

## IV. RESULTS OF FIELDWORK AND ANALYTICAL TASKS

This chapter provides a narrative of the fieldwork conducted at the Beech Ridge Site between 2003 and 2004. URS planned this work in consultation with DelDOT and the DelSHPO in order to best accommodate research issues with implementation of excavations. The data-recovery excavations were carried out in three separate stages in order to monitor and evaluate the daily field results and adjust planned work to the results being generated. Each stage of the field effort was initiated after consultation with the DelSHPO and DelDOT; field strategies were changed to take into account the developing archaeological record as necessary in conjunction with these consultations between the two state agencies.

This chapter reviews the following topics: 1) a narrative of the three separate stages of fieldwork, 2) the methods employed in the excavation, 3) a discussion of the site's basic stratigraphy and its implication for archaeological contexts, 4) descriptions of the major categories of cultural materials recovered, 5) analysis of discrete episodes of debitage and their relationship to short-term visits to the site, and 6) a summary of the field effort. Interpretive comments are kept to a minimum, as that is the focus of Chapter V. Also note that Appendix B, regarding the geomorphological analysis, contains a detailed discussion of the stratigraphy at the site.

### FIELDWORK STAGES

The Phase II evaluation investigations HCI conducted in 2001 revealed several small components dating from the Late Archaic to Early, Middle, and Late Woodland periods. This work indicated that cultural materials were present both in A-horizon and sub-A-horizon stratigraphic contexts. Generally speaking, Late Woodland ceramics and related materials were limited to the overlaying A horizon, while a crushed Early Woodland vessel was found within the upper subsoil horizon of the site. Additionally, two pits with Late Woodland ceramics were documented during HCI's Phase II work. Several Late Archaic projectile points were also recovered from the upper subsoil horizons at the site. The latter items pointed to the possible existence of components pre-dating the Early Woodland occupation of the site.

Based on this range of indicated occupation remains, URS developed a staged field strategy initially designed to expand on the horizontal and vertical limits of the components identified in the Phase II effort. Initial efforts were directed to refining the extent of the Woodland components and determining the stratigraphic context of any earlier components that might have been present. Each stage of fieldwork is discussed in the following sections below. Figure 4.1 depicts the complete map of all data-recovery excavations carried out through the course of these separate stages and should be consulted as the discussion proceeds.

#### *Stage I Fieldwork*

Stage I field efforts, which took place from June to early July 2003, focused on establishing the grid and locating all of the HCI Phase II test units. This initial stage of fieldwork was designed

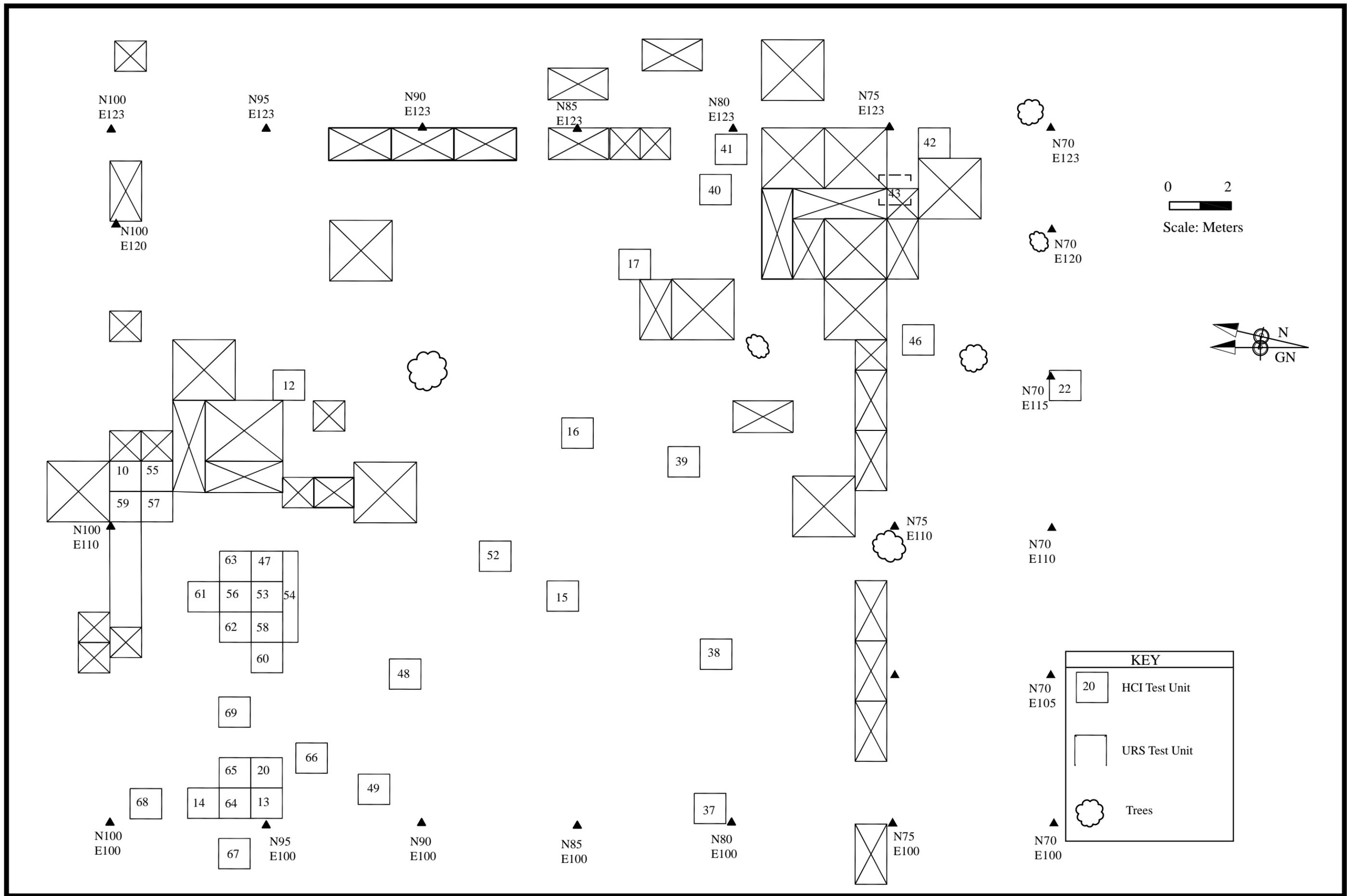


Figure 4.1 Plan View Showing URS Data Recovery Units and HCI Phase II Units.

to excavate a maximum area of only 25 square meters of the site and determine if additional field effort would be necessary. HCI's test units were tied into the data-recovery grid when possible, though at times considerable skew in their mapped location was evident. The grid effectively boxed in the landform the site occupies and provided adequate horizontal control over the area. During early stages of fieldwork, DelDOT staked out the proposed right of way (ROW) across this landform so that the data-recovery excavations could be focused on the footprint of the proposed undertaking. The grid was established by setting three key baselines using a tape and transit; all measurements were done using the metric system rather than feet and inches. The N100 line at the top of the site intercepts the north wall of the HCI Phase II Test Unit 10, which contained the crushed Early Woodland vessel. A second baseline—designated the E100 line—was placed at the western edge of the site. The third baseline, N123, was situated near the site's eastern boundary. All units were placed in reference to this grid; many of the smaller test units eventually were incorporated into the larger block excavations that characterized the site. At the conclusion of the first stage of the field effort, 24 square meters had been excavated within the ROW.

The initial Stage I test units focused on evaluating the potential of the site to expand on the information concerning the Early Woodland/Woodland I period and the Late Woodland/Woodland II period identified during the previous Phase II effort. During the initial stages of the data-recovery effort, unit placement was focused at the northern end of the site in the vicinity of HCI's Test Unit 10, close to the two Late Woodland pits, Features 1 and 2 (noted as the eastern and western pits in HCI's report), and in the southeast portion of the site near HCI's Test Unit 41, which exhibited deeper archaeological deposits.

The first unit to be excavated, N100 E105, served as a control for understanding the stratigraphic context at the northern end of the site area. This unit, culturally sterile, was excavated to 72 centimeters below surface and exposed four distinct soil horizons; in brief, the sequence consisted of an A horizon capping a moderately thick C horizon that, in turn, rested on a well-developed paleosol B horizon. Detailed notes on the stratigraphic contexts are offered in a subsequent section of this chapter below. Additional excavations were carried out with reference to the soil horizon designations identified in this first unit and from findings by URS's consulting geomorphologist Dr. Frank Vento. These soil horizons were encountered at varying levels across the site due to the undulation of the landscape.

Test Units N99 E112 and N98 E112 were placed adjacent to the HCI block that contained Test Unit 10. The Early Woodland crushed vessel recovered in HCI's Test Unit 10 was primarily confined to base of the A horizon between 12 and 22 centimeters below surface. Unit N99 E112 yielded little cultural material. Artifacts from this unit include low quantities of debitage and one body sherd of the above-noted crushed vessel. These materials were mostly from the A horizon and upper few centimeters of the upper C horizon. The second test unit, N98 E112, was also culturally sterile. Other units in the vicinity of Test Unit 10 (N100 E105, N100 E106, N99 E105.5, and N99 E116) failed to produce any significant artifacts or features, indicating that the pot drop feature was a discrete event.

Two 2-x-2-meter block units (N75 E118 and N77 E121) were excavated in the vicinity of HCI Test Units 41 and 42 to explore deeper and potentially Archaic deposits. HCI's Test Unit 41 had

uncovered 24 flakes, a contracting-stem projectile point, a bifacial knife fragment, and two heat-fractured jasper pebbles. Artifacts were located throughout the profile up to a depth of 58 centimeters below surface, a context that corresponded to the C horizon found across the site area. Lower quantities of materials were recovered from HCI's Test Unit 42. Here, only three flakes were recovered from between 20 and 40 centimeters below surface. Both of these units indicated that an unknown occupation was present below the surface A horizon at various levels of the C horizon.

Excavation of a 2-x-2-meter square unit, N75 E118, provided clarification of the deeper components present. Of significance, the base of a yellowish brown jasper LeCroy bifurcate point was recovered from Level 3 of this unit, approximately 27 centimeters below surface and midway through the C horizon. Level 3 also produced six flakes of the same material and can be considered as related to the early Middle Archaic component represented by this distinctive point. In addition to the debitage, an early-stage jasper biface was also recovered from this level. The presence of the LeCroy bifurcate point base clearly suggests that a living surface was present by approximately 8000 B.P., midway through deposition of the C horizon on the Beech Ridge landform.

Even more significant was the recovery of an Early Archaic corner-notched Palmer/Kirk point in this unit from just above the B horizon at a depth of about 46 to 48 centimeters below the unit's surface and about 20 centimeters below the LeCroy point. This Early Archaic point was a complete specimen manufactured from jasper. Several small jasper flakes were recovered from the same level. It should be stressed that this point was recovered only two to three centimeters above the upper surface of the paleosol B horizon present across the landform the site occupies. In broad terms, this point places the date for the inception of the C-horizon development about 10,000 years B.P.

Excavation of the second 2-x-2-meter block unit produced only debitage. Quartz, jasper, and chert flaking debris was recovered from both the surface A horizon and into the C horizon. Some of this material is likely related to the Early and Middle Archaic components present in N75E118. Sampling the paleosol B-horizon did not recover any cultural material.

A third test unit added to the Archaic sequence that was obviously present at the Beech Ridge site. Unit N75 E115, a 1-x-1-meter test unit on the southern boundary of the site area, contained a Middle Archaic Morrow Mountain point or closely related variant. This specimen was recovered from the upper portion of the C horizon at about 17 centimeters below surface. The point was found *in situ* in the unit's east wall in the upper part of the C horizon, a context that places it *above* the bifurcate point. Other artifacts from this level include three small pieces of FCR and one small jasper flake. No additional cultural material was recovered from this unit, which was excavated to approximately 60 centimeters below surface.

The Stage I investigations did not uncover much additional information pertaining to the Woodland occupations at the site. No additional features were recorded and only one sherd related to the Early Woodland crushed vessel was found. Low densities of debitage, primarily biface-thinning flakes, found in the upper A horizon of the site likely reflect individual episodes of curation during the Woodland occupation. It is probable that the Woodland period

occupations were focused towards the part of the site now underneath the parking lot of the apartment complex bordering the site to the north and east.

Most significantly, the work conducted during the Stage I effort showed that the Beech Ridge Site preserved stratified Early to Middle Archaic period components not identified during the Phase I and II work conducted at the site. Additionally, the excavation of the underlying paleosol B horizon showed that debitage was present in levels below the Early Archaic Palmer/Kirk variant, suggesting that either another Early Archaic component was present or, more likely, that a Paleoindian occupation was present and stratified below the Palmer component.

The Archaic projectile points recovered during Stage I are significant in that they correlate well with established Archaic sequences in the Eastern United States. As Gardner (1974) argues, the immediate post-Paleoindian period in the nearby Shenandoah Valley is marked by the presence of corner-notched points such as the Palmer/Kirk varieties. These corner-notched points are part of an early horizon of notched points that tie into a broad post-Pleistocene adaptation to changing environmental conditions (Carbone in Gardner 1974). Of key interest for the Beech Ridge Site and the Delmarva Peninsula are the implications these point types have for local climatic changes and landform use. The Palmer corner-notched specimen, well dated to about 9500–10,000 B.P., was found in a soil context in Test Unit N75 E118 that essentially was deposited close to the Pleistocene-Holocene boundary. It is an excellent convergence of datable point typology and climatic events as recognized in soil depositional sequences.

Given the results of the initial Stage I investigations, a revised scope was developed in consultation with DelDOT and the DelSHPO for exploring the potential that the Beech Ridge Site had for understanding possible Paleoindian and Early to Middle Archaic occupations. This second field effort, called Stage 2, involved the excavation of larger block units to identify living floors associated with the earlier components present from the paleosol B horizon through the overlaying C horizon.

### *Stage II Fieldwork*

In light of the results of the Stage I excavations, a revised plan was developed in consultation with DelDOT and the DelSHPO to open larger block units in the area that yielded the Archaic sequence of points. The Stage II investigations concentrated on exposing deeper deposits through the excavation of large block excavations around Test Unit N75 E118. The block unit methodology was employed in order to best expose any living surfaces that might have been associated with the Archaic points recovered from N75 E115. During this stage, an additional 77 square meters of the site area were excavated.

In addition to the continuation of block excavation, a series of 1-x-1-meter and 1-x-2-meter units were excavated, forming two cross-site trenches, one oriented north-south and the other oriented east-west. These long, continuous profiles dissected the landform and showed the undulation and variability in the prehistoric landscape. The trenches made up the southern and eastern boundaries of the test area and linked to the large block excavation previously mentioned.

During this second stage of fieldwork, a decision was made to screen half of each unit through 1/8-inch mesh to determine if smaller lithic debitage was present and associated with the buried Archaic period components. While the number of artifacts found at the deeper level was variable in count, use of finer mesh screen was clearly successful in recovering small flakes that would have been lost using a 1/4-inch mesh hardware cloth screen.

The block excavations recovered eight additional Early and Middle Archaic projectile points and four bifaces from test units in the southern part of the site area. Two additional Palmer/Kirk specimens were recovered, as well as three Morrow Mountain specimens—all were recovered from within or close to the N75 E115 location that produced the LeCroy and first Palmer/Kirk specimen. Perhaps most significant was the recovery of a late Paleoindian Dalton-Hardaway point from the paleosol B horizon in Test Unit N95 E112, placed south of HCI's unit with the Early Woodland vessel. This point was in the lowest level in the unit, within a large root stain that had "wrapped around" the point; despite its presence within the penumbra of this natural feature, it is considered to be in proper stratigraphic context. A fragment of a heavily curated side-notched Brewerton point was recovered from the top of the C horizon in this unit. This specimen closes the Middle Archaic period.

The recovery of this late Paleoindian point from the B horizon corroborates the recovery of flakes from similar contexts in the N72 E120 block. Flakes in that block came from B-horizon contexts below the Palmer points that were, as noted above, recovered from immediately above the contact between the eolian C horizon and paleosol B horizon. Flakes from the paleosol are thus considered to be associated with a very-low-density late Paleoindian occupation of the site area. Given its recovery, a third stage of fieldwork was initiated, designed to sample in greater detail the area of the site around the Dalton-Hardaway location.

### *Stage III Excavations*

URS conducted Stage III excavations during January and February 2004. During this short field effort, five additional square meters were excavated around N95 E112, where the late Paleoindian Dalton-Hardaway point was recovered. Continual subfreezing temperatures hampered this work to a degree, making excavation somewhat difficult. All soils from the C horizon and deeper were screened through 1/8-inch mesh. Test Units N97 E111 and N96 E114 were located north and east, respectively, of the unit that produced the Dalton-Hardaway point. Test Units N92.2 E110.5 and N92.5 E113 were situated to the south. The additional work recovered debitage from paleosol contexts considered to be associated with the Dalton-Hardaway component. No other diagnostic artifacts, however, were recovered from this component.

## EXCAVATION METHODS

The procedures employed in the field followed those outlined in the work plan submitted to DelDOT and the DelSHPO. Units placed during the data-recovery effort were excavated according to natural soil horizons, or subdivided into arbitrary 10-centimeter levels, as deemed

necessary. Information from each unit was recorded in a standardized format throughout the field effort. Soil profiles were drawn for at least two walls of each unit once excavation reached sterile soil. All soil horizons were described with reference to standard USDA terminology. Soil colors were recorded with reference to the Munsell system. Photographs were taken of key profiles in order to document this cross-site stratigraphy.

Cultural materials recovered from excavated contexts were bagged and labeled according to their provenience. The few features identified during the course of the work (all natural in origin) were fully exposed and mapped in plan prior to sampling by cross-sectioning, if applicable. Profiles of cross-sectioned features were photographed and drawn to scale.

