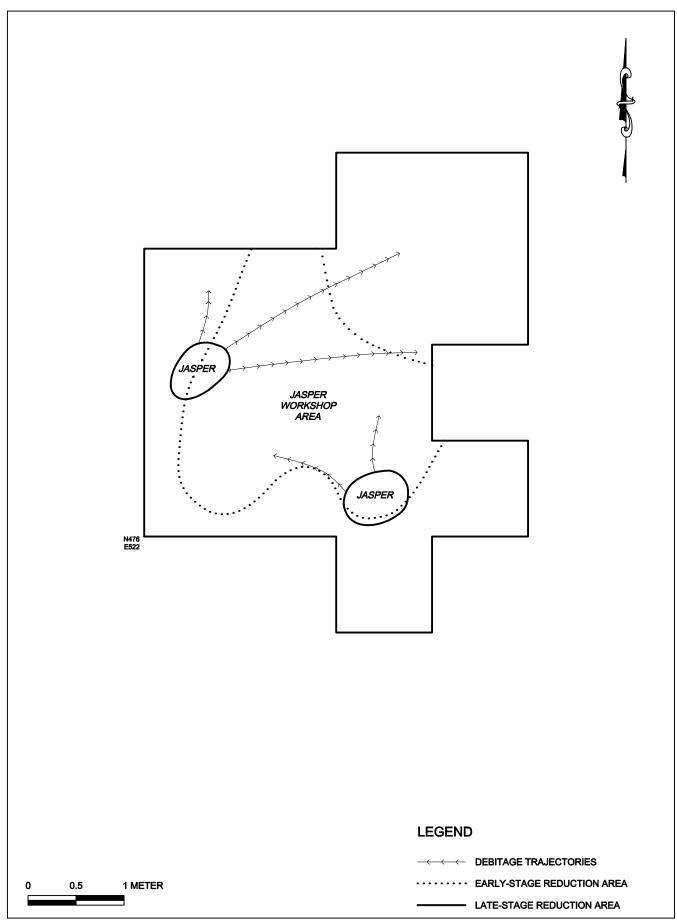


Figure 13: Block Area 3 West, Jasper Debitage Clusters

Other types of debitage are very sparsely represented in the upper component of this block. For example, quartz is limited to a few early reduction flakes along the northern edge of the block, and quartzite is represented by a total of five flakes in the upper component. Chert flakes recovered from the northern half of the block consist of only six early reduction flakes and four biface reduction flakes. A few flakes of chalcedony, siltstone, and argillite were also recovered from the block.

6. Block Area 3 West, Lower Component

Recoveries from the lower component of this block area show a pattern that is less than clear (Figure 14). All of the tool recoveries were from Level 3, and although this is discussed as a separate component, i.e., the lower component, some of the debris may actually have originated from the upper component activities. The jasper freehand core recovered from Level 3, for example, lies near the area where three jasper cores were recorded in the upper component. The projectile points of jasper (N=20) and chert could relate to the workshop activity described for the upper component, or may simply be isolated finds from an earlier occupation. The single steatite sherd would most likely also be attributable to an earlier occupation.

The jasper debitage recorded in the lower component consists of early reduction flakes across much of the living floor, with concentrations in the lower central portion of the block where more than 60 early reduction flakes were mapped. The biface reduction flakes, however, appear to correspond to the two biface reduction areas defined for the upper component. This casts some doubt on the separation of these two components, at least in this part of the site.

Quartz (N=4) and quartzite (N=8) counts are low for the lower component, but chert appears to maintain the same frequencies as those observed in the upper component. In fact, distributions and counts would seem to indicate the presence of a very limited chert biface reduction area in the northern half of the block, but associated with the upper component.

Again, most of the debris and tools recorded in Levels 1-3 appear to be associated with the upper component of this block area. There may also be isolated finds or activity areas of an earlier era represented in Level 3, but it is not possible to separate these small assemblages from the later cultural materials.

7. Block Area 3 East, Upper Component

The Phase III excavations conducted in Block Area 3 East focused on areas surrounding Phase II Units 6 and 10 (Tables 10 and 11). Phase II Unit 7, from which very little material was recovered, lies just a few meters south of the main block in this section. This block area represents the excavations closest to the edge of Drawyer Creek.

