IV. FIELDWORK AND ARTIFACT ANALYSIS

This chapter presents the results of Rutgers' Phase III fieldwork and the results of URS' assemblage analysis. Descriptions of stratigraphic context and features are presented first, followed by descriptions of the following major artifact classes: debitage, projectile points and bifaces, ceramics, and miscellaneous artifacts. This data is followed by a brief discussion of how these classes were structured across the site. Using *Surfer* maps as a guide, several discrete artifact clusters, most based on the concentration of debitage and associated classes of material, are argued to mark the location of short-term occupations dating to the Late Archaic period. Given that most of the site's context is limited to the plowzone, most comments about the nature of the occupations are generalized. If a greater degree of resolution were available, more specific linkages between visually apparent artifact clusters and specific tool kits could be explored.

As noted in Chapter 1, the most intense or common period of occupation at the Gabor Site dates to the Late Archaic period, or Woodland I in Custer's terminology (Custer 1989). Scattered Middle Archaic points, as well as terminal Archaic and Early Woodland points, are present in the assemblage as well. A localized concentration of Late Woodland ceramics in the southwest corner of the site shows limited use of the Gabor landscape at that time.

Rutgers conducted fieldwork at the Gabor Site in 1994. The data recovery effort focused on the excavation of dispersed, one-meter test units across the open field area, with several clusters of two-meter units placed to explore possible features. Most of these units supplement Phase II units excavated by UDCAR in 1994. In the wooded area, on the western edge of the site, field efforts included the excavation of two-meter block units across the area. Four separate groups of such units were opened to explore features or potential features. All excavation units from Rutgers' 1994 data recovery excavation are depicted on Figure 4.1. Figure 4.2 shows feature locations on the same base map.

ARCHAEOLOGICAL CONTEXT AND STRATIGRAPHY IN THE WOODED SITE AREA

The following paragraphs review the stratigraphic context of archaeological materials in the wooded section of the Gabor Site. This discussion will provide an understanding of the degree of resolution—or lack thereof—in archaeological contexts for the various assemblages discussed further along in this chapter.

The New Castle County Soil Survey (Matthews and Lavoie 1970) maps the soils within the site areas as part of the Elsinboro series, specifically Elsinboro silt loam (3 – 8 percent slopes). The typical profile for the Elsinboro series consists of a brown (10YR 4/3), silt loam Ap horizon capping a yellowish brown (10YR 5/4), silt loam A2 horizon. In turn, the A2 horizon caps a strong brown (7.5YR 5/6), light silty clay loam B21t horizon, which grades into a strong brown (7.5YR 5/6), heavy silt loam B22t horizon. The C horizon consists of a strong brown (7.5YR 5/6), micaceous fine sandy loam.

Figure 4.1 The Gabor Prehistoric Site (7NC-D-131B), Area B Site Plan, Showing Excavation Units and Machine-Stripped Areas.

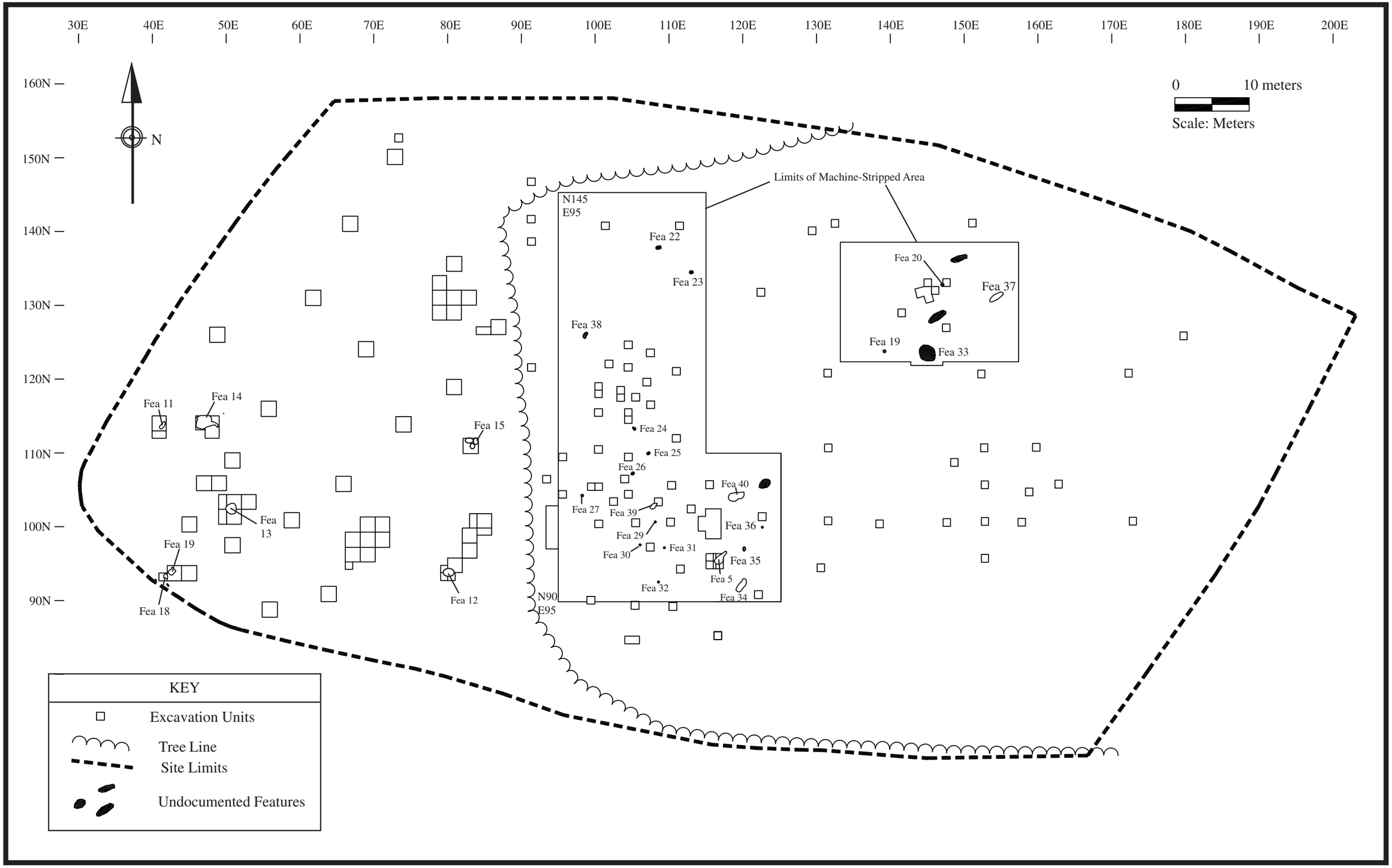

Figure 4.2 The Gabor Site (7NC-D-131B), Area B Site Plan, Showing Feature Locations.

During their Phase III effort, Rutgers recorded profiles describing different stratigraphic sequences in distinct portions of the woodlot. The main divergence from the standard USGS profile noted above involves the presence of an additional "E horizon" occurring almost throughout the entire woodlot in Rutgers' documentation. This horizon is only absent within those excavation units along the boundary of the woodlot and the agricultural field. Rutgers considered this horizon to be evidence that the woodlot had never been plowed, and that no Ap horizon was present in the bulk of the woodlot (which UDCAR's Phase I/II survey documentation describes as "new-growth") (Hoseth and Seidel 1994). It is certain, however, that this area actually was plowed sometime in the past. Waters' *Principles of Geoarchaeology* describes E horizons as follows:

> In some soils, light-colored horizons composed of mineral grains resistant to chemical weathering, such as quartz, occur beneath the A horizon. These zones, designated E horizons, have been intensely leached by water and are devoid of iron and aluminum, organic matter, and clay (Waters 1992: 49).

Based on the field notes, excavation unit level forms, and profile drawings, the horizon Rutgers characterized as an E horizon does not possess the above characteristics. The horizon in question is not composed of chemically resistant mineral grains; it is mostly composed of silt or silt loam, and contains clay and organic matter (i.e., carbon), materials absent in a true E horizon. This horizon does not exhibit any evidence that water has leached away clay or other soluble materials. Furthermore, the USGS (Matthews and Lavoie 1970) has typified the underlying subsoils as Bt or argillic horizons, which contain significant accumulations of clay. E horizons typically overlay spodic (Bh, Bs, or Bhs) horizons containing large amounts of aluminum and organic matter, and varying amounts of iron (Waters 1992: 50 – 53).

Furthermore, consultation of the photographic documentation from the Gabor Site reveals a very clear and abrupt boundary between the A horizon and the so-called E horizon. If this boundary represented the interface between an unplowed A horizon and a developing horizon, the boundary between the two horizons would be much more diffuse and gradual. Unlike the photographs, the profile drawings of the excavation units (Figure 4.3) encompassing the boundary between the woodlot and the agricultural field do not exhibit a clear break between these two areas. This three-meter-long profile clearly shows part of the "undisturbed" A horizon overlaying the Ap horizon intruding from the agricultural field. If the woodlot had indeed been undisturbed, one would expect the relevant profiles to exhibit exactly the opposite. None of the complex stratigraphy described in Rutgers' field notes and associated profile drawings is evident in the photographic record of the same profiles. Therefore, it is likely that this "E horizon" is actually the B21t horizon described in the New Castle County soil survey (Matthews and Lavoie 1970).

INDIVIDUAL FEATURE DESCRIPTIONS

Feature 11

Feature 11 was located in the far western portion of the wooded area. It was encountered in the southeast quadrant of Excavation Unit 45 and measured approximately 80 x 41 centimeters.

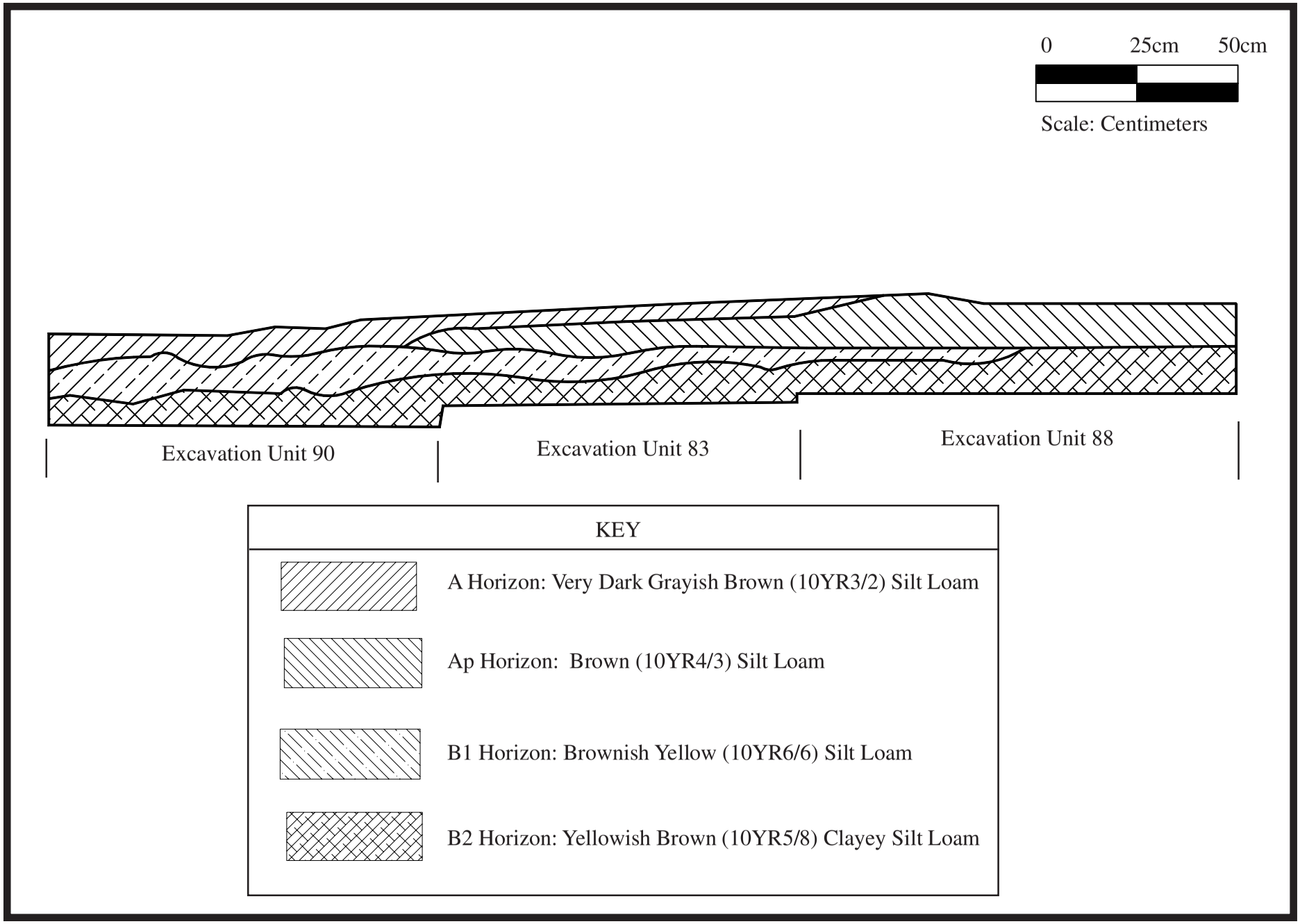

Figure 4.3 Profiles of Excavation Units 83, 88, and 90.

This feature was roughly kidney shaped in plan view. The soil matrix consisted of mottled brownish yellow (10YR 6/8) and yellowish brown (10YR 5/6) silt loam with large areas of yellowish red (5YR 5/8) burnt silt loam. Carbon flecking was present throughout the feature's matrix. The feature was bisected lengthwise and the southeastern wall profiled, revealing a shallow profile that deepened toward the feature's northwestern extremity. Carbon and soil samples were taken from both halves of the feature, though URS does not currently possess the actual samples or the results (if any) of such testing.

Rutgers' Evaluation. Feature 11 was initially interpreted as representing a noncultural stain, possibly a result of root activity. Rutgers apparently based this interpretation on the feature's shallow nature, lack of prehistoric artifacts, and the presence of two additional stains in the feature's base similar to a tree's root system or a rodent's burrow. Whether or not Rutgers utilized soil or carbon-sample data in reaching this conclusion is unknown.

URS' Evaluation. Reanalysis of the available field drawings, associated notes, black-and white-photographs, and color slides revealed that Feature 11 was a kidney-shaped stain with extensive evidence of thermal activity. At first glance, the feature's shape and the presence of thermally altered soils and carbon seems to suggest a possible prehistoric hearth; if this were the case, then one would expect to recover at least moderate amounts of fire-cracked rock (FCR) from both the feature and the two-meter square excavation unit containing the feature. However, no FCR was recovered from either the feature or the excavation unit (Excavation Unit 45). Even if the woodlot had been plowed and disturbed during the historic period, one would still expect to find FCR within the two-meter-square excavation unit. While a moderate amount of nondiagnostic lithic materials were recovered from the excavation unit, Feature 11 yielded no artifacts of any kind. Considering the lack of FCR, it is difficult to identify Feature 11 as a hearth. The feature's diffuse boundaries, uneven profile, and lack of artifacts all seem to indicate that the stain may be a burnt-out tree root ball. In addition to these signs, the apparent remains of taproot systems can be seen in the closing plan view photographs. The presence of prehistoric lithics beneath the sterile feature matrix can possibly be attributed to episodes of bioturbation; the taproots may have displaced lithics from the upper plowzone stratum.

Feature 12

Feature 12 was initially encountered in the extreme southwestern corner of Excavation Unit 53. This unit, a two-meter square, was located in the eastern portion of the wooded area, close to the boundary between the plowed field and the woods. After Feature 12 was encountered, three additional one-meter test units were opened around the original unit's southwestern quadrant (Figure 4.4). These units were placed to fully expose the feature, which appeared to continue beyond the unit's southwestern quadrant. When fully exposed and pedestalled, Feature 12 resembled a prehistoric hearth comprised of tightly packed fragments of FCR. The rock cluster appeared to be in a shallow, basin-shaped pit extending into the surrounding B-horizon soil; no other feature fill or burnt areas of soil were apparent in its vicinity. The only other evidence of thermal activity exhibited in Feature 12 was a small amount of carbon in the B-horizon soil surrounding the feature. The core of this potential hearth measured approximately 80 x 60 centimeters, although additional fragments of FCR were distributed across the excavation in a linear pattern from east to west (see Figure 4.4).

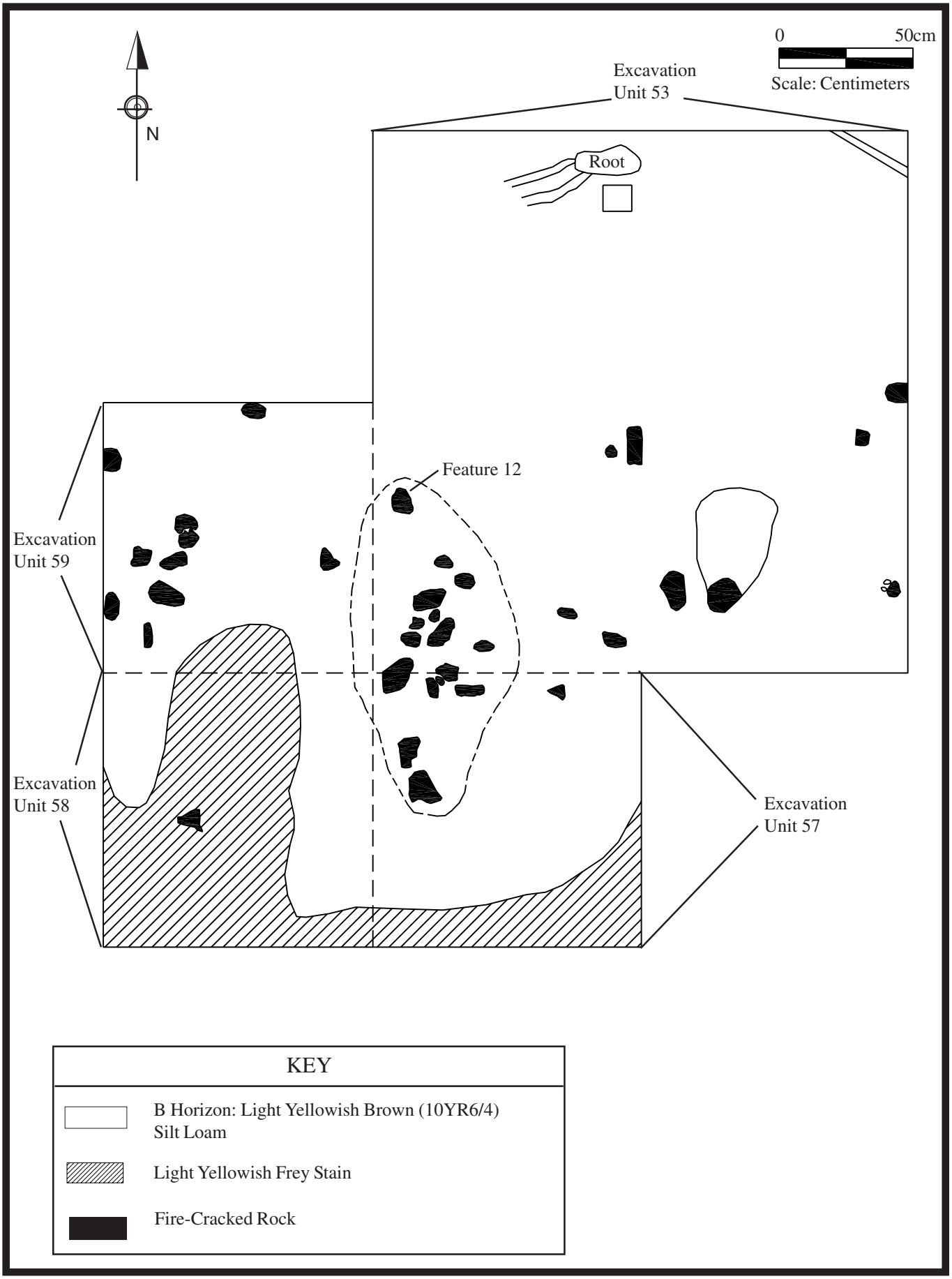

Figure 4.4 Plan View of Feature 12 Within Excavation Units 53, 57, 58, and 59.

Rutgers' Evaluation. Based on the absence of obvious, thermally altered feature fill and the presence of only small amounts of carbon, Rutgers determined that Feature 12 was unlikely to represent an actual hearth. In this view, the feature more likely represented a dumping site for discarded FCR and burnt detritus associated with a hearth.

URS' Evaluation. While Rutgers' conclusion is a possible alternative, certain factors should be considered. The initial identification of the feature as a FCR dumpsite was based on the notion that the woodlot had never been plowed, and that the feature extended into an undisturbed E horizon (defined by Rugters; this layer is herein identified as a B horizon, as noted earlier). As the profiles exhibit clear evidence of plowing in the area, Feature 12 has likely been partly impacted by cultivation. This explanation would account for the linear distribution of FCR across the overall excavation. Such activities may also have impacted any obvious feature fill that once existed in this location. Therefore, it is quite possible that Feature 12 represents the basal remnants of a prehistoric hearth. The bulk of the feature may have been dispersed across the immediate landscape; the documented remains may represent only the very bottom layer of FCR and some carbon flecking in the B horizon.

Additionally, the plan view map of Feature 12 indicates two other suspicious deposits in the B horizon (see Figure 4.4). The plan view map of Feature 12 describes these deposits as light yellowish gray stains with no accompanying Munsell or soil data: the first is an amorphous stain occupying the southern extent of Excavation Unit 57 and the central portion of Excavation Unit 58; the second, located in the southeastern quadrant of Excavation Unit 53, is a flattened ovoid, 45 x 25 centimeters, containing fragments of FCR. Although these stains appear in both the plan view map and in the black-and-white photographs of the feature and surrounding excavation units, no discussion of the stains accompanies this visual documentation. The appropriate level forms for the excavation units do not mention either stain. While the shape of the larger, amorphous stain suggests a noncultural genesis (i.e., tree or root disturbance), the smaller stain's size and shape are suggestive of a small, prehistoric pit.

Feature 13

Feature 13 was initially encountered in Excavation Unit 56. It consisted of a concentration of FCR situated in the northwestern portion of this two-meter-square unit. In an effort to fully expose the feature, Rutgers opened three other adjoining excavation units. Excavation Unit 63, another two-meter-square excavation unit, was opened to the north of the original unit, while two 2-x-1-meter excavation units (61 and 62) were opened along its western border. This strategy served to open a 4-x-3-meter block excavation. The core of Feature 13 was located almost in the direct center of this block excavation. This core was the densest part of the feature, and measured approximately 134 centimeters in diameter. The center of the feature's core contained a large metate, an artifact apparently reutilized as a hearthstone subsequent to its original usage. Smaller, less-dense spirals of FCR radiated northward and southward from the feature's core. If these spirals—probably the results of either plow activity or bioturbation—are factored into Feature 13's size, then the feature encompasses an area approximately 3.29 x 2.32 meters.