Straightforward excavation methods were employed in the excavation of both the block units and individual features. Prior to controlled excavation, the organic litter was raked clear. In each unit, the organic root mat and the thin A1 horizon were removed as a single layer by shovel. The following soil horizons (AC, C, B, and C2) were excavated in arbitrary 10-centimeter levels, when necessary, using a combination of shovel and trowel. The base of each level was troweled clean to look for features. Sherd and FCR clusters, when encountered *in situ*, were exposed by trowel and brush and mapped prior to being photographed in plan.

Dr. Vento's sampling enhanced interpretations of the soil profile. Samples were collected for particle size analysis and other studies from key profiles within the block excavation area. Results of these specialized studies are presented in Appendix B of this report.

## SITE STRATIGRAPHY AND ARCHAEOLOGICAL CONTEXT

Excavations at the site revealed a simple profile that obtained for most of the site area. The best descriptions of this profile come from the large block unit and the two trenches that extend laterally from the main excavation. Given that the landform the site occupies is relatively level, the horizons defined were thought to have been more or less even across the site. However, the site's surface tilted downwards to the (grid) west, dipping gradually towards a small drainage feature. The current surface masks an uneven surface that was eventually covered with windblown materials. The uneven surface, defined below, was a highly weathered Pleistocene landform (or surface) that evidently was variably dissected through time before burial.

The following profile description will apply for most of the site area, though qualifications noting its variability across the site will be presented further below. The profile description below is taken from the south wall of N75 E104 to E106 (Figure 4.2). Additionally, Plate 4.1 illustrates the profile from the 2-x-2-meter block N75 E115, which produced the Palmer/Kirk and LeCroy points.

### *Zone I (0–9 centimeters)*

This very dark grayish brown (10YR 3/2) layer of thin sandy loam Ao/A1 horizon varies in thickness from about five centimeters to nearly 10 centimeters. The top of the layer is, as

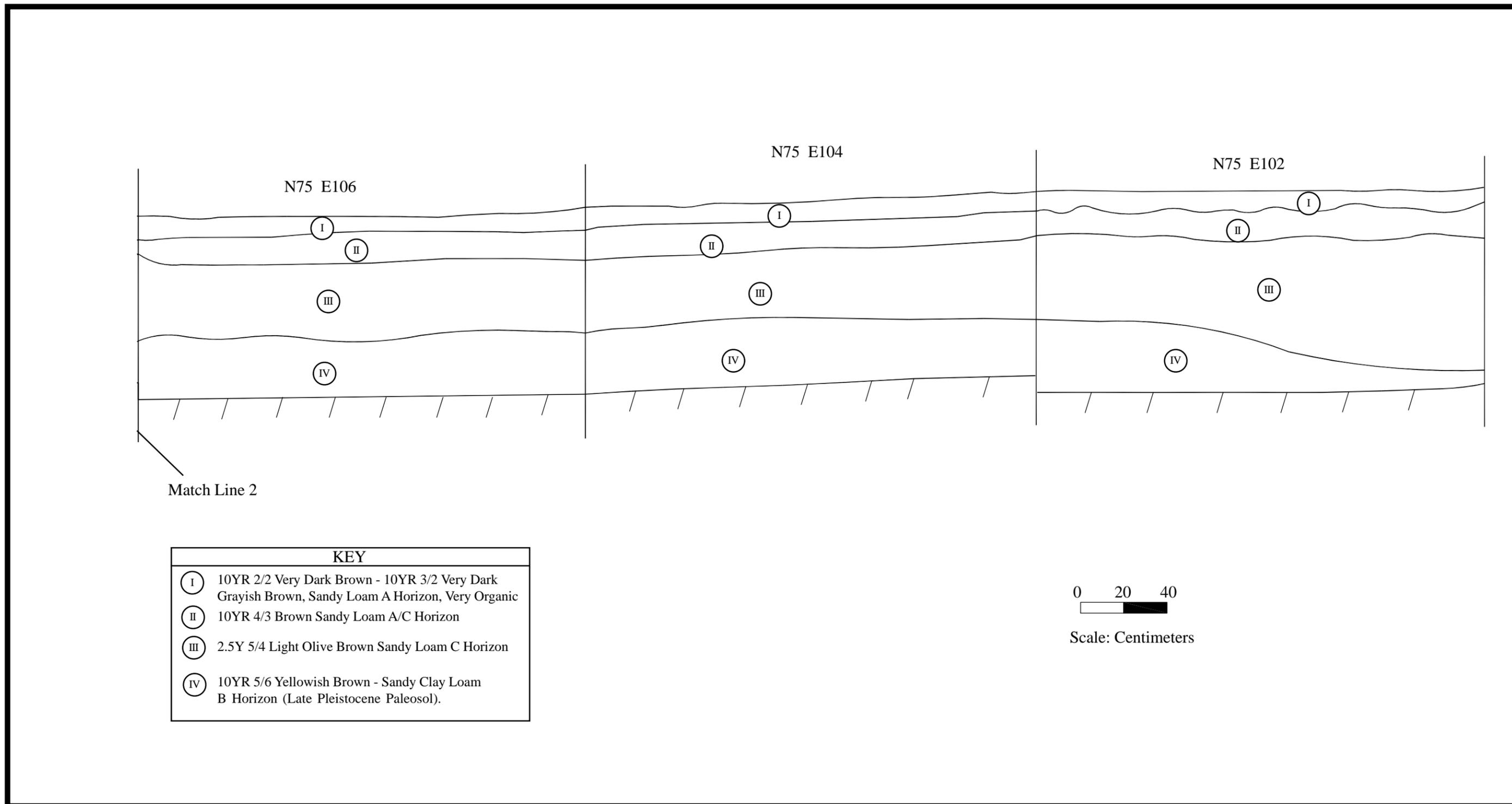


Figure 4.2 South Wall Profile, N75 E102 through E106, Showing Major Horizons at Beech Ridge. Note the variable surface of Zone IV, the paleosol B horizon representing the surface of occupation for the Late Paleoindian Dalton-Hardaway component. The Early Archaic Palmer/Kirk component rested almost directly on top of this horizon.



Plate 4.1 South Wall Profile, N75 E118. This unit shows the underlying B horizon representing the Late Pleistocene occupation surface available during the closing phases of the Paleoindian period.

expected, composed of leaf litter and other macro-organic fragments. Most of the layer is bound together by a root mat from both trees and low-lying ground vegetation. The base of the horizon exhibits an undulating though clear boundary with the zone below, reflecting natural weathering processes.

*Zone II (9–20 centimeters)*

This dark grayish brown (10YR 4/2) layer is a sandy loam A2 horizon. The base of this horizon is variable in depth below the surface, dipping and rising as a result of root intrusion and variable weathering rates. Color of the horizon trends towards a lighter olive brown/olive yellow (2.5Y 5/4 to 5/6) near the base of the layer, while pockets of very dark grayish brown (10YR 3/2) are found near the top. The boundary of this horizon is clearly defined despite its undulating and weathered nature.

*Zone III (20–55/60 centimeters)*

This C horizon is moderately thick and olive brown (2.5Y 5/4 to 5/6). Its 2.5Y hue is quite distinctive and sets it apart from the 10YR hues of Zones I and II, as well as the soil colors of Zone IV. It is quite homogeneous in make-up from a visual standpoint, though it becomes more compact in the lower 5–10 centimeters before it comes to rest on the underlying Zone IV paleosol. In some cases, this difference in texture could serve as a basis to subdivide this horizon into two parts: Zone III-A and Zone III-B. This is an important horizon, as it developed throughout the Holocene and contains significant Archaic components. The lower boundary of this horizon is abrupt where it sits on the underlying paleosol. The thickness of the horizon is variable depending on the nature of the paleo-topography marked by this underlying paleosol.

*Zone IV (55/60–80 centimeters)*

This layer is a yellowish brown (10YR 5/6 to 5/8) sandy clay loam B horizon. It has a crusty texture when cut with a trowel, a factor of its iron-rich content. This distinctive layer marks the Pleistocene surface available for occupation during the late Paleoindian to Early Archaic periods. Apparently this surface was exposed for a lengthy period of time, given its high degree of weathering and somewhat dissected nature. Mottled areas of strong dark gray (10YR 4/1) to gray (10YR 5/1) gleyed soil are found throughout this horizon at an approximate depth of 70 centimeters below the surface. This paleosol horizon caps loamy sands of marine origin. The boundary at the base of this horizon is clearly defined in both texture and color; the boundary to the next horizon can be described as abrupt.

*Zone V (80–90+ centimeters)*

This yellowish brown (10YR 5/6) to light yellowish brown (10YR 6/6) layer is a loamy sand C horizon; this is a sterile horizon.

There are variations to the above-described profile depending on where it was exposed on the site's landform. Zone I and II, essentially the surface A-horizon package, varied little across the site. Zone III showed significant variation. Close to the edge of the swamp bordering the site to

the east, the Zone III C horizon was variably thick. In addition, this zone was moderately thick towards the north of the site area, in the long trench profile exposed along the E75 line. However, Zone III began to pinch out towards the west as one approached the small drainage feature cutting through the landform.

Most of the variation in the thickness of Zone III clearly results from the paleo-topography marked in the Zone IV paleosol. This ancient surface peaked—forming a small rise overlooking the swamp—in the vicinity of N75 E80, where it can be seen in profile. This peak is well illustrated in the photograph of the large block unit (Plate 4.2). Two additional views of this block are presented in Plates 4.3 and 4.4, again showing the dissected topography marked by the underlying paleosol B horizon. It dropped off to all sides from this point. It is notable that this high spot was the focus of most cultural debris exposed in the excavations. Clearly, it was a significant node, topographic high spot, or “bump” on the landform to base a small hunting camp or monitoring station on overlooking the swamp. To the west of the site area, Zone IV dipped downwards until a former channel of the small drainage feature bordering the site truncated it; this is clearly seen in the profile from the long east-to-west trench extending from the block unit, depicted in Plate 4.5. Shovel tests placed to the south of the project area and paralleling the edge of the landform overlooking the swamp revealed that this paleosol was encountered at variable depths below the surface. The interpretation offered here is that this surface formed a series of small high spots along the scarp that were selected for use as short-term camps (hunting stations) or game-monitoring stations.

The extent of this paleosol landform to the north is unknown within the immediate site area, given the existing development. However, this surface may be an excellent stratigraphic marker in the region, as it appears to be present in other archaeological sites tested to date in the region (see Vento’s comments in his report presented in Appendix B). In the final section of this report, the presence of this well-defined paleosol will be discussed in the context of developing a predictive model for determining the probable location of late Paleoindian and Early Archaic components. Additionally, the mapped extent of the C horizon will be integrated with this model, as it has excellent potential for providing separation between various Archaic components, depending on its thickness.

### *Archaeological Context*

The profile exposed at the Beech Ridge Site contained a sequence of projectile points that spanned the late Paleoindian period through to the Late Archaic period. Zone IV, the well-defined paleosol B horizon, contained evidence of at least one low-density Paleoindian component identified via a Dalton-Hardaway projectile point. This specimen was recovered from the upper part of the paleosol in N95 E112. Little debitage was associated with this point in that unit. However, debitage was recovered from the Zone IV paleosol in the large block excavation (vicinity of N75 E118), well below levels containing the Early Archaic Palmer points. A second late Paleoindian component is certainly present in the block excavation unit, although no diagnostic points were recovered. The stratigraphic context is considered ironclad in support of this interpretation. It is clear from the distribution maps of debitage in the block that



Plate 4.2 Block Unit Profile, View Looking West. Note undulation of underlying B-horizon access block, reflecting the landform's former topography.



Plate 4.3 Block Unit Profile, View Looking Southwest. Note B horizon beneath C horizon and its undulating surface.



Plate 4.4 Block Unit, View Looking South. Note variable surface and paleosol B horizon reflecting a dissected surface.



Plate 4.5 East to West Trench Profile. Note the paleosol B horizon dipping to the west.

materials from Levels 6 and 7, both of which sampled the paleosol, were markedly different in distribution from those in the overlying C horizon.

The lowest part of the C horizon produced three corner-notched Palmer projectile points. The first point, recovered from N75 E118, was about eight centimeters above the top of the Zone IV paleosol. The second example, found in Level 6 of N83 E122, was recovered from just above the contact between the C horizon and the Zone IV paleosol. The third example, only the blade fragment of a Palmer/Kirk variant, was recovered from Level 4 of N96 E114, a depth that corresponds to a point just at the contact between the Zone III C horizon and the underlying Zone IV paleosol. Clearly, all three of these points, recovered from the very base of the C horizon, marked a surface that had formed on the top of the paleosol prior to its development or deposition throughout the middle Holocene.

The projectile points recovered from the middle portion of the C horizon include a LeCroy bifurcate, three Morrow Mountain specimens, and a side-notched Brewerton specimen. The LeCroy point was recovered from about the middle of the C horizon in N75 E118. In this unit, the C horizon is somewhat compressed, measuring only 43 centimeters thick on average between the base of the A2 horizon and top of the Zone IV paleosol. It is stratified above the Palmer corner-notched point recovered from Level 6 in the same unit.

More problematic are the locations of the Morrow Mountain specimens. The specimen from N91 E122 was recovered from Level 7, about 63 centimeters below surface. This depth corresponds with the lower portion of the C horizon, though above the depth/level that yielded the three Palmer points. It was certainly deeper than the bifurcate point, which normally would be stratified below Morrow Mountain points. The second specimen, recovered from Level 7 of N80 E116, also corresponds to a comparable placement in the lower C horizon. And, again, this point was stratigraphically above the placement of the three Palmer specimens. The third specimen, of rhyolite (FS 11), came from the same level as the LeCroy specimen.

In reviewing the above information, it becomes clear that the sequence from Dalton-Hardaway to Palmer to Morrow Mountain is clear and supported by the stratigraphic contexts at the site. The LeCroy, while in the upper C horizon, may be somewhat out of sequence for one reason or another. The extent of minor topographic differences that would have been masked by aggradation of the C horizon cannot be dismissed. As noted earlier, the undulations of the paleosol surface suggest a dissected landform that evened out through time through the buildup of the C horizon. It is possible that the LeCroy surface, such as it once existed, is comparable or below that which supported the three Morrow Mountain points. It is also possible that any one surface could have sustained deflation to the extent that variable "collapse" of one living floor onto another in places across the site's landscape occurred. Given these considerations, along with a variable surface topography, an alignment of the roughly 15 to 20 centimeter absolute depth differences between the Morrow Mountain and LeCroy points onto one surface of occupation seems plausible. The issue of separation between the LeCroy and Morrow Mountain points is not overly significant in light of the excellent separation of the other major point styles stratified within the site.

The following sections provide descriptions of the cultural material recovered from the excavations at the site. Presented first are the projectile points recovered from all contexts, followed by descriptions of the small Late Woodland ceramic assemblage recovered from the A horizon close to HCI's two pits. The discussion of the lithic debris is presented in tabular format in the course of reviewing the discrete flaking episodes interpreted as short-term curation events conducted during the course of hunting and/or gathering visits to the site. Miscellaneous categories of material, such as FCR, are simply tabulated and presented in the artifact inventory.

## PROJECTILE POINTS

Although few in number, the projectile points recovered from Beech Ridge record a significant chronological sequence, well supported by stratigraphy, ranging from the late Paleoindian through to the Late Archaic period. Vertical separation between these points is manifest at the site, marking successive use of the landform through the early to middle Holocene. The Archaic sequence follows the classic chronological schemes Coe (1964) and Broyles (1971) first developed, parts of which were elaborated upon by Chapman (1985), Gardner (1974), and others (see, in particular, discussions in Anderson and Sassaman 1996). In brief, the sequence from Beech Ridge includes, from early to late, the following classic point types: Dalton-Hardaway (or Hardaway-Dalton), Palmer/Kirk, LeCroy Bifurcate, Morrow Mountain, Halifax/Brewerton, and Savannah River.

Projectile points dating to the Early through Middle Woodland were also recovered, though stratigraphic separation is weak. There is some stratigraphic support to place the Early to early Middle Woodland period Teardrop/Piscataway points in the upper part of the A2 horizon documented beneath the surface A horizon/weathered plowzone. Each of the points recovered in the data-recovery excavations are described in the following paragraphs. A summary of the sequence follows, based on the review provided in Chapter III of this report.

### *Dalton-Hardaway*

A single example of the late Paleoindian Dalton-Hardaway type (FS 308) was recovered from the excavations (Plate 4.6). It was recovered from the paleosol B horizon in the lowest level of Unit N95 E112, within the boundary of a faintly defined root stain designated as Feature 4. In terms of its stratigraphy, the vertical location of the point was well within the paleosol B horizon that forms the Pleistocene-Holocene surface extending across the site and defined in the previous section on site stratigraphy. Although the point was found within the stain, it was considered to be stratigraphically *in situ*, since the stain is considered as a post-depositional event that crossed through intact strata. In essence, the stain was the decayed silhouette of a root system.

This point is a complete specimen, manufactured from a grayish black and somewhat grainy chert. In length it measures 2.6 centimeters. The blade is biconvex in cross-section and exhibits careful retouch flaking along the margins. It has been extensively resharpened, leaving the hafting element the largest part of the specimen. The width across the shoulder is 1.5 centimeters. The haft element exhibits the classic weak side notching and indented, well-thinned



Plate 4.6 Dalton-Hardaway Point. This artifact was manufactured from rhyolite and recovered in the paleosol B horizon of N95 E112 (FS 308).

base that leaves small “ears” on either side of the specimen. Although thinned at the base, it is not fluted, nor does the base exhibit any grinding, though the ridges between flake scars in the haft element appear more rounded than those towards the end of the blade element.