The four 1x1-meter block area consisting of Units 10, 39, 40, and 41 contained only a few

Table 10: Site 7NC-G-143, Block Area 3 East: Stone Tool and Core Assemblage, Levels 1-2			
TOOL AND CORE TYPE	COUNT		
Quartzite Stemmed Point	1		
Chert Stemmed Point	1		
Quartzite Side-Notched Point	1		
Jasper Indeterminate Biface	1		
Quartz Bipolar Core	1		
TOTAL	5		

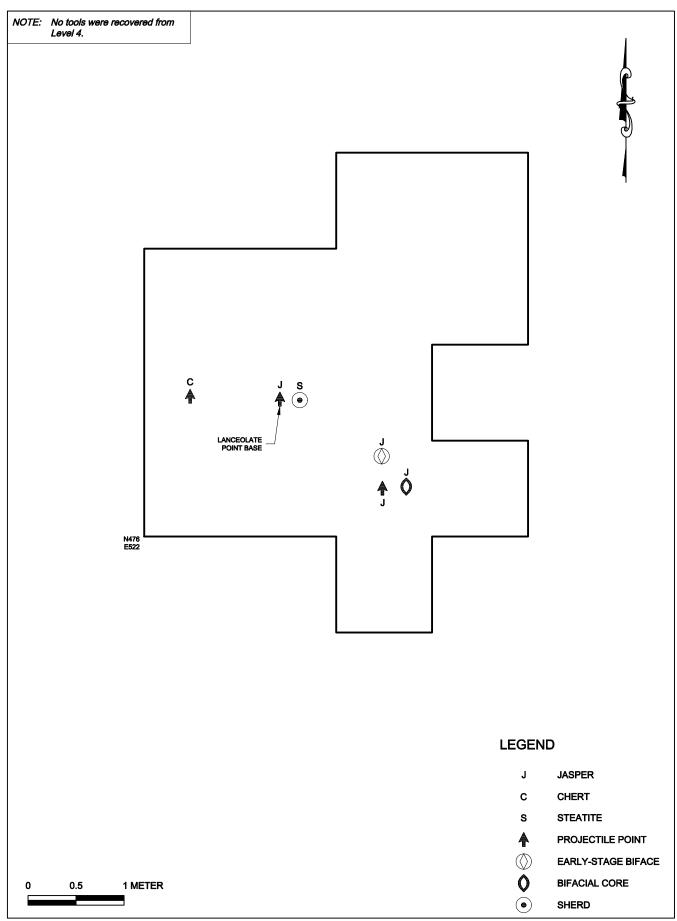


Figure 14: Block Area 3 West, Lower Component Artifact Distributions

quartzite flakes; consequently, efforts in that area were abandoned. The largest excavation block in this section consists of 11 contiguous 1x1-meter units. Within that block, five stone tools were recovered from the upper component, including three stemmed projectile points, a jasper indeterminate biface, and a quartz bipolar core (Figure 15). There is no apparent patterning associated with these finds, nor were there any associated features. Ceramic sherd recoveries were confined to the western half of the block and represent four separate vessels. All of the ceramics are Woodland II in age, but the only ones that are clearly identifiable as to type are a few Minguannan sherds found in the south-central part of the block.

Table 11: Site 7NC-G-143, Block Area 3 East: Debitage Totals, All Levels

TOTAL COUNT	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVELS 6-8
Chert	-	-	1	-	-	-
Jasper	1	-	-	-	-	-
Quartzite	12	12	1	1	-	-
Quartz	8	4	1	-	-	-
TOTAL	21	18	3	1	-	-

Based on the very sparse recoveries of debitage, this area does not appear to be a workshop locality. Debitage recorded within the upper component of the block included only one jasper flake, 24 quartzite flakes, and 12 quartz flakes. No patterning is suggested by any of the flake distributions. Feature 3, a recent disturbance, was recorded in Units 46 and 34.

The function of this area within the overall site contexts is difficult to discern. Three of the five lithic artifacts recovered were projectile points, most likely from different episodes of site use. The ceramics may also represent different episodes of occupation. It is possible that this portion of the site represents marginal use and may have been an intermittent repository for generalized site debris.

8. Block Area 3 East, Lower Component

The lower component recoveries from Block Area 3 East were very sparse. No tools, and very few flakes, were recovered from below Level 2. The total debitage recoveries consist of one chert flake and two quartzite flakes.