Rutgers' Evaluation. Rutgers initially identified Feature 13 as a dumpsite for FCR associated with stone-boiling activities. This conclusion was based on two factors: 1) the FCR comprising

Feature 13 are described as being directly emplaced in the underlying B-horizon soils with no apparent thermally altered soils or feature fill surrounding them; and 2) the feature was located in an undisturbed (i.e., unplowed) setting. The provided documentation contains only two mentions of other intermixed feature matrix soils or carbon remains. The first mention refers to a small, circular deposit of ash and charcoal measuring approximately 15 centimeters in diameter and located in the northern portion of the feature's core. The second mention is made in regard to a larger, ovoid deposit of ash and charcoal measuring approximately 45 centimeters in length and located to the southeast of the feature. According to Rutgers' incomplete draft report, this deposit apparently also contained thermally altered soils; unfortunately, the notes and forms do not contain the source of this information. It is unclear from the paperwork whether or not these two deposits were isolated examples, or if similar deposits were intermixed with the FCR. The plan view drawing of Feature 13 indicates both of these deposits, but the feature level forms and the crew chief's field journal only indicate the larger, more-ovoid, southeastern deposit. No description is available for the small, circular deposit outside the plan view map.

The feature forms also indicate that soil, flotation, and carbon samples were obtained from Feature 13, though no such samples or results from any samples were available to URS. It is unknown if Rutgers utilized results from these samples in their initial evaluation of Feature 13.

URS' Evaluation. Although the accompanying paper documentation is sparse, the remaining photographic documentation appears to show a greater amount of feature matrix than indicated in any drawings, notes, or forms. A large, diffuse circular stain, most apparent in the color slides, appears in the photographs. The stain, obviously darker than the surrounding B horizon, was located just to the northwest of the centrally located metate, and measured approximately 90 centimeters in diameter. Interestingly, it encompassed the smaller, circular, ash-and-charcoal deposit depicted on Feature 13's plan view map. Smaller, intermittent deposits of the same feature matrix appear amidst the remaining FCR, and the larger, ovoid stain appears similar in the color slides. This stain was probably feature fill related to a hearth. While this particular deposit/feature fill does not seem to be highly documented, the feature excavation forms indicate that the feature was excavated in two levels. It is possible that Rutgers utilized the presence/absence of this apparent feature fill as a guide for segregating these two levels, although no specific evidence appears in the documentation.

Based on the maps and notes alone, it is unclear if the fragments of FCR were directly emplaced in B-horizon soils. The photographs and excavation techniques suggest the presence of a distinct feature fill. Also, Rutgers' designation of Feature 13 as a boiling-stone dump is partially predicated on the idea that it is located in an undisturbed woodlot. If the woodlot had been plowed at some point in the past (clearly the case), then any feature fill may have been disturbed or diffused through such activity. It is unlikely that Feature 13 merely represents a convenient place to dump boiling stones. Given the large amounts of FCR recovered (approximately 325 pounds) from its matrix, Feature 13 is best interpreted as a prehistoric hearth.

Feature 14

This feature was first encountered in the western half of Excavation Unit 70, a 2-x-2-meter unit located in the western portion of the woodlot. As this feature was not fully exposed by the original excavation unit, two smaller 2-x-1-meter units were opened to the south and west of the original unit (see Figure 4.2). These additional excavations helped to reveal a large (2 x 1.5 meters wide) potential hearth feature. The feature fill consisted of a brownish yellow (10YR 6/6) mottled with varying ratios of dark gray (10YR 4/1), yellowish brown (10YR 5/8), and very dark gray (10YR 3/1), loose silt loams. The feature matrix also contained distinct circular concentrations of gray (10YR 4/1-3/1) silt loam with carbon and thermally altered areas (Figure 4.5). Finally, a tendril of feature matrix extends approximately one meter eastward from the core of the feature. Feature 14 was bisected from east to west; the southern half was removed first. This bisection apparently revealed a shallow, stratified profile (average depth = 10.5 centimeters), although the formal profile and photographs do not actually show a lower stratum. The feature forms indicate that this second stratum consisted of a very shallow (average depth = 3.5 centimeters), brownish yellow (10YR 6/6), soft silt loam containing carbon. The description of the second stratum is similar to the preceding stratum, except for the lack of the heavy mottling and burning. This difference probably indicates that the strata division is based on lessening amounts of mottling and burning, not on the presence of an entirely new soil, and is therefore fairly subjective. As the provided profile appears to represent the overall depth of the feature and not just the first stratum, it is possible that such a decision was reached during fieldwork. Flotation and carbon samples were retained from both halves of the feature, but the results were not made available to URS.

Rutgers' Evaluation. Based on the thermally altered feature fill and the abundant presence of carbon, nondiagnostic prehistoric lithics, and a thermally altered projectile point, Rutgers concluded that Feature 14 was a possible prehistoric hearth.

URS' Evaluation. While Rutgers' designation of Feature 14 as a prehistoric hearth seems likely based on the thermally altered nature of the matrix and the broken projectile point, the feature's complete lack of FCR is problematic. It should also be noted that the four excavation units opened over and around the feature (Excavation Units 70, 75, 76, and 77) only yielded two fragments of FCR. It is also interesting that Rutgers determined both Features 12 and 13 to be "prehistoric fire-cracked rock features" or boiling-stone dumps, not actual hearths. Yet both features contained FCR and at least minimal evidence of thermally altered soils and carbon. Specifically, a tremendous amount of FCR (approximately 325 pounds) was recovered from Feature 13; distinctly burned sections are apparent in the associated maps and photograph, yet this feature was not considered a hearth. It is unclear why Rutgers considered Feature 14 a potential hearth, but did not also characterize Features 12 or 13 as hearths.

Two possible interpretations exist for Feature 14. It may not have been a hearth at all, but a natural feature, such as a burned tree stump. This possibility was initially considered on the feature form; the loose, soft soil matrix of the feature was offered as evidence. The plan view drawing also appears very tree-like. The circular concentrations of dark gray soil and carbon could represent the positions of former roots, and the tendril of feature matrix extending eastward also seems rather root-like. The recovery of the broken, thermally altered projectile

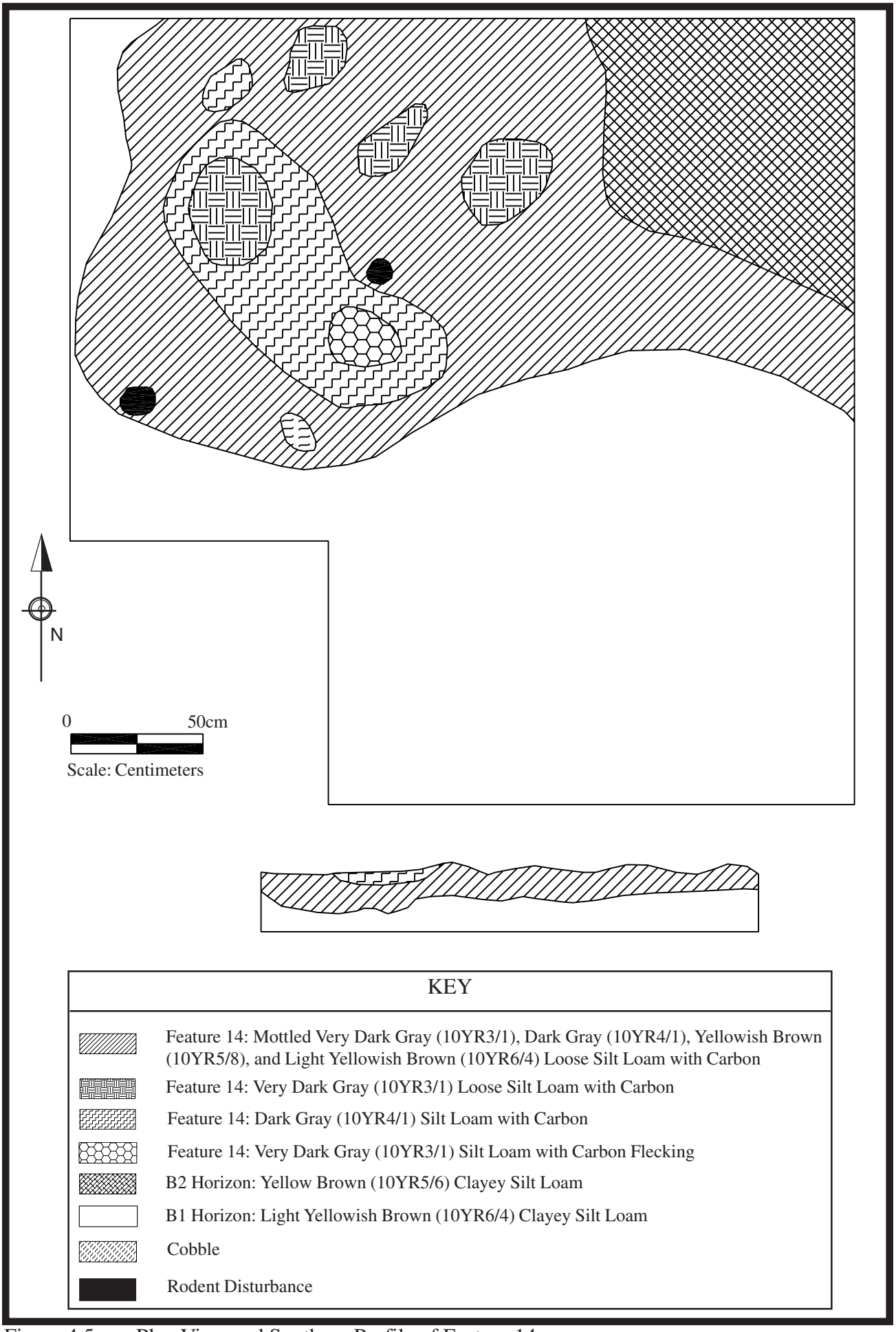

Figure 4.5 Plan View and Southern Profile of Feature 14.

point apparently caused the excavators to modify this original opinion. A second possible interpretation is that Feature 14 is the remains of a rodent burrow. The same factors pointing to a tree (i.e., loose soil, circular concentrations, and the "tendril") can also be attributed to rodent behavior, which would explain the shallowness of the profile.

A reasonable conclusion concerning Feature 14 is a mixture of the two above possibilities, with an interpretive emphasis on the second option. Even though Feature 14 exhibited obvious signs of thermal activity, it did not contain any FCR whatsoever, and the associated excavation units only yielded two fragments of FCR. It is therefore considered unlikely that Feature 14 was a prehistoric hearth. The plan view drawing seems to indicate a natural origin for the feature. The color slides show that the feature's boundaries and mottling are more diffuse than indicated in the plan view drawing. While the feature's profile seemed too shallow to represent a tree's root system, it was not too shallow to represent a rodent burrow. Based on the available information, it appears most likely that Feature 14 probably represented the basal remains of a rodent burrow disturbed somewhat by plowing.

Feature 15

Feature 15 was a set of three interlocked, circular stains revealed in Excavation Unit 73. This moderately large feature occupied almost the entire northeast quadrant of the unit; each circular stain consisted of a distinct feature matrix. The largest and southernmost of the interlocked stains was designated Area A. Feature 15, Area A, was approximately 72 centimeters wide and consisted of a very dark grayish brown (10YR 3/2) silt loam with dense concentrations of carbon. Feature 15, Area B, consisted of a dark grayish brown (10YR 4/2) silt loam with moderate concentrations of carbon, and was approximately 56 centimeters in diameter. Feature 15, Area C, approximately the same size as Area B, consisted of a brown (10YR 4/3) silt loam containing low concentrations of carbon. The feature was bisected from north to south (through Areas A and B) and the eastern half removed first. It appears that although Areas A and B were excavated separately, the artifacts from each were not kept in distinct groups. Additionally, apparently only Area A's western profile was drawn or photographed. Area A exhibited a stratified, 24-centimeter-deep, basin-like profile. The second stratum consisted of a dark grayish brown (10YR 4/2) clayey silt. No profile exists for Areas B or C. When the western half was removed, Areas A and B were again excavated separately, and the artifacts were again grouped together. Also, as Area C was supposedly mottled, it was not excavated separately at all. It is unclear which area was included with Area C, but, as all the artifacts were lumped together, this information is of no real value. The nature of the mottling is also unclear, as no mottling is indicated on the plan view. Flotation and carbon samples were retained from both halves of the feature, but the specific source of these materials within the three areas is unknown. Results from any such samples were not provided to URS.

Rutgers' Evaluation. Neither the feature form nor field journal offer any interpretations of Feature 15, but the incomplete draft report refers to it as a noncultural root disturbance. It is unknown what criteria were used to arrive at this conclusion, as no confirming evidence was offered in any of the sources made available to URS. It is possible that the flotation and/or carbon sample offered insight into the feature's identity, but, again, such results were unavailable.

URS' Evaluation. The information provided for Feature 15 is confusing at best, and some very basic data is completely missing. While the provided profile may indicate that Area A may have been a prehistoric pit feature, it is unknown which (or if all) of the three areas contained the recovered prehistoric lithics. The complete lack of profiles for the remaining two areas makes identifying them impossible. Based on the incomplete information provided to URS, no final determination about Feature 15 can be made. It is not possible to either confirm or refute Rutgers' interpretation of Feature 15.

Feature 17

This large, amorphous feature was located near the center of Excavation Unit 78. It measured approximately 90 centimeters in diameter and consisted of a mixture of feature soils (Figure 4.6). While the bulk of the feature consisted of a brownish yellow (10YR 6/6) silt loam, the central portion of the feature contained two additional feature fills: a small, amorphous patch of brownish yellow (10YR 5/6) silt loam surrounding three small, circular patches of black (10YR 2/1) silt loam. Feature 17 does not appear to have been bisected; it was apparently excavated as a whole. Consequently, no profile drawings, sketches, or photographs of Feature 17 exist. Apparently, the feature was around five centimeters deep, but it is unclear if this depth represents the actual depth of the feature or the depth where excavation halted. No flotation or carbon samples were obtained from the feature.

Rutgers' Evaluation. The feature form and field journal offer no final interpretation of Feature 17; the incomplete draft report designates the feature as a noncultural root disturbance. As in the case of Feature 15 above, the criteria used to arrive at this conclusion are unclear, as the feature was not bisected and no profiles were created. The feature form makes reference to root disturbances in the feature, but it does not offer an interpretation based on this observation. No evidence to confirm or deny this interpretation was offered in any of the sources made available to URS.

URS' Evaluation. Given the lack of profile drawings or photographs for Feature 17, it is difficult to interpret the feature. Although both the plan view drawings and photographs are reminiscent of a burnt tree's root system, a profile would be necessary to corroborate this conclusion. Based on the incomplete documentation provided to URS, it is not possible to positively identify this feature.

Feature 18

Feature 18 consisted of a closely packed concentration of FCR. It was partially encountered in the southwestern portion of Excavation Unit 78; an additional, one-meter-square unit (Excavation Unit 86) was opened to define the feature's complete limits (see Figure 4.6). This feature, approximately 30 centimeters in diameter, consisted completely of FCR and other prehistoric lithics. No feature fill or carbon remains were extant, and the FCR was contained within the B horizon. Although the feature was not bisected, the portions in each excavation unit were removed separately. As Feature 18 did not possess any distinct feature matrix, no profile

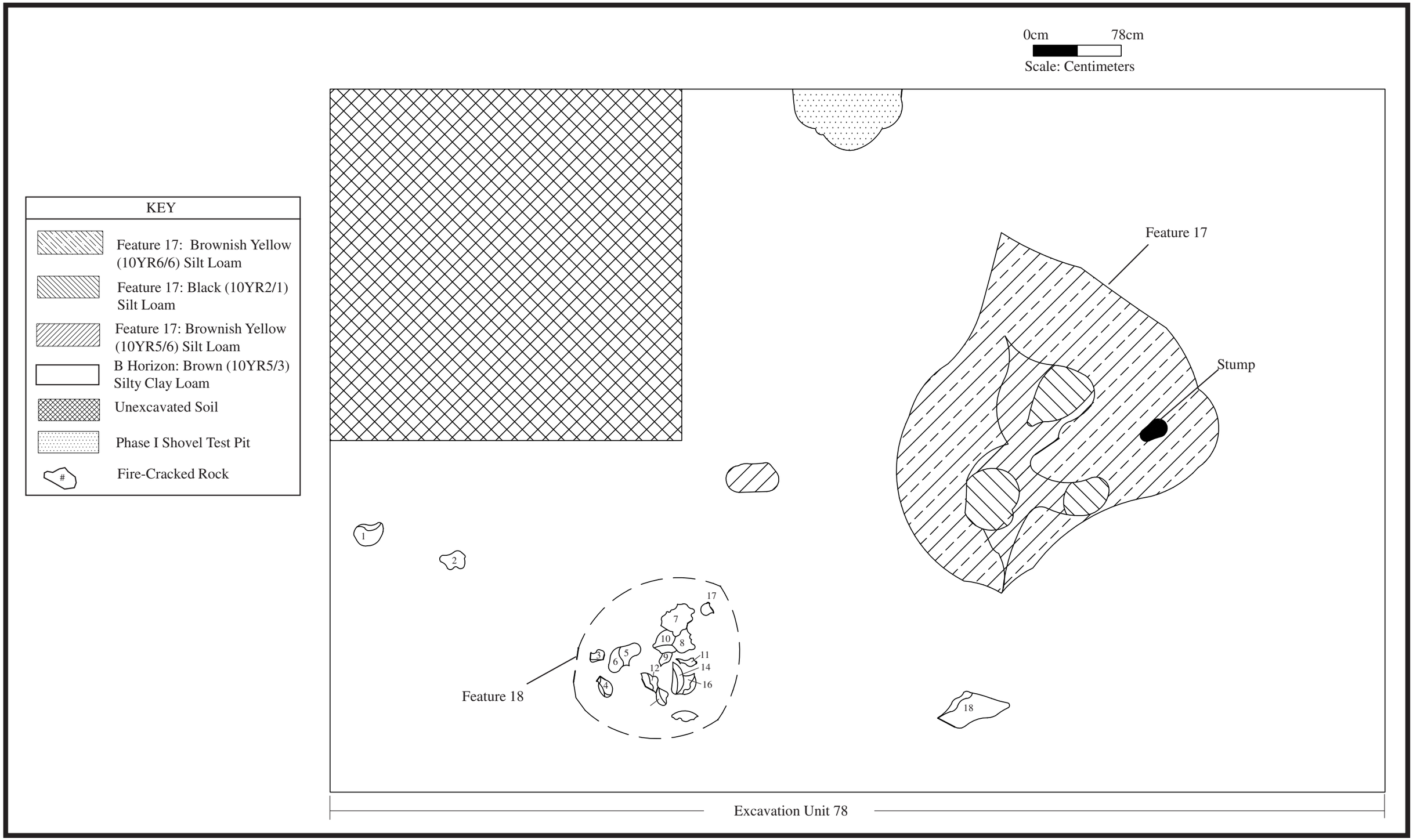

Figure 4.6 Plan Views of Features 17 and 18.

drawings or photographs were obtained. No flotation or carbon samples were retained from Feature 18.

Rutgers' Evaluation. Based on the lack of both a distinct feature fill and carbon remains, Rutgers determined that Feature 18 was probably not a prehistoric hearth. Instead, Feature 18 was determined to be a prehistoric FCR cluster or, more specifically, a dumping site for boiling stones.

URS' Evaluation. Based on the available information, the above interpretation is probably valid. A perusal of the photographic documentation did not reveal any information not shown on the formal plan view drawing. The FCR does appear to be contained within the B horizon, and no evidence of burning or carbon can be seen in the photographs. The presence of the hammerstones and the core is not significant, as these artifacts may also have been used as boiling stones.

RUTGERS' FEATURES IN THE AGRICULTURAL FIELD

The stratigraphy documented in the former agricultural field is simple and straightforward. It consists of a single brown (10YR 4/3) silt loam Ap horizon capping a yellowish brown (10YR 5/8), clayey silt B21t horizon. This stratigraphic sequence can be observed in the profile for the excavation units encompassing the boundary between the woodlot and the agricultural field, particularly the portion of the profile for Excavation Unit 88 (see Figure 4.3). This profile only differs slightly from the typical Elsinboro profile; no A2 horizon is present, and the B21t horizon tends toward more-yellow Munsell hues. Long-term plowing activities can probably account for these differences; the A2 horizon has been incorporated into the plowzone during decades of intensive plowing.

While Rutgers did excavate a total of 42 units in the agricultural field, none of the 23 newly documented features were encountered within any of these units. Large-scale backhoe excavations revealed all of the newly documented features in the field. The only feature apparently encountered within an excavation unit was a portion of Feature 5, which Rutgers initially uncovered during Phase II investigations. The excavation unit level forms list several potential features (n=32), but none of these were assigned feature numbers or further documented in any way. It is possible that they represented shallow, noncultural stains (resulting from tree roots, rodents, or remnant plow scars) that remained after removal of the plowzone horizon. No further notes or maps are available other than the excavation unit level forms. In addition, there are three large, oval stains indicated on the site map (see Figure 4.2) that are not further documented or discussed in any of Rutgers' materials, nor do they correlate with any of UDCAR's documented features. The three stains were apparently convincing enough to warrant inclusion on a large-scale site map, but were later discounted for unknown reasons. It is not known what criteria Rutgers used to discount these three potential features apparently uncovered during the stripping, or the 32 potential features encountered in the excavation units, as no further information regarding them was made available to URS.

Rutgers stripped two different areas during the Phase III effort: a larger, more extensive area and a smaller one (see Figure 4.1). The larger area (Area A) consisted of an L-shaped excavation with the vertical portion of the *L* parallel to the woodlot/field border. It measured 1,300 square meters and encompassed the portion of the field where both Rutgers and UDCAR concentrated their excavation units. The horizontal portion of the *L* encompassed the block excavations where UDCAR documented Features 3, 5, 7, 8, and 10 during their Phase II investigations. This portion was probably uncovered in order to relocate these features and search for any other associated features, especially those associated with Features 3 and 5, two of the three controversial, potentially pithouse-related features.

The smaller area (Area B) consisted of a rectangular excavation encompassing 384 square meters. Only four of Rutgers' excavation units were actually located within this area; it is assumed the area was stripped because it contained UDCAR's controversial Feature 6. This stripping was probably done in order to search for any features associated with the third potentially pithouse-related feature.

FEATURES IN AREA A

Feature 16

Incomplete documentation precludes any reanalysis of this feature.

Feature 21

This feature was located near the northeastern extent of Area A and consisted of a small trianguloid stain in the B horizon (see Figure 4.2). The stain was comprised of a yellowish brown (10YR 5/4) silty sand; it measured approximately 41 centimeters from east to west and 34 centimeters from north to south. Feature 21 was bisected and its southern half removed first, revealing a shallow, bowl-shaped profile only 12 centimeters in depth. The removal of the northern half did not reveal any further profile information.

Rutgers' Evaluation. Rutgers interpreted Feature 21 as a noncultural stain, possibly a small portion of plowzone not removed during stripping.

URS' Evaluation. Even though no formal field mapping, photographs, or results from the flotation sampling of Feature 21 were provided to URS, the rough sketches of the feature on the feature form do not seem to contradict this interpretation.

Feature 22

This feature, located approximately four meters southwest of Feature 21, consisted of an ovoid stain in the B-horizon soil (see Figure 4.2). The stain measured approximately 63 centimeters in diameter and consisted of a dark yellowish brown (10YR 4/6) "compact clay" (Rutgers' term—more likely, this soil is a silt loam). Feature 22 was bisected from east to west and the southern half removed first, revealing a cone-like profile that was 47 centimeters in depth. Although most

of the northern half was removed as a flotation sample, neither this sample nor results from it were provided to URS.