### *Palmer/Kirk Specimens*

Three examples of corner-notched points that can be classed within the Palmer/Kirk cluster were recovered from the site. As noted in the cultural context section, Palmer and Kirk types are considered to be variants on an Early Archaic typological scheme. Cable (1996:112) recommends that corner-notched Kirk points be classed as Palmer since the range of variation includes both. Kirk serrated and side-notched would be retained as types in his reorganization. Here they are simply designated Palmer/Kirk to reflect the historical identification of the two points.

The first example (FS 41) was recovered from Excavation Level 6 at the base of the thick C horizon capping the A/B paleosol in the southeast quad of N75 E118 (Plate 4.7). This point was from the lower part of the level, about 8 centimeters above the transition between the C horizon and paleosol B horizon underlying the site. It comes from the beginning of the depositional cycle that led to the thick C-horizon package found across the site. Indeed, it may have been on a now-weathered surface capping the paleosol B horizon.

This corner-notched specimen was manufactured from yellowish brown jasper and exhibits an asymmetrical blade, one side of which exhibits deep, well-flaked serrations. The material is criss-crossed by thin black veins and may have originated from the Iron Hill source. The opposite blade margin has weak serrations and is missing the corner of the shoulder or “tang”. Corner notching is deep, and left a flat-based, expanded stem. Although the base is not ground, the ridges between flake scars on the base close to its juncture with the blade element are more rounded than those farther up the blade. This well-made point is biconvex in cross-section and measures 27 millimeters in length, 17 millimeters in width, and four millimeters in thickness.

The second Palmer/Kirk specimen (FS 109) was recovered from Level 6 of N83 E122 (see Plate 4.7). This context corresponds to the base of the thick C horizon immediately above its contact with the paleosol B horizon. This point was recovered about 11 meters to the grid northeast of the other Palmer/Kirk specimen. Both points are from identical stratigraphic contexts. As noted in the section on site stratigraphy, the base of the C horizon is compact and contains a fair amount of pea gravel. It likely represents the remains of a former surface of occupation situated on top of the paleosol B horizon.

This point is complete and exhibits a slightly asymmetrical blade with deep corner notches and a wide, slightly excurvate base. The deep corner notches form marked tangs where the blade margins terminate. Both blade margins are finely flaked, creating very small, fine serrations. No basal grinding is evident. This point is biconvex in cross-section and measures 26 millimeters in length, 25 millimeters in width, and six millimeters in thickness.

The third example (FS 331) was recovered from Level 4 of N96 E114 (see Plate 4.7). It was found in the vicinity of the Dalton-Hardaway point locality. The stratigraphic position of this



Plate 4.7 Palmer/Kirk Points. These points came from just above the paleosol B horizon: Top left, recovered from Excavation Level 6 of N75 E118 (FS 41); top right, recovered from Excavation Level 6 of N83 E112 (FS 109); bottom, a blade fragment preserving a portion of the notch, recovered from Excavation Level 4 of N96 E114 (FS 331).

point was close to the base of the C horizon; it was recovered from contexts immediately *above* the top of the well-defined paleosol B horizon that extends across the site. This specimen was manufactured from an off-white chert with brown mottles on its surface. The blade is slightly excurved with finely flaked, almost serrated blade margins. The base was snapped off along a diagonal line from just above one shoulder through the specimen to a point just at the blade-shoulder margin on the opposite side. It does not exhibit the drooping shoulders (or tangs) as seen in the corner-notched specimen recovered from Level 6 of N83 E122. The remaining portion of this specimen measures 31 millimeters in length, 19 millimeters in width, and approximately five millimeters in thickness. The blade is biconvex in cross-section. It is interesting to note that this specimen was stratified below the side-notched Brewerton specimen (described below) recovered from the contact between the A2 and C horizons. Stratigraphically, it was above the Dalton-Hardaway point recovered from the adjacent unit, N95 E112.

### *LeCroy Bifurcate*

One specimen of a LeCroy point was recovered from the excavations (Plate 4.8). This specimen (FS 27) was recovered from Level 3, northwest quadrant, of N75 E118, a depth that corresponds to the middle of the C horizon at the site. The remaining portion of the point is a basal fragment manufactured from yellowish brown jasper similar to the Palmer/Kirk specimen from FS 109. This point was stratified *above* the Palmer/Kirk specimen found in the southeast quadrant of this unit in Level 6 (FS 41).

This point was snapped in two immediately below the shoulder-stem juncture. The remaining portion of the stem shows the expansion of the hafting element leading to the shoulders of the point. It is deeply bifurcated, with the curved inner edge of the indentation being moderately ground. Grinding does not extend along the sides of the stem element.

### *Morrow Mountain and Brewerton Points*

There are three points identified as examples of Middle Archaic Morrow Mountain II projectile points and one fragmentary example of a Brewerton side-notched point. These Middle Archaic points are described below.

One of the three Morrow Mountain points, recovered from Level 7 of the north half of N91 E122 (FS 134), is a complete specimen manufactured from smoky brown granular quartz (Plate 4.9). The stratigraphic context of this point was about midway through the C horizon. This point is well made, having been reduced from a larger flake of quartz. Interestingly, there are several flecks of mica in the parent material from which the point was elaborated, suggesting that the source may have been provided by vein contexts from Piedmont rock formations. The specimen is plano-convex in cross-section and has well-defined shoulders and a symmetrical stem (with respect to the blade element). The point measures 48 millimeters in length, 32 millimeters in maximum width (as measured at the shoulders), and 12 millimeters in thickness.

The second Morrow Mountain specimen, a complete point, is a heavily curated or resharpened specimen manufactured from yellow brown jasper (see Plate 4.9). It was recovered from Level 7 in the northwest quadrant of N80 E116 (FS 209). This context corresponds to the thick C



Plate 4.8 LeCroy Bifurcate Point. This proximal fragment was recovered from Excavation Level 3 in N75 E118 (FS 27).



Plate 4.9 Morrow Mountain Points. Top specimen recovered from Excavation Level 7 in N91 E122 (FS 134); bottom left specimen recovered from Excavation Level 7 in N80 E116 (FS 209); bottom right specimen recovered from Excavation Level 3 of N75 E115 (FS 11).

horizon capping the paleosol B horizon at the site. The blade element exhibits concave margins from extensive resharpening. The base is long and tapers to a point; weak shoulders separate the blade from the stem element. This point measures 36 millimeters in length, 15 millimeters in maximum width, and six millimeters in thickness.

The third and final example of this Middle Archaic type is a complete specimen recovered from the C horizon of N75 E115 (FS 11), the same relative stratigraphic context as the LeCroy point in N75 E118. This example was manufactured from rhyolite and has a curved blade element that left tang-like shoulders (see Plate 4.9). The base is a rounded nub similar to the Morrow Mountain I specimens Coe illustrates (1964:38, Figure 33). The specimens in the latter photo exhibit, in some cases, the same tang at the blade-shoulder junction, a result of resharpening the blade element. The small rounded base is one of the defining attributes for this type.

One example of a side-notched Brewerton point was recovered from Level 2 of the southeast quadrant of N96 E114 (FS 328; Plate 4.10). This context corresponds to the upper part of the C horizon at the site, though in a section where all strata are compressed to an extent (see discussion in section on stratigraphy above). This specimen was manufactured from a somewhat grainy, off-white chert. The point was split along its longitudinal axis, preserving what appear to be the distal tip (or the blade margin just below the tip), one blade margin, and most of the base. The side notch remaining is deep with the base extending beyond the edge of the point's shoulder, an indication of extreme resharpening of the blade element while the specimen was hafted. Given the exaggerated nature of the stem element in relation to the blade, this point would be classed as an example of Ritchie's Brewerton Eared-Triangle, which is nothing more than a heavily reworked Brewerton side-notched point.

This specimen is an excellent example of side-notched Brewerton points, as well as Big Sandy II, Godar, and related late Middle Archaic period side-notched points. All these points mark a horizon that immediately pre-dates the Late Archaic phases characterized by the distinctive Savannah River point throughout many parts of the Eastern United States.

### *Teardrop Points*

Three examples of small lobate-stemmed points were recovered from the excavations. These specimens are usually called Teardrop points in the southern New Jersey and northern Delaware region. Some investigators have linked these to Piscataway points, an Early to Middle Woodland type common in the Potomac and Patuxent River drainages. However, the latter type usually display a longer blade element than the three examples recovered from Beech Ridge. Despite morphological differences relative to points from the Potomac and Patuxent drainages, these points seem to fall within the Early Woodland period in the Delaware Bay area. These three examples are described below.

One specimen was recovered from Level 3 of N75 E113 (east half, FS 72), a context that corresponds to the upper part of the C horizon extending across the site. This point was manufactured from a gray chert. The base of the point preserves cobble cortex, reflecting its source from streambed gravel sources. The point has well-flaked blade margins that converge to a sharp tip (Plate 4.11). The shoulders are symmetrical with respect to the blade element, while



Plate 4.10 Side-Notched Brewerton Point. This artifact was recovered from Excavation Level 2 in N96 E114 (FS 328), part of the upper C horizon at the site. The point has been split down the middle from an impact fracture. Note the width of the blade element relative to the base. The blade element exhibits extensive resharpening while hafted.



Plate 4.11 Teardrop Points. Top, recovered from Excavation Level 3 in N75 E113 (FS 72); bottom left, recovered from Excavation Level 3 in N77 E118 (FS 99); bottom right, recovered from Excavation Level 2 in N82 E116 (FS 92).

the stem tapers evenly to the base, which is marked by the above-noted cobble cortex. The point is biconvex in cross-section and measures 32 millimeters in length, 18 millimeters in width, and seven millimeters in thickness.

A second Teardrop point was recovered from Level 3 of N77 E118 (FS 99; see Plate 4.11). This level removed the upper 10 centimeters of the C horizon extending across the site. The point was manufactured from a flake of brown jasper. Indeed, it is best described as a unifacial point, with only small retouch flakes at the distal end showing on the ventral surface of the source flake. The point has rounded shoulders and as much blade element above that juncture as there is stem below it. The striking platform and bulb are at the stem end of the specimen. The point measures 30 millimeters in length, 18 millimeters in width, and five millimeters in thickness.

The third example of this point type was recovered from Level 2 of N82 E116 (west half, FS 92), corresponding to the thin A2 horizon (see Plate 4.11). This point was manufactured from a flake of brown jasper struck from a small cobble or pebble. Cortex is present on a small area of the platform marking the base of the stem. The point has a definite curve, though the source flake was thick and required true bifacial reduction, unlike the unifacial point described above. The shoulders are asymmetrical with respect to the blade and stem elements, with one side more pronounced than the opposite side. The specimen measures 29 millimeters in length, 17 millimeters in width, and seven millimeters in thickness.

#### MISCELLANEOUS PROJECTILE POINTS

Three separate points and one fragment remain to be described. One is a Middle Woodland Fox Creek specimen, while the other three are unidentified and cannot be tied to known chronological periods. These items are discussed in the following sections.

##### *Fox Creek (Selby Bay)*

One example of this distinctive Middle Woodland period point type was recovered from the excavations (Plate 4.12). It was recovered from the lower part of the surface A horizon of N77 E118 (FS 96) and is a complete specimen manufactured from purple argillite. The stem element is square with a slightly indented or incurved base. The shoulders are weakly defined, as is typical of this type.

##### *Unidentified Points*

The first of the three unidentified points is a quartz specimen exhibiting a small rounded stem element. This is a crudely manufactured point recovered from the A horizon in N91 E122 (FS 128) (Plate 4.13). The second unidentified point is a specimen manufactured from grayish black chert. It is a lozenge-shaped point missing part of the stem element and may be a variant of the Early Woodland Teardrop-Piscataway type. It was recovered from Shovel Test 2, excavated to the grid south of the right of way (FS 20); this point came from the A-horizon/C-horizon contact area and is illustrated in Plate 4.13.



Plate 4.12 Fox Creek/Selby Bay Stemmed Point. Made from purple argillite, this point was recovered from Excavation Level 1 in N77 E118 (FS 96).



Plate 4.13 Unidentified Points. The quartz specimen on the left was recovered from Excavation Level 1 in N91 E122 (FS 128); the specimen on the right (FS 20), manufactured from gray chert, was recovered from the A-horizon Shovel Test 2 placed outside of the ROW and is tentatively classed as a variant of the Early Woodland Teardrop or Piscataway point.

The remaining unidentified point is a distal tip fragment recovered from the lower C horizon in N90.2 E110 (FS 232). This fragment, manufactured from Iron Hill chert, is likely an Early Archaic point. The remaining blade margins preserve fine pressure flaking below the tip commensurate with the flaking of the Palmer/Kirk specimens recovered from other parts of the site. This point is not illustrated.

#### MISCELLANEOUS BIFACE FRAGMENTS

There are six biface fragments recovered from various contexts at the site. Two are proximal fragments snapped across the midpoint of the blade element; both have rounded bases. One specimen (FS 152) was manufactured from thermally altered jasper (Plate 4.14). This fragment was recovered from Excavation Level 5 in N84 E124, a stratigraphic context that corresponds to the contact with the C horizon and the underlying paleosol B horizon. This biface fragment is likely associated with the Early Archaic component represented by the Palmer/Kirk points recovered in the block excavation area.

The second proximal fragment is a specimen manufactured from a light tan chert (FS 111). It was recovered from the contact between the A horizon and upper C horizon in N89 E122 (Excavation Level 2) (see Plate 4.14).

A small biface, nearly complete and modified from a pebble, was recovered from Excavation Level 3 in N75 E118 (FS 29), a context corresponding with the upper to middle C horizon. This specimen preserves pebble cortex on one side and exhibits broad flake scars around the blade perimeter (see Plate 4.14).

Two other biface fragments are portions of the blade elements of unfinished tools. One is the lateral fragment of a point preform manufactured from Iron Hill chert and recovered from Excavation Level 3 in N75 E113 (FS 72). This context is comparable to the mid portion of the C horizon and may correspond to the LeCroy stratigraphic position. It is clearly from Archaic contexts and is illustrated in Plate 4.14. The other biface or point preform, also manufactured from Iron Hill chert, is the blade portion snapped off above the juncture with the base or stem element (see Plate 4.14). It was recovered from the A horizon in N94.5 E111 (FS 313). This fragment likely belongs to an unknown period of the Woodland stage.

The final biface fragment is a nodule of yellow jasper preserving a flaked edge. It was recovered from the lower A horizon of Excavation Level 2 in N78 E118 (FS 288). This fragment is not illustrated.

#### END SCRAPERS

Two specimens are classed as D-shaped end scrapers. One specimen, manufactured from speckled yellowish jasper, has a steep working edge on one end (Plates 4.15 and 4.16). The opposite side exhibits a worked edge for scraping purposes, as well. This tool was recovered



Plate 4.14 Biface Fragments.



Plate 4.15 D-Shaped End Scrapers from Archaic Contexts. See alternate view of these artifacts in Plate 4.16.



Plate 4.16 Archaic End Scrapers Showing Working Edges. The tan jasper specimen on the left has a steep, chisel-like working edge, while the greenish gray chert specimen on the right has a much lower working angle on the blade element. Both have been modified from thick flakes reduced from large pebbles.

from Excavation Level 4 of N78 E113 (FS 188), in the lower C horizon, which puts it within the Palmer/Kirk context.

The second end scraper was manufactured from a grayish chert. This tool exhibits a rounded and well-flaked working edge; it was recovered from Excavation Level 4 in N75 E118 (FS 33), comparable to the Palmer/Kirk contexts. It is from the same depth as the specimen described above.

### FLAKE TOOLS

Two specimens are classed as flake scrapers. One is a decortication flake of quartz with a concave working edge. It was recovered from the A horizon in N75 E116 (FS 257) and is not illustrated. The second specimen is a coarse-grained grayish chert flake with use-wear along one of the lateral margins. It was recovered from the A horizon of N80 E116 (FS 198) and is also not illustrated.

### CORE FRAGMENTS

There are five specimens classed as core remnants. Three are quartz specimens, recovered, respectively from the lower A horizon in N82 E122 (FS 17), the lower A horizon in N75 E120 (FS 156), and the upper C horizon in N87 E122 (FS 22). None of these items are diagnostic.

Two remaining specimens are fragments of a chert pebble and a jasper nodule. The chert specimen preserves pebble cortex and was recovered from the paleosol B horizon in N91 E122. The jasper specimen was from the lower A horizon in N77 E118 (FS 96).

### CERAMICS

The ceramic assemblage from Beech Ridge is limited in total count. Tables 4.1, 4.2, and 4.3 below provide outlines of the recovered sherds and their proveniences.