9. Block Area 3 Center, Upper Component

This area contained the largest excavation block on the site—a block of 24 1x1-meter units (Figure 16; Tables 12-14). The excavations focused on what was initially found in Phase II Unit 3, which is located in the south-central portion of this block. The upper component in this block is comparable to the main excavation block in Area 3 West, except that in this block, quartzite, rather than jasper, was the primary workshop raw material reduced. The tool and debris forms are also comparable to those in Area 3 West, with staged quartzite bifaces and cores making up most of the

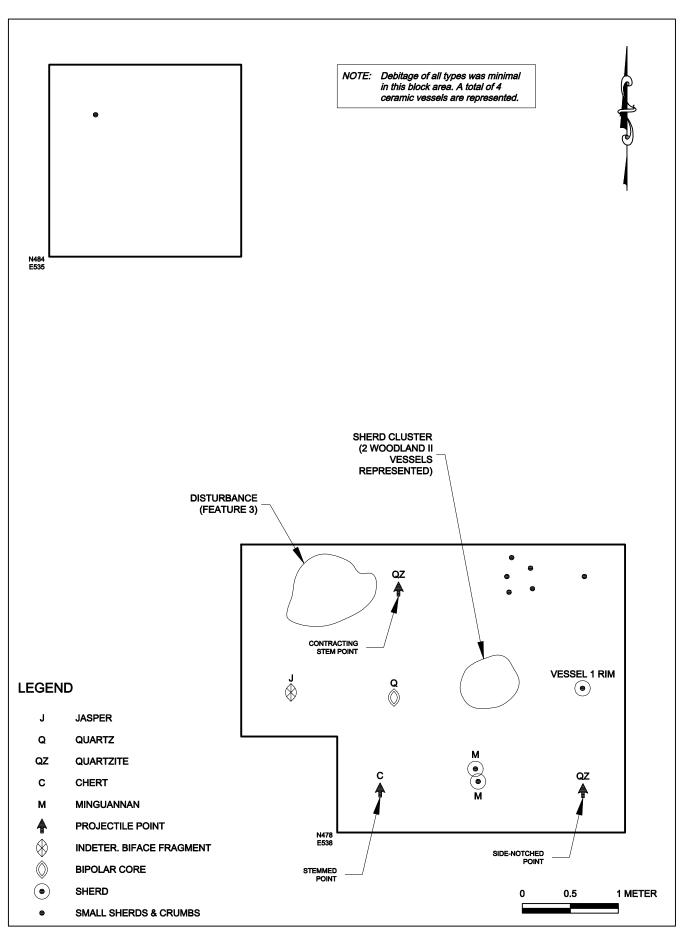


Figure 15: Block Area 3 East, Upper Component Artifact Distributions

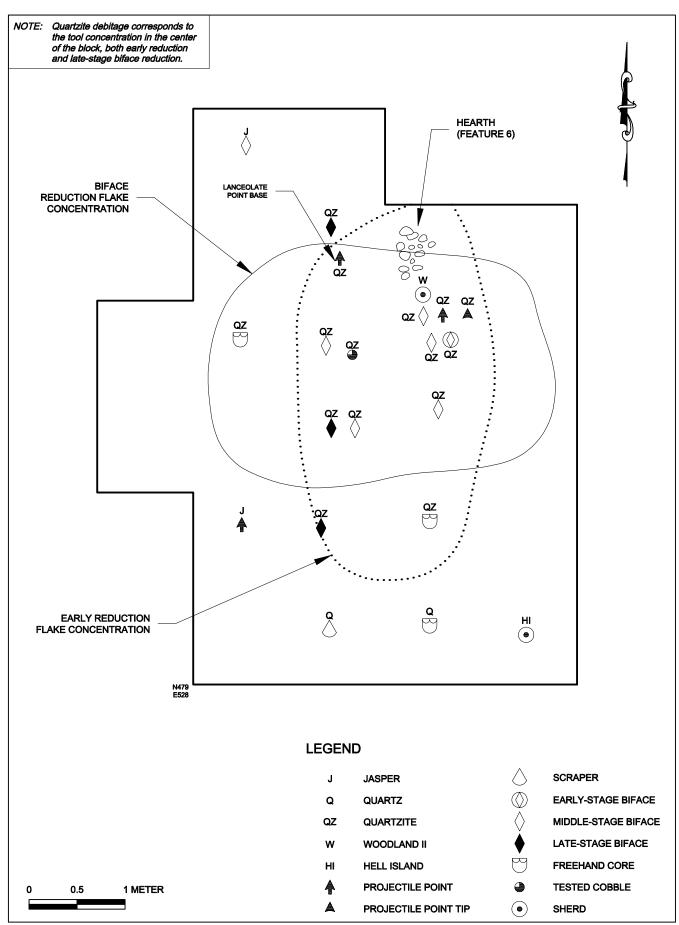


Figure 16: Block Area 3 Center, Upper Component Artifact and Feature Distributions

assemblage. The lower component of Block Area 3 Center, discussed below, exhibits more varied raw material in the tool forms and a smaller assemblage overall.