Rutgers' Evaluation. Rutgers' initial interpretation of Feature 22 in their incomplete draft report was that it represented a noncultural stain, although none of the provided documentation offers any insight into this interpretation. The feature form, the site map, and the crew chief's field journal give no indication that Feature 22 was noncultural. In plan and profile, the feature form does not offer any clues as to the feature's function. The site map depicts Feature 22 as a "potentially" cultural feature, while the field journal refers to it as a "basin-shaped burnt earth feature." It is unclear why Rutgers interpreted Feature 22 as a noncultural stain.

URS' Evaluation. Despite the lack of formal field maps, photographs, notes, or flotation results, the rough sketch of Feature 22 on the feature form indicate a cultural origin. The plan view and profile maps of Feature 22 depict a stain with a diameter of 63 centimeters and a moderately deep, well-defined profile. Although no artifacts were recovered from Feature 22, nearly half of the feature was sampled for flotation. Whether or not any artifacts or other material remains (i.e., seeds, pollen, faunal remains, etc.) were recovered from this sample is unknown. The available data from the Phase II work suggest that Feature 22 was a prehistoric pit feature.

Feature 23

Feature 23 was the last feature located in the northeastern portion of Area A, situated approximately 5.5 meters southeast of Feature 22. It consisted of a small, circular stain in the B horizon that measured approximately 29 centimeters in diameter. Available notes describe the feature fill as a brown (10YR 6/5) silty soil, but this description is problematic. The Munsell color attributed to the feature fill does not exist, and the soil matrix description is incomplete. It is possible that the actual Munsell color is 10YR 5/6 (yellowish brown) and the description on the feature form was a typographic error. As for the soil matrix description, based on similar feature descriptions, it can be assumed that the soil is actually a silt loam. Feature 23 was bisected from north to south and the eastern half removed first, revealing a basin-shaped profile that reached a depth of 22 centimeters. The removal of the western half did not reveal any further profile information.

Rutgers' Evaluation. Rutgers interpreted Feature 21 as a noncultural stain, possibly a rodent burrow. This interpretation was apparently based on the fact that the feature fill continues deeper into the B horizon to the north, giving the profile a burrow-like appearance.

URS' Evaluation. Even though no formal field mapping or photographs of Feature 21 were provided to URS, the rough sketches of the feature on the feature form do not seem to contradict this interpretation.

Feature 24

This feature, located near the center of Area A, consisted of an amorphous stain in the B horizon (see Figure 4.2). The exact size of the feature is unknown, as no scale information is present on the feature form. The feature fill was comprised of a brown (10YR 5/3), very wet and soft silt

with large amounts of carbon. Although the feature fill is described as silt, comparable features and the descriptions of local soil series (Matthews and Lavoie 1970) indicate that the fill was probably closer to a silt loam than a pure silt. The feature was bisected from east to west and the southern half was excavated. Exactly what the northern profile revealed about Feature 24 is unknown, because no profile drawings, sketches, or photographs of the profile were available. The notes on the feature form do indicate that the profile was at least 50 centimeters deep and resembled the remnants of a tree, but that is the extent of the available information.

Rutgers' Evaluation. Rutgers' initial interpretation of Feature 24 was that the feature represented the remains of a tree's root systems, and no further excavations were apparently conducted. This interpretation is apparently based on the wet, soft, carbon-filled nature of the feature fill and the description of the missing northern profile.

URS' Evaluation. URS was not provided any data to substantiate the above hypothesis, neither were we provided with any documentation or information that could contradict this hypothesis. Therefore, URS has little choice but to leave the interpretation as it stands.

Feature 25

Feature 25 was located approximately four meters southeast of Feature 24 (see Figure 4.2). It consisted of circular stain approximately 20 centimeters in diameter. The feature fill is described as a dark brown silt, but no further soil or Munsell information is recorded on the feature form. Based on the Munsell color charts and comparable features, it can be assumed that the feature fill can be more completely described as a dark brown (10YR 3/3) silt loam. The feature was bisected from east to west and the southern half was excavated, revealing a cone-like profile that was 30 centimeters in depth.

Rutgers' Evaluation. Rutgers' initial interpretation of Feature 25 was that it represented the remains of tree; at this point, excavation halted. Any information that may have led to this conclusion is absent; the incomplete draft report, the field journal, and the feature form offer no insight into this interpretation. As a matter of fact, the "comments" section of the feature form only contains a single word, which is "tree." The profile sketch, also on the feature form, more closely resembles the profile of a prehistoric post than it does a remnant tree root system. It is possible that the rough sketch does not accurately portray the feature's northern profile, but no other mapping or photographs were available for comparison.

URS' Evaluation. Due to the lack of further information, it is impossible to confirm or contradict Rutgers' interpretation of Feature 25.

Feature 26

The documentation for Feature 26 only consists of the site map and an incomplete feature form. The only graphic representation of this feature is the site map (see Figure 4.2), which depicts it as a small, circular stain located around 3.5 meters southwest of Feature 25. According to the site map, the feature appears to have been approximately the same size as Feature 25, but neither the feature form nor any other documentary sources substantiate this assumption. No recorded

feature descriptions exist. Apparently, no Munsell information, sketch plan view, or sketch profile were recorded.

Rutgers' Evaluation. The feature is described as a rodent disturbance, but no notes, maps, or photographs confirming this interpretation exist.

URS' Evaluation. Due to this feature's complete lack of necessary documentation, URS cannot confirm or dispute Rutgers' assessment.

Feature 27

Only a site map and an incomplete feature form stand as documentation for Feature 26. The site map (see Figure 4.2) depicts the feature as a small, circular stain located around 7.5 meters southwest of Feature 26. According to the site map, the feature appears to be approximately the same size as Features 25 and 26, but neither the feature form nor any other documentary sources substantiate this assumption. No recorded feature descriptions are available. Apparently, no Munsell information, sketch plan view, or sketch profile were recorded.

Rutgers' Evaluation. The feature is described as a rodent disturbance, but no notes, maps, or photographs exist to confirm this interpretation.

URS' Evaluation. Due to this feature's complete lack of necessary documentation, URS cannot effectively evaluate Rutgers' assessment.

Feature 28

The documentation for Feature 28 only consists of the site map (see Figure 4.2), which depicts it as a small, ovoid stain located around four meters southwest of Feature 27 and just above Feature 16. According to the site map, the feature appears to be approximately half the size as Features 25, 26, and 27, but no other documentary sources substantiate this assumption. No recorded feature descriptions exist and, apparently, no Munsell information, sketch plan view, or sketch profile were recorded.

Rutgers' Evaluation. The feature is described as a rodent disturbance, but no notes, maps, or photographs exist to support this interpretation.

URS' Evaluation. Due to the lack of necessary documentation, URS cannot independently analyze Feature 28, leaving us only with Rutgers' assessment.

Feature 29

Feature 29 was a small, rectangular stain, located approximately 11.5 meters directly east of Feature 16 (see Figure 4.2). It was composed of a wet brown (10YR 5/3), loosely compacted silt loam with gravels and carbon flecking. The feature was bisected from east to west, and the southern half was excavated. It is uncertain what this excavation revealed, as no plan maps, profiles, sketches, or photographs of Feature 29's northern cross-section cut were available.

Rutgers' Evaluation. Rutgers' interpreted this feature as a probable tree or root disturbance. This conclusion is apparently based on the feature fill's loose consistency, carbon flecking, and the presence of circular stains that seemed to represent the former positions of various root networks.

URS' Evaluation. Without any profile drawings, photographs, or plan views of Feature 29, it is difficult to comment on Rutgers' interpretation. The limited documentation does not contradict Rutgers' conclusions about Feature 29. Therefore, URS has little choice but to leave the interpretation as it stands.

Feature 30

Feature 30 was located approximately 3.5 meters southwest of Feature 29 (see Figure 4.2). It consisted of small, circular stain that measured approximately 19 centimeters in diameter and contained a brown (10YR 4/3) silt loam fill. The feature was bisected from east to west; the southern half was removed first and screened. This excavation revealed a moderately shallow, basin-like profile. The northern half was then removed as a flotation sample. No documentation or artifacts from the sample were made available to URS.

Rutgers' Evaluation. Rutgers' interpretation of Feature 30 describes it as a truncated post.

URS' Evaluation. Based on the limited documentation provided to URS—which did not include any formal maps or profiles, photographs, flotation results, or notes—it is possible that Feature 30 represents a truncated post. The sketch profile appears to be slightly more basin-like than one might expect of a truncated post's profile, but there are no comparative photographs or formal maps to provide any additional insight.

Feature 31

The documentation for Feature 31 consists of the site map and an incomplete feature form. The only graphic representation of this feature is the site map (see Figure 4.2), which depicts it as a small, circular stain located about 3.25 meters east of Feature 30. The feature fill is described as a brown (10YR 4/3) silt loam. According to the site map, the feature appears to be approximately the same size as Feature 31, but neither the feature form nor any other documentary sources are available to support this interpretation. The Munsell and soil information represents the only recorded feature descriptions. Apparently, no sketch plan view or sketch profiles were recorded.

Rutgers' Evaluation. The feature is described as a tree/root disturbance on the feature form, but no maps or photographs exist to confirm this interpretation.

URS' Evaluation. Due to this feature's lack of necessary documentation, URS cannot independently analyze Feature 31 to evaluate Rutgers' assessment.

Feature 32

This feature was located approximately 4.5 meters south of Feature 32 (see Figure 4.2). It consisted of a small, circular stain measuring approximately 23 centimeters in diameter. The feature fill is described as a wet, brown (10YR 4/3) silt loam with gravels and some charcoal. Feature 32 was bisected from east to west and the southern half excavated first, revealing both a cylindrical profile and a quartz biface fragment. The profile was approximately 35 centimeters in depth, straight sided, and flat bottomed. The northern half was removed as a flotation sample, but the results were not made available to URS.

Rutgers' Evaluation. Based on the feature's profile and the presence of a prehistoric tool, Rutgers concluded that Feature 32 was a possible prehistoric posthole.

URS' Evaluation. Even though no profile drawings or photographs were made available to URS, none of the reviewed documentation contradicts Rutgers' initial interpretation.

Feature 34

Feature 34 was a large, ovoid stain located in the southeastern portion of Area A, approximately 10.5 meters east of Feature 32 (see Figure 4.2). It measured 1.95 meters long by 82.5 centimeters wide. The feature fill was composed of a dark yellowish brown (10YR 4/6) silt loam with carbon flecking. The feature was bisected from north to south and the western half removed first (Figure 4.7). Although both halves were excavated in arbitrary, ten-centimeter levels, no distinct stratigraphy was documented. A total of four arbitrary levels were excavated in this manner. Excavation revealed a basin-like profile (Figure 4.8), reaching a depth of approximately 45 centimeters. A total of 12 prehistoric lithic artifacts were recovered from both halves of the feature; all of these artifacts came from the first three levels. Flotation samples were taken from all four of the eastern half's arbitrary levels, and at least two carbon samples were collected. Analytical results from these samples were not made available to URS.

Rutgers' Evaluation. Rutgers' incomplete draft report only describes this feature as a noncultural oval stain in the B horizon; no data supporting this conclusion is contained in the draft report. The draft report represents the only document that offers any interpretation of Feature 34. Neither the feature forms nor the field journal draw any conclusion concerning Feature 34. The notes for Feature 34 do not mention any evidence suggesting a natural origin for this feature. None of the provided materials contain any evidence to suggest that Feature 34 was noncultural in origin, yet the feature is described as such in the incomplete draft report.

URS' Evaluation. Based on the material provided to URS (i.e., the formal plan view and profile drawings, photographs, and the recovered artifacts), this feature appears to be a prehistoric pit. The basin-shaped profile and the presence of lithics support this interpretation. Black-and-white photographs show a clearly delineated profile that does not seem diffuse or unclear. The closing photographs do not display any evidence for the presence of root-like anomalies visible at the feature's base, near-surface roots trailing off into the subsoil, or any other evidence to suggest this feature was a tree. The lack of internal stratigraphy probably indicates that the feature represented a single fill episode. In sum, Feature 34 probably represents a former storage pit.

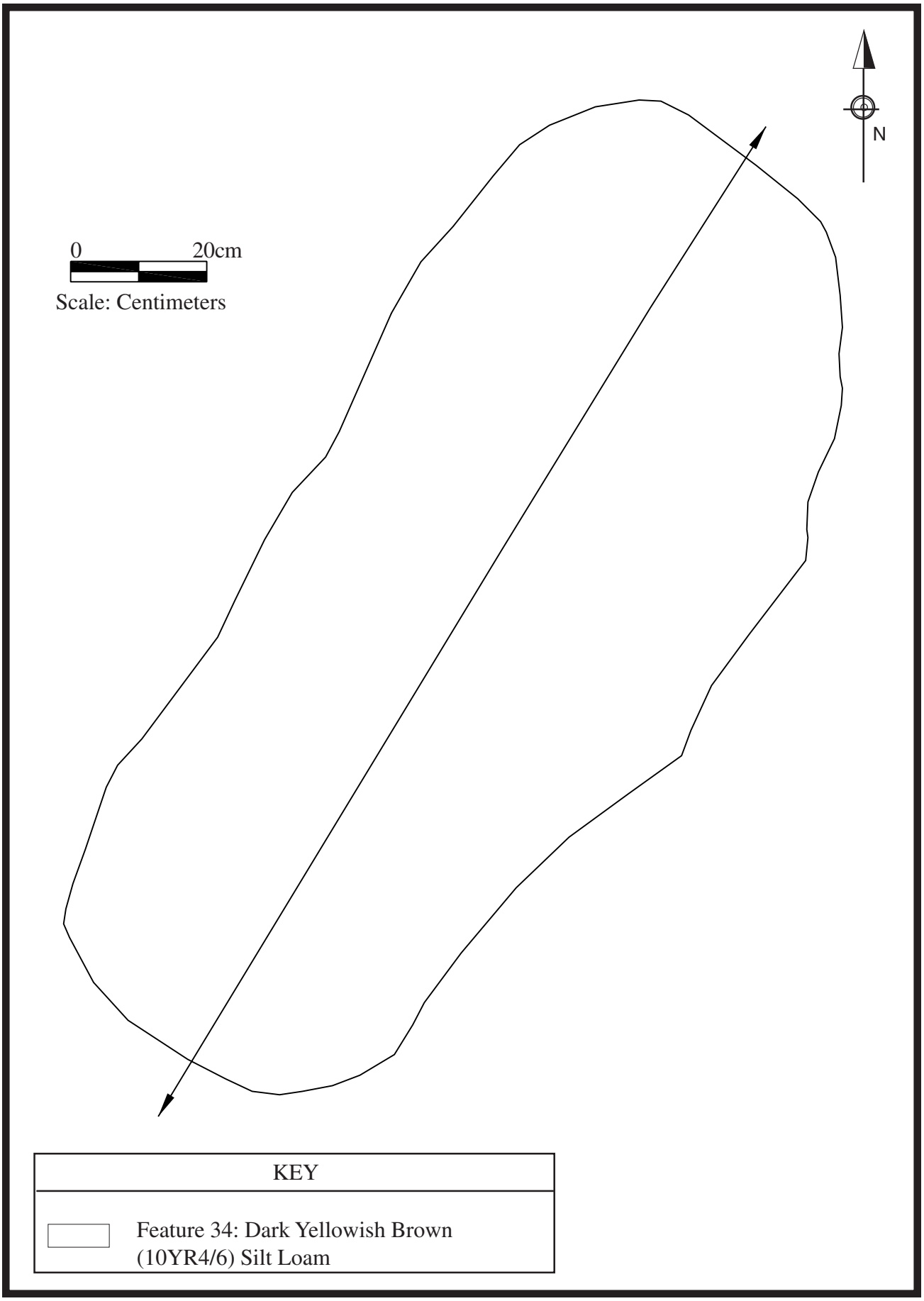

Figure 4.7 Bisection of Feature 34.

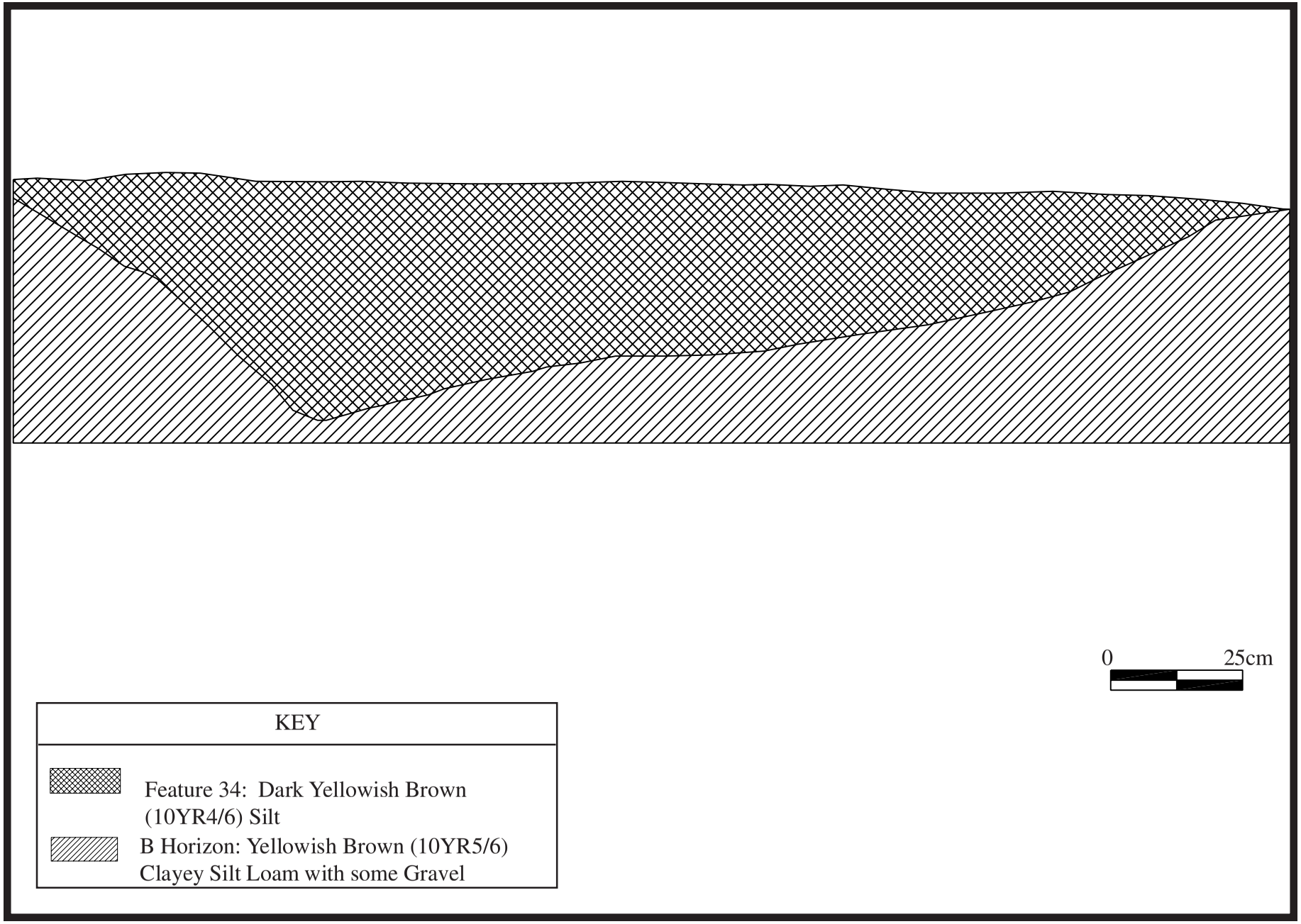

Figure 4.8 Eastern Profile of Feature 34.

Feature 35

The documentation for Feature 35 is limited to its location on the site map (see Figure 4.2) and an incomplete feature form. The only graphic representation of this feature (apart from its location) is a sketch plan view on the feature form. These sources show a small, teardrop-shaped stain located approximately four meters north of Feature 34. The feature fill was described as a dark yellowish brown (10YR 4/6) compact clay, but based on comparable features, it may have contained a significant amount of silt and been closer to a heavy silt loam. According to the site map, the feature appears to be roughly twice the size as Features 29 – 32, but the sketch plan map on the feature form does not possess a scale. None of the other documentation contains any mention of the feature's size. Feature 35 was bisected from east to west and the southern half was removed. The type of profile revealed in this excavation remains unclear; no profile sketch, formal map, or photographs were available for analysis. It does not appear that any flotation or carbon samples were taken from Feature 35.

Rutgers' Evaluation. The feature form, field journal, and incomplete draft report all describe Feature 35 as a noncultural stain, specifically the remnants of a tree's taproot. Excavation of the southern half was halted when the feature's noncultural nature became apparent. As a result, the northern half was not excavated. The teardrop form was apparently the result of a rodent intrusion in the taproot's northern portion, which formed the upper portion of the teardrop.

URS' Evaluation. Rutgers' interpretation of Feature 35 was based on the profile of the northern half. As no profile drawings or photographs documented this apparent taproot, URS cannot independently analyze Feature 35 to assess Rutgers' judgment.

Feature 36

This feature was located approximately four meters to the northeast of Feature 35 (see Figure 4.2). It consisted of a circular stain that measured 35 centimeters in diameter. A rodent disturbance/tunnel extended from the southeastern portion of the feature. The feature form contains no information on soil texture or color. Feature 36 was bisected from east to west and the southern half removed first. This cross section revealed a cone-like profile reaching a depth of 26 centimeters. The northern half was not excavated and no samples were taken.

Rutgers' Evaluation. Rutgers' incomplete draft report termed this feature a rodent disturbance, an interpretation apparently based on the sketch plan view that showed the rodent tunnel extending from the main part of the feature. No other notes, drawings, or maps offered any insight into this particular determination, especially since the field journal and feature form refer to Feature 36 as a taproot.

URS' Evaluation. Based on the profile documented in the sketch, it is possible that Feature 36 was actually a postmold. The rodent disturbance was likely a recent intrusion. Unfortunately, the lack of any Munsell or soil-texture information, photographs, or formal drawings to corroborate this conclusion makes it difficult to offer an alternate interpretation.

Feature 38

Feature 38 was located approximately 13.5 meters northwest of Feature 24 (see Figure 4.2). It consisted of an 84-x-20-centimeter, kidney-shaped stain oriented north to south. The feature fill was comprised of a yellowish brown (10YR 5/4 – 5/6), slightly compact clayey silt with carbon flecking. Feature 38 was bisected from north to south and the eastern half removed first. This excavation revealed an irregularly shaped profile that possessed a deep southern portion (depth = 16 centimeters), a shallow central portion (depth = 6 centimeters), and a northern portion diving back down slightly (depth = 8 centimeters). The northern half, which reached a maximum depth of 28 centimeters, was then excavated. The majority of the feature fill from the northern half was collected as a flotation sample, but the results from the samples were not made available to URS.

Rutgers' Evaluation. The draft report only identifies Feature 38 as a noncultural stain; no further interpretation is offered in this document. The field journal and feature form offer a little more insight into this feature; they term Feature 38 as a noncultural "subsoil variation." The feature form also states that root/rodent disturbances were present in the western and southern portions of the feature, but no graphic documentation of said disturbances was included. It is unclear what criteria Rutgers used to term Feature 38 a "subsoil variation," as no other notes, formal drawings, or photographs from this feature were available.

URS' Evaluation. Based on the notes from the feature forms, Feature 38 possessed a distinct, kidney-shaped plan view, attained a maximum depth of 28 centimeters, contained at least one prehistoric lithic in the eastern half, and exhibited noticeable carbon deposits. The western half was almost entirely removed as a flotation sample, which could very possibly contain additional prehistoric lithics. The profile was irregular, but apparently distinct enough to sketch. All of this data points to at least the possibility that Feature 38 was a prehistoric refuse or storage pit. If the feature was a "subsoil variation" (a term that is never explained), then why did it possess a distinct shape/profile, carbon deposits, and a prehistoric lithic? Unfortunately, no formal drawings, extensive notes, photographs of any nature, or flotation results exist to identify Feature 38 as either a prehistoric pit or a noncultural "subsoil variation."

Feature 39

The documentation for Feature 39 only consists of the site map and an incomplete feature form. The site map is the only graphic representation of this feature (see Figure 4.2). This source shows a moderate-sized (approximately 1-x-0.5-meter-wide), teardrop-shaped stain located two meters north of Feature 29. The feature form does not contain any Munsell or soil-texture information. Feature 39 was bisected from east to west and the southern half was removed. It is unclear what type of profile this excavation revealed, as few field notes were available for analysis. Furthermore, it does not appear that any such documentation was ever undertaken. No flotation or carbon samples were taken from Feature 39.

Rutgers' Evaluation. The feature form, field journal, and incomplete draft report all describe Feature 35 as a noncultural stain, specifically the remnants of a tree's root system. The evidence for this consisted of the feature fill becoming noticeably wetter, softer, and darker with depth,

and erratic, root-like disturbances in the feature's walls. In light of this evidence, excavation of the southern half was halted; no excavation of the northern half was undertaken. Unfortunately, no documentation exists to corroborate this interpretation.

URS' Evaluation. Rutgers' interpretation of Feature 39 was based on the profile of the northern half. As no profile drawings or photographs document this feature or the apparent remains of a root system, URS cannot fully analyze Feature 39 and either agree or disagree with Rutgers' assessment. It should be noted, though, that Feature 39 was a kidney-shaped feature containing several prehistoric lithics, including two quartz cores. This evidence may point to a cultural origin for Feature 39.

Feature 40

This feature was an east-west oriented, kidney-like feature located approximately 4.5 meters northwest of Feature 36 (see Figure 4.2). It measured 1.9 meters from east to west and 85 centimeters from north to south. The feature fill consisted of a dark yellowish brown (10YR 4/6) silt loam with gravel. The feature was bisected from east to west; the southern half was removed, revealing an approximately 52 centimeter deep, basin-shaped profile. The northern half was not removed, and no flotation or carbon samples were taken.

Rutgers' Evaluation. The incomplete draft report, field journal, and feature forms all describe Feature 40 as a noncultural stain. The feature was determined to represent the remains of a tree's root system. This conclusion was apparently based on three facts: 1) the feature "tunnels off" to the southwest at the base of Level Five; 2) small, circular stains existed along the south wall of the feature and appeared to be root related; and 3) the feature fill at the feature's base was soft and appeared to be organic. This fill at the feature's base was probed with a split-spoon, and it apparently continued for at least another 20 centimeters. These factors led to the halting of the southern half's excavation.

URS' Evaluation. Rutgers' interpretation of Feature 40 was based on the profile of the northern half and apparent disturbances in the walls and base of the excavated southern half. While a formal drawing of this profile exists, no photographs of the profile were taken. Additionally, no documentation of the disturbances in the southern half was apparently undertaken; no drawings or photographs exist of the disturbances that apparently influenced Rutgers' determination of the feature's noncultural status. The only photographs of Feature 40 consist of an indistinct series of opening plan view plates. Further, as excavation was halted before completion, the provided formal profile does not actually represent the full extent of the northern wall. The combination of all these factors leads to two conclusions: 1) the full amount of information that might have been collected from Feature 40 was not collected; and 2) due to this lack of information, URS cannot fully analyze Feature 40 and either agree or disagree with Rutgers' conclusion. An analysis of the limited information does suggest that Feature 40 may have been cultural in nature. The kidney-shaped plan view, basin-shaped profile, and presence of prehistoric lithics are suggestive of a prehistoric refuse/storage pit. A full excavation and documentation of Feature 40 may have verified or refuted this supposition.

FEATURES IN AREA B

Feature 3

This feature was apparently re-excavated, but no documentation exists. Artifacts were recovered, though no documentation accompanies them. The nature of this feature remains unknown given the lack of data.

Feature 6

UDCAR originally uncovered this feature during their 1992 Phase II effort. It was tentatively identified as a storage pit associated with a possible prehistoric pithouse. The feature was not excavated at that time; it was mapped in plan view and then reburied for excavation at a future time. In 1994, the feature was uncovered again during Rutgers' Phase III efforts. The original three UDCAR test units (49, 53, and 54) formed an upside-down *L* shape; the bottom of the *L* faced due west (see Figure 4.2). All three of these units were re-excavated and, according to the field journal, the feature was apparently mapped in plan view. Unfortunately, the only full graphic representation of Feature 6 appears on the site map (see Figure 4.2). No formal plan view was provided to URS and no plan view photographs appear to have been taken. The only other opening drawings or sketches consist of a very rough sketch in the crew chief's field journal and two sketches on feature forms that purport to be from Levels 1 and 2 of the feature's western half as they appeared in Test Unit 53. Test Unit 53 was the central unit of the *L* and contained a large portion of the feature. It is unknown if any other portion of the feature was excavated. The feature's shape is unknown, given the lack of field notes. The feature fill consists of a yellowish brown (10YR5/6) silt loam with carbon flecking and gravel. Fortunately, formal profile drawings of Feature 6 do exist, and they appear to come from Test Unit 53 exclusively. These profiles are purported to be of the test unit's southern, northwestern, and western profiles. The southern and northwestern drawings revealed moderately shallow (approximately 20-centimeter), basin-shaped profiles. These profiles apparently represent cross sections of the feature as seen in Test Unit 53's walls. The western profile, which was also the eastern wall of Test Unit 49, is much shallower and represents the western extent of the feature.

Feature 19

This small, circular feature was located in the southwestern portion of Area A (see Figure 4.2). It measured approximately 18 centimeters in diameter. Although the feature fill's abundant amounts of carbon were documented, no Munsell or soil-texture information was documented. The feature form, the incomplete draft report, and the field journal list no such information. The feature was bisected from north to south and the western half was removed. This excavation apparently revealed a 50-centimeter-deep, narrow, cone-shaped profile, although the profile sketch is difficult to interpret. Even though the western half of the feature was removed, the sketch profile shows the southern profile of the feature with the western and eastern halves together, apparently indicating that at least a partial excavation of the southern half was also undertaken, or that the feature was excavated by quarters. The eastern half was apparently not removed.

Rutgers' Evaluation. The feature form, field journal, and incomplete draft report all describe Feature 19 as a noncultural stain, specifically the remnants of a tree's taproot. This conclusion was apparently based on the feature's narrow profile and the large amount of carbon encountered.

URS' Evaluation. The feature's narrow, cone-like sketch profile and abundant amount of carbon seem to suggest that it represented a remnant post. Unfortunately, without formal drawings, photographic documentation, or a complete description of the feature to corroborate this interpretation, URS cannot confirm either conclusion.

Feature 20

Although no scale was provided on the feature form, Feature 20 appears to be comparable in size to Feature 19 (see Figure 4.2). The feature, which contained a brown (10YR 4/3) silt loam with gravel, was bisected from north to south and the western half was excavated. It is unclear what this excavation technique revealed, as no profile sketches exist. The only graphic representations of Feature 20 appear on the site map (cited above) and the feature form as a sketch plan view. Furthermore, no photographs were apparently taken of Feature 20.

Rutgers' Evaluation. The incomplete draft report, field journal, and feature form all describe Feature 20 as a rodent disturbance. The feature form asserts that upon bisection, it was evident that the feature's fill undercut the subsoil. This fact apparently led to Rutgers' interpretation of the feature as a rodent disturbance.

URS' Evaluation. Rutgers' interpretation of Feature 20 was based on the profile of the eastern half. As no drawings or photographs exist to document this profile, URS cannot fully analyze Feature 20.

Feature 33

No reinterpretation is possible for this feature, given the complete lack of adequate documentation.

Feature 37

The documentation for Feature 37 only consists of the site map (see Figure 4.2), which depicts it as a large, ovoid stain located around 6.5 meters east of Feature 20. According to the site map, the feature appears to be approximately 2 x 0.5 meters, but no other documentary sources substantiate this assumption. No recorded feature descriptions exist. Apparently, no Munsell information, sketch plan view, or sketch profile were recorded.

Rutgers' Evaluation. In the incomplete draft report, the feature is simply described as a noncultural stain, but no notes, maps, or photographs are available to confirm this interpretation. The field journal merely notes that Ray Muller excavated Feature 37, which yielded no artifacts and contained a fair amount of gravel. None of the provided documentation alludes to the

rationale for Rutgers' conclusion, and no materials are available to reveal the potential feature's profile.

URS' Evaluation. On the site map, the feature appears to exhibit the characteristics of a prehistoric refuse or storage pit, but there is absolutely no documentation to prove or disprove this hypothesis. Unfortunately, due to this feature's nearly total lack of necessary documentation, URS cannot analyze Feature 37 to assess Rutgers' interpretation.

ARTIFACT ASSEMBLAGE

The following sections present descriptions of the various artifact classes recovered from Rutgers' Phase III data recovery excavations. As expected, debitage and other stone-tool manufacturing debris dominated this assemblage. Debitage falls within several basic raw material categories, but was mostly obtained from nearby jasper sources. Flaking debris, including both shatter and flakes proper, totals 4,974 specimens. Bifaces, including projectile points and point fragments, total 71 specimens, and appear to be dominated mostly by Late Archaic/Transitional period types. Bare Island and Poplar Island/Lackawaxan types are common and seem to point to one or more closely related occupations. Other types include Perkiomen and Susquehanna specimens, Orient Fishtail specimens, and Late Woodland triangular specimens. Ceramics, restricted to a small area of the site, were not plentiful. All of the sherds pertain to a few vessels of Riggins Fabric Impressed, a Late Woodland ware known best from southern New Jersey. It is coeval with Townsend Ware, defined in Delaware. This ware's presence in New Castle County is not surprising, given its abundant distribution across Delaware Bay. Other artifact categories include cores, modified flakes, hammerstones, and FCR.

Debitage

Debitage recovered from the data recovery excavations totaled 4,974 specimens. These artifacts are enumerated by raw material in Table 4.1. Note that this table includes both flakes and shatter fragments.

Table 4.1 Flakes by Lithic Raw Material.

Lithic Material	Raw Count
Argillite	11
Chalcedony	34
Chert	495
Jasper	2,761
Quartz	1,443
Quartzite	225
Rhyolite	5
Totals	**4,974**

The high number of jasper specimens (totaling 55.5 percent of the assemblage) is not surprising. Nearly all of this material came from nearby outcrops related to the Iron Hill locality. Quartz, totaling 29 percent of the debitage assemblage, is readily available in nearby, given the proximity of the Piedmont formations. Lithic materials drop off markedly in count after jasper and quartz

materials are considered. Chert, totaling 495 flakes (or nearly 10 percent of the debitage sample) is third in count, followed by quartzite, a raw material that makes up only 4.5 percent of the sample. The remaining kinds of raw material—argillite, chalcedony, and rhyolite—are poorly represented and most likely pertain to several episodes of biface curation. Unlike the jasper and quartz, no evidence for primary stone-tool production is present in any of these latter categories.

In general, most of the debitage from jasper and quartz categories can be classified as biface-thinning specimens, resulting from either the final working of biface blanks and/or curation of hafted bifaces. A breakdown of these two lithic categories (as well as chert and quartzite) by flake type is offered in Table 4.2.

Table 4.2 Major Debitage Categories by Flake Type.

Material	Shatter	Primary Flakes	Biface-Thinning Flakes	Totals
Jasper	149	55	2,557	2,761
Quartz	602	39	802	1,443
Chert	21	27	447	495
Quartzite	55	13	157	225
Totals	**827**	**134**	**3,563**	**4,924**

Core and Core Fragments

Rutgers excavations at the site recovered a number of core fragments of various lithic raw materials, including quartz, quartzite, jasper, and chert. Quartz was the most commonly recovered, core-related material, numbering 28 specimens; nearly all of these are blocky fragments left over from reduction of locally available quartz cobble material. In addition, five questionable cobbles are present in the assemblage; their identity as cores or tested cobbles is uncertain. Plate 4.1 illustrates a sample of the quartz core specimens. Quartzite cores numbered seven specimens and are similar to quartz cores in that they were reduced from locally available cobble material. Some of the specimens exhibit cortex on one or more facets. These quartzite cores are depicted in Plate 4.2.

Local jasper was also present in core form. The assemblage contains six specimens of yellowish jasper core fragments. These fragments were not obtained from cobble sources, but from local outcrops in the New Castle County area. Coarse-grained tabular cortex is present on the platform ends of several specimens, suggesting that cores began as large flakes knocked off blocks of unmodified raw material. Plate 4.3 shows all jasper cores discovered during data recovery.

Remaining core fragments are limited to a number of flaked chert pebbles, some of which may not be culturally modified. Six fragments, all small and derived from large pebbles, exhibit one or more flake scars. A sample of these items are shown in Plate 4.4.

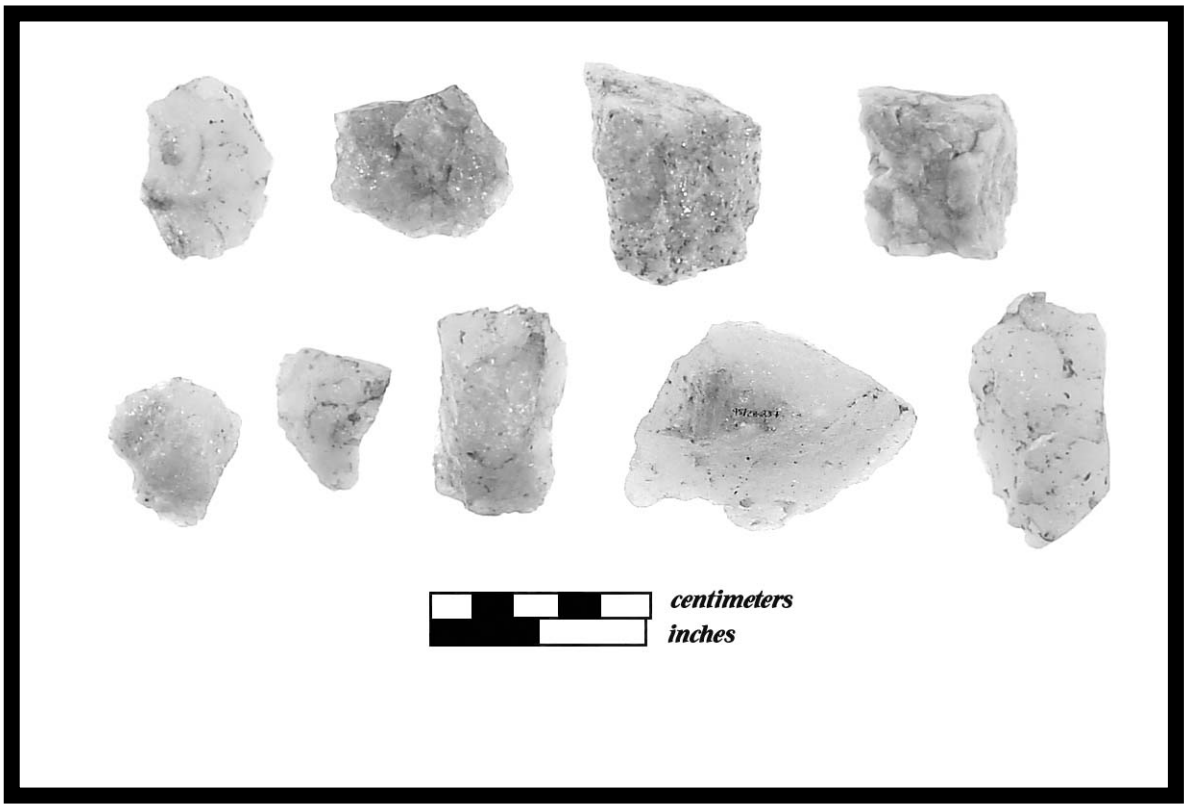

Plate 4.1 Quartz Cores.

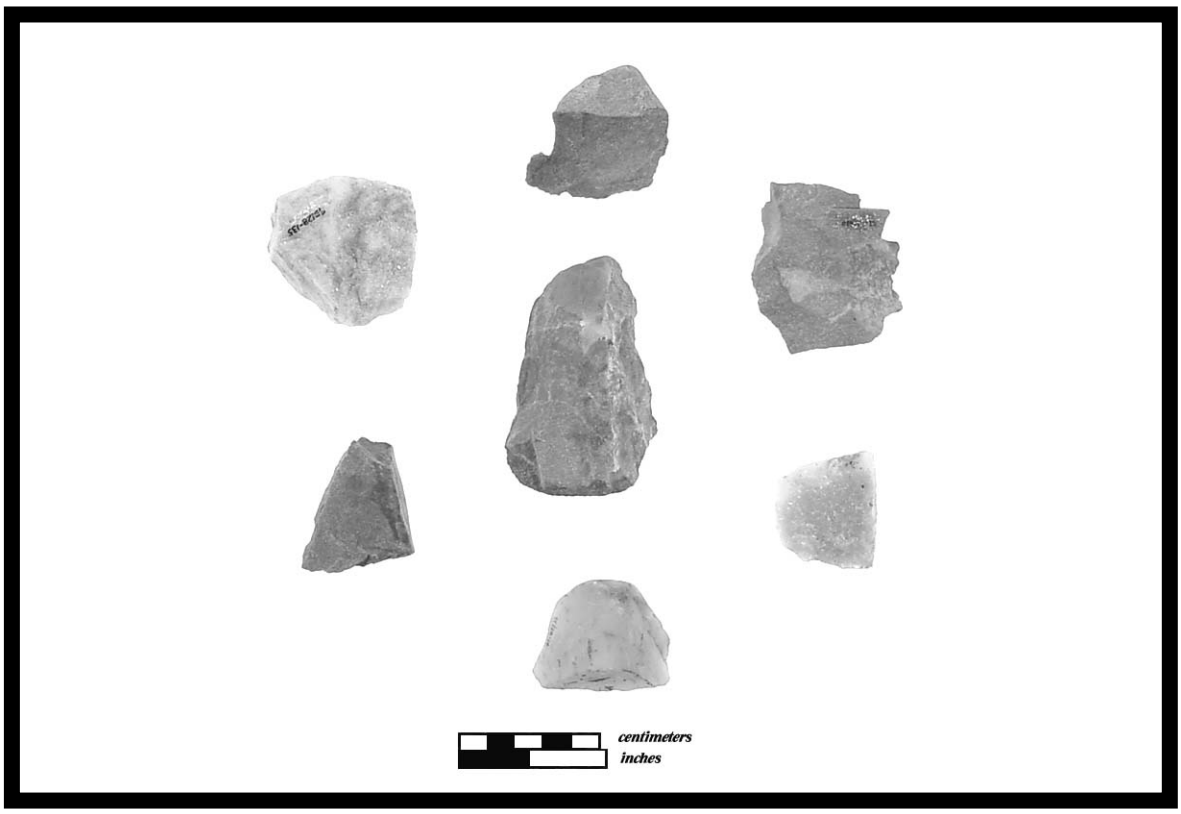

Plate 4.2 Quartzite Cores.

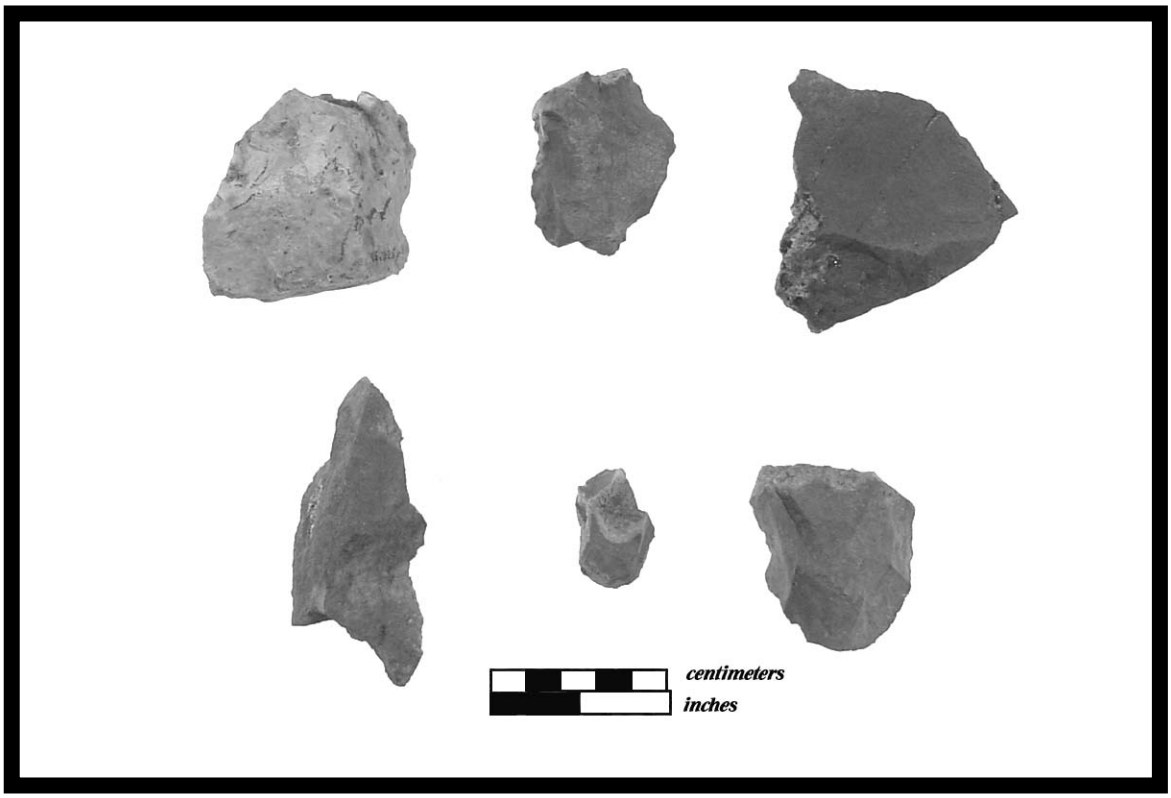

Plate 4.3 Jasper Cores.