**Table 4.1 Coulbourn Ceramics**

FS #	Provenience	Artifact Count	Object	Typology	Material	Surface Treatment	Element	Comments
54	TU N72 E120, SE Quad, Level 3	1	Sherd	Coulbourn	Clay Temper	Net Impressed	Body	
54	TU N72 E120, SE Quad, Level 3	1	Interior Spall	Coulbourn	Clay Temper	Unidentified		
227	TU N90.2 E110, SE Quad, Level 3	1	Sherd	Coulbourn	Clay Temper	Net Impressed	Body	
229	TU N90.2 E110, NW Quad, Level 2	1	Exterior Spall	Coulbourn	Clay Temper	Net Impressed		
229	TU N90.2 E110, NW Quad, Level 2	1	Sherd	Coulbourn	Clay Temper	Net Impressed	Body	Point Provenienced. X=66-69, Y=134-140, 14 cmbs

**Table 4.1 Cont'd**

FS #	Provenience	Artifact Count	Object	Typology	Material	Surface Treatment	Element	Comments
229	TU N90.2 E110, NW Quad, Level 2	1	Exterior Spall	Coulbourn	Clay Temper	Net Impressed		Point Provenienced. X=65, Y=138-140, 14.5 cmbs
229	TU N90.2 E110, NW Quad, Level 2	1	Sherd	Coulbourn	Clay Temper	Net Impressed	Body	recent break (3 pieces). Point provenienced. X=64-66, Y=137-143, 15 cmbs
233	TU N90.2 E110, NE Quad, Level 4	1	Sherd	Coulbourn	Clay Temper	Net Impressed	Body	
238	TU N90.2 E110, SE Quad, Level 4	1	Sherd	Coulbourn	Clay Temper	Net Impressed	Body	
301	TU N94.5 E112, SW Quad, Level 3	1	Sherd	Coulbourn	Clay Temper	Unidentified	Body	
302	TU N94.5 E112, SE Quad, Level 4	1	Sherd	Coulbourn	Clay Temper	Net Impressed		
305	TU N94.5 E112, NW Quad, Level 5	1	Interior Spall	Unidentified	Clay Temper	Unidentified		
338	TU N97 E111, W Quad, Level 3	1	Sherd	Coulbourn	Clay Temper	Unidentified		
341	TU N97 E111, M Quad, Level 3	1	Sherd	Coulbourn	Clay Temper	Net Impressed		
343	TU N94.5 E112, SW Ext., Level 1	1	Sherd	Coulbourn	Clay Temper	Unidentified		

**Table 4.2 Townsend-Rappahannock Ceramics**

FS #	Provenience	Artifact Count	Object	Typology	Material	Surface Treatment	Element	Comments
211	TU N91 E118, NW Quad, Level 1	1	Sherd	Rappahannock	Shell Temper	Fabric Impressed	Body	recent break, 2 pieces mend
211	TU N91 E118, NW Quad, Level 1	1	Sherd	Rappahannock	Shell Temper	Fabric Impressed	Body	recent break, 2 pieces mend
221	TU N91 E118, SE Quad, Level 2	1	Sherd	Rappahannock	Shell Temper	Fabric Impressed	Body	
248	TU N90.2 E110, SW Quad, Level 5	1	Sherd	Rappahannock	Shell Temper	Fabric Impressed	Body	
282	TU N94.5 E112, SW Quad, Level 2	2	Sherd	Rappahannock	Shell Temper	Fabric Impressed	Body	
284	TU N94.5 E112, NW Quad, Level 3	1	Sherd	Rappahannock	Shell Temper	Fabric Impressed	Body	
285	TU N94.5 E112, SW Ext., Level 3	2	Sherd	Rappahannock	Shell Temper	Fabric Impressed	Body	
285	TU N94.5 E112, SW Ext., Level 3	3	Sherd	Unidentified	Shell Temper	Cord Marked	Body	
300	TU N94.5 E112, SE Ext., Level 1	1	Sherd	Rappahannock	Shell Temper	Fabric Impressed	Body	
306	TU N94.5 E112, SW Ext., Level 5	2	Sherd	Rappahannock	Shell Temper	Unidentified	Body	
310	TU N93.5 E110.5, Level 1	1	Sherd	Rappahannock	Shell Temper	Fabric Impressed	Body	
311	TU N93.5 E110.5, Level 2	5	Sherd	Rappahannock	Shell Temper	Fabric Impressed	Body	
314	TU N 94.5 E111, N Half, Level 1	1	Sherd	Rappahannock	Shell Temper	Fabric Impressed	Body	
315	TU N 94.5 E111, S Half, Level 2	10	Sherd	Rappahannock	Shell Temper	Fabric Impressed	Body	
316	TU N 94.5 E111, N Half, Level 2	2	Sherd	Rappahannock	Shell Temper	Fabric Impressed	Body	
317	TU N 94.5 E111, S Ext., Level 2	7	Sherd	Rappahannock	Shell Temper	Fabric Impressed	Body	
318	TU N 94.5 E111, S Ext., Level 3	3	Sherd	Rappahannock	Shell Temper	Fabric Impressed	Body	

**Table 4.3 Miscellaneous Ceramics**

FS #	Provenience	Artifact Count	Object	Typology	Material	Surface Treatment	Element	Comments
2	TU N99 E112, Level 3	1	Sherd	Accokeek	Sand Temper	Cord Marked	Body	Interior cord marked
21	TU N99 E116, Level 4	1	Crumb	Accokeek	Sand Temper			
319	TU N 94.5 E111, S Half, Level 3	1	Sherd	Accokeek	Sand Temper	Cord Marked	Body	
322	TU N100 E110, SE Quad, Level 2	2	Sherd	Accokeek	Sand Temper	Cord Marked	Body	
13	TU N75 E118, SE Quad, Level 2	1	Exterior Spall	Mockley	Shell Temper	Net Impressed	Body	
45	TU N72 E120, NE Quad, Level 2	1	Sherd	Mockley	Shell Temper	Net Impressed	Body	
79	TU N75 E111, E Half, Level 2	1	Sherd	Mockley	Shell Temper	Net Impressed	Body	

**Table 4.3 Cont'd**

FS #	Provenience	Artifact Count	Object	Typology	Material	Surface Treatment	Element	Comments
81	TU N75 E111, E Half, Level 3	1	Sherd	Mockley	Shell Temper	Net Impressed	Body	
96	TU N77 E118, E Half, Level 2	1	Sherd	Mockley	Shell Temper	Net Impressed	Body	broken in two pieces post excavation
157	TU N75 E120, S Half, Level 2	1	Sherd	Mockley	Shell Temper	Net Impressed	Body	
210	TU N91 E118, SW Quad, Level 1	1	Sherd	Mockley	Shell Temper	Net Impressed	Body	recent break, 2 pieces
201	TU N80 E116, NE Quad, Level 4	1	Sherd	Unidentified	Unknown		Body	
342	TU N94.5 E112, NW Quad, Level 4	1	Crumb	Unidentified	Unknown			

The recovered sherds represent Early, Middle, and Late Woodland ware groups. The Early Woodland to early Middle Woodland Colbourn ceramics and the common shell-tempered Late Woodland Rappanahock Fabric Impressed ware is the most common in count. However, several sherds of Early Woodland Accokeek cordmarked and the Middle Woodland Mockley net-impressed wares are present, as described below. It would appear that only one or—at the most—two vessels represent each ware group present. This low number suggests that these vessels were used as a means of conveyance to the site for foodstuffs or other items, or as a means for collection of water and/or other items to be carried back to a larger occupation than present at Beech Ridge.

#### *Accokeek Cordmarked*

This is the earliest ware present at the site and is represented by only four cordmarked body sherds (Plates 4.17 and 4.18). These four sherds come from the body of a vessel and do not convey much information on vessel shape; all exhibit a sandy clay paste. These vessels (and the sherds point to at least two separate vessels) were fired well enough to oxidize both interior and exterior surfaces. The largest sherd, recovered from the base of the A horizon (Excavation Level 3, N99 E112) has bold cordmarking on the exterior surface and isolated corded impressions on the interior surface. The latter impressions represent the edge of the paddle (where the cord wraps around a flat wooden spatula-shaped implement) used to finalize the exterior surface when it was used as a tool to hold the interior of the vessel while rotating it to continue placement of the exterior cordmarking. This sherd is similar to the crushed interior-exterior cordmarked vessel recovered during HCI's Phase II effort. The other three sherds do not exhibit such interior cording.

#### *Coulbourn Ware*

An unusual ware, this is a grog- or clay-tempered pottery Cara Wise first defined on the Eastern Shore (Artusy 1976). Vessels reconstructed for this ware are similar to the thick-walled, conoidal vessels characteristic of Popes Creek ceramics (Plate 4.19). This ware is considered to be an Eastern Shore cognate ware of the classic Popes Creek ceramics, a member of a widespread early Middle Woodland net-impressed horizon found from the lower Delaware River south to the Chowan River area of North Carolina.

The sample from Beech Ridge includes 15 sherds (including interior and exterior spalls). These sherds, with one exception, are clearly from the same vessel—a thick-walled, net-impressed jar. Vessel wall thickness at its maximum is between 14 to 15 millimeters. No rims or basal



Plate 4.17 Body Sherd of Accokeek (or Wolf Neck) Cordmarked. This sherd exhibits cordmarking on the interior surface, illustrated in Plate 4.18.



Plate 4.18 Interior of a Body Sherd of Accokeek or Wolf Neck Cordmarked.



Plate 4.19 Body Sherds of Coulbourn Net Impressed. This early Middle Woodland Popes Creek cognate ware was tempered with clay pellets.

fragments were recovered; vessel shapes are inferred to be similar to the conoidal jars with slightly flaring rims found in early Middle Woodland period net-impressed assemblages. Nearly all these sherds were recovered from a restricted horizontal area centered close to N94 E112. The one sherd that represents a different vessel (FS 54) was recovered from N72 E120; this sherd represents a thinner-walled vessel.

#### *Mockley Ware*

Mockley is the classic shell-tempered ware found in the circum-Chesapeake Bay region. As with Popes Creek and related wares, this shell-tempered pottery forms a widespread and chronologically tight horizon from the lower Delaware River Valley south to the Chowan River. It is clearly an evolution or development out of the earlier Popes Creek horizon. In this sense, the Popes Creek to Mockley continuum is a tradition in Willey and Phillip's (1958) sense; that is, within a broader horizon geographically bounded by distinct Middle Woodland wares in the Northeast, Southeast, and Upper Ohio Valley region to the west.

There are only six sherds of this ware present in the assemblage recovered from Beech Ridge. Most of these sherds appear to be from one vessel, a thick-walled, net-impressed jar recovered in the N75 E118 region of the site (Plate 4.20). No rim sherds or fragments of the base are present in the assemblage. Thickness of the vessel wall is close to 15 millimeters at its maximum.

#### *Townsend Series (or Ware)*

The largest sample of prehistoric ceramics belongs to the Late Woodland Townsend Series (Lopez 1965). As defined, Townsend includes several named "types," including Rappahannock Fabric Impressed, the most common example in the assemblage. In total, 43 sherds of this ware were recovered. Most of these sherds come from a fabric-impressed vessel. One sherd exhibits a corded line placed around the base of the neck of the vessel (Plate 4.21), suggesting that one jar in the assemblage is an example of Townsend Corded-Horizontal (Lopez 1965). All of these sherds are clearly from the same vessel, as they share strong similarities in color, wall thickness, and surface treatment. Most of the body of a decorated vessel in the Townsend Ware group would have been fabric-impressed and variably (though not necessarily) smoothed over after application. Decoration was always placed between the neck and the rim. No rims or basal sections were recovered to shed better light on the shape of this vessel.

#### *Unidentified Sherd*

One small sherd with crushed rock or grit temper was recovered. This one sherd, with smoothed exterior and interior surfaces, comes from N80 E116. It may be Late Woodland in age, as it is thin and rather well made.

## DEBITAGE ANALYSIS

Debitage was recovered from the upper A horizon down into the paleosol B horizon in various localities across the site. The total debitage is presented by raw material in Table 4.4.



Plate 4.20 Body Sherds of Mockley Net Impressed. This classic shell-tempered Middle Woodland ware is found throughout the Chesapeake Bay region.



Plate 4.21 Body Sherds of Townsend Corded-Horizontal. Note the corded line placed across the sherd on the lower left. The body of the vessel is fabric impressed, as exhibited on the top specimen and the body sherd on the lower right, which was partially smoothed over.

**Table 4.4 Debitage Totals**

Object	Argillite	Chalcedony	Chert	Ironstone	Jasper	Quartz	Quartzite	Rhyolite	Total
Cobble Fragments and Split Pebbles					14	2	1		17
Core			1		1	3			5
Flake	1	9	204	1	534	108	6	12	875
Shatter			4		10	11	4		29
<b>Total</b>	<b>1</b>	<b>9</b>	<b>209</b>	<b>1</b>	<b>559</b>	<b>124</b>	<b>11</b>	<b>12</b>	<b>926</b>

Although low in count in terms of overall site totals, thedebitage present from sub-A-horizon contexts can be used to map discrete events from late Paleoindian and Archaic stage occupations in the site, in particular those present in the large block unit excavated around N75 E118, where the Palmer/Kirk and LeCroy points were recovered. These individual events, small as they are, provide insight into the structure of low-density lithic activities related to biface curation across the evolving landform that makes up the Beech Ridge Site.

Given the low numbers ofdebitage from raw material categories that could effectively or confidently be ascribed to single occupations or episodes within an occupation, more detailed analysis ofdebitage beyond broad distribution studies was not attempted. The type ofdebitage analysis performed for the Frederick Lodge Site complex (7NC-J-97, 7NC-J-98, and 7NC-J-99) was not conducted. In that study, considerations ofdebitage attributes—such as platform shape, using Phagan’s method (Phagan 1976), presence/absence of lipping on the bulb of percussion, and size—were applied to a sample of flaking debris from Middle Archaic contexts in order to explore aspects of lithic technology (Petraglia et al. 2003). Results of this analysis provided some insight into biface-reduction trajectories, as well as curation technology (resharpening or edge maintenance) among cryptocrystalline materials, such as jasper and related lithic materials. Coming from well-excavated contexts, the Frederick Lodge sample size—much larger than the Beech Ridge sample—afforded this analysis.

In order to conduct the analysis, alldebitage from the block excavations was examined by level and grouped according to lithic raw material type to identify discrete “events” of tool manufacture, resharpening/curation, or related biface maintenance. In looking at the entire block area—level by level, not just each unit separately—a relatively complete view of the activities throughout the suite of Archaic period occupations within the site was established. This is particularly important in view of the existence of the late Paleoindian Dalton-Hardaway occupation(s) present in the paleosol B horizon and represented in low counts of lithic materials.

For purposes of analysis,debitage specimens of the same lithic material within a given level were designated an event number. Materials from these events were examined with a hand lens in order to identify all characteristic attributes (such as color, texture, fossil or crystalline inclusions, banding, etc.) and define raw material groups. The goal, in essence, was to isolate flakes removed from the same biface during the course of edge maintenance or related lithic curation/resharpening tasks. Events with three flakes or less were also assigned a number, but considered to be isolated occurrences. Individually, no substantial conclusions could be drawn with events of such low counts, other than to note that they likely reflect “spot” curation of a hafted blade. Some of the more isolated events were found to be associated with larger—though

spatially separate—events in terms of similarity in material, and are therefore considered related. Use of this procedure proved effective for showing that space was organized within the landform sampled by the block excavation through time, with most events focused on what is identified as the edge of a bluff overlooking the now-relict stream channel bordering the site to the east, southeast, and south.

Analysis of lithic materials from the A horizon was not conducted, given the extent of potential disturbance at this level. Events from Excavation Level 2 are discussed but not mapped, due to the same concern with mixture from disturbance and overlapping occupations. The following descriptions of events are presented in tabular form. In order to visually enhance the debitage events from Excavation Level 3 and lower, a series of GIS maps were produced. Larger events were mapped using GIS techniques to provide a visual enhancement of how they are organized in space within the large block excavation. These maps and a brief accompanying discussion follow the lithic events detailed below.

#### *Excavation Level 2 Lithic Events*

Table 4.5 lists in numerical order the identified lithic events in Excavation Level 2, which corresponds to the uppermost C-horizon context found beneath the surface A horizon. This stratigraphic context corresponds mostly to the Late Archaic period, though the small teardrop-shaped points could indicate an Early Woodland context as well for parts of the site. There are only six events that represent reliable groupings or clusters of flakes that can be considered single episodes of resharpening. Events 1 and 7 are the largest, both with 17 flakes total. The small events consist of only one to two flakes.

**Table 4.5 Identified Lithic Events, Excavation Level 2**

EVENT	MATERIAL	COUNT	UNITS	OBJECT
1	Black Chert-med/coarse grained	17	N75 E118, N75 E120, N77 E118, N77 E121, N78 E118	Biface-thinning flakes
2	Light Gray Chert	7	N75 E118, N75 E120, N77 E118, N78 E118, N77 E121	Biface-thinning flakes
3	Green/Brown Chert	1	N75 E120	Biface-thinning flake, isolated
4	Grayish white Chalcedony	2	N75 E118, N77 E118	Biface-thinning flakes, isolated
5	Black Chert (glassy)	1	N74 E118	Biface-thinning flake, isolated
6	Brownish Quartz	1	N77 E118	Flake fragment
7	Yellow Jasper (w/ micro fossils)	17	N75 E118, N75 E120, N77 E118	Biface-thinning flakes
8	Tan Jasper w/ white mottles	4	N75 E120, N77 E118, N78 E118	Biface-thinning flakes
9	Red Jasper	7	N75 E118, N75 E120, N77 E118, N78 E118	Biface-thinning flakes
10	Milky Quartz	1	N72 E120	Biface-thinning flake, isolated
11	White/Clear Quartz	6	N74 E118, N75 E118, N78 E118	Biface-thinning flakes
12	Pink Quartz	1	N74 E120	Biface-thinning flake, isolated

**Table 4.5 Cont'd**

EVENT	MATERIAL	COUNT	UNITS	OBJECT
13	White Quartz	1	N74 E120	Shatter, isolated
14	Gray Speckled Rhyolite	1	N74 E118	Biface-thinning flakes, isolated
15	Gray chalcedony	1	N75 E118	Biface-thinning flake, isolated
16	Tan/Light Gray Chert	4	N75 E118, N75 E120, N78 E118	Biface-thinning flakes
17	Red Jasper	1	N75 E118	Split pebble, isolated
18	Tan Jasper	2	N72 E120	Biface-thinning flakes, isolated
19	Gray Chert (coarse)	1	N75 E118	Biface-thinning flake, isolated
20	Yellow Jasper (coarse)	1	N75 E120	Biface-thinning flake, isolated
22	Greenish/Brown Chert	1	N74 E118	Biface-thinning flake, isolated

*Event 1: Black Chert.* Event 1 is associated with 17 black chert biface-thinning flakes (four are small retouch flakes) recovered from contiguous Test Units N75 E118, N75 E120, N77 E118, N77 E121, and N78 E118. Most of this material was within a 2-x-2-meter block within the excavated area. The lithic material that composes this event exhibits a slightly grainy texture, which served to segregate it from the glassy black chert characteristic of Event 5. The flakes of Event 1 reflect resharpening of the blade margin on a hafted biface.