A single feature, Feature 6, was recorded in Unit 79 in the northeastern section of the block (Figure 17). The feature was roughly circular in form and was encountered at the top of Level 3 in the western half of the unit, but it is most likely associated with the upper component. Fire-cracked rock related to the feature was recorded in the upper levels before the feature was recognized as a distinct cluster of FCR. In diameter, the feature measured 38 centimeters east-west and 70 centimeters north-south. Contained within the feature was a cluster of FCR, a single fire-reddened core, and wood charcoal identified as hickory (*Carya* sp.).

Table 12: Site 7NC-G-143, Block Area 3 Center
Stone Tool and Core Assemblage, Levels 1-2

TOOL AND CORE TYPE	COUNT
Quartzite Point Base	1
Quartzite Point	1
Jasper Point Base	1
Quartzite Early-Stage Bifaces	3
Quartzite Middle-Stage Bifaces	5
Jasper Middle-Stage Bifaces	1
Quartzite Late-Stage Bifaces	1
Quartzite Point Tip	1
Quartzite Freehand Cores	2
Quartz Freehand Cores	1
Quartzite Tested Cobble	1
Quartz Utilized Flake	1
TOTAL	18

Immediately surrounding Feature 6 to the

south and west were staged bifaces and cores, all of quartzite. The bifaces included one early-stage form, three middle-stage bifaces, and one late-stage biface, one point tip, one notched point, and the base of a quartzite projectile point. The cores included a single tested quartzite cobble. These items may have been discarded during the course of a hearthside lithic workshop session.

Further from the hearthside, but still surrounding the feature, were an additional three middle-stage bifaces (2 quartzite and 1 jasper) and one early-stage quartzite biface. Other recoveries included three freehand cores (2 quartzite and 1 quartz), another quartzite early-stage biface, and one jasper projectile point base. The majority of the artifacts listed above were found within 2 meters of the hearth, and could therefore be considered associated with hearthside activities. Judging from the

Table 13: Site 7NC-G-143, Block Area 3 Center:
Stone Tool and Core Assemblage, Levels 3-4

TOOL AND CORE TYPE	COUNT
Quartzite Point	1
Jasper Stemmed Point	1
Quartzite Early-Stage Bifaces	2
Quartz Indeterminate Biface Fragments	3
Chert Indeterminate Biface Fragments	1
Chert Middle-Stage Bifaces	1
TOTAL	9

recoveries alone. the tool activities represented in this block are related to biface and flake tool production. These events probably took place in a single episode over a short period of time, but the time frame is unclear. Diagnostic ceramics associated with the workshop area include a few Woodland II (Late Woodland) sherds. No radiocarbon samples were recovered from this location. A Hell Island (Middle Woodland) sherd was recovered from the southeastern corner of the block, but is probably not associated with the hearth.