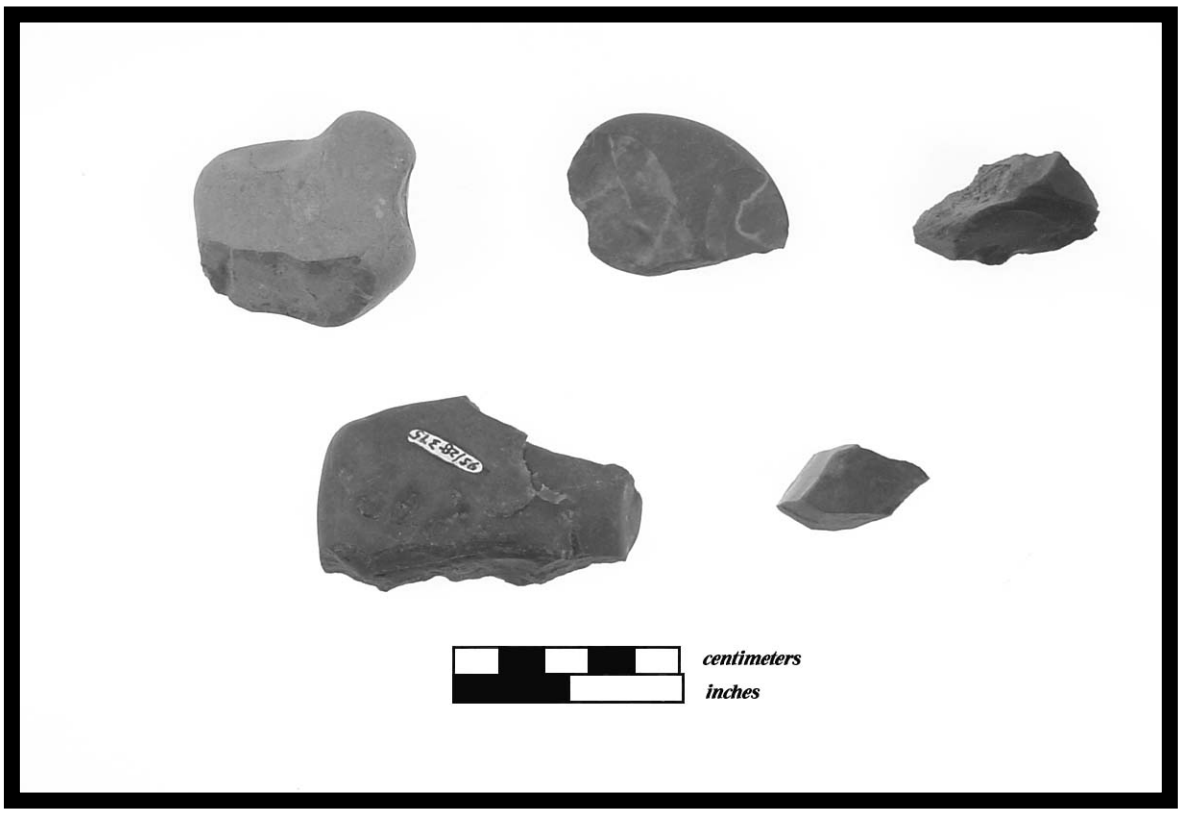

Plate 4.4 Flaked Chert Pebbles.

Ceramics

The ceramic assemblage from the data recovery excavations is characterized entirely by the Late Woodland ware known as Riggins Fabric Impressed, a ware better known from the southern part of New Jersey. Along with the Riggins are three body sherds of Rappahannock Fabric Impressed, a cognate Late Woodland type within the Townsend Ware group defined from Delaware. The recovered assemblage is small, limited to only 83 body sherds of Riggins, four rim sherds of the same, eight interior spalls, six exterior spalls, and three crumbs, as well as the three above-noted body sherds of Rappahannock Fabric Impressed. The 104 sherds of Riggins Ware are enumerated by excavation unit in Table 4.3.

Table 4.3 Riggins Fabric-Impressed by Excavation Unit and Feature Context.

Sherd Type	Feature 16	EU 46	EU 47	EU 48	EU 51	EU 53	EU 73	EU 89	Totals
Body	3	28	2	13	12	3	1	21	**83**
Int Spall	0	1	0	1	4	0	0	2	**8**
Ext Spall	0	4	0	2	0	0	0	0	**6**
Rims	2	1	0	0	0	0	0	1	**4**
Crumbs	0	1	1	0	1	0	0	0	**3**

The three body sherds of Rappahannock are tempered with finely crushed shell and are similar in color and texture to Riggins specimens. Given that Rappahannock is a contemporaneous ware, it is not unexpected to find it in the same context as Riggins ware.

The Riggins ware sample represents a small assemblage, perhaps composed of only three separate vessels. These vessels are well made of a well-cleaned, clayey paste containing fragments of crushed quartz added as a tempering agent. The general appearance of the ware follows closely descriptions offered by Cross (1941) and McCann (1950). Exterior surfaces are covered with tightly plaited fabric that was not smoothed over towards the bases. Upper parts of the vessels were partially smoothed over, in some cases nearly obliterating the impressions. Exterior surfaces are generally brown (7.5YR 5/4) to light brown (7.5YR 6/4), with some surfaces appearing as red (2.5YR 4/6). The interior vessel colors are similar, though tend to be dark brown (7.5YR 4/2) to dark gray (7.5YR 4/1). The cores are reduced, varying from dark brown (7.5YR 3/2) to very dark gray (7.5YR 3/1). The thickness of body walls varies with their location on the vessels. Mid-portion wall thickness, from the "belly" of a vessel, is five to seven millimeters; the walls thicken towards the bases. No true basal sherds were recovered, though it is assumed that thickness here would be in excess of seven millimeters. Thin sherds, measuring close to four millimeters in thickness, came from the constricted neck portions of vessels and just below vessel rims.

Given the few rims of any size, determining vessel shape is difficult. Two tentative shapes can be defined from two rims: one a closed-mouthed, barrel-shaped vessel with a flaring rim measuring about 30 centimeters (12 inches) in diameter; the other a straight-walled jar with a direct rim measuring about 35 centimeters (14 inches) in diameter. These two vessel shapes are illustrated in Plate 4.5. A third rim (Catalog #573) is too small for making any inference of vessel shape. This rim is of interest, in that it exhibits two incised lines, though the motif is not

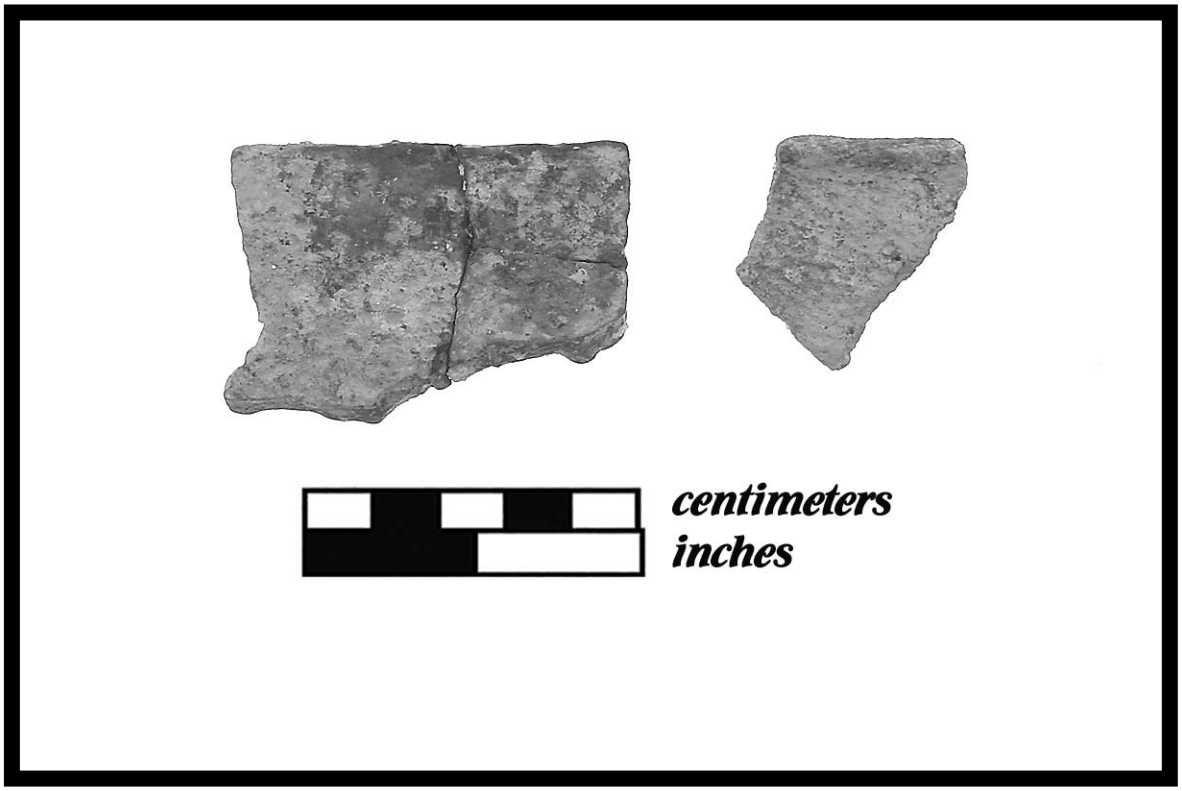

Plate 4.5 Riggins Fabric-Impressed Vessel Rims.

discernable. Riggins Incised from New Jersey (and its related ware, Indian Head Incised) have motifs comparable to those defined for Townsend (cf. Lopez 1961; McCann 1950).

The three body sherds of Rappahannock Fabric Impressed are considered part of the same assemblage as the Riggins ware sherds. At least one sherd of the three was recovered from Feature 16, which also contained five sherds of Riggins.

In sum, the ceramic assemblage from the Gabor Site suggests a small suite of vessels representing a single household. The tight concentration of all ceramics from the wooded section of the site likely represents the focus of a short-term and seasonally occupied, hamlet-type component.

Projectile Points and other Bifaces

The range of identifiable points recovered at the Gabor Site range from late Middle Archaic to Late Woodland specimens. The greatest concentration of points by period, however, dates to the Late Archaic and include both Savannah River/Bare Island types and Poplar Island types. Projectile points are described below in chronological order, beginning with the side-notched Brewerton specimens. As an artifact class, each identifiable point serves as a means to provide a measurable chronological span, or framework, for the multiple visits to the Gabor Site through time. The variable representation of identifiable points at the site is a measure of changing land use through time, and can be a jumping off point for an evaluation of Native-American utilization of the specific landscape recognized today as the Gabor Site area. This data, when placed within the comparative framework of other sites that have been investigated within Delaware and the greater Middle Atlantic region, provides a basis for developing sets of inferences bearing on Native-American lifeways and their articulation with the natural world through time. While in one sense the presentation of the data below is traditional, its application is related to a more anthropologically informed treatment of the real meaning of chronologically specific events.

Brewerton/Halifax Points. Four examples of this type were recovered during Rutgers' excavations (Plate 4.6). In general form, these four specimens match the descriptions Coe (1964) provides for Halifax and Ritchie (1971) provides for Brewerton. Two of the points are relatively complete; one is missing the distal end, and the fourth specimen is broken on an angle across the blade to shoulder. When large samples of this type cluster are viewed, there is a noticeable cline in overall shape from Halifax to Brewerton. For instance, a large collection of points classifiable as Brewerton recovered from the Chick Farm Site (18FR335), located along the Potomac River, exhibits specimens with broad bases that are flat to slightly incurving, separated from the blade by shallow side notches (Barse 2001). Average length and width of these points in the sample are, respectively, 26.45 and 18.58 millimeters. Points recognized as Halifax (following Coe) exhibit bases that are narrower in width than the shoulders and more convex. The blade is separated from the basal element by broader, shallower side notching. Given the four specimens, metrical summaries are not provided, though the length and width measurements do fall within the range of the sample noted above from the Chick Farm Site. In general, these points are longer and do not exhibit as great a degree of resharpening as those designated as Brewerton. The blade element of these four points exhibit varying degrees of

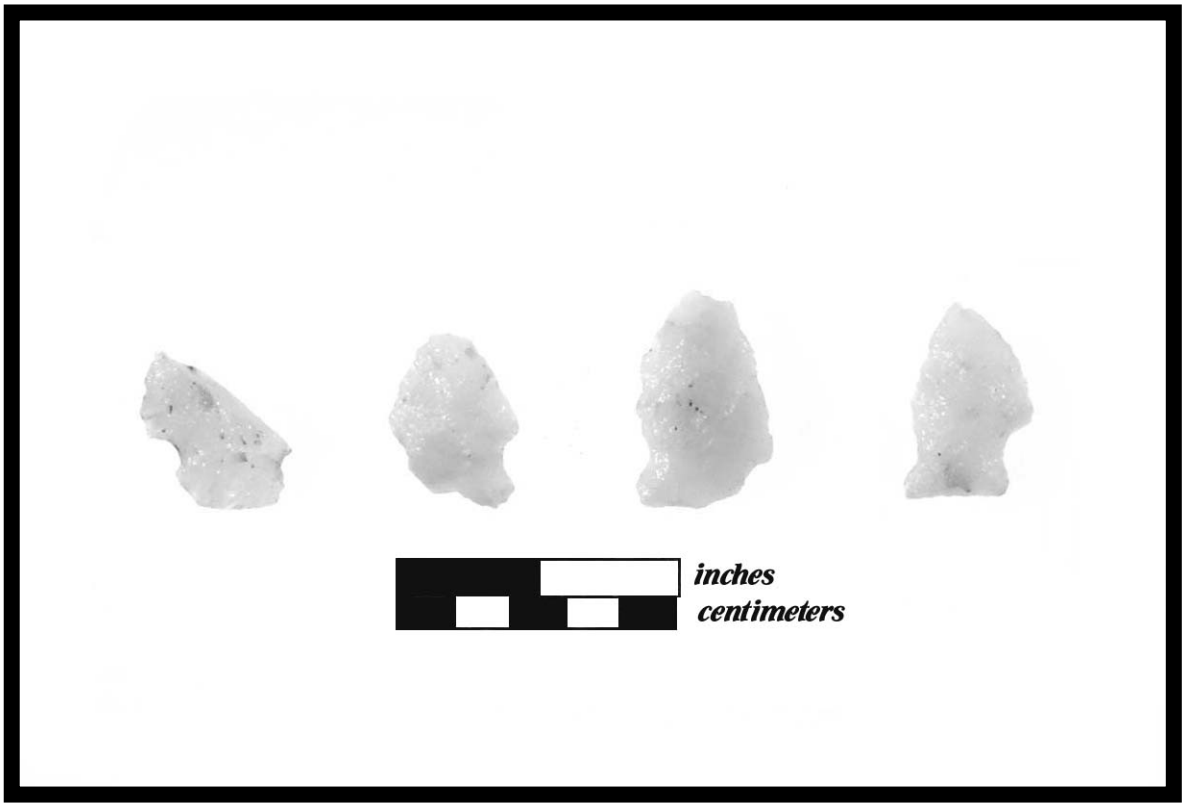

Plate 4.6 Brewerton/Halifax Projectile Points.

resharpening, a technique which resulted in a diminution of the blade element or creation of a distinct asymmetry. Table 4.4 summarizes these points.

Table 4.4 Brewerton Projectile Points.

Cat #	Provenience	Material	Portion	Length	Width	Thickness
23	EU 22, Level 1	Quartz	Complete	31 mm	21 mm	7 mm
25	EU 24, Level 1	Quartz	Complete	29 mm	20 mm	7 mm
32	EU 31, Level 1	Quartz	Complete	35 mm	22 mm	9 mm
798	EU 85 NE, Level 3	Quartz	Proximal Fragment	-	24 mm	8 mm

Bare Island/Small Savannah River Stemmed Points. This group includes parallel-stemmed points with variably developed shoulders that match Kinsey's (1959) descriptions of the "square stemmed" points recovered from Bare Island, as well as those Coe (1964) describes as the small variant of the Savannah River point (Plate 4.7). In many aspects, this is the same type as the Holmes point defined by Gardner and McNett (1975), based on their survey of Potomac River archaeology. As reviewed later in this chapter, Barse considers Bare Island points to be equivalent to classic, Late Archaic Savannah River types, albeit within a smaller overall size and slightly narrower in terms of its stem element. Given the same kinds of cultural associations when obtained from sealed contexts (both associated with steatite bowls and base camps in riverine settings), they can easily be seen as stylistic variants on a common Late Archaic hafted biface/point technological continuum extending north-south along the Atlantic seaboard. Minor stylistic differences exist (not quantified here), however, that could serve to separate them from points identified as classic Savannah River specimens. One such element is the slight asymmetrical treatment of the stem's base, with one side slightly expanded outwards and sometimes downwards relative to the other side. Table 4.5 details the sample recovered from the Gabor Site data recovery excavations.

Table 4.5 Bare Island/Small Savannah River Points.

Cat #	Provenience	Material	Portion	Length	Width	Thickness
373	EU 71 NW, Level 2	Quartz	Proximal Fragment	-	21 mm	9 mm
549	EU 84 NW, Level 2	Quartzite	Complete	44 mm	19 mm	10 mm
550	EU 84 NE, Level 2	Rhyolite	Complete	51 mm	20 mm	10 mm
582	EU 85 SW, Level 2	Quartz	Complete	48 mm	18 mm	9 mm
797	EU 85 NW, Level 3	Quartzite	Complete	55 mm	18 mm	11 mm
797	EU 85 NW, Level 3	Quartz	Complete	46 mm	18 mm	12 mm

The small sample of these points from the Gabor Site does match Kinsey's (1959) descriptions of this type from the Bare Island Site. The stems of these points are square and exhibit a mild asymmetric treatment, while the shoulders are rounded and the blades are narrow and triangular. As Kinsey noted (1975:80) these typically narrow bladed and square-stemmed points may be part of a regional tradition that sets itself apart (geographically) from contemporary Late Archaic manifestations in the Delaware River Valley and, by extension, the Susquehanna River Valley.

Perkiomen and Susquehanna Points. The assemblage from Rutgers' excavations contains one of each of these two types (Plate 4.8). The Perkiomen specimen was manufactured from a flake of Iron Hill jasper (Catalog #11). It is missing about half of the blade element; its base is marked

Plate 4.7 Bare Island/Small Savannah River Projectile Points.

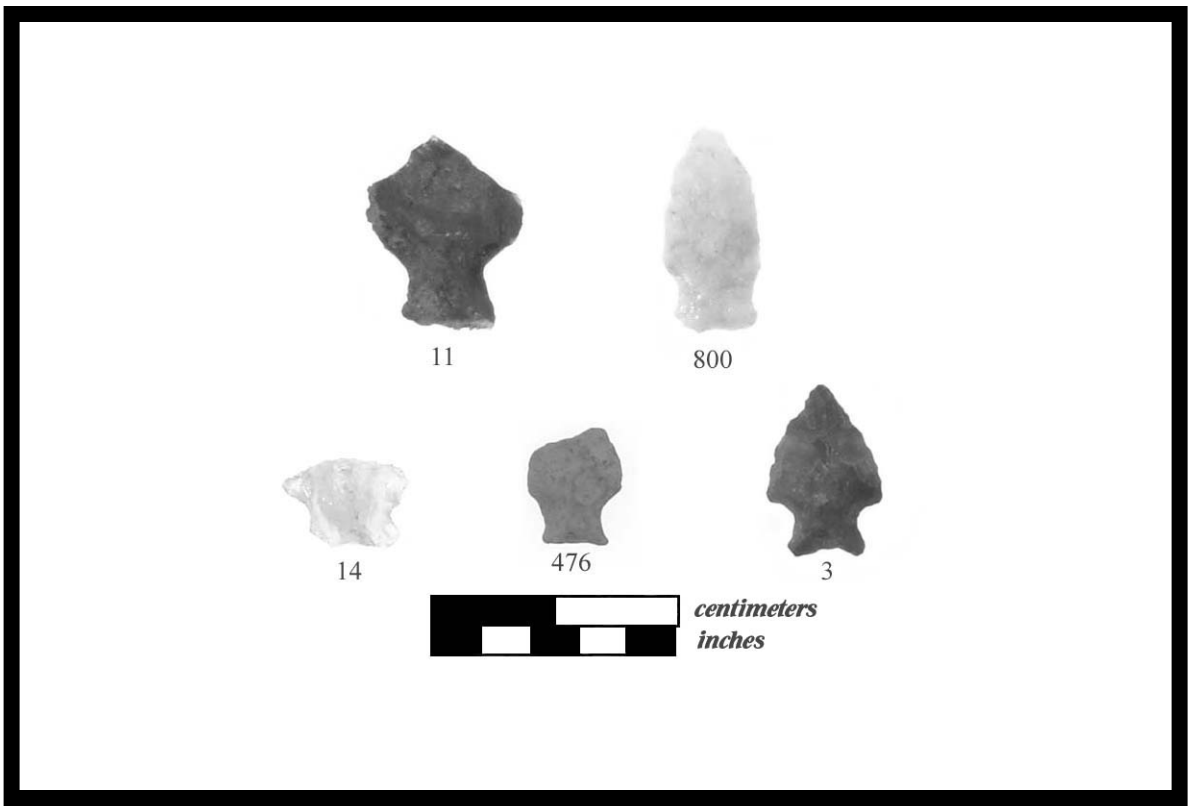

Plate 4.8 Perkiomen (11), Susquehanna (3), and Orient (800, 14, and 476) Points.

by a crystalline vein running through the parent material. Similar impurities are found along the shoulder on one side of this point. The Susquehanna point, made from gray chert (Catalog #3), is a complete specimen. It is comparable to smaller specimens defined by Cresson, who termed them small variants of the type (Cresson 1990:107). Table 4.6 details aspects of these two points.

Table 4.6 Perkiomen and Susquehanna Points.

Cat #	Provenience	Material	Typology	Portion	Length	Width	Thickness
3	EU 03, Level 1	Chert	Susquehanna Broadspear	Complete	32 mm	22 mm	6 mm
11	EU 11, Level 1	Jasper	Perkiomen Broadspear	Proximal Fragment	-	29 mm	8 mm

Orient Projectile Points. Three of the recovered points are identified as examples of the Orient Fishtail type (see Plate 4.8). These points match the original type description presented by Ritchie, based on a sample from the Stony Brook Site on Long Island (Ritchie 1959:31 – 32). The relationship between these points and earlier Susquehanna specimens is clear to see, based on the morphology of the stem or base element in the present sample of Orient types. Table 4.7 presents the relevant contextual and metrical data for these points.

Table 4.7 Orient Fishtail Points.

Cat #	Provenience	Material	Portion	Length	Width	Thickness
14	EU 14, Level 1	Quartz	Proximal Fragment	-	22 mm	9 mm
476	EU 51 SE, Level 5	Argillite	Proximal Fragment	-	17 mm	3 mm
800	EU 85 SW, Level 3	Quartz	Complete	38 mm	17 mm	9 mm

The argillite specimen, lacking only the distal end, is classic in shape and exhibits expanding basal "ears" and rounded shoulder elements. The complete quartz specimen (Catalog #800) does not possess the classic basal shape, though this may be due to the nature of the raw material used. The final specimen, a quartz proximal fragment, is tentatively identified as an Orient or cognate form.

Orient points are well known in the Delaware and Susquehanna River Valleys, as well as in southern New England. Recent excavations along the Ohio River, just north of Pittsburgh, have provided a rough western edge to this type's distribution in geographic space. As a point type, Orient Fishtail specimens are viewed as a form that developed, in terms of stylistic evolution, out of the preceding Susquehanna tradition. Indeed, this point can be seen as the endpoint of this continuum, straddling the Late Archaic (or Transitional period) and the Early Woodland period. As Ritchie (1959) so well documented at the Stony Brook Site, Orient points have been found in contexts dominated by steatite bowls, Vinette I pottery, or in some of the burial pits on Long Island, with both steatite bowls and Vinette I ceramics. Sites with datable contexts generally support more of an Early Woodland affiliation than a Late Archaic ascription. The fieldwork from the Ohio Valley Site at Leetsdale, north of Pittsburgh (36AL480), have shown them to be from both ceramic and non-ceramic stratified contexts, suggesting that it is, indeed, a transitional form.

Ritchie is worth quoting regarding the transitional nature of the Orient type: "The Orient Complex, as seen with the addition of the new data described in this report, constitutes a link between the Late Archaic and Early Woodland stages of cultural development on Long Island" (Ritchie 1959:89). Ritchie goes on to note available radiocarbon dates at that time.

Poplar Island/Rossville Projectile Points. There are ten examples of a contracting stem point that is best identified as the Poplar Island type (a sample of these points is depicted in Plate 4.9) (cf. Kinsey 1959; Ritchie 1971:44 – 45;). The term "Rossville" is added as a modifier, since Ritchie considered it a related form. Also, the two appear to be similar in terms of shape and, when documented in good stratigraphic contexts, appear to date to the Late Archaic/Transitional/Early Woodland. This point is the most common type recovered during Rutgers' Phase III excavations at the Gabor Site, and supplement two others recovered in the Phase I/II investigations (cf. Hoseth and Seidel 1994:37 – 38, Fig. 27, C and D). In general, these points exhibit long, tapered stems and rounded bases. Two of the bases on the points in the sample preserve striking platforms, indicating that these were modified from large flakes struck from tabular cores. The shoulders are weakly expressed and somewhat asymmetric in regard to the transition from stem to blade. The blade elements are excurvate in form and show mostly a biconvex cross section when finished. Several of the examples in the sample are obviously preforms and not finished specimens. Since they are identifiable as to type, these preforms are included herein rather than under the biface subheading below. Table 4.8 presents basic data on this point sample.

Table 4.8 Poplar Island/Rossville Projectile Points.

Cat #	Provenience	Material	Portion	Length	Width	Thickness
2	EU 02, Level 1	Jasper	Proximal Fragment	-	23 mm	9 mm
3	EU 03, Level 1	Jasper	Proximal Fragment	-	29 mm	11 mm
3	EU 03, Level 1	Jasper	Complete	55 mm	28 mm	9 mm
7	EU 07, Level 1	Quartzite	Complete	62 mm	29 mm	13 mm
29	EU 28, Level 1	Jasper	Complete	70 mm	23 mm	10 mm
41	EU 40, Level 1	Jasper	Complete	56 mm	18 mm	8 mm
85	EU 44 NE, Level 3	Jasper	Proximal Fragment	-	24 mm	7 mm
144	EU 52 SE, Level 3	Jasper	Proximal Fragment	-	21 mm	11 mm
179	EU 52 NW, Level 5	Quartz	Proximal Fragment	-	20 mm	9 mm
208	EU 57 NW, Level 1	Quartzite	Complete	62 mm	26 mm	10 mm

Kinsey identified Poplar Island points as a recognizable type at the Kent-Hally Site on Bare Island in the Susquehanna River. This type was known as Type C in his original paper on the excavations at the site. Kinsey later presented a description of the type in Ritchie's second edition of *A Typology and Nomenclature for New York Projectile Points* (Ritchie 1971). This description was based on Kinsey's work on Bare Island, published in 1959 (Kinsey 1959). Here, these points were found to co-occur (stratigraphically) with Bare Island points and steatite vessels, though the stratigraphy of the site was less than ideal for separation of distinct components. Indeed, one of the points in the sample was recovered from the inside of a reconstructable steatite vessel, a rather tight association that points to a secure Late Archaic

Plate 4.9 Poplar Island Projectile Points.

chronological context. In his 1959 report on the excavations at Bare Island, Kinsey designated this type as "tapered or lobate stemmed." His characterization of the type, then provisional, matches the Poplar Island points recovered at the Gabor Site.

Witthoft presented an earlier definition of the type in 1959, in a paper reviewing the Archaic of the Appalachian region. Witthoft discusses the sequence of points recovered from excavations on Duncan Island in the Susquehanna River upstream from the Maryland-Pennsylvania line. He describes a sequence including tapered-stem points found in the upper part of a weak B horizon (Witthoft's B zone) and terms it the Poplar Island Complex, as similar points were recovered from a nearby island of the same name. Interestingly, Witthoft reports that a series of points comparable to Coe's Morrow Mountain type were found in a C horizon encountered below the B zone as discussed by Witthoft (cf. Witthoft 1971:123 – 124; original 1959). This discussion was made in light of Coe's recent stratigraphic excavations in the Carolina Piedmont; indeed, Witthoft's discussion revolves around the issue of the stratigraphic integrity of individual types, something Brennan eventually termed the "Coe Axiom" (Brennan 1967).

More-recent work in the Delaware River Valley has helped to clarify Poplar Island points and their cultural context. Excavations at two sites in Gloucester County, New Jersey, in the Mantua Creek drainage uncovered this type in association with Lackawaxan points, suggesting that both were associated as part of a mobile biface tool kit. Radiocarbon dates for Lackawaxan and Poplar Island components place it within the Late/Terminal Archaic of the Delaware River (cf. Lothrop and Koldehoff 1994).

Woodland Stage Projectile Points. The remaining four points specimens date to the Woodland stage. One of the points is a small teardrop shaped Piscataway specimen manufactured from black chert (Catalog #65). The second is a Rossville specimen made from a grayish black chert. This point was found in four separate fragments and pieced together (Catalog #s 409, 429, and 437, the latter consisting of two fragments). The remaining two specimens are Late Woodland triangular Levanna specimens: one was manufactured from jasper (Catalog #252) and the other from a grayish black chert (Catalog # 766). All four of these points are depicted on Plate 4.10.

Piscataway points, as noted in Chapter III, were once considered to be limited to the Early Woodland period, though they are now demonstrated to continue into the Middle Woodland period as well. This point was the most common type recovered from excavated pit contexts at the Fletcher's Boathouse Site on the Potomac River in Washington, D.C. (Barse 2001). This distinctive, lobate-based type (referred to as Teardrop points in New Jersey) has been found associated with Accokeek pottery in a number of sites in Maryland, Virginia, and New Jersey. In Early Woodland contexts, Piscataway points have been found associated with Accokeek Cordmarked pottery at the West Shore Site in Anne Arundel County (Barse 1978), the Woodbury Annex Site in Gloucester County, New Jersey (Mounier and Cresson 1988), Site 28GL209, located close to the Woodbury Annex Site in Gloucester County, New Jersey (Barse 1992:19 – 21), and at the 522 Bridge Site (44WR329) in Warren County, Virginia (McLearen 1991). Additional sites in the James River basin could be added to this roster, as well.

Mounier and Cresson (1988) also reported a number of radiocarbon dates for Piscataway points and associated ceramic contexts from the Woodbury Annex Site. These dates range from about 1480 to 220 B.C., with four falling between 940 and 530 B.C. The latter range (940 to 530 B.C.) is an acceptable bracket for Accokeek ceramics, and thus for the Piscataway point type.

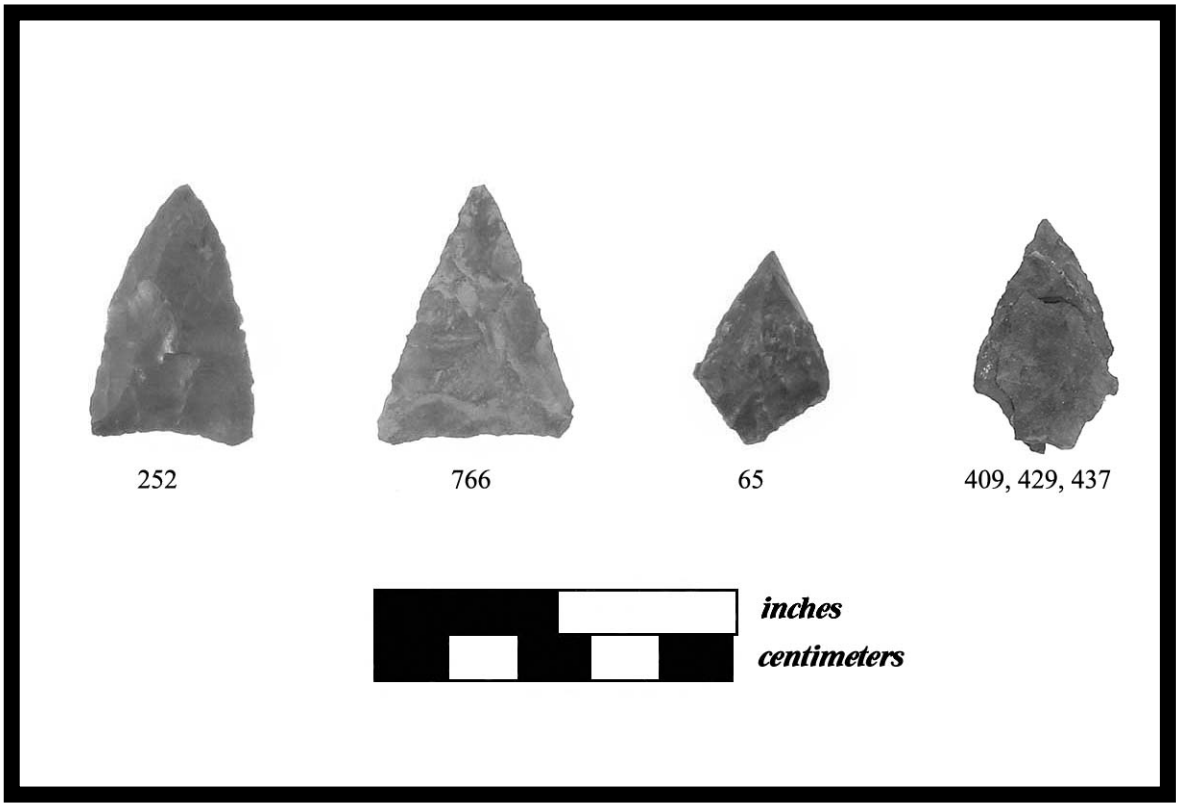

Plate 4.10 Woodland Projectile Points. From left to right: Levanna (252, 766), Piscataway (65), and Rossville (409, 429, and 437) specimens; the latter is a refit of point fragments.

McLearen provides a series of dates that place the Accokeek component at 44WR329 at around 908 B.C. (McLearen 1991:122 – 123). Middle Woodland contexts containing Piscataway points have been limited to the Patuxent Point Site in Calvert County, Maryland (Gardner, Nash, Walker, and Barse 1989), where they were recovered from pit contexts associated with Mockley ceramics. The second site that yielded this point type in Middle Woodland contexts is that under discussion herein.

Triangular projectile points, with one notable exception, commonly date to the Late Woodland period. These points appear in the archaeological record after about A.D. 1000. The one exception is the late Middle Archaic triangular type, a number of which were recovered from deeply buried contexts in Area D of the Abbott Farm Site (Stewart 1994). Comparable points were recovered from a southern New Jersey site as well, in contexts that argue for a pre-Late Archaic time period (Lothrop and Koldehoff 1994). Such late Middle Archaic points are comparable in time to the Beekman triangle points Funk and Ritchie defined based on work in New York (Ritchie 1971; Funk 1976).

Miscellaneous Projectile Point Fragments. A number of point fragments, mostly distal ends and other fragments, were recovered from the Phase III excavations and are summarily discussed herein. None of these points are chronologically diagnostic; their presence may simply point to multiple episodes of onsite retooling over the course of the many occupations occurring within the Gabor Site landscape. These points are broken down by raw material in Table 4.9. These specimens are presented in Plate 4.11.

Table 4.9 Projectile Point Fragments.

Cat #	Provenience	Material	Typology	Portion
14	EU 14, Level 1	Quartzite	Unidentified Point	Distal Fragment
15	EU 15, Level 1	Jasper	Unidentified Point	Distal Fragment
28	EU 27, Level 1	Quartz	Unidentified Point	Distal Fragment
28	EU 27, Level 1	Jasper	Unidentified Point	Distal Fragment
48	EU 43 NE, Level 2	Jasper	Unidentified Point	Distal Fragment
134	EU 52 SW, Level 2	Quartz	Unidentified Point	Distal Fragment
201	EU 53 NE, Level 3	Quartz	Unidentified Point	Distal-Medial Fragment
470	EU 80 SE, Level 2	Quartz	Unidentified Point	Distal Fragment
516	EU 83 NE, Level 4	Jasper	Unidentified Point	Distal Fragment
581	EU 85 SE, Level 2	Quartz	Late Stage Biface or Preform	Distal-Medial Fragment
684	EU 92 SW, Level 2	Jasper	Unidentified Point	Distal Fragment
735	EU 94 SW, Level 1	Quartz	Unidentified Point	Distal Fragment
764	EU 93 SW, Level 2	Jasper	Poplar Island Preform	Proximal Fragment
837	General provenience	Quartz	Late Stage Biface or Preform	Distal Fragment

Bifaces and Biface Fragments. A number of early- to late-stage bifaces, or fragments thereof, were recovered at the Gabor Site. These artifacts were fashioned from local jasper, quartz, quartzite chert, and, in the case of one specimen, argillite.

Plate 4.11 Miscellaneous Projectile Point Fragments.

Jasper, likely from the Iron Hill deposits, was most common in the assemblage, numbering 12 specimens. These artifacts represent early-, middle-, and late-stage specimens, as listed in Table 4.10 (also see sample of these bifaces in Plate 4.12).

Table 4.10 Jasper Bifaces.

Cat #	Provenience	Biface Stage	Portion
24	EU 23, Level 1	Mid Stage	Proximal Fragment
24	EU 23, Level 1	Mid-Late Stage	Distal Fragment
36	EU 35, Level 1	Early-Mid Stage	Complete
125	EU 50 NE, Level 2	Early Stage	Complete
143	EU 52 NE, Level 3	Unidentified	Medial Fragment
257	EU 64 SW, Level 2	Mid Stage	Medial Fragment
485	EU 83 NE, Level 2	Late Stage	Distal Fragment
576	EU 90 NE, Level 1	Early-Mid Stage	Proximal Fragment
586	EU 88 NE, Level 3	Unidentified	Complete
595	EU 90 NW, Level 2	Early Stage	Proximal Fragment
684	EU 92 SW, Level 2	Early-Mid Stage	Complete
718	Feature 16 SE, Level 2	Early Stage	Complete
761	EU 93 NW, Level 2	Early-Mid Stage	Complete
836	Feature 16, Plowzone	Mid Stage	Proximal Fragment

The number of early- to early-middle-stage specimens suggests *in situ* stone-tool production. Given the close association between the jasper core fragments and the Poplar Island points, the above items are likely related to the one or more components dating to this Late Archaic complex.

Quartz is represented by six specimens. Quartz bifaces are summarized in Table 4.11 (also see sample in Plate 4.13).

Table 4.11 Quartz Bifaces.

Cat #	Provenience	Biface Stage	Portion
38	EU 37, Level 1	Mid Stage	Proximal Fragment
274	EU 46 SE, Level 6	Mid Stage	Proximal Fragment
588	EU 88 SW, Level 3	Mid Stage	Proximal Fragment
612	Feature 32 S half, Level 1	Mid Stage	Medial Fragment
675	EU 92 SE, Level 1	Unidentified	Proximal Fragment
678	EU 91 NE, Level 2	Early-Mid Stage	Proximal Fragment

The relatively low number of quartz bifaces is curious in light of the high number of core fragments from the site.

Quartzite bifaces, numbering five specimens, are briefly summarized in Table 4.12 (also see Plate 4.14).

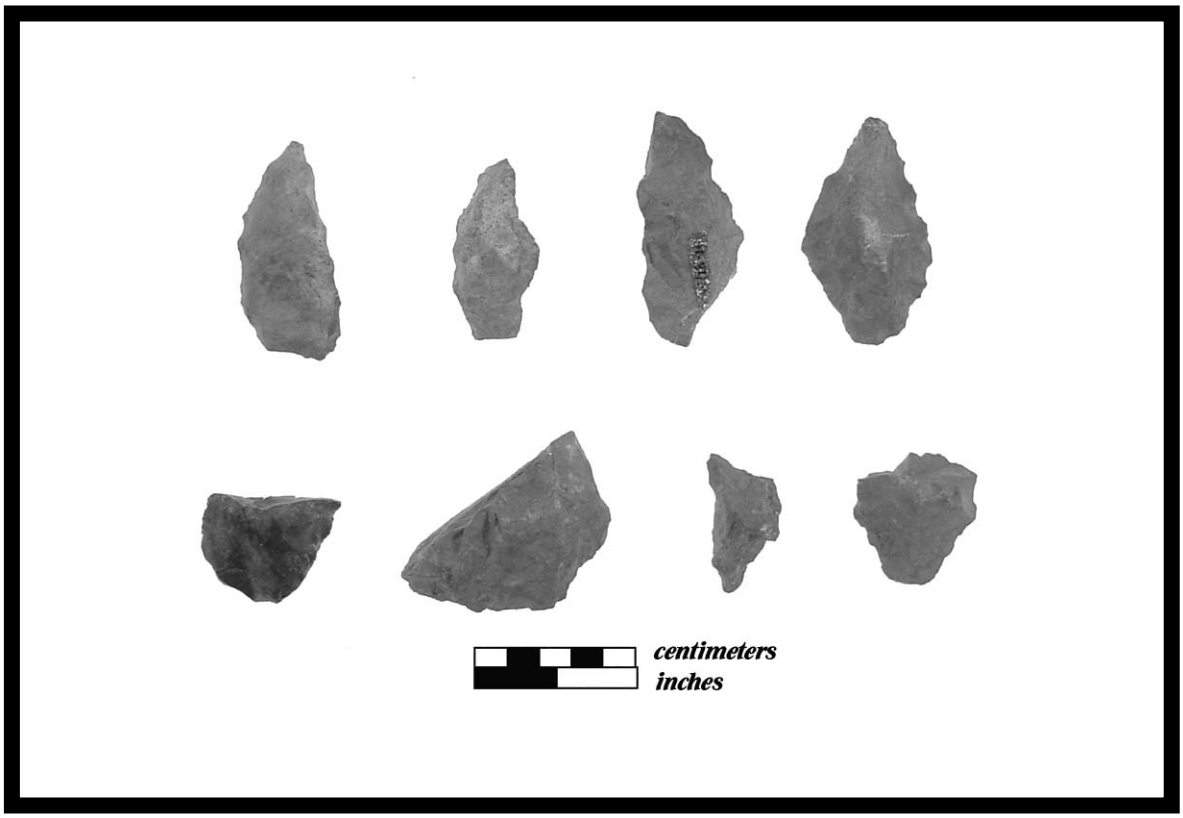

Plate 4.12 Jasper Bifaces.

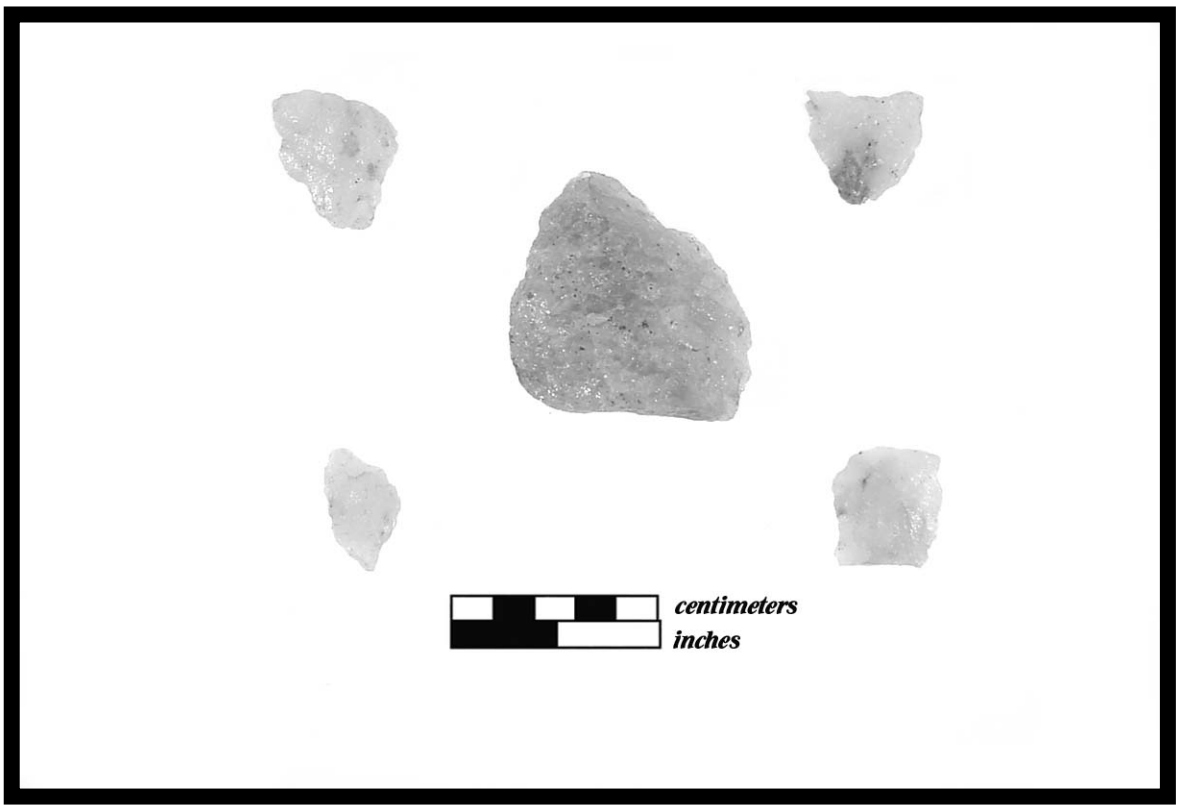

Plate 4.13 Quartz Bifaces.

Plate 4.14 Quartzite Bifaces.

Table 4.12 Quartzite Bifaces.

Cat #	Provenience	Biface Stage	Portion
249	EU 64 SW, Level 1	Early-Mid Stage	Complete
574	EU 89 SW, Level 2	Late Stage	Proximal Fragment
580	EU 85 NE, Level 2	Mid Stage	Proximal Fragment
667	Feature 33 N half, Level 2	Mid Stage	Proximal Fragment
741	EU 95 NW, Level 2	Mid Stage	Proximal Fragment

Catalog #249 is large, appearing as a handaxe-like biface with cortex on a portion of one side. Cortex was also present on the platform end of two other specimens, indicating that large flakes removed from cobble cores were used to generate smaller bifaces.

The remaining three bifaces include two of local grayish black chert and one manufactured from argillite (Plate 4.15). One chert specimen is a complete, early-stage biface (Catalog #837), the other a large, mid-stage, proximal-medial fragment (Catalog #22). The argillite specimen is a complete, early- to middle-stage biface (Catalog# 485).

DISTRIBUTION OF LITHIC MATERIALS AND COMPONENT IDENTIFICATION

One of the tasks that can be accomplished with plowzone materials is plotting the density of various artifact classes to define discrete loci of occupation. This section briefly reviews a series of *Surfer* maps that depict debitage, FCR, and flaked lithic categories to show the locations of several discrete, Late Archaic components at the site.

Considering the distribution of debitage, several discrete localities are discerned when the four major raw material categories are mapped. Quartz lithic debris (Figure 4.9) shows at least six separate concentrations or peaks in material count. Jasper shows three separate concentrations, partially overlapping those of quartz (Figure 4.10). Quartzite shows at least one good concentration (Figure 4.11), while chert has two closely spaced peaks (Figure 4.12). Each one of these concentrations likely reflects localized areas in which tool production and/or maintenance tasks were conducted.

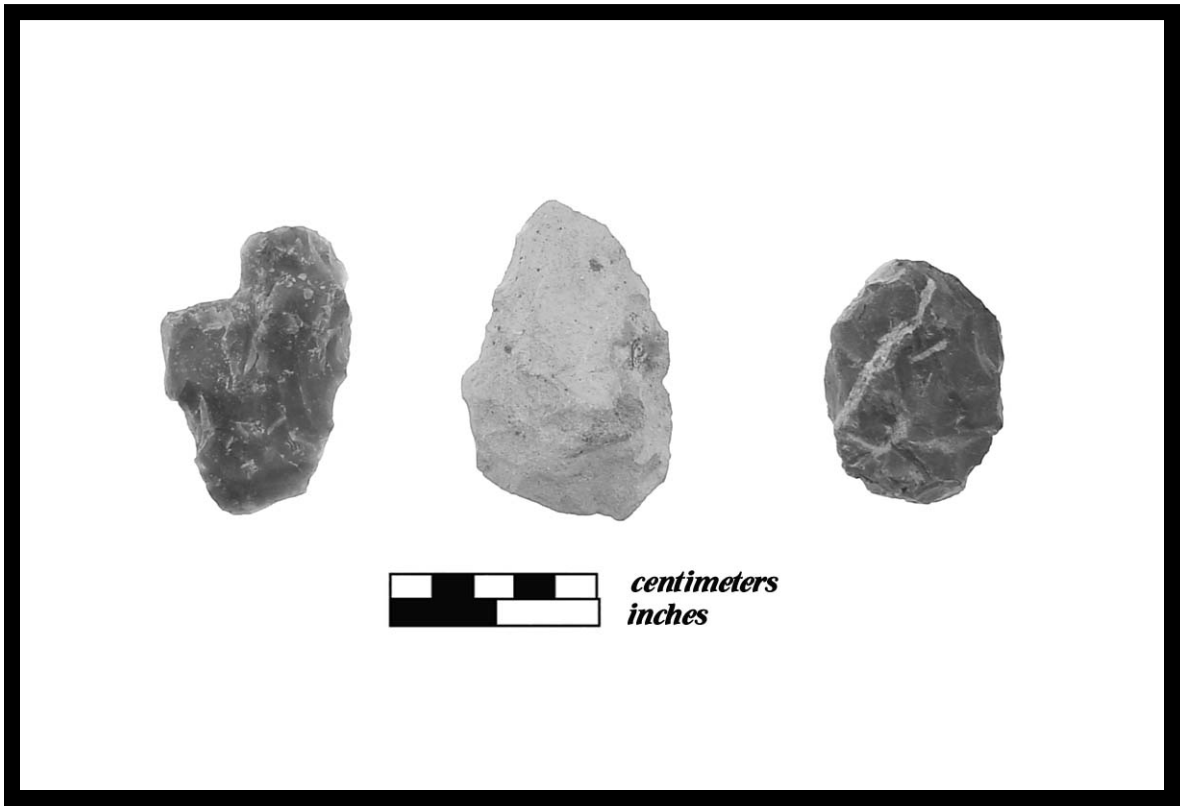

Plate 4.15 Two Chert Bifaces (Left and Right) and One Argillite Biface (Middle).

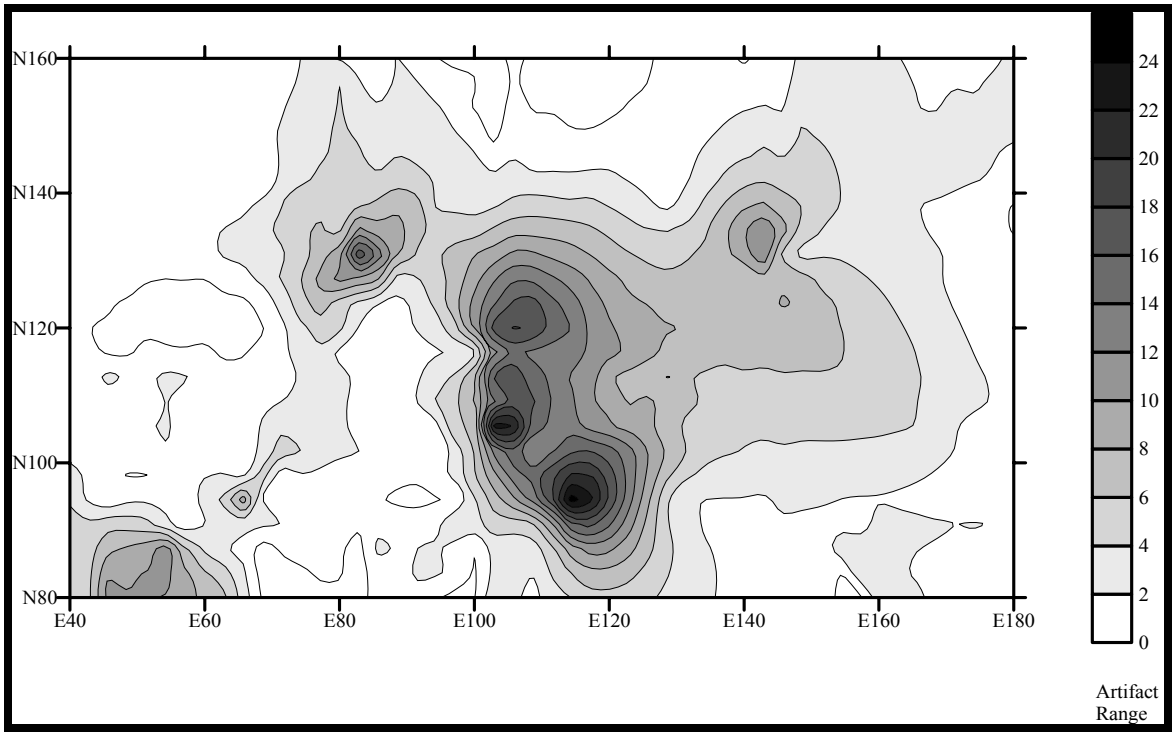

Figure 4.9 Distribution of Quartz Debitage.

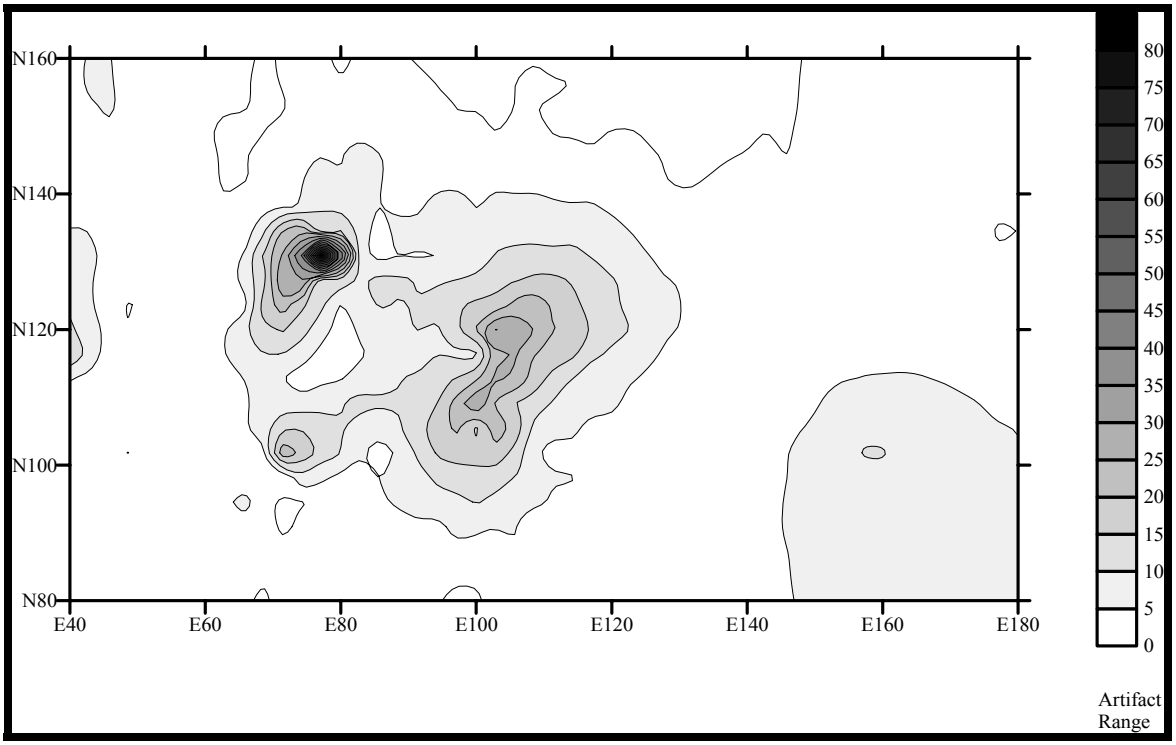

Figure 4.10 Distribution of Jasper Debitage.

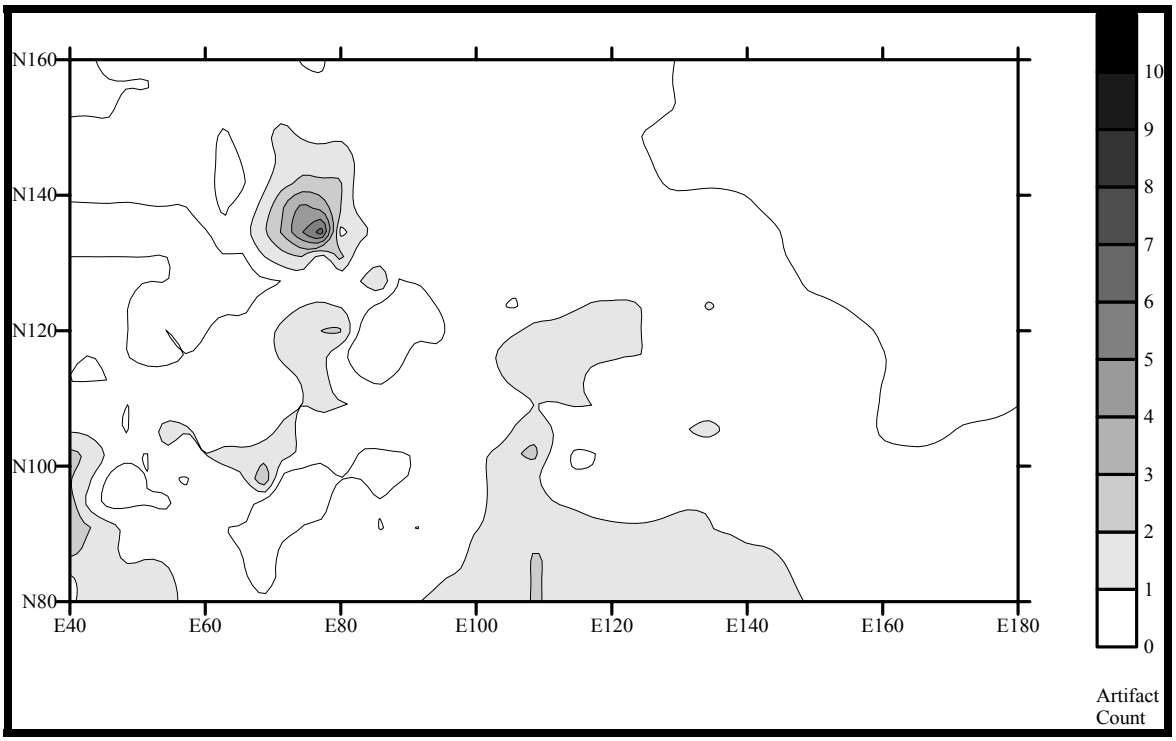

Figure 4.11 Distribution of Quartzite Debitage.

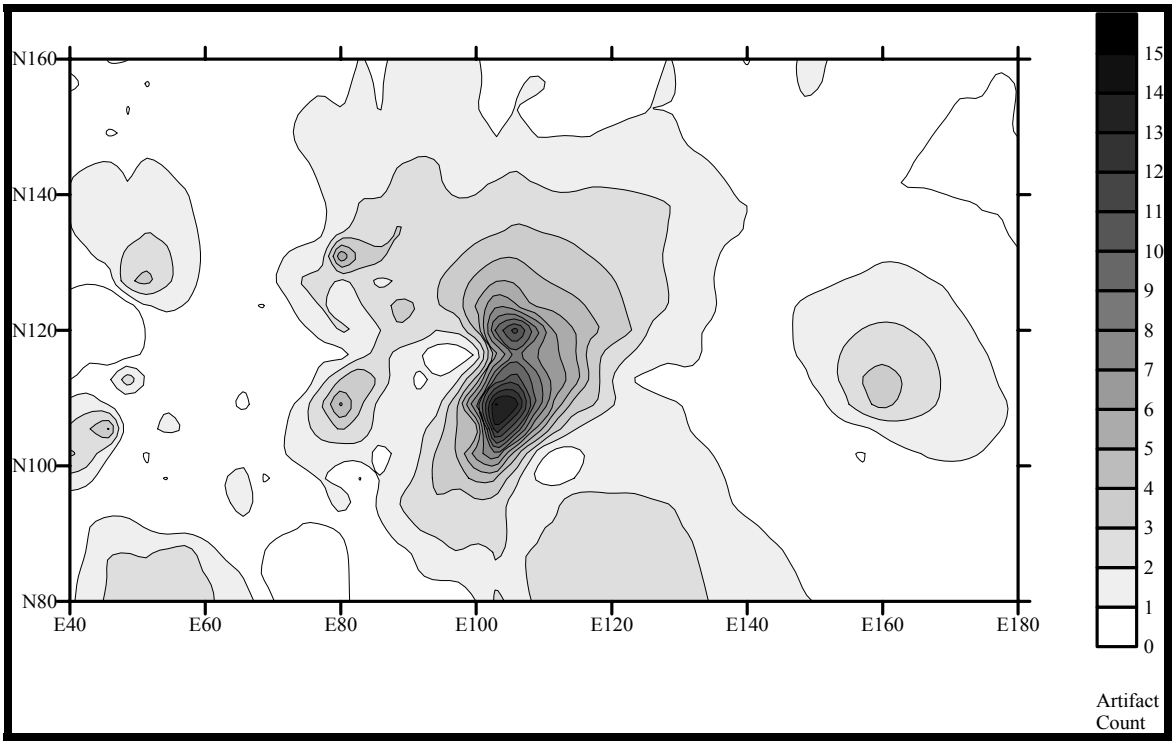

Figure 4.12 Distribution of Chert Debitage.

Following on the latter thought, it is of interest to plot the location of core fragments and nondiagnostic bifaces with the more-prominent lithic peaks as indicated on the *Surfer* maps. For instance, a comparison of jasper debitage with cores and bifaces shows rather close correspondence. Jasper bifaces correlate well with the jasper debitage concentrations (Figure 4.13). Similarly, jasper cores fall well within the same concentration (Figure 4.14). Quartz cores fall well within the debitage peaks for the same material (Figure 4.15), as do quartz bifaces (Figure 4.16).

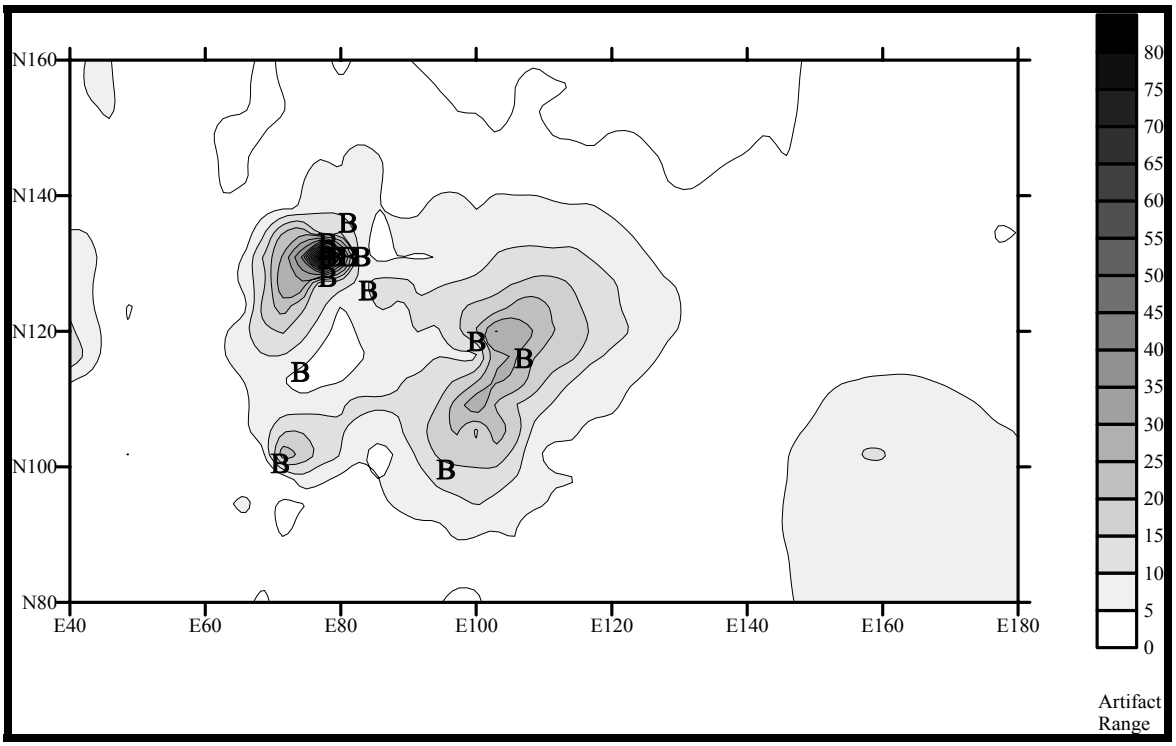

Figure 4.13 Plot Map of Jasper Bifaces Over Distribution of Jasper Debitage.

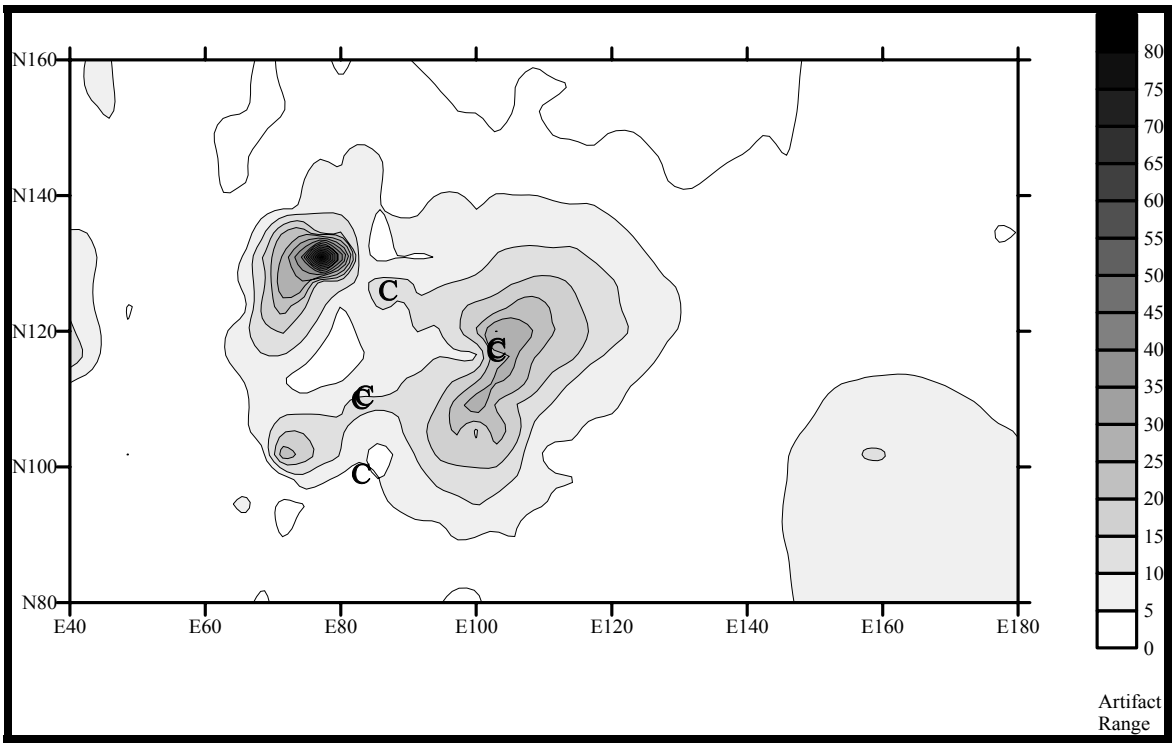

Figure 4.14 Plot Map of Jasper Cores Over Distribution of Jasper Debitage.

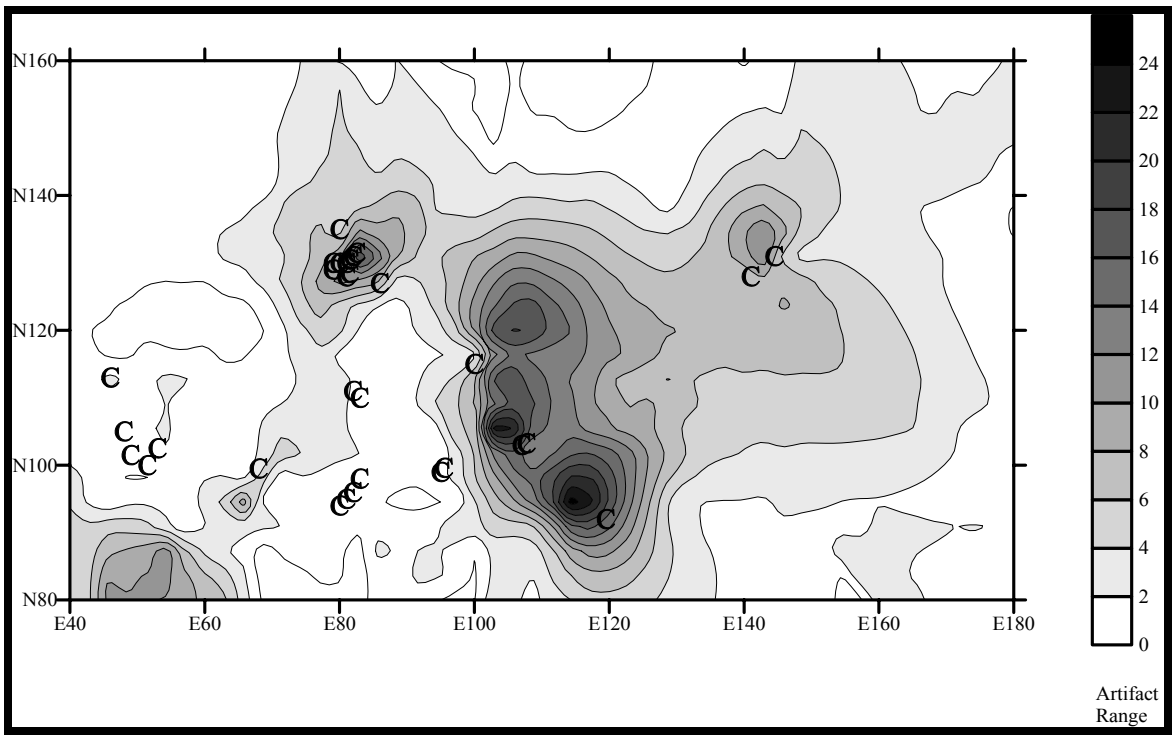

Figure 4.15 Plot Map of Quartz Cores Over Distribution of Quartz Debitage.

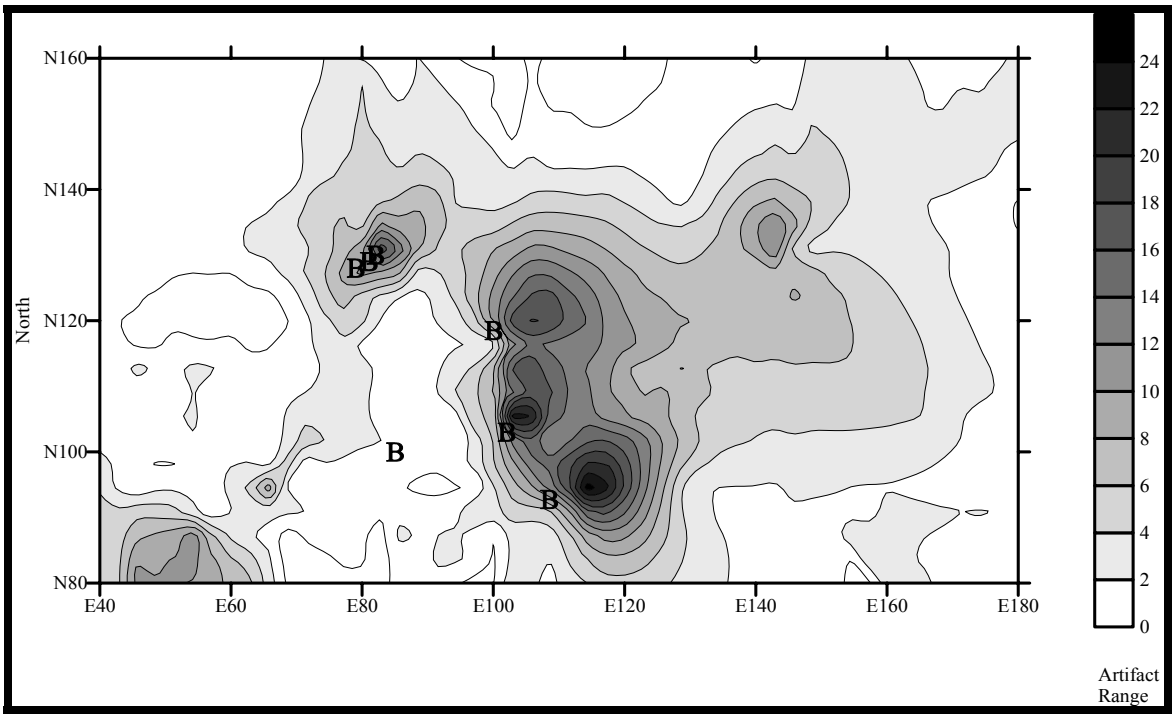

Figure 4.16 Plot Map of Quartz Bifaces Over Distribution of Quartz Debitage.

Each of these clusters, marked by debitage peaks and associated core fragments and bifaces, are the archaeological residue of short-term occupations. Dating each is somewhat problematic, given the lack of contextual resolution in regard to the plowzone provenience of materials. Nonetheless, an exploration of the relationship of several categories of chronologically diagnostic points with these lithic concentrations suggests that most date to the Late Archaic period. A look at the Middle Archaic Brewerton points (Figure 4.17) and the Susquehanna, Perkiomen, and Orient points (Figure 4.18) shows what may be a scattered or random distribution across the site. However, when Poplar Island points are considered (Figure 4.19), there is a closer association with the higher concentrations of jasper lithic materials. The latter map shows both jasper and non-jasper Poplar Island points. It can be argued that most of the jasper lithics may be associated with several discrete components focused on the manufacture of these points using locally available jasper. The high concentration of jasper cores and bifaces—several of which appear to be Poplar Island performs—in the midst of the jasper debitage area suggests the presence of several discrete occupational loci. Bare Island points (considered herein to be contemporaneous, broadly speaking, with Poplar Island specimens) cluster tightly in the southwest corner of the site, suggesting a single focus of occupation (Figure 4.20).

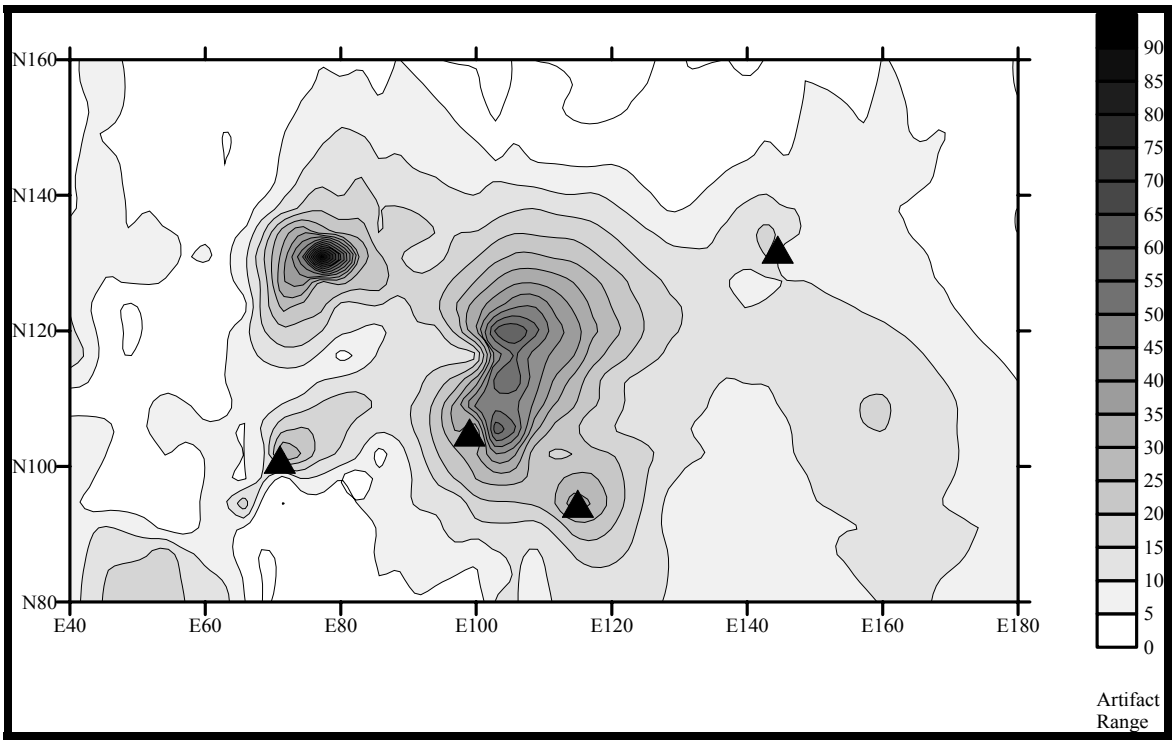

Figure 4.17 Plot Map of Brewerton Points Over Distribution of All Material Types of Debitage.

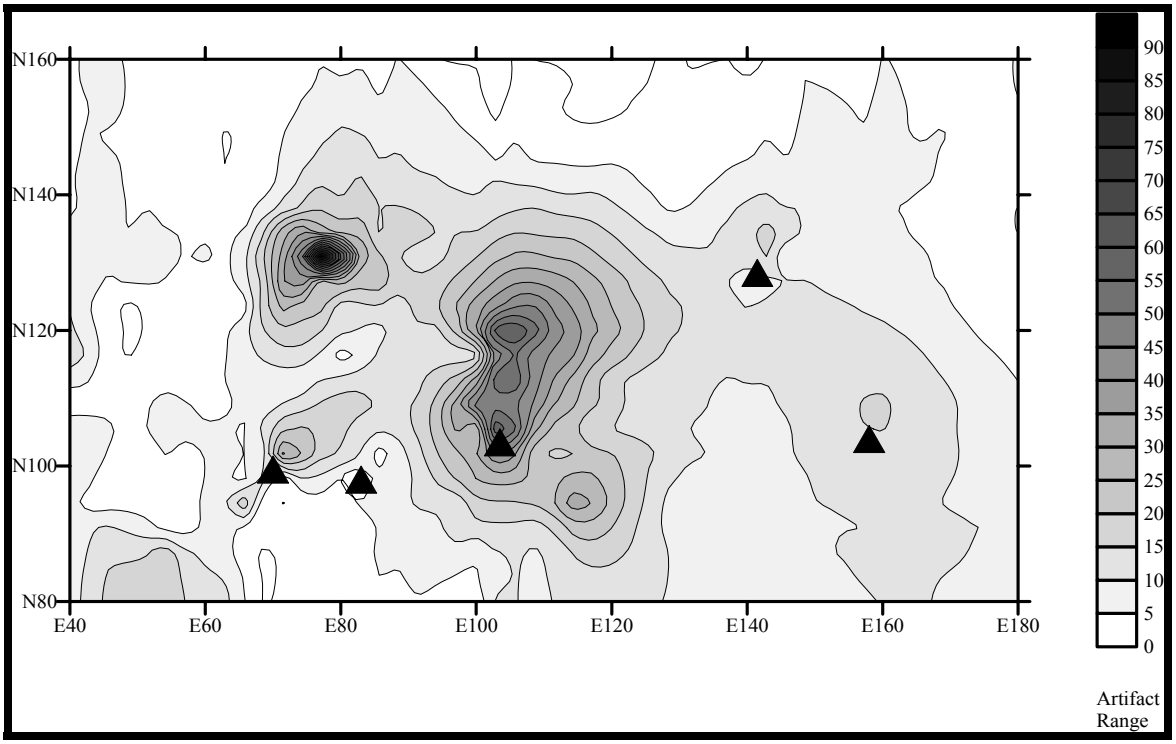

Figure 4.18 Plot Map of Susquehanna, Perkiomen, and Orient Points Over Distribution of All Material Types of Debitage.

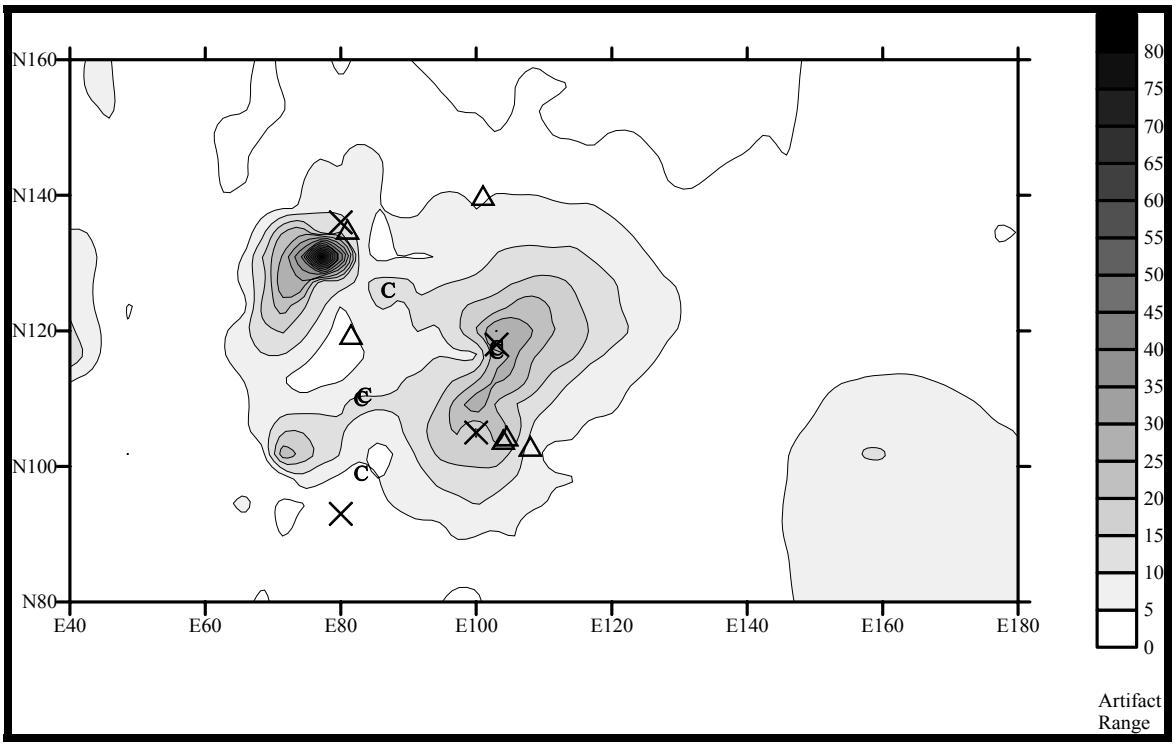

Figure 4.19 Jasper Cores (C) and Poplar Island Points (Δ=Jasper; X=Non Jasper) Over Distribution of Jasper Debitage.

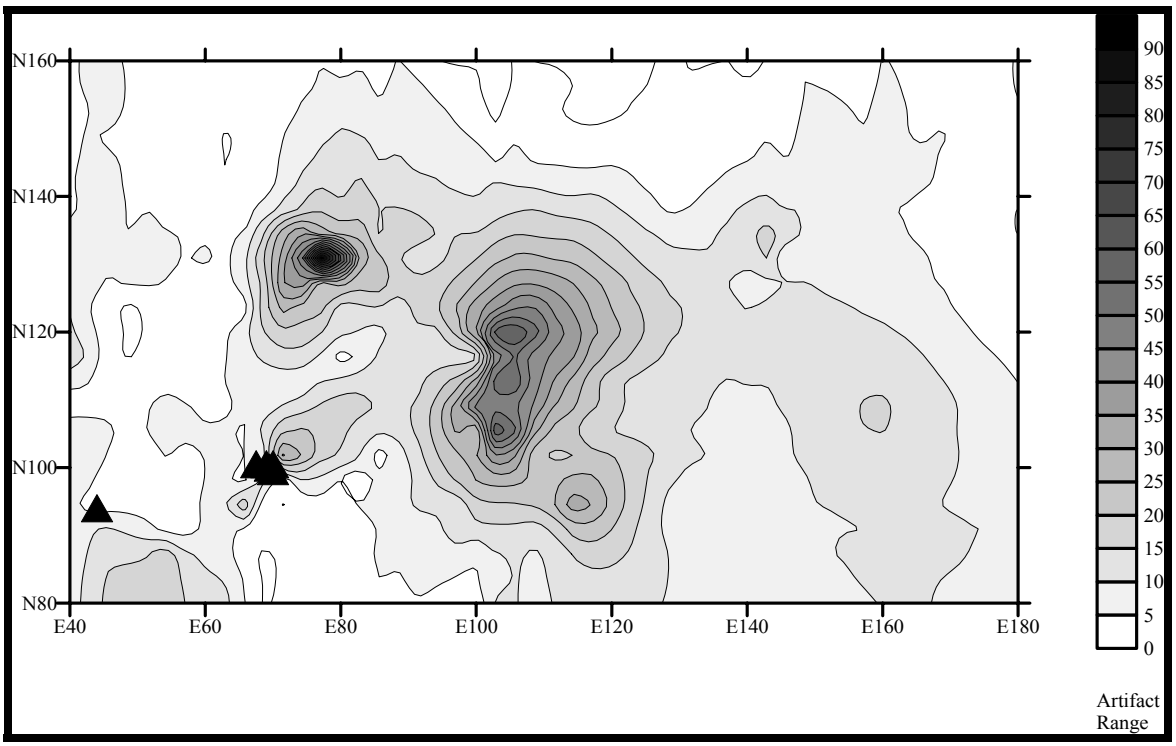

Figure 4.20 Plot Map of Bare Island Points Over Distribution of All Material Types of Debitage.

Trying to extract more-refined information on the distribution of various components would be limited with the plowzone context of most materials available for such a study. However, the data available do point to the isolation of several discrete components that likely date to the Late Archaic; each of these components were apparently involved in the procurement and reduction of quartz, quartzite, or jasper for the production of stone tools. Such production efforts were probably conducted as part of a suite of behavioral tasks embedded in the range of activities conducted during short-term hunting or extractive forays. In other words, although the archaeological signature of any occupational locus is heavily slanted towards stone-tool production, it was likely one of several tasks conducted in the course of occupying the Gabor Site landscape.

THE GABOR SITE AND LANDSCAPE THROUGH TIME

> "The construction of reliable chronology is a basic archaeological task. Without a sound chronology, any inferences about subsistence, settlement, or social systems in the past are likely to be historical monstrosities."
>
> Warren DeBoer

> "If you don't know how old it is, you're not a good archaeologist, but if you want to know what it means, my brother-in-law is a pretty good shaman."
>
> Manuel Rengifo, as related by Warren DeBoer

Taking DeBoer's caution into account, a basic effort must be made at the outset of any archaeological investigation to identify the chronological range of occupations preserved within an archaeological site. This chronology is the framework against which events, practical or otherwise, are measured. It provides a means for avoiding chaos, an unordered mix of events and/or the historical monstrosities DeBoer warns against. To this end, the time periods present at the Gabor Site, given the recovered diagnostics, are reviewed below. It should also be noted that the point of this section is not to argue for or against the chronological placement of specific types, but to accept previous work that categorizes them into an understandable and reliable framework. Thus, this chronology serves as a tool in providing structure for the individual events that took place across the Gabor Site landscape.

Given the range of recovered projectile points and identifiable ceramic ware groups, the chronology of occupation at the Gabor Site includes components dating to the early Middle Archaic, the terminal Middle Archaic, the Late Archaic/Transitional, and the Late Woodland. One bifurcate point, a reworked LeCroy specimen recovered during Phase I/II fieldwork at the Gabor Site in 1993, is evidence for the early Middle Archaic period (Hoseth and Seidel 1994). This point is illustrated on the cover of the report generated from the collected data. No further evidence of a Middle Archaic bifurcate component was documented during Rutgers' Phase III work.

A late Middle Archaic component (separate from the bifurcate component) is indicated by the recovery of four moderately curated (reworked/resharpened), side-notched Brewerton/Halifax projectile points manufactured from quartz. Distribution analysis does not provide clear support of an association with one of the several debitage clusters in the site. Despite Custer's assertion that the point does not resolve well chronologically (Custer 1989:147, Table 21), side-notched Brewerton points (or their variants) have been firmly dated between 6000 and 5000 B.P. Heavy curation of the blade element in many cases may render typological identification unreliable. Nevertheless, the presence of this type supports use of the Gabor Site landform prior to the tremendous expansion of Native-American populations beginning in the Late Archaic period. It is assumed that the one or more occupations dating to this period may be identifiable as short-term camps or hunting stations (alternatively, micro-band camps or procurement sites).

The greatest use of the Gabor Site landscape took place during the Late Archaic period (or, in Custer's terminology, the earlier part of the Woodland I period). Two diagnostic projectile point groups, Bare Island and Poplar Island, represent the most common projectile point types recovered during data recovery excavations (some of the issues regarding the chronology of these two types is reviewed earlier in this chapter). Bare Island points, a square-stemmed type found in association with steatite bowls in the upper part of a B horizon at the Kent-Hally Site on Bare Island, appear similar to other square-stemmed points dating to the Late Archaic period. All of these points appear to be cognate forms that one could argue (emphasis on *could*) are related historically to the classic Savannah River type first noted by Claflin at Stallings Island in Georgia (Claflin 1931) and given formal definition in the 1960s by Coe (1964). A number of the Bare Island specimens Kinsey illustrated in his 1959 report on the excavations at the Kent-Hally Site overlap with the classic Savannah River type. Other specimens from the type site appear to show narrower blade elements and attenuated stems. When large collections from the Delaware River are examined, some overlap with the group of points known as Lackawaxan. Clearly, typological "slippage" exists from one archetype to another as one moves across the geographic landscape in the Middle Atlantic region.

However, the apparently good associations with steatite bowls at the Kent-Hally Site, as well as proven stratigraphic context at other sites in the Delaware River, support a Late Archaic placement for Bare Island points as *originally* defined by Kinsey. Some continuation into the Early Woodland is certainly possible, as some investigators have identified smaller square-stemmed or "devolved" Savannah River points in such contexts. However, this continuation is beyond the scope of the current discussion, as Rutgers uncovered no clear ceramic evidence of an Early Woodland occupation at the Gabor Site during data recovery excavations.

Poplar Island, as a Late Archaic type, has become better known in recent years (cf. discussion in Lothrop and Koldehoff 1994). As in the case of the Bare Island type, this point also owes its definition to archaeological investigations in the Susquehanna River. As noted earlier, Witthoft discusses a Poplar Island Complex from Duncan Island, situated close to Bare Island, near the Maryland border. Kinsey's contracting-stem points from the Kent-Hally Site form the basis for the formal definition of the type, named for yet another island in the Susquehanna, Poplar Island, where these points were evidently common. Witthoft's review of the Poplar Island materials from the Duncan Island excavations shows that these points are pre-pottery in their stratigraphic context. The association of these points in the shallow—albeit apparently sealed—stratigraphy

at the Kent-Hally Site provides a basis for the Late Archaic/Transitional chronological placement.

At Site GL211 in Gloucester County, southern New Jersey, recent work revealed a relatively intact Poplar Island component (Lothrop and Koldehoff 1994). An assemblage of Poplar Island and Lackawaxan points were found isolated partly in subplowzone deposits. A bulk soil radiocarbon date of 3830 +/- 90 B.P. (Beta 43291) from the site supports a Late Archaic placement for the points, and matches comparable dates obtained from other Poplar Island and Lackawaxan components (ibid. 115).

The question for the Gabor Site assemblage is whether or not the Poplar Island and Bare Island points are associated within contemporaneous occupations or represent separate visits to the site by differing social groups. Based on a consideration of the site's distribution data, it is difficult to determine if these points were part of an assemblage maintained by a single contemporaneous social group that made several (repeated) visits to the site throughout the Late Archaic period. Distribution of both point types across the site show that each occupied a discrete spatial locus within the site. This evidence certainly points to separate components—or visits—at the site.

Perhaps subsequent to occupations marked by Bare Island and Poplar Island points, several small visits to the site were made during the end of the Late Archaic/Transitional and into the Early Woodland period. The only evidence for these apparently underrepresented occupations are the Susquehanna Broadspear (Terminal Archaic) and Orient Fishtail points (Terminal Archaic to Early Woodland). Lacking ceramics, it is difficult to ascertain whether or not the Orient specimens pertain to Archaic or Early Woodland components.

The final Native-American component at the site is associated with the Late Woodland period. Riggins and related ceramics recovered from a spatially discrete area on the western end of the site point to the location of a single-family, hamlet-type occupation. The limited ceramic assemblage, perhaps representing several vessels in all, suggests a short-term, perhaps seasonally based occupation.

A brief note on formation processes: as stated in previously, most of the archaeological context at the site is limited to the plowzone. The few features present below the plowzone had been partly impacted through agricultural disturbances; portions of these features remained intact in the upper subsoil horizons. Depositional processes resulting in the burial of these features, and any associated cultural debris, most likely can be attributed to eolian events. In large open fields (though not fields at the time of occupation), burial would have been uneven, with some areas being deflated while others were covered.

The kinds of occupations present through time are interpreted as small, short-term camps, or micro-band camps, representing varying kinds of local resource exploitation. A consideration of the nature of such occupations and their links to a more-comprehensive regional settlement system is discussed in Chapter V.