*Event 2: Light Gray Chert.* This event is composed of seven light gray chert flakes recovered from adjacent Test Units N75 E118, N75 E120, N77 E118, and N78 E118. These flakes, again, show some clustering within a small area. Two of the flakes have cortex, while the remaining are non-cortex biface-thinning flakes. A small amount of thermal alteration is evident on some of the flakes. These flakes are interpreted as the result of resharpening a hafted biface modified from pebble or cobble sources, hence the cortex present.

*Event 7: Yellow Jasper.* There are 17 biface-thinning flakes associated with Event 7. These flakes are from one or more tools reduced from yellow jasper. Four flakes preserve sections of a rough cortex and several show evidence of thermal alteration. Microfossils are visible with a hand lens in the matrix of some of the flakes. Given the presence of cortex, it is assumed that these flakes come from a tool modified from cobble or pebble sources. The small fossil inclusions are excellent markers for identifying these flakes as a group within the block.

*Event 8: Tan Jasper with White Mottling.* This small event consists of four biface-thinning flakes of light tan jasper with bands of white. While little can be inferred from this event on its own, similar material was found in other levels and other areas of the site, making it a significant discovery. The blade of the third Palmer/Kirk specimen (FS 331), recovered in Excavation Level 4 of N96 E114, was fashioned from a similar material. Several flakes of this same material were also recovered from these contexts.

*Event 9: Red Jasper (Thermally Altered).* Seven biface-thinning flakes (one of which has a very small amount of cortex remaining) represent this event. This event may be related to Event 7; both events involve smooth jaspers, and while the flakes in Event 9 are reddened from heat exposure, the centers of several are the same yellow color as the Event 7 flakes. Both events represent the alteration of an existing biface, one reduced from either a pebble or cobble source.

*Event 11: White/Clear Quartz.* This event represents a group of six quartz biface-thinning flakes that are relatively similar, all appearing to be somewhat crystalline in nature. This similarity suggests that all were removed from a single biface. One of these flakes preserves a small patch of cortex. Other quartz flakes in this level are milky, white, pink, and brownish, and are represented by one specimen each. They clearly come from different tools.

### *Excavation Level 3 Lithic Events*

Lithic Events 23 through 32 were identified in Excavation Level 3 (Table 4.6). Event 23, comprised of 44 flakes of yellow jasper, is the major lithic concentration in this level from the block excavation. It may be a continuation of Event 7 from Excavation Level 7 above. Alternatively, Event 7 may be the upper part of the flaking cluster in Excavation Level 3, the preferred interpretation given the greater number of flakes. Events 28, 27, and 24 are the remaining lithic clusters marked by more than a handful of flakes.

**Table 4.6 Identified Lithic Events, Excavation Level 3**

EVENT	MATERIAL	COUNT	UNITS	OBJECT
23	Yellow Jasper	44	N72 E120, N75 E118, N75 E120 N77 E121, N77 E118, N78 E118	2 points, 1 shatter, 1 decort. flake, 1 primary flake, 39 biface-thinning flakes
24	Quartz	12	N72 E120, N74 E118, N75 E118, N77 E118, N77 E121,	Biface-thinning flakes
25	Gray Rhyolite	1	N74 E118	Biface-thinning flake, isolated
26	Quartzite	1	N78 E118	Primary flake, isolated
27	Red Jasper	13	N74 E120, N75 E120, N77 E118, N78 E118	Biface-thinning flakes
28	Black Chert	15	N72 E120, N 74 E118, N75 E118, N75 E120, N77 E118, N78 E118	1 shatter, 14 biface-thinning flakes
29	Gray Chert	4	N75 E118, N75 E120, N77 E118	Biface-thinning flakes
30	Pink Chert	1	N75 E118	Biface-thinning flake
31	Dark Gray Chert	1	N74 E118	Decort. Flake, isolated
32	Tan/Lt. Gray Chert	3	N75 E120, N77 E118	Biface-thinning flakes, isolated

*Event 23: Yellow Jasper.* Forty-four flakes of yellow jasper represent this event. The color of the material varies slightly and includes some flakes that are banded with a lighter yellow or tan, indicating variations in the parent nodule from which the implement was made. Thermal

alteration is apparent on the edges of a few flakes. In total, forty-one biface-thinning flakes and one piece of shatter are included in this event, the largest of any level. Also included are one large primary flake and a decortication flake. These flakes were recovered from Test Units N78 E118, N77 E121, N75 E118, N75 E120, and N72 E120. As noted, most of the specimens are biface-thinning flakes and smaller retouch flakes.

This event includes the general area that yielded the LeCroy bifurcate point. A jasper point, teardrop in shape and modified from a large biface-thinning flake, was recovered from N77 E118, also within the locality of this flaking event. Both of these tools are made from the same jasper material that defines Event 23. No matching distal fragment was found of the LeCroy point in this area; it is assumed to have been lost off-site. The point was discarded here; the debitage may reflect manufacture of a replacement. Event 23 almost certainly includes flakes that represent more than one specific lithic task. As noted, the biface-thinning flakes indicate the maintenance or resharpening of a hafted biface, while the presence of the sizeable decortication flakes suggest biface or point production from a cobble/pebble core or biface blank with remaining cortex. No cobble or pebble cores were recovered. Event 23 contains flakes that point to the only case at the site where cobble reduction—or reduction of a larger biface blank preserving cortex—was conducted. This is significant, given the scarcity of cobbles in the immediate site area; lithic raw materials were brought to the site during the site's Woodland and Archaic occupation.

*Event 24: Clear–Milky Quartz.* Event 24 is easily defined as it is based on a small assemblage of 12 quartz biface-thinning flakes recovered from Test Units N77 E121, N72 E120, N77 E118, N74 E118, and N75 E120. It has a broad distribution across the block within Excavation Level 3. The material is generally clear with some specimens falling more on the milky white end of the spectrum. Several very small retouch flakes are included in this event, as well as two flakes that preserve cortex. The flakes in this event could reflect both the manufacture of a projectile point from a pre-existing biface and/or resharpening a hafted biface. It is unlikely that the entire tool was fashioned on site or in this block area, given the relatively low number of flakes in this event and the overall low incidence of quartz at the site.

*Event 27: Red Jasper (Thermally Altered).* Event 27 contains 13 thermally altered red jasper biface-thinning flakes from four test units: N77 E118, N74 E120, N75 E120, and N78 E118. With the exception of FS 292 and FS 100, which are larger flakes, most flakes in this event are small and represent edge retouch of a hafted biface. One flake, FS 186, preserves a small amount of cortex and exhibits small pot lids typical of thermal alteration.

*Event 28: Black Chert (Medium Grained).* Fourteen flakes, including both biface-thinning and small retouch specimens (as well as one piece of shatter preserving cortex), make up Event 28. These artifacts were recovered from six units in the block: N75 E118, N72 E120, N77 E118, N74 E118, N75 E120, and N78 E118. The lithic material that makes up Event 28 is a uniform black chert with a visible granular structure; all are thus easily identifiable. The piece of shatter is small, but the preserved cortex suggests it could have come off of a larger tabular block, or it may have been removed from an early-stage biface, where cortex was still present. Overall, Event 28 represents either the reduction of a biface preform into a more finished tool or resharpening of a hafted biface tool.

*Event 32: Tan/Light Gray Chert.* This is a low-density event defined by the recovery of three biface-thinning flakes of a tan to light gray chert recovered from Test Units N77 E118 and N75 E120. These chert flakes are clearly from the same tool, all exhibiting tan banding and similar kinds of inclusions. These items reflect resharpening of a hafted biface. Additionally, flakes of this same material were recovered from other levels and areas of the site. It should be noted, too, that the Palmer/Kirk point from Excavation Level 4 in N96 E114 was manufactured from the same or a very similar material.

*Excavation Level 4 Lithic Events*

With Excavation Level 4, debitage counts begin to drop in count and become more defined in horizontal location. This excavation level includes Events 33 through 45 and refers to the middle to lower parts of the C horizon, as defined in the block and across the site area. As can be seen in Table 4.7, only events 36 and 40 have relatively high numbers of flakes. These events and those with lesser quantities are discussed below.

**Table 4.7 Identified Lithic Events, Excavation Level 4**

EVENT	MATERIAL	COUNT	UNITS	OBJECT
33	Clear Quartz	6	N72 E120, N74 E120, N75 E120, N77 E118	5 Biface-thinning flakes, 1 unid flake
34	Gray Rhyolite	2	N75 E118	Biface-thinning flakes, isolated
36	Black Chert	17	N75 E118, N75 E120, N77 E118, N78 E118	Biface-thinning flakes
37	Dark Gray Chert	1	N75 E120	Biface-thinning flake, isolated
38	Light Gray Chert	3	N74 E118, N75 E120	Biface-thinning flakes, isolated
39	Purplish Chert	5	N75 E118, N77 E121, N78 E118	Biface-thinning flakes
40	Tan Jasper w/ white mottles	23	N72 E120, N74 E120, N75 E118, N75 E120, N77 E121, N78 E118	23 biface-thinning flakes
41	Dk. Brown/Red Jasper	1	N75 E120	Biface-thinning flake, isolated
42	Red Jasper (thermally altered)	1	N78 E118	Biface-thinning flake w/ cortex, isolated
43	Gray/Red Chert	1	N75 E118	Decort. Flake, isolated
44	Very Light Gray Chert	1	N75 E20	Biface-thinning flake, isolated
45	Pink Quartz	1	N75 E120	Biface-thinning flake, isolated

*Event 33: Clear Quartz.* This event is defined by the presence of six crystalline or translucent quartz flakes, including five biface-thinning flakes and one flake fragment. These items were recovered from Test Units N72 E120, N77 E118, N74 E120, and N75 E120 in the block excavation. The low number of these flakes points to limited resharpening or maintenance of a hafted biface, all obviously detached from the same tool.

*Event 36: Black Chert.* This event is comprised of 17 thin black chert biface-thinning flakes, all uniform in texture and color. These flakes were found in a relatively restricted horizontal area in Test Units N75 E118, N77 E118, N75 E120, and N78 E118, and were clearly detached in the resharpening of a hafted biface.

*Event 38: Light Gray Chert.* This event is defined by only three small biface-thinning flakes. One flake was recovered from N74 E118, while the other two came from N75 E120. These items reflect resharpening of a hafted biface edge.

*Event 39: Purplish Chert.* Five flakes of a purple chert define this event. These items were recovered from units N75 E118, N77 E121, and N78 E118 of the block excavation. All point to retouching of a hafted biface.

*Event 40: Tan Jasper with White Mottling.* This is a distinctive jasper represented by 23 biface-thinning flakes. All of these flakes were removed from the edge of a hafted biface and likely indicate extensive modification or resharpening of the implement.

*Excavation Level 5 Lithic Events*

Excavation Level 5 samples the lower C horizon to the point of contact of the paleosol B horizon within the block excavation. Lithic events 46 through 56 are defined for this context within the block excavation. There are two notable events that include relatively higher counts of flakes: Events 50 and 48. Lesser events range in count from 10 down to four, with the remaining represented by one to two flakes only.

**Table 4.8 Identified Lithic Events, Excavation Level 5**

EVENT	MATERIAL	COUNT	UNITS	OBJECT
46	Quartz	8	N75 E120, N77 E118	All flakes
47	Gray Rhyolite	1	N78 E118	Isolated flake
48	Black Chert	18	N74 E118, N75 E118, N75 E122, N77 E118, N78 E118	All Flakes
49	Light Tan Jasper	7	N75 E120, N77 E118	All flakes
50	Yellow Jasper	29	N72 E120, N75 E118, N75 E120, N77 E118, N77 E121, N78 E118	All flakes
51	Red Jasper	10	N75 E120, N77 E121	All flakes
52	Brown/yellow Jasper	1	N75 E120	Isolated flake
53	Gray/Black Chert	4	N75 E120, E75 E120	All flakes
54	Quartzite	2	N75 E120, N78 E118	Isolated flake and shatter
55	Gray/green Jasper	1	N75 E118	Isolated flake
56	Black Chert	1	N75 E118	Isolated flake

*Event 50: Yellow Jasper.* Twenty-nine jasper flakes from the block excavation define this event. All of these are biface-thinning flakes recovered from the core of the block area. These flakes were detached from a single hafted biface in the course of blade resharpening.

*Event 48: Black Chert.* This event is defined by the recovery of 18 black chert flakes, all obviously detached from the same implement. These are biface-thinning flakes and reflect resharpening of a hafted implement.

*Event 51: Red Jasper.* This group of jasper flakes may be thermally altered examples of those flakes in Event 50. These are biface-thinning flakes and were detached in the course of resharpening a hafted tool.

*Event 46: White Quartz.* This group is readily identified and is restricted to two units within the block excavation. These are biface-thinning flakes and likely mark the resharpening of a single hafted implement.

*Event 49: Light Tan Jasper.* This group of seven jasper flakes is slightly different than those that compose Event 50 and are thus considered evidence of a separate episode of hafted biface maintenance. These flakes were recovered from only two units within the block excavation.

*Event 53: Grayish Black Chert.* Four distinctive grayish black chert flakes represent this small event. These four flakes are biface-thinning specimens and represent resharpening of a hafted implement.

*Lithic Events from Excavation Levels 6 through 9*

Low quantities of flaking debris were recovered from levels that penetrated into the paleosol B horizon. These events include only groupings of four or less flakes. While appearing insignificant by themselves, they show variable horizontal grouping that clearly argues for isolated episodes of biface resharpening. With the exception of Event 57, composed of quartz, all of these events consist of jaspers or cherts in various colors and textures. Given the low counts of these individual episodes, GIS mapping was difficult. The tables below provide the descriptions of these small flaking events for Excavation Levels 6 through 9.

**Table 4.9 Identified Lithic Events, Excavation Level 6**

EVENT	MATERIAL	COUNT	UNITS	OBJECT
57	Quartz	3	N72 E120, N75 E118, N78 E118	Biface-thinning flakes, isolated
58	Black Chert	4	N75 E118, N77 E118	Biface-thinning flakes
59	Red Jasper	3	N72 E120, N75 E118, N77 E118	Biface-thinning flakes, isolated
60	Tan Jasper	4	N75 E118, N75 E120	Biface-thinning flakes
61	Light Tan Jasper	1	N77 E118	Biface-thinning flake, isolated

**Table 4.10 Identified Lithic Events, Excavation Level 7**

EVENT	MATERIAL	COUNT	UNITS	OBJECT
62	Yellow Jasper	4	N72 E120, N80 E116	Biface-thinning flakes
63	Purplish/Gray Chert	1	N72 E120	Biface-thinning flake w/ cortex, isolated
64	Tan Chert	1	N77 E118	Biface-thinning flake, isolated

**Table 4.11 Identified Lithic Events, Excavation Level 8**

EVENT	MATERIAL	COUNT	UNITS	OBJECT
65	Black Chert	1	N72 E120	Biface-thinning flake, isolated

**Table 4.12 Identified Lithic Events, Excavation Level 9**

EVENT	MATERIAL	COUNT	UNITS	OBJECT
66	Black Chert	1	N75 E118	Biface-thinning flake, isolated

*A Consideration of Debitage Event Distribution*

In order to provide some control over the distribution of debitage, a series of GIS-based maps were generated to assess any structure that the horizontal distribution of such events may reflect. When the various larger events are viewed in terms of horizontal dimensions, an idea of the structured use of space on the Beech Ridge landform close to the scarp overlooking the relict drainage is obvious.

The above section describes the lithic events from the top down. The reverse will be done here, considering the GIS distribution maps from the lowest levels and working up through the column. One note of caution is in order. Given the relatively low counts of debitage for any one event (in the tens or less), mapping of individual events created at times stronger images than warranted by the actual representation of flaking material.

The lowest levels in the large excavation block sampled the paleosol B horizon present across the site area. Excavation Levels 7 through 9, taken together, contain only eight small biface-thinning flakes. As seen in the tables above, Event 62 from Excavation Level 7 is comprised of only four jasper flakes. The remaining events, 63 through 66, are each composed of one flake. Only Event 62 (from Excavation Level 7) was mapped. This map, depicted in Figure 4.3, clearly shows the small cluster of four jasper flakes adhering to the southeast corner of the block, close or near to grid point N72 E121. This small cluster of jasper biface-thinning flakes marks a localized biface retouch episode.

This small event exhibits a complete disjunction with those mapped in the overlaying excavated context, Excavation Level 6. Figure 4.4 illustrates mapping for Event 60 in this context, composed of four tan jasper flakes concentrated between N75 E118 and N75 E120.

Excavation Level 6, a context referring to the upper part of the paleosol B horizon, contained Events 57 through 61. Although low in number, mapping clearly shows discrete locations across the block.