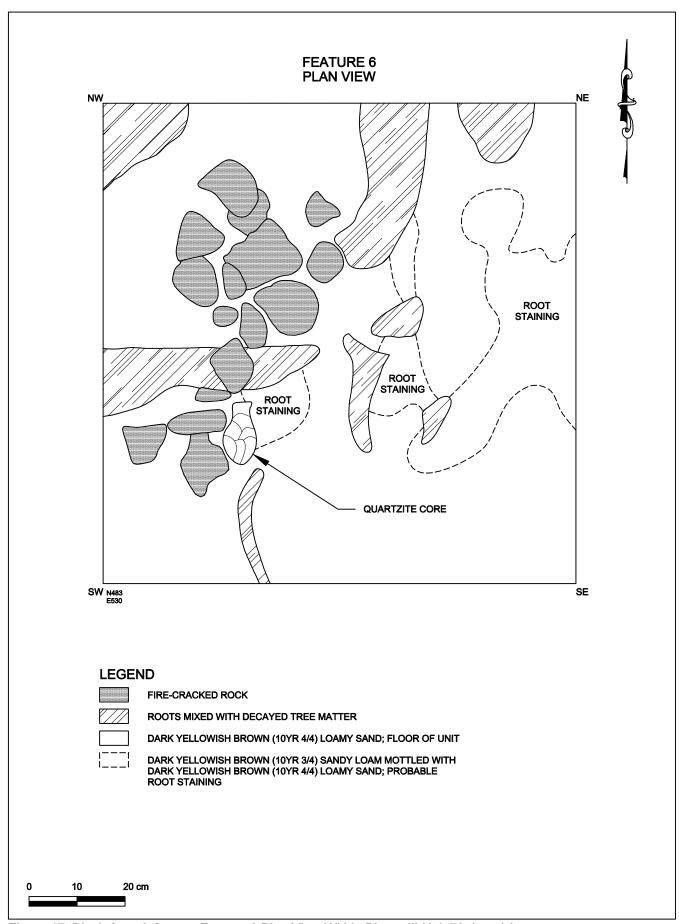


Figure 17: Block Area 3 Center, Feature 6 Plan View Within Phase III Unit 79, Level 3

Quartzite debitage predominates in the central portion of this excavation block, with early reduction flakes the primary type. The presence of the debitage corresponds to the reduction of early- and middle-stage bifaces, as evidenced in the associated tool assemblage surrounding the hearth. In the heart of the early reduction debitage cluster of the upper component, more than 200 quartzite early reduction flakes were recorded. Biface reduction flakes, although less common (with approximately 75 in the center of the block), are most concentrated in the same location as the early reduction flakes. This would seem to indicate that early- to late-stage biface manufacturing took place in this location, most likely by the same individual or individuals.

Other types of debitage are not well represented in the upper component of this block area. Chert debitage in the upper component includes only nine flakes, quartz only two flakes, and jasper 22 flakes. None of these raw materials is clustered in any discrete form resembling a distinct activity area.

TOTAL COUNT	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVELS 6-8
Chert	2	7	8	5	1	-
Jasper	7	15	11	20	4	-
Quartzite	303	922	479	150	52	19
Quartz	9	13	15	9	7	-
TOTAL	321	957	513	184	64	19

10. Block Area 3 Center, Lower Component

The lower component recoveries in this block area show a more varied pattern but also evidence some relationship to the overlying, i.e., upper, component (Figure 18). For example, two unfinished quartzite bifaces centrally located within the block may relate to the quartzite biface reduction activities apparent in the upper component. The four indeterminate biface fragments (3 quartz and 1 chert) are more ambiguous in their association.

The quartzite debitage in the lower component consists of early reduction and biface reduction flakes scattered across the central portion of the block. One primary concentration can be noted (see Figure 18), also in the central part of the block. Jasper (N=35), quartz (N=31), and chert (N=14) counts are low and do not show any apparent patterning across the living floor.

11. Block Area 4, Upper and Lower Components

The Phase III excavations in Block Area 4 included three 1-meter units placed adjacent to Phase II Unit 2. This excavation block is the southernmost excavation area on the site and the highest in elevation above Drawyer Creek, and it lies next to a disturbed area in the uplands adjacent to the site. In the Phase I investigation, sufficient FCR was obtained from Shovel Test 36c to record Feature 1. In the Phase II investigation, this hearth feature was observed near the southeastern corner of Unit

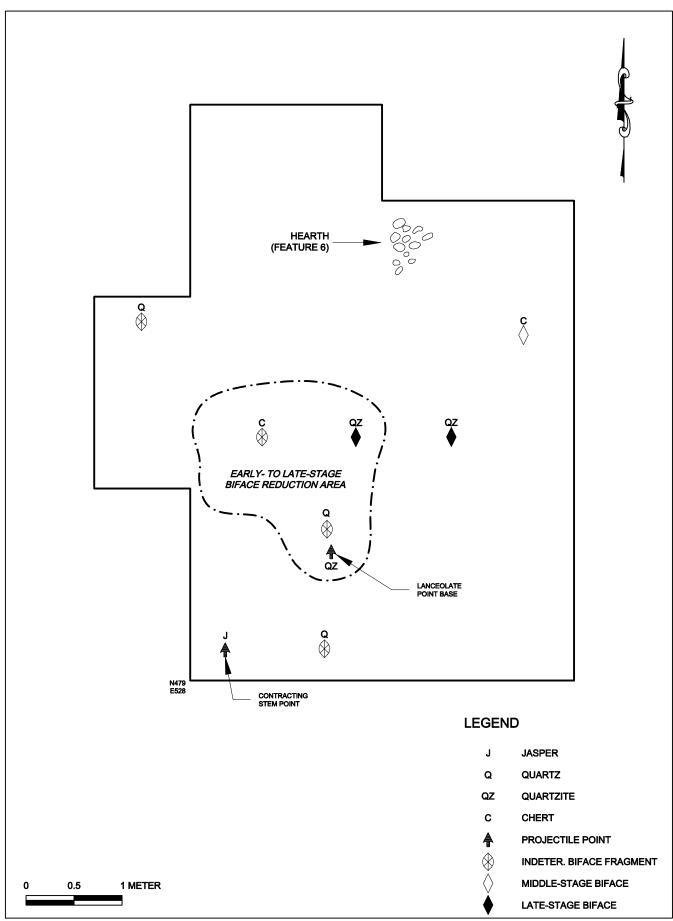


Figure 18: Block Area 3 Center, Lower Component Artifact and Feature Distributions

