PHASE I AND II SURVEY RESULTS

AREA 1, WOODLAND BEACH ROAD

Area 1 is located south of Kent 6 (Woodland Beach Road) east of Smyrna (Figure 1). Area 1 extends south from relocated Kent 6 to Mill Creek east of the proposed right-of-way of State Route 1. This area is generally flat with gentle 4' to 6' elevation changes and a severely eroded ephemeral drainage north of Mill Creek. A large part of the northernmost area of Area 1 had been severely disturbed by the construction of the Kent 6 realignment (Figure 6).

Phase I testing of Area 1 located no additional historical or prehistoric sites. A total of 72 shovel test pits were excavated at 20 foot and 40 foot intervals. The location of these tests are shown in Figure 6. No structures are shown on any known nineteenth century maps of the area, including Byles' (1859) and Beers' (1868) historical atlases. Intensive archival research as part of data recovery operations at the nearby John Darrach Store site immediately north of Area 1 also located no structures in the project area (De Cunzo et al. 1992).

Phase I shovel testing of Area 1 located a consistent plow zone scatter of nineteenth and twentieth century artifacts. Artifacts recovered consisted largely of coal, amber and clear bottle glass, and small whiteware and redware ceramic sherds. Artifact density ranged from one to five artifacts per shovel test. All of these artifacts came from disturbed, plow zone contexts. The distribution of these historical artifacts was random and no evidence of a historical site was identified. Uniform artifact densities over the entire parcel indicate simple plow zone scatter.

A typical soil profile of Area 1 in a moderately eroded area (STP 1-17) is shown in Figure 7. The stratigraphy of Area 1 consisted of two simple strata, plow zone and subsoil. The plow zone was a consistent dark brown silty loam extending to approximately 0.6' below ground surface in eroded areas to 1.0' below surface in less eroded areas. Underlying the plow zone was a yellow-brown sandy clay. Eroded areas were indicated by both a truncated plow zone (generally less than 0.75' thick) and a more gravelly subsoil. Eroded areas were most noticeable near Mill Creek.

Three shovel tests, 1-17, 1-14, and 1-41, located prehistoric artifacts in this project area. These three tests are located on the same eroded terrace as sites 7K-A-97, 7K-A-98 and 7K-A-99 (Figure 6).

FIGURE 6

Location of all Phase I Tests in Area I

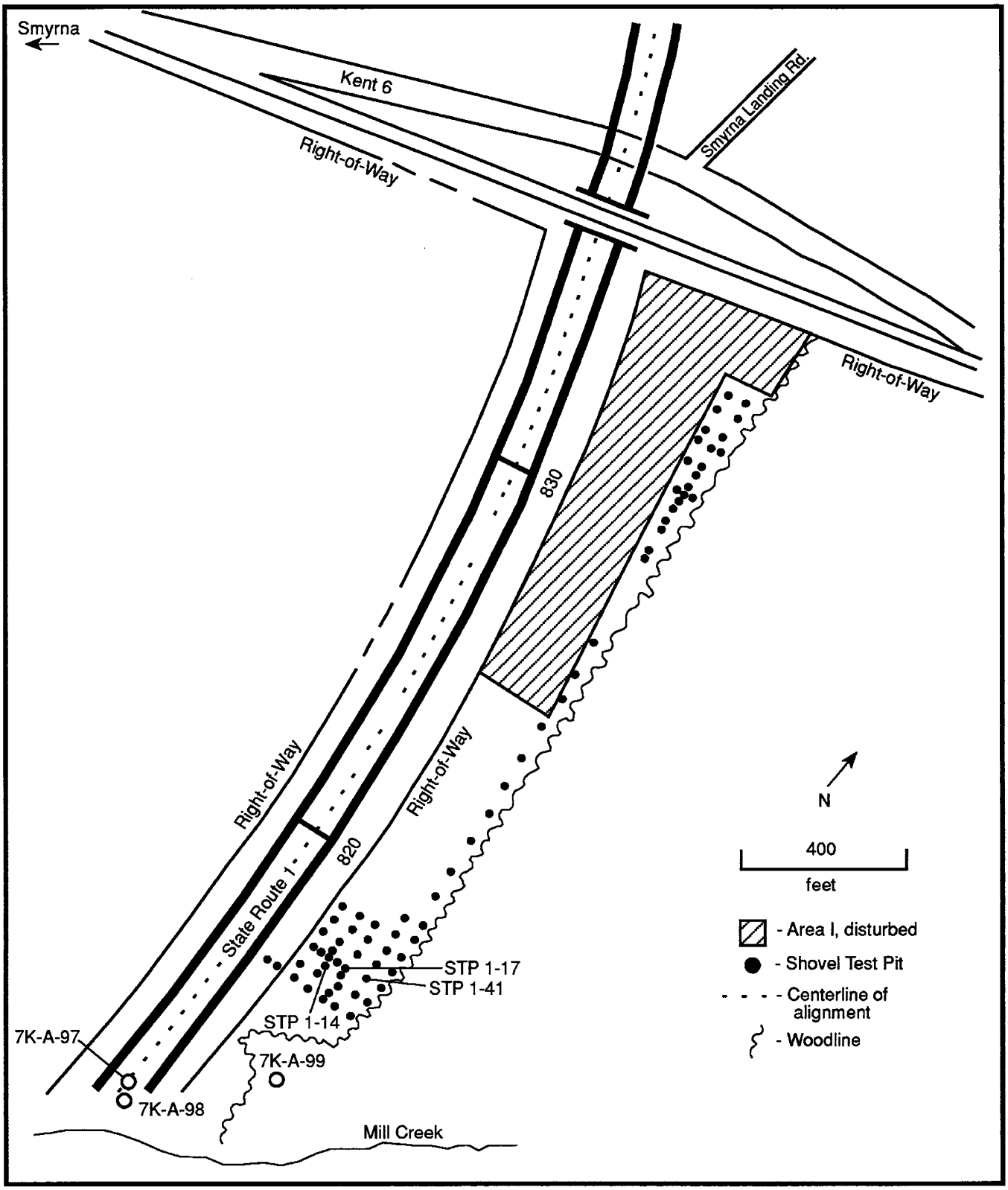
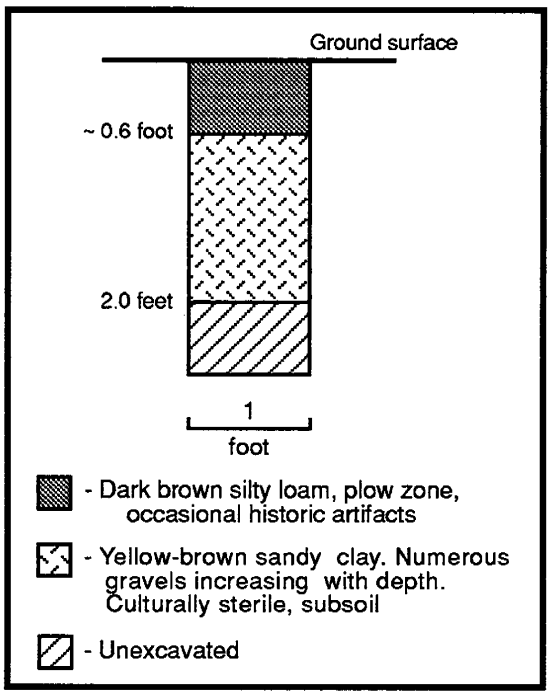


FIGURE 7

Typical Soil Profile in Area 1 (STP 1-17)



One quartz or quartzite flake was found in the severely eroded plow zone of each test. Additional shovel tests were placed at 20' intervals around each test and no additional prehistoric artifacts were found. No artifacts were recovered from intact subsoil contexts.

In summary, Phase I testing located no additional archaeological sites in Area 1. No further work is recommended.

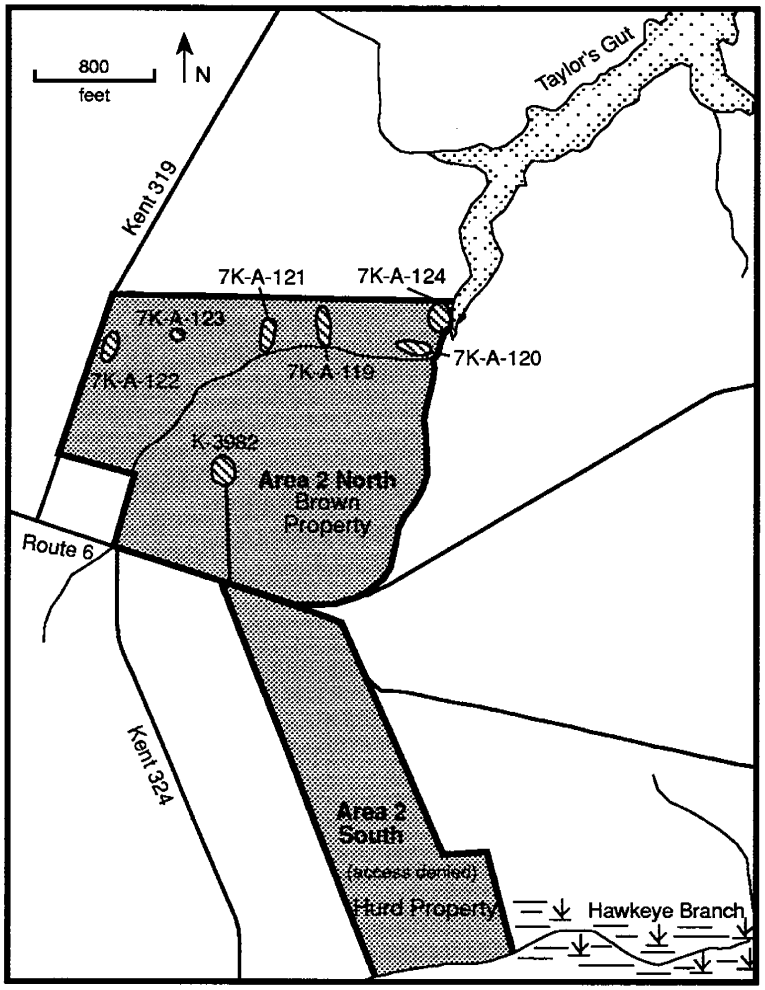
AREA 2, BROWN AND HURD PROPERTIES

Area 2 is located east of Smyrna, on the north and south sides of Kent 6 (Figure 1). The area is extremely flat and elevations range between 10 and 13 feet above sea level. The southern portion (Area 2S - south of Kent 6)is owned by Mr. Carl Hurd who denied access. The northern portion (Area 2N - north of Kent 6) is owned by Mr. Ellis A. Brown of Kenton, Delaware. Mr. Brown rents the 1920s concrete block farmhouse (K-3982) on the property and tills the land with his son, Mr. Gerald Brown. Mr. Ellis Brown initially permitted testing, but later withdrew permission after five days of field work. During this week of testing, however, five prehistoric sites (7K-A-124, 7K-A-123, 7K-A-121, 7K-A-119, and 7K-A-120) and two historical sites (7K-A-122 and K-3982) were identified and partially tested. Figure 8 shows the location of all archaeological sites and areas surveyed in Area 2. A summary of the artifacts recovered from the sites in Area 2 is given in Appendix I.

Phase I testing was completed at only one of the seven sites identified in Area 2. This site was 7K-A-122, the remains of a mid- to late nineteenth century house that appears on Byles' (1859) and Beers' (1868) historical atlases as the "D. Palmatory" house (Figures 9 and 10). Site 7K-A-122 is located in a tilled winter wheat field. Surface visibility was excellent (90%) and the entire field was subjected to a controlled surface collection. The site was identified as a 160' by 200' concentrated scatter of nineteenth century ceramic sherds, coal, and brick fragments east of Kent 319 (Figure 8). Historical

FIGURE 8

Location of Archaeological Sites in Area 2



ceramic artifacts recovered included diagnostic nineteenth century ironstones, redwares, yellowwares, and sponge, transfer-printed, and annular whitewares. These artifacts were found among numerous brick, nail, and window glass fragments that clearly marked the location of at least one structure.

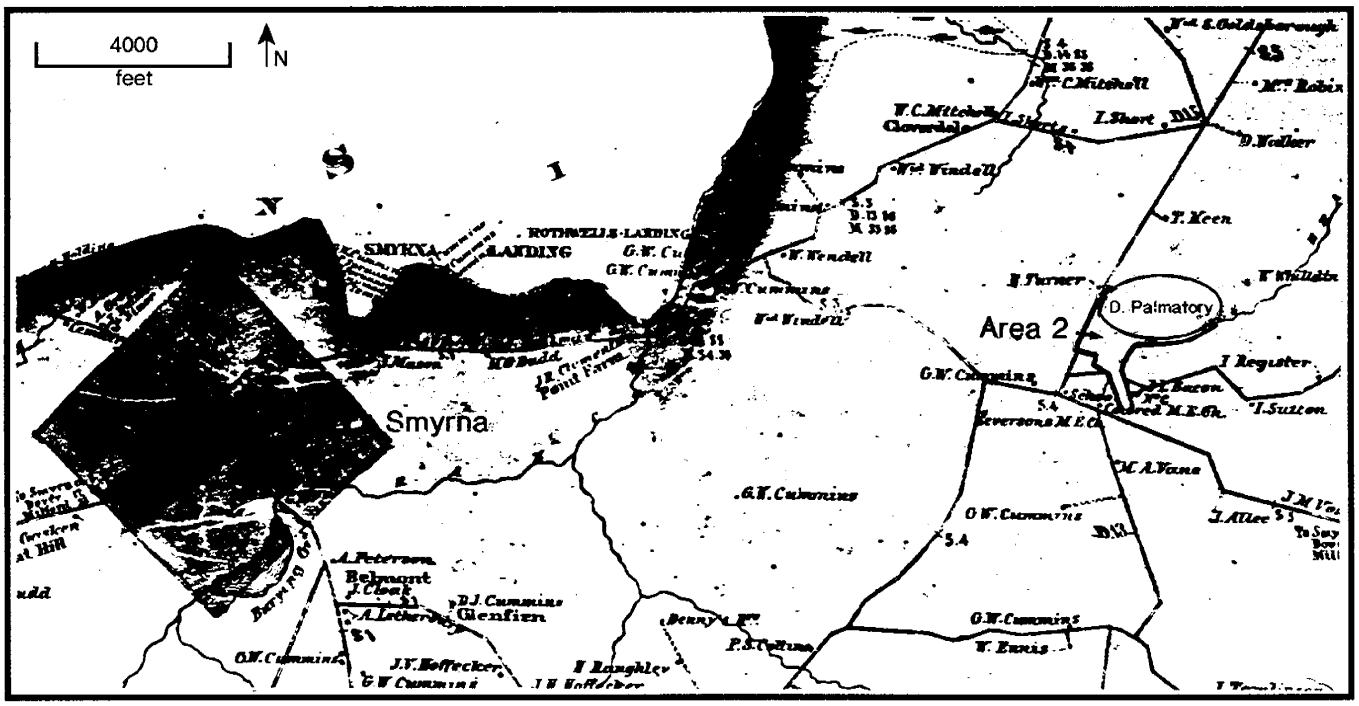
The area of 7K-A-122 identified by pedestrian survey was then tested by a total of 53 shovel test pits. The site is located on a small 2' rise of Matapeake silt loam surrounded by more poorly-drained Othello and Mattapex silt loams. The area of the site indicated by Phase I testing corresponds closely to the limits of the Matapeake rise. The shovel tests were excavated on a 20' grid oriented to Kent 319 and the slight rise on which the site is located (Figure 11).

Historical artifacts were recovered in every shovel test at site 7K-A-122. Artifact density ranged from 2 to 97 artifacts per shovel test. One intact historical feature, probably the remains of a cellar hole, was located in Shovel Test Pit B-13 (Figure 11). The majority of the artifacts recovered came from disturbed plow zone contexts, but artifacts were recovered from intact subsoil deposits in three other shovel tests near Shovel Test Pit B-13 (Figure 11).

The greatest density of historical artifacts was recovered from the vicinity of the historical feature located in Shovel Test Pit B-13. The feature consisted of a thick layer of dark, highly organic silty loam

FIGURE 9

Detail of Byles' 1859 Atlas Showing Area 2 and the D. Palmatory Property



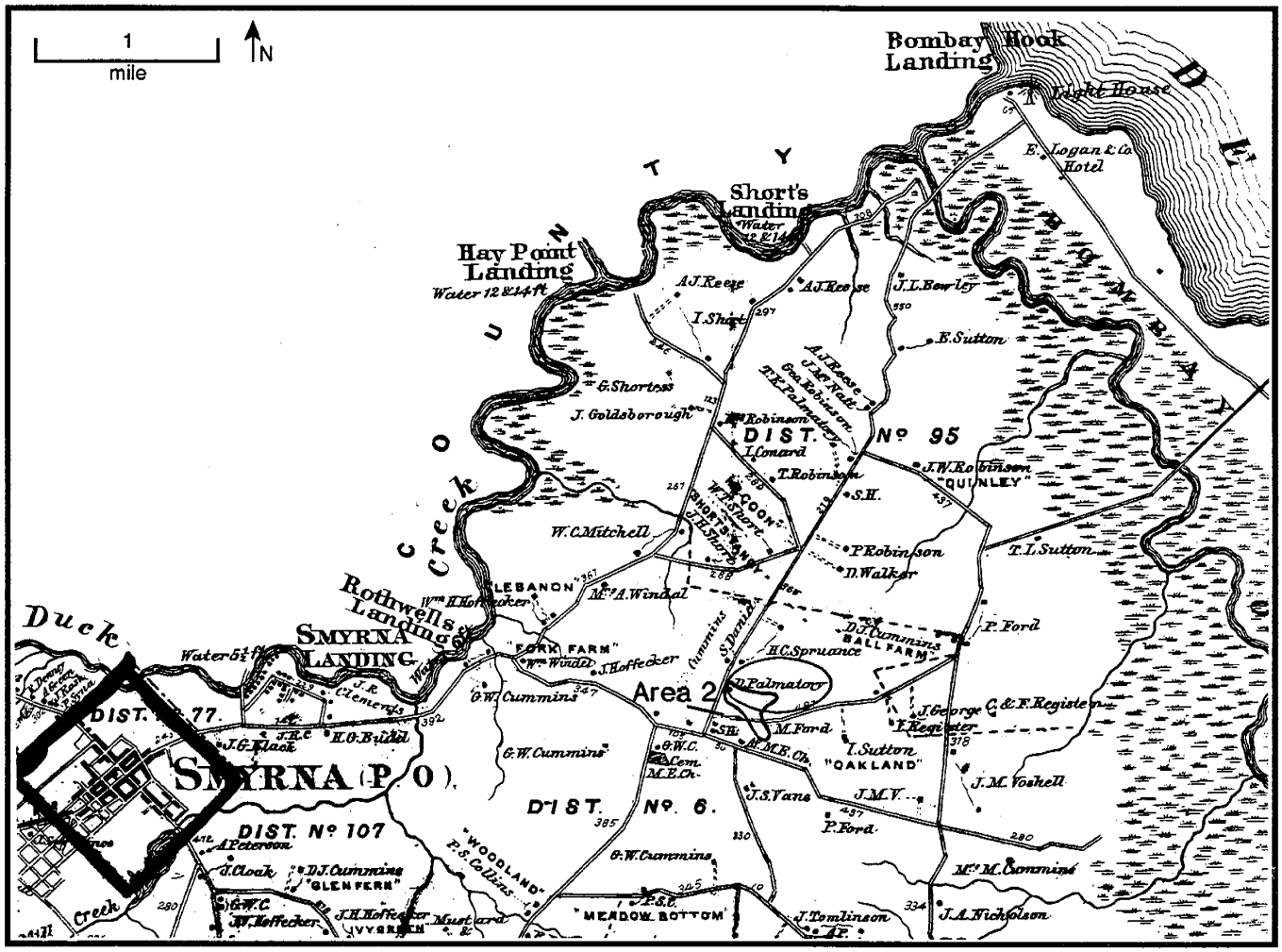
containing numerous historical artifacts including whiteware, redware, ironstone, and panel bottle fragments. This layer was found below the plow zone from 0.9' to 1.4' below ground surface. Numerous faunal remains including oyster shell, beef, and pig remains were also recovered from below the plow zone. A profile of Shovel Test Pit B-13 is shown in Figure 12.

The remaining historical site, K-3982, consists of an extant 1920s farmhouse and associated outbuildings. The house dates to the 1920s and is currently occupied by tenants, Mr. and Mrs. H