Excavation Level 5 offered a greater number of debitage events with slightly higher counts. Figures 4.5 through 4.10 illustrate mapping of Events 46, 48, 49, 50, 51, and 53 from this context. Although all these events are composed of limited quantities of flakes—except for Event 48 (18 black chert flakes) and Event 50 (29 yellow jasper flakes)—variable horizontal distributions are noted. Events 48 and 50 are of interest, as both are clearly associated with

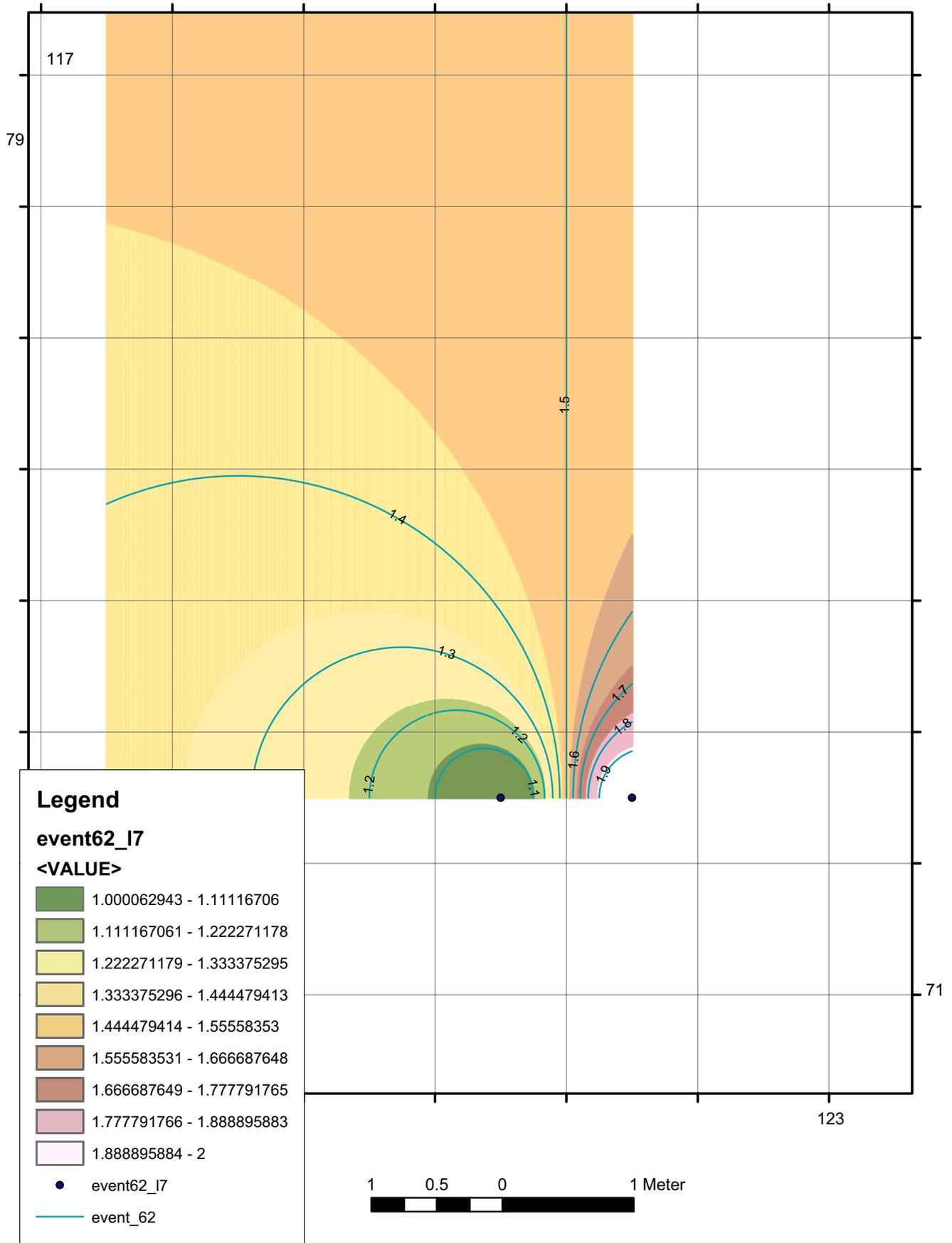


Figure 4.3 Event 62, Excavation Level 7.

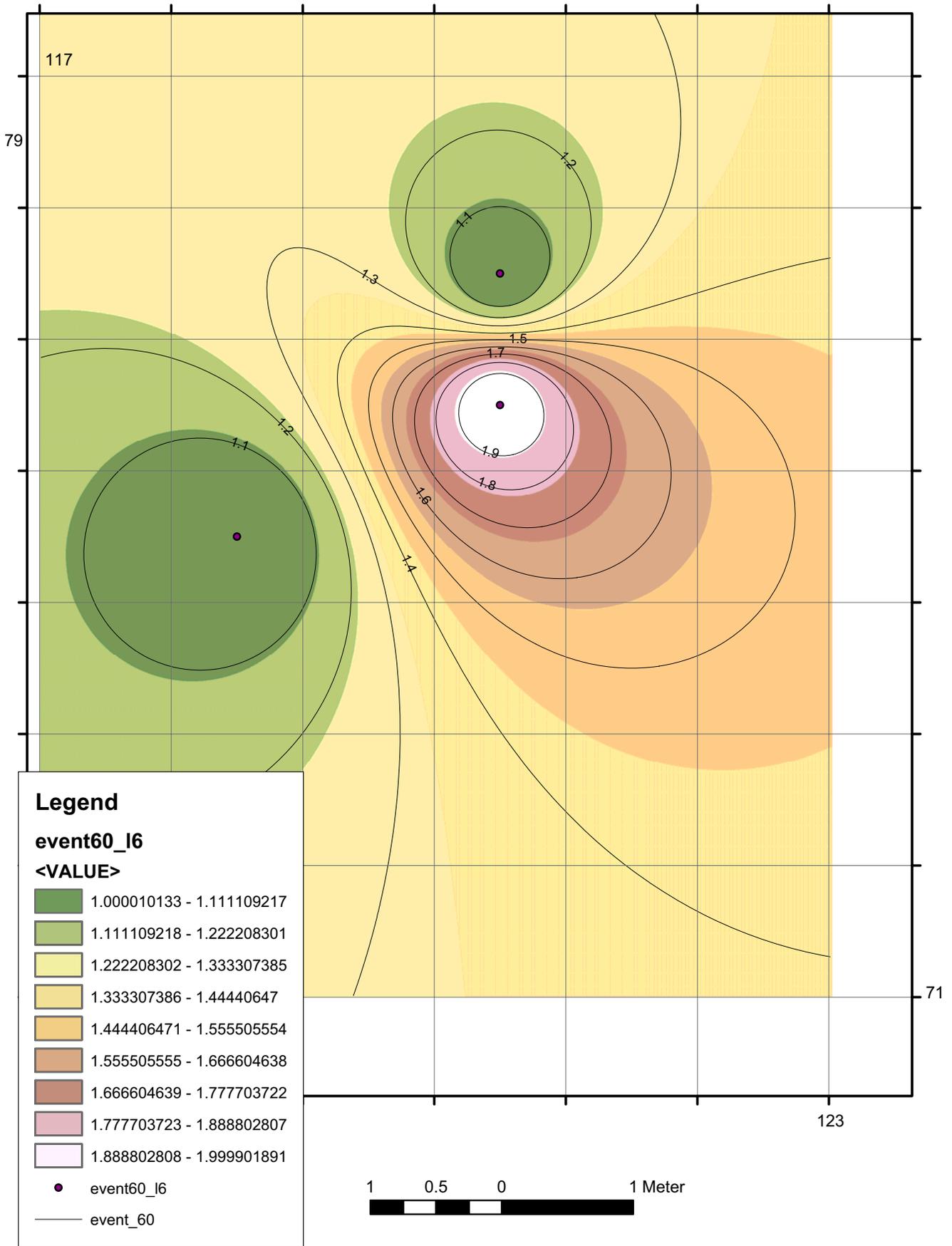


Figure 4.4 Event 60, Excavation Level 6.

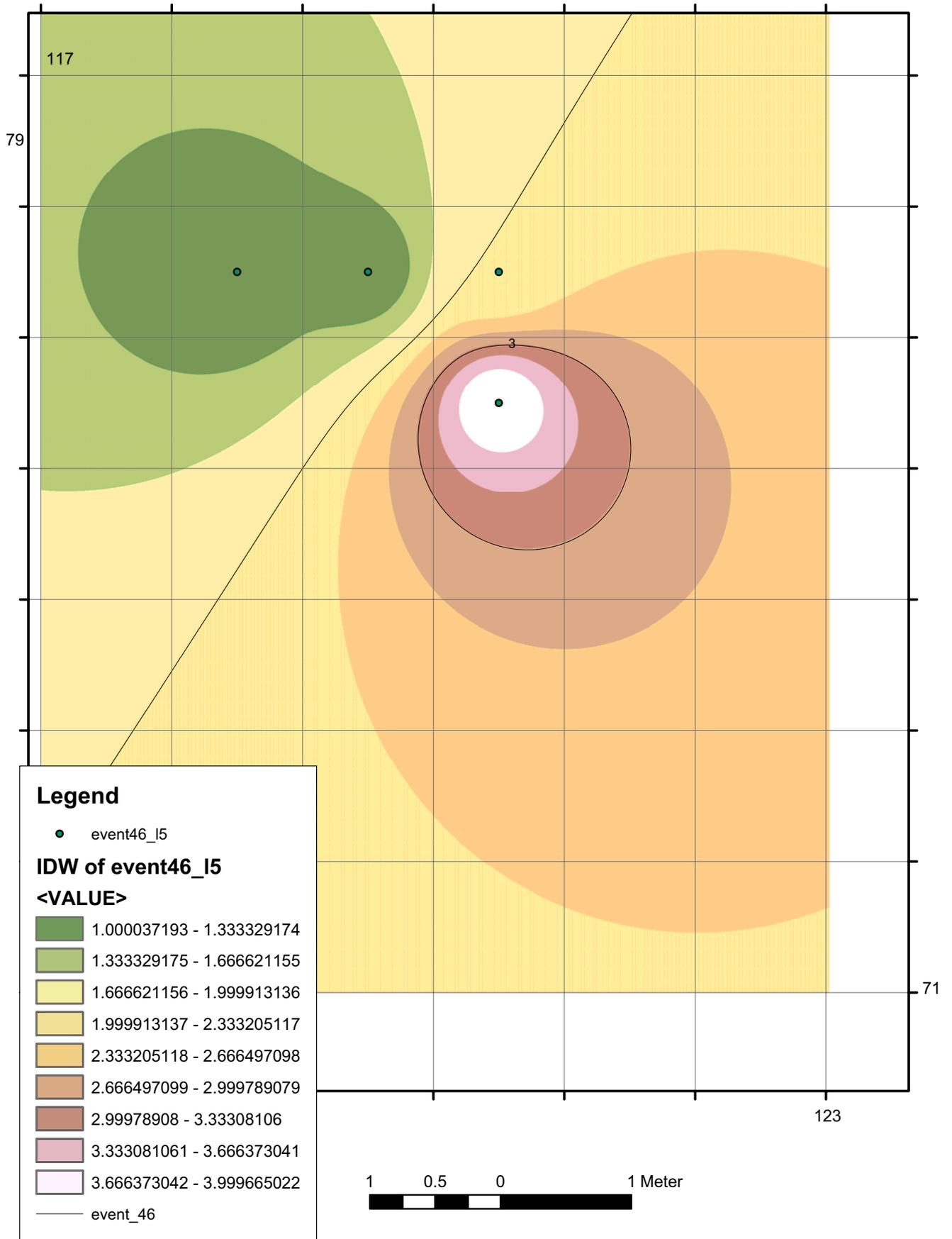


Figure 4.5 Event 46, Excavation Level 5.

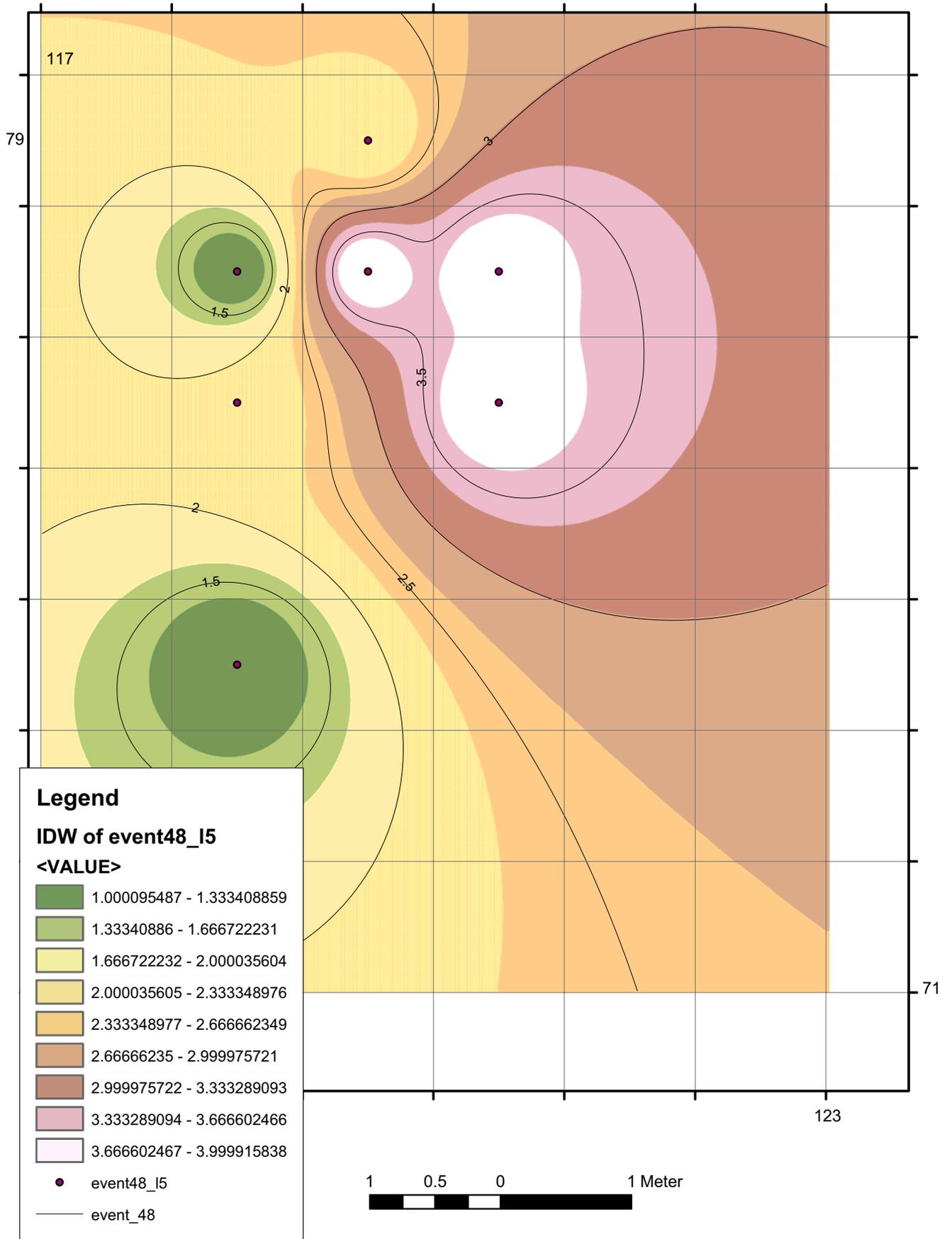


Figure 4.6 Event 48, Excavation Level 5.

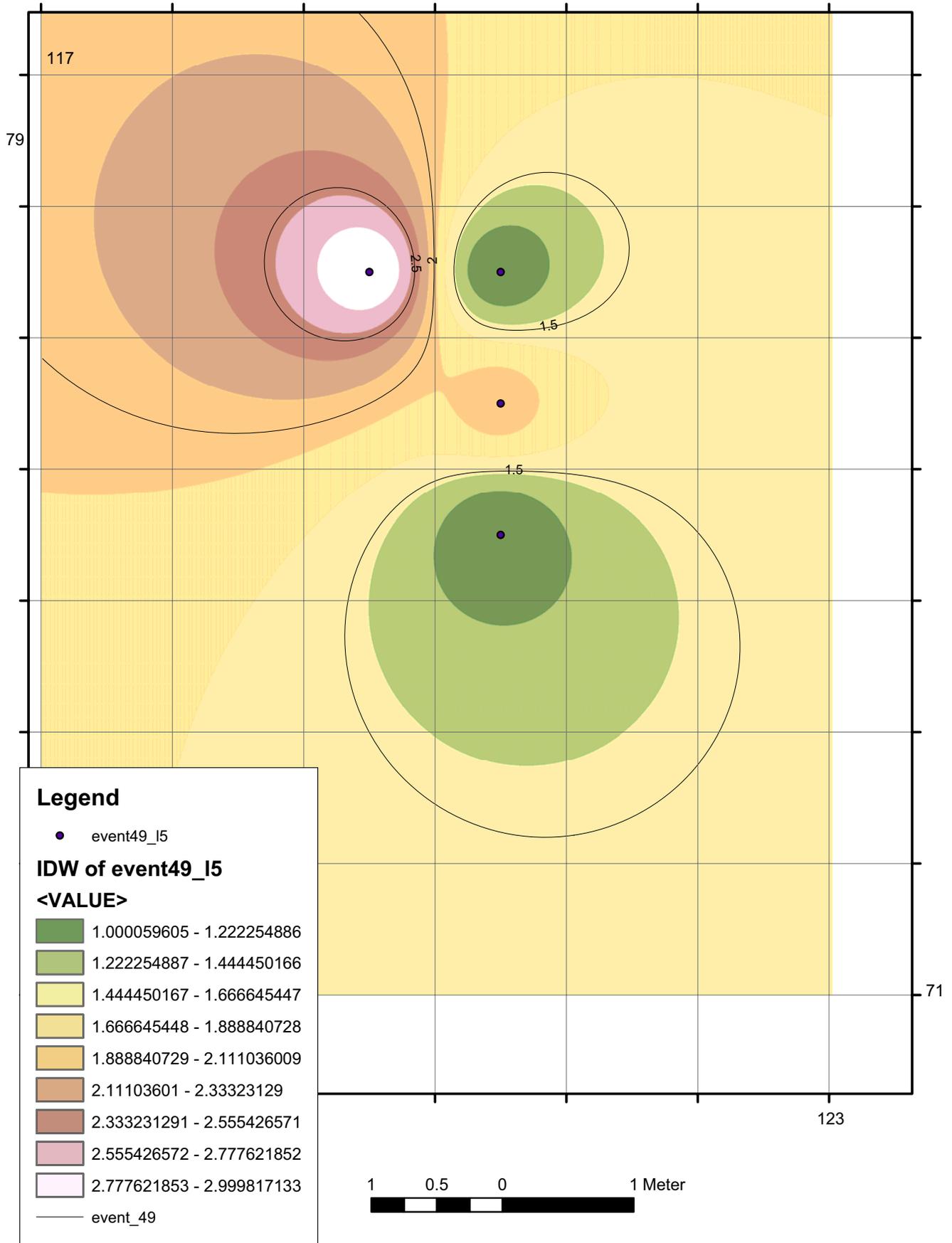


Figure 4.7 Event 49, Excavation Level 5.

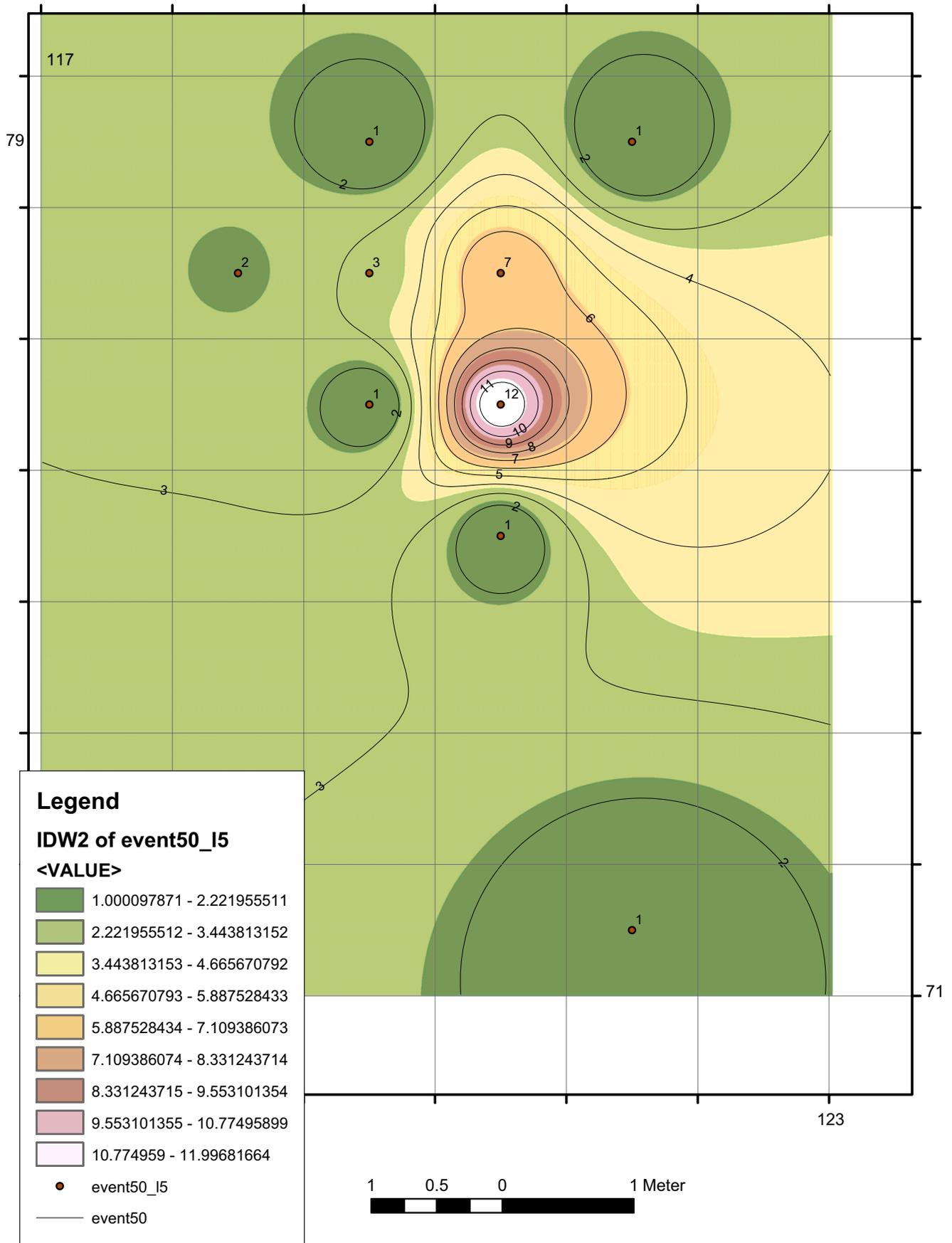


Figure 4.8 Event 50, Excavation Level 5.

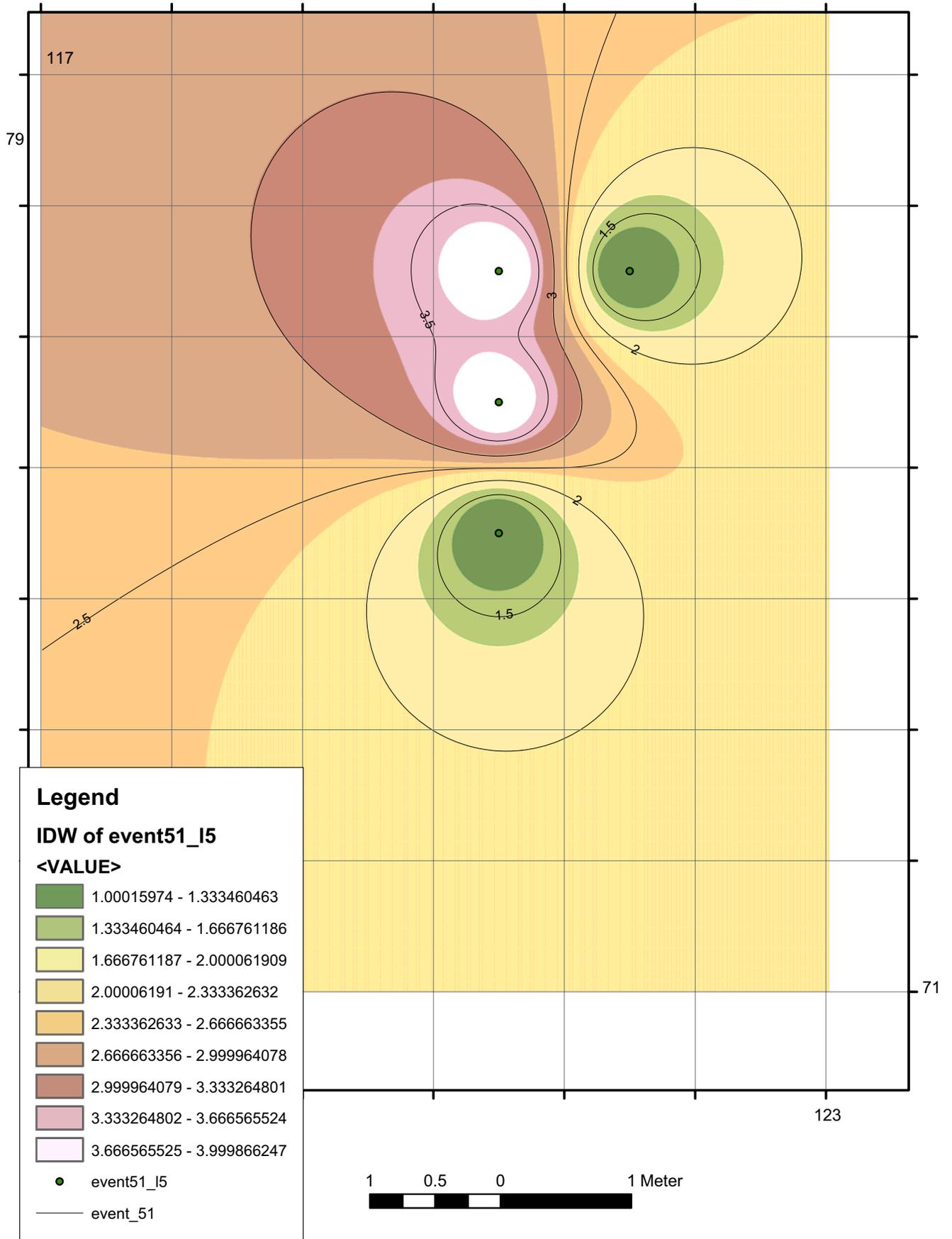


Figure 4.9 Event 57, Excavation Level 5.

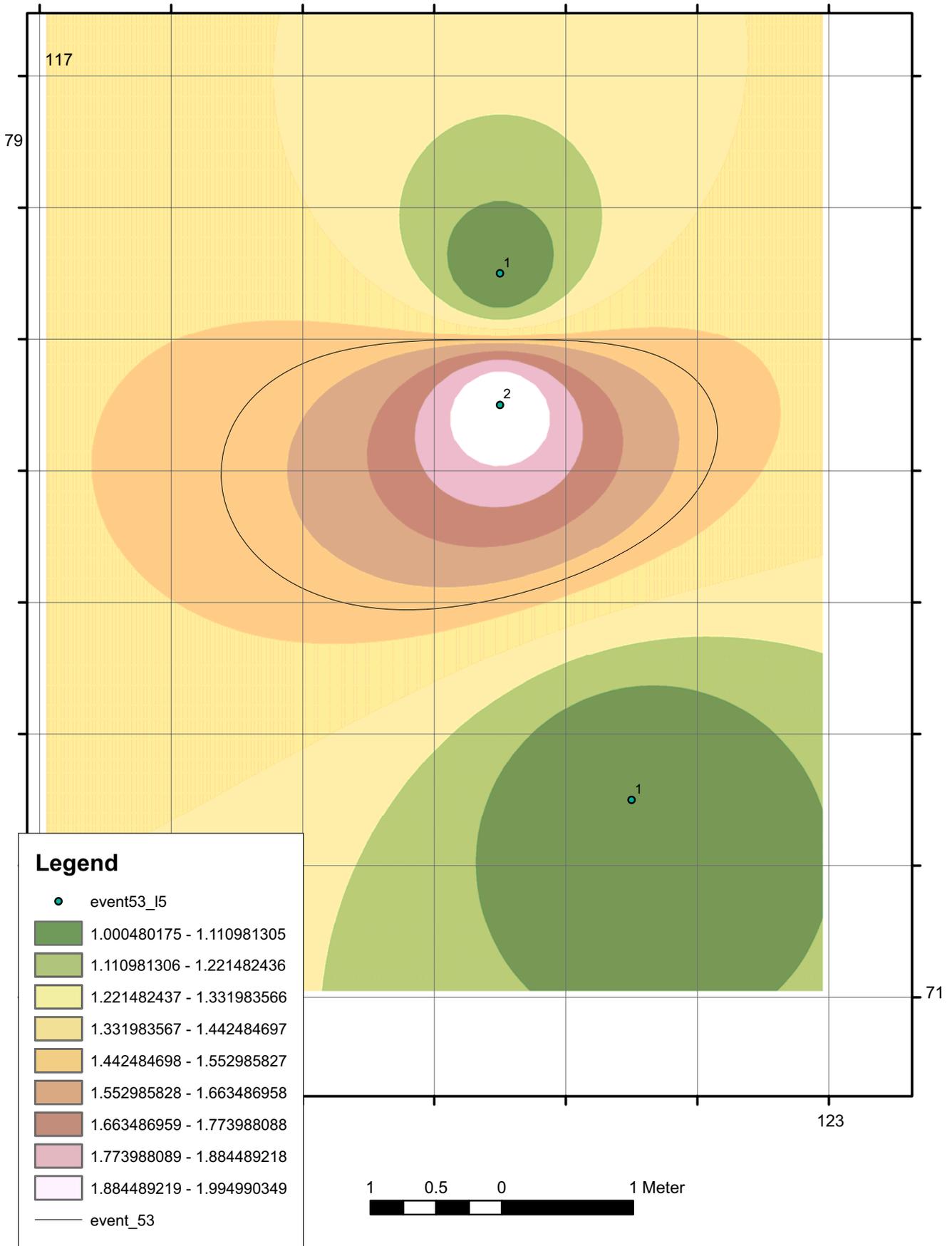


Figure 4.10 Event 53, Excavation Level 5.

distinct raw materials of different origin, though they share overlapping distributions within the block area. This circumstance suggests that individual flaking events and the behavior that shaped them (one or more individuals resharpening a hafted biface) were focused within a discrete area of the landform overlooking the small drainage to the east of the site area. These events are located roughly from N74 to N78 and E119 to E122. Stratigraphically, the paleosol in this part of the block defines a relatively level topographic high point on the former landscape that was, perhaps, a focus of repeated visits for game monitoring. Events 46 and 51—each containing eight quartz flakes and 10 red jasper flakes, respectively—show distributions broader in scope and slightly skewed from the locus of Events 48 and 50.

Excavation Level 4, a context sampling Middle Archaic levels, provides two events useful for mapping. Event 36 (Figure 4.11), as defined from this level, may be part of Event 48 in Excavation Level 5. Since excavation could not follow specific stratigraphic breaks within the C horizon, the possibility of splitting a lithic concentration was clearly a possibility. These two events were segregated, given the discrete excavated contexts; however, both are composed of black chert and occur within the same sub-units of the block. See Figure 4.12, which provides both events combined into one map.

Event 40, composed of 23 biface-thinning flakes of tan jasper, is clearly separate from those events mapped in the underlying level (Figure 4.13). Event 40 is located towards the north-central portion of the block, concentrated between N72 and N75 E120.

Excavation Level 3, pertaining to the upper C horizon and incorporating Middle to Late Archaic contexts, yielded two moderately dense lithic clusters: Event 23, with 44 jasper flakes, and Event 28, with 15 black chert flakes. These two events were chosen for mapping, given the clearly discrete differences in raw material. Event 23 is illustrated in Figure 4.14 and is located in N72 to N78, between E118 and E120. This event, composed of yellow jasper, clearly overlaps in distribution with Event 50 in Excavation Level 5. It would be tempting to identify both as debris from the same reduction or maintenance episode. However, there is a clear lack of this raw material in the intervening Excavation Level 4 contexts, leading to the conclusion that these events represent separate episodes of lithic reduction or curation tasks, despite the overlap in horizontal location.

Event 28 is presented in Figure 4.15. While overlapping with Event 25 to some extent in its principal horizontal location, Event 28 trends to the northeast of the block, while Event 25 trends to the southeast in the GIS maps.

Excavation Level 2 refers mostly to the lower A horizon and its contact with the underlying C horizon at the site. The events within Excavation Level 2 appear to represent a compressed series of occupational events and are not discussed, given the great potential for chronological overlap. It is nearly impossible with the available information and the lack of more refined contextual resolution to peel away and isolate chronologically discrete events in this important level. Resolution would be had if refined excavation techniques employing either piece-plotting individual flakes or removal of the horizon in 25-centimeter subdivisions had been employed. Again, a lesson in hindsight presents itself in the analytical process.

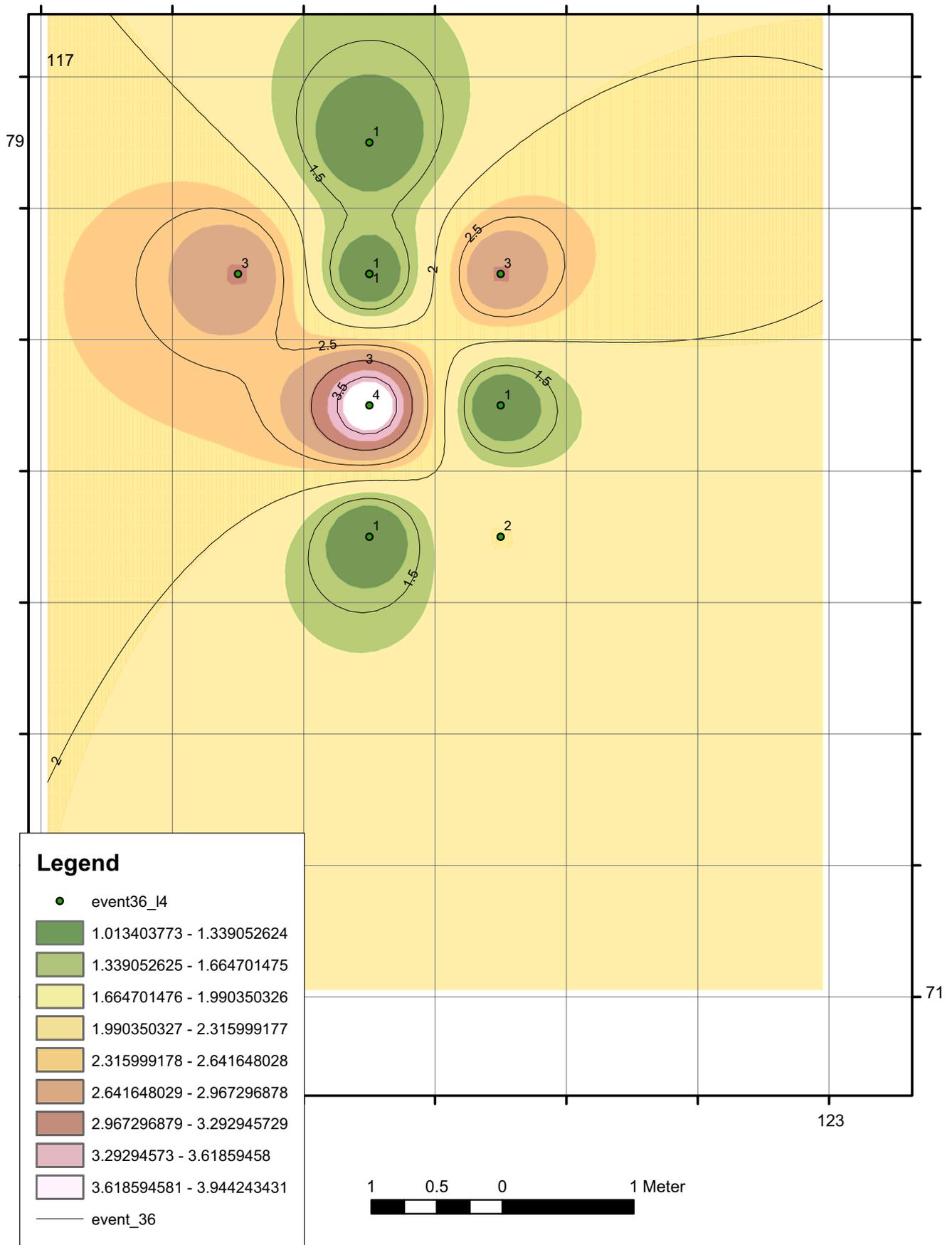


Figure 4.11 Event 36, Excavation Level 4.

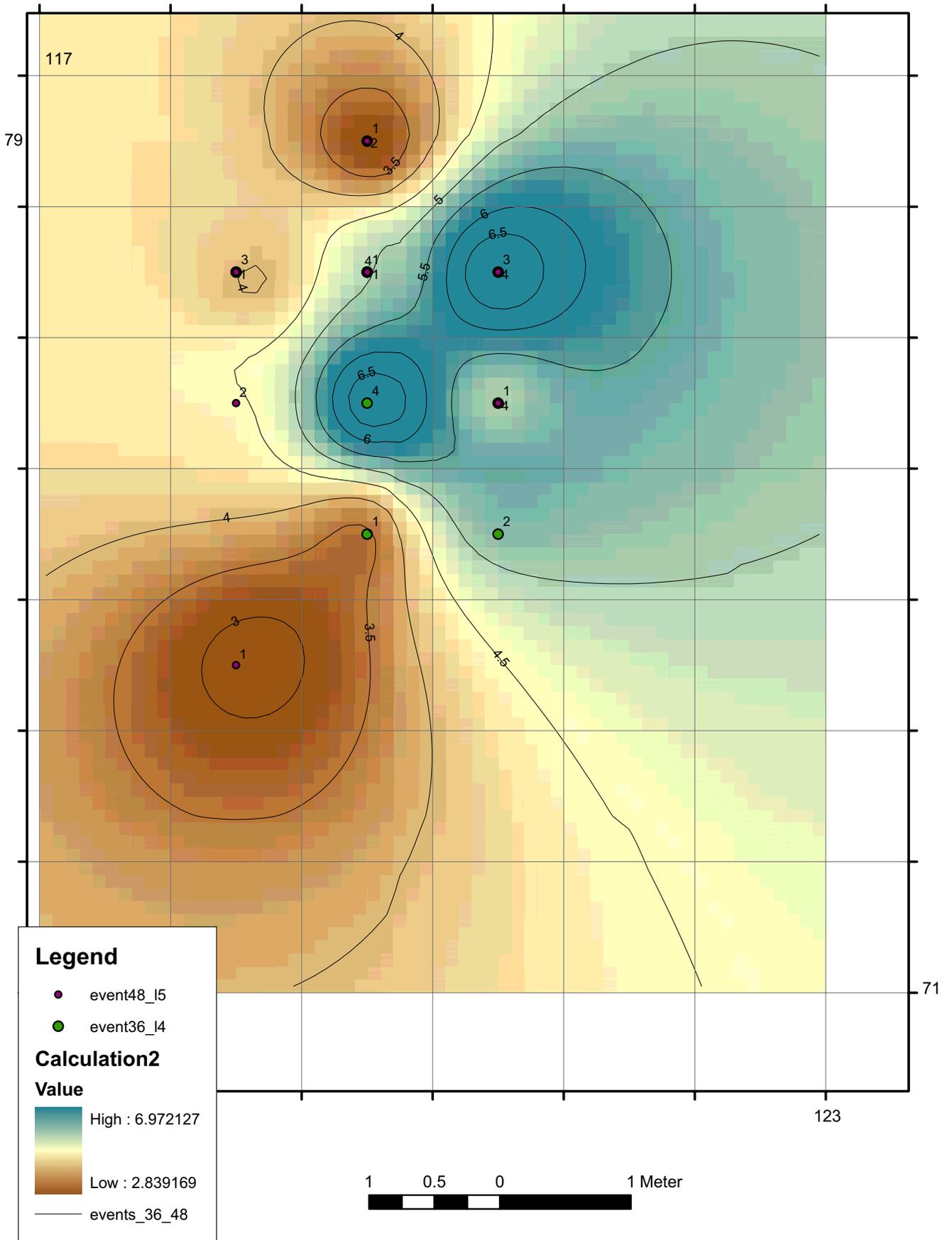


Figure 4.12 Event 36 (Excavation Level 4) and 48 (Excavation Level 5) Combined.

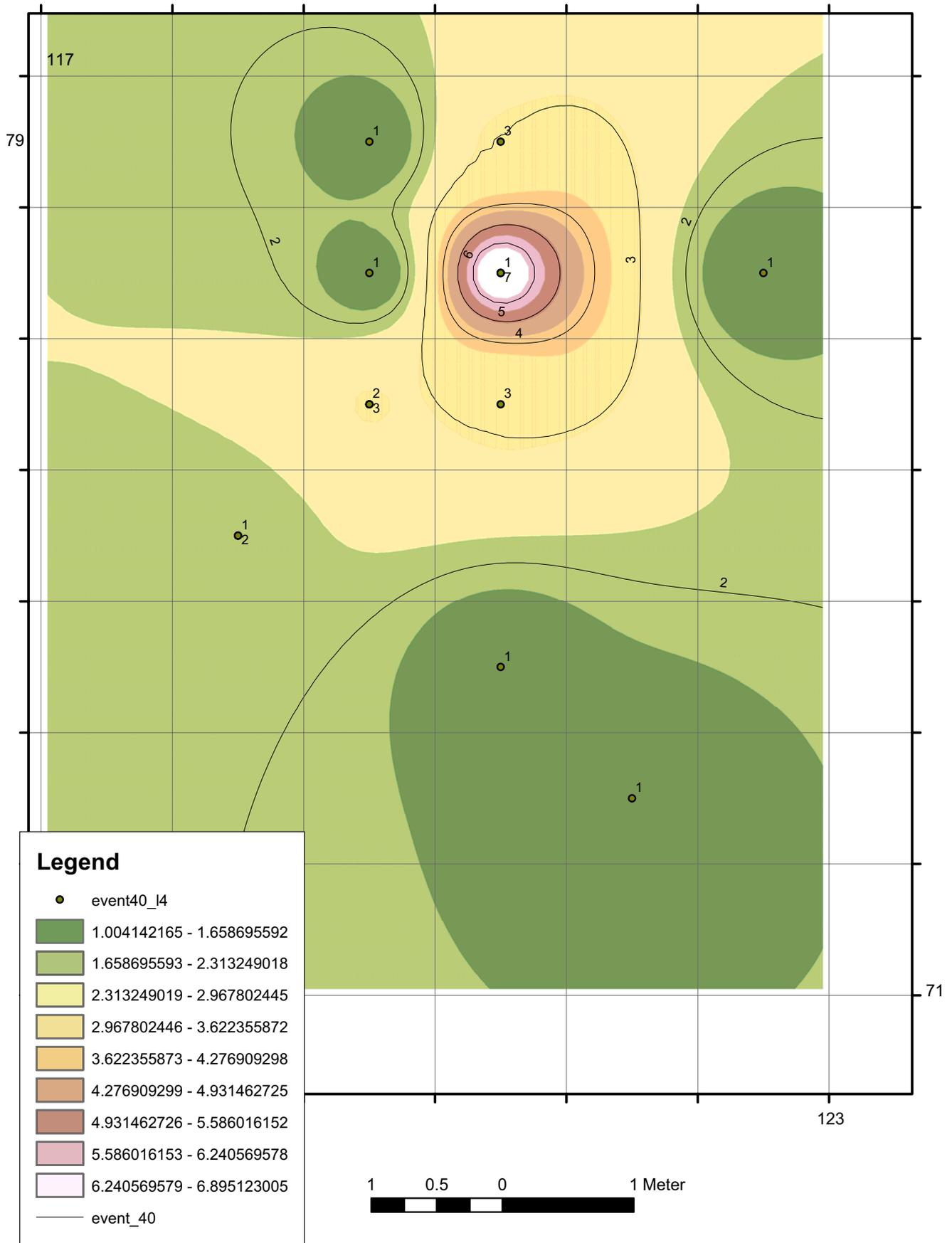


Figure 4.13 Event 40, Excavation Level 4.

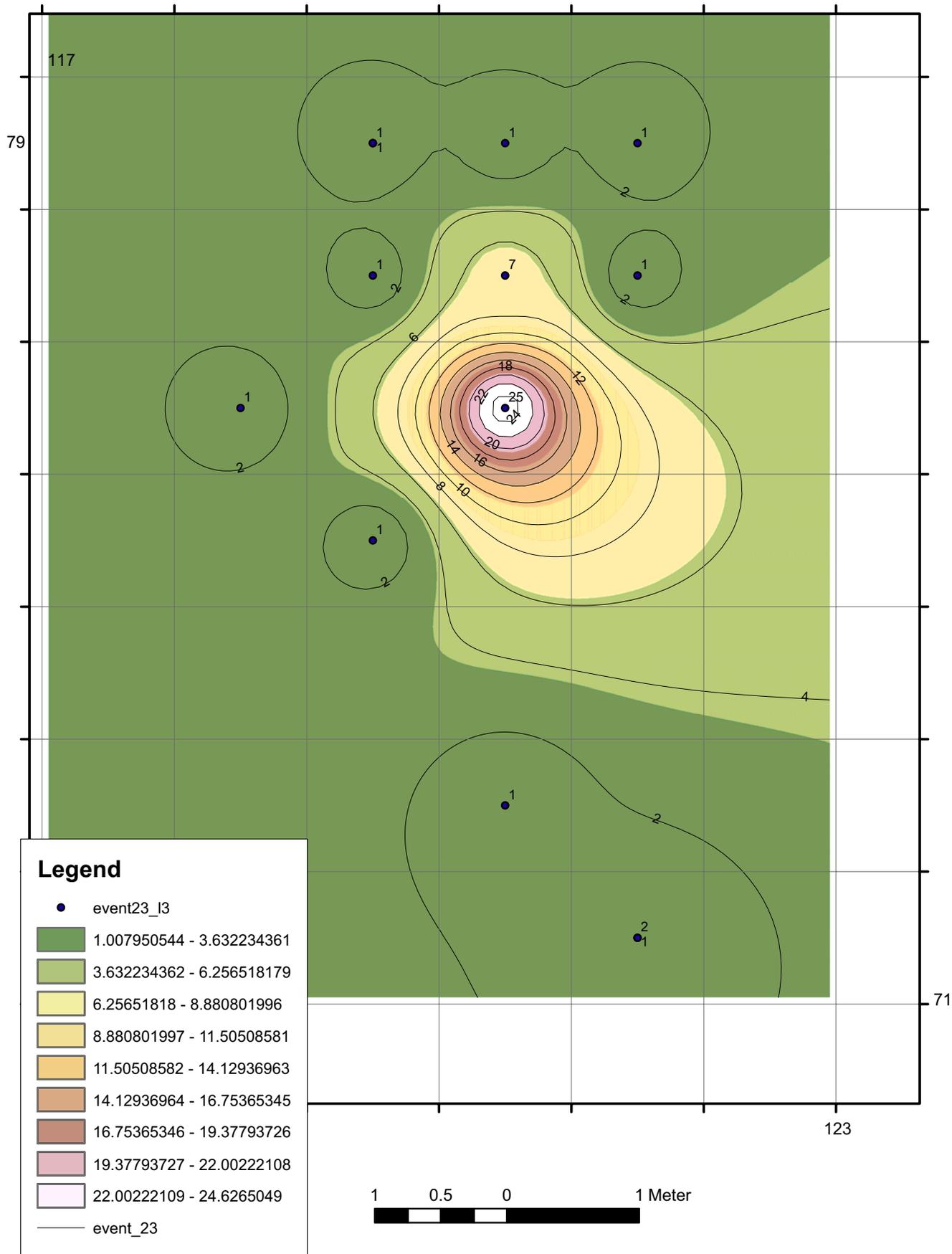


Figure 4.14 Event 23, Excavation Level 3.

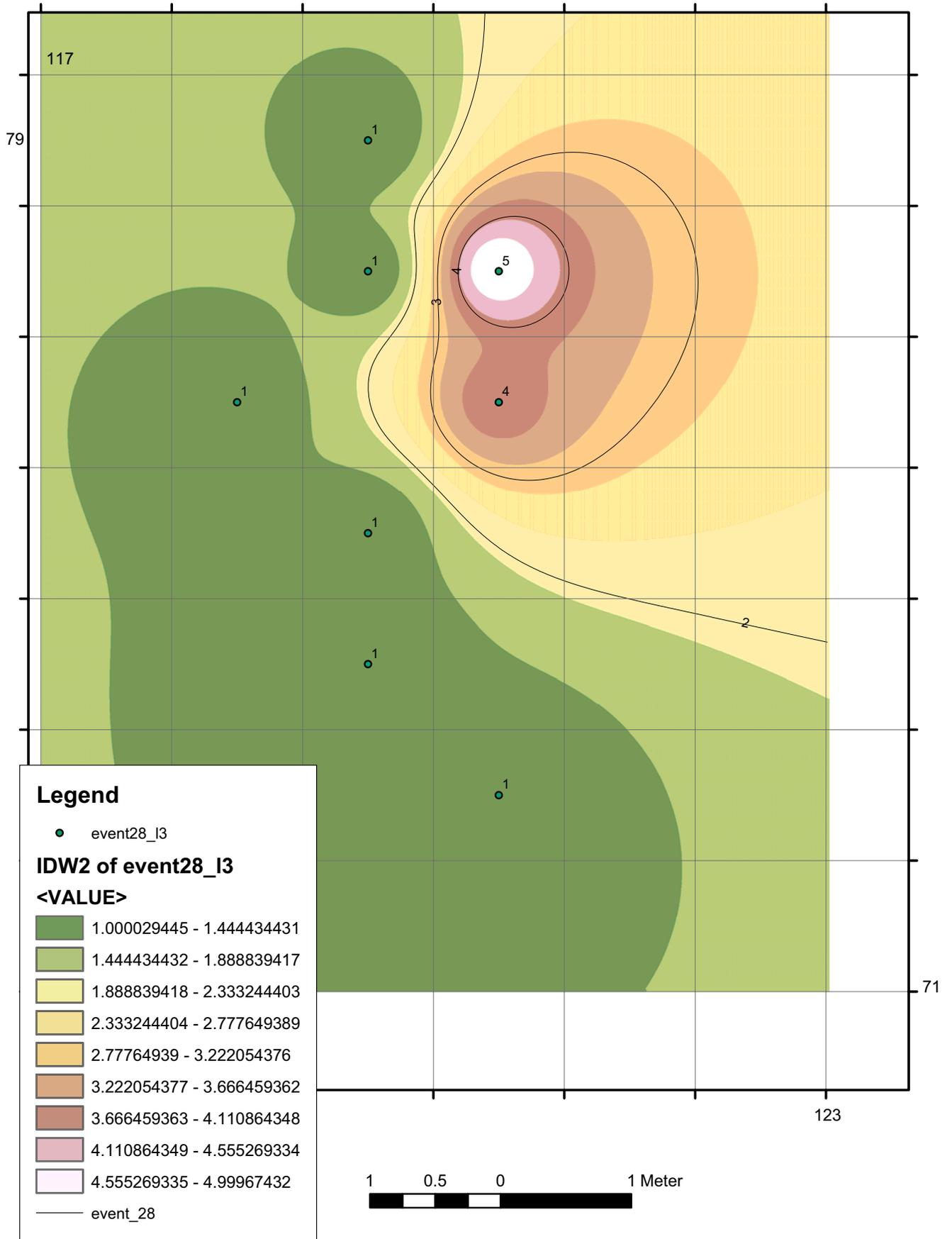


Figure 4.15 Event 28, Excavation Level 3.

## SOME BRIEF THOUGHTS ON THE PALEOINDIAN AND ARCHAIC ASSEMBLAGES

In reviewing the above information on projectile points, their context, and the lithic events, some notes on assemblages seem in order. One fact is clear, and that is the low-density nature of the late Paleoindian and Early to Middle Archaic components. No other tool types are clearly associated with the Dalton-Hardaway component. The only cultural materials in the lower levels are small biface-thinning flakes interpreted here as evidence of hafted-biface edge retouching. The small numbers of flakes comprising the lithic events in Excavation Levels 6 through 9 are viewed as such individual episodes of retouching biface margins.

The Early Archaic Palmer/Kirk components—defined primarily from the recovery of the two complete specimens from just above the contact between the C horizon and underlying paleosol B horizon—also lack other artifact categories, unless the two D-shaped end scrapers from Excavation Level 4 are included. However, the stratigraphic position of these two scrapers lies in the lower to mid C horizon and could be associated with either the Palmer/Kirk or perhaps the LeCroy or Morrow Mountain components. The lithic events in Excavation Levels 4 through 6 repeat a pattern, though with higher flake counts, of that seen in the lowest levels of the site. These events again show overlapping episodes mainly representative of the resharpening or maintenance of hafted bifaces.

The lack of specific classes of tools in Paleoindian and Archaic contexts other than bifaces reflects a narrow focus on the part of the Native-American groups using the Beech Ridge landform. Through time, it was simply a focus of short-term hunting stations. As reviewed in the following chapter, the site and its series of small transient components can be seen as a one part of a broader pattern of landscape use; the archaeological record of the earlier occupations at the Beech Ridge Site is only a small part of a larger system of Native-American hunter-gatherer-forager organization focused on the exploitation of multiple sets of resources from a number of differing landscape or environmental settings within the St. Jones drainage and beyond.