2. This location corresponds to the location of Shovel Test 36c, where the feature was first identified. In Phase II Unit 44, 16 FCR were recorded in Level 2, and in Unit 48, most of the FCR recorded was in the form of small cobbles found in Levels 1 and 2. Based on its shallow context, the feature is very likely attributable to the Woodland II occupation of the site, although no diagnostic artifacts were recorded within or adjacent to the feature. Wood charcoal obtained from the feature was identified as oak (*Quercus*) (Egan-Bruhy 1997, see Appendix E of this volume). The only identified seeds were of the mustard family (Brassiceae), an edible plant useful for its leaves, buds, and seeds.

No stone tools or ceramics were recorded in the three 1-meter units comprising Block Area 4. Two quartz flake fragments were recovered in Feature 1. The remaining debitage recorded was scattered across the block in very low numbers, as indicated in Table 15. It is interesting to note, however, that six rhyolite flakes and one chalcedony flake were recovered from this block. The absence of rhyolite and chalcedony from other blocks and the removed position of this block in relation to the rest of the site would seem to indicate the presence of a separate occupation in this locality.

Table 15:	Site 7NC-G-143.	, Block Area 4:	Debitage Tota	ls, All Levels

TOTAL COUNT	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVELS 6-8
Chert	4	5	-	3	-	-
Jasper	3	1	1	-	-	-
Quartzite	5	4	-	-	-	-
Quartz	-	2	-	-	-	-
Rhyolite	1	1	4	-	-	-
Chalcedony	-	1	-	-	-	-
TOTAL	13	14	5	3	-	-

12. Block Area 5, Upper and Lower Components

Block Area 5 is defined as the area between the Block Area 2 and Block Area 3 excavations, and the peripheral block (Block Area 4) on the southern edge of the site. No Phase III excavations were conducted in this area, but it was the focus of both Phase I and Phase II testing. A total of seven shovel tests (3 positive and 4 negative) were excavated, as well as a single Phase II unit (Unit 5). Only three quartzite flakes were recovered from the shovel tests, and was sterile.

13. Block Area 6, Upper and Lower Components

Block Area 6, located on the northeastern periphery of the site adjacent to Drawyer Creek, consists of three Phase I shovel tests, two Phase II 1x1-meter units, and a total of five 1-meter units excavated during Phase III. The Phase I shovel tests contained only four flakes altogether (3 quartz and 1 quartzite). In the Phase II units, the most notable recoveries were four Woodland II ceramic sherds from Unit 12.

The Phase III units produced only a few Woodland II sherds (Unit 54), a chert triangular projectile point (Unit 43, Level 1), and a jasper point tip (Unit 61, Level 3). Feature 4, a tree-throw disturbance, was recorded in the northernmost 1x2-meter unit (Units 47 and 54), with the majority of the disturbance recorded in Unit 54. The debitage recorded in the units exhibits no discrete patterning and was found in low frequencies (Table 16). There is no clear predominance of any raw material type.

Table 16: Site 7NC-G-143, Block Area 6: Debitage Totals, All Levels

TOTAL COUNT	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVELS 5-8
Chert	2	3	2	-	-
Jasper	1	3	1	1	-
Quartzite	2	1	1	-	-
Quartz	-	4	-	-	-
TOTAL	5	11	4	1	-

The results of the Phase III field investigations at the Drawyer Creek South Site show a series of spatially discrete and dense artifact concentrations, some in association with FCR features and others in more isolated locations. The high-density debitage clusters suggest that most of the activities in these locations centered on biface and core reduction, as well as on the production of expedient flake tools. The presence of FCR clusters that appear to be associated primarily with the Woodland II occupation suggests that cooking and food processing occurred at the site. Details on the character of the site assemblages are provided in Chapter VI; in Chapter VII, concluding statements address the sequence and nature of each occupation of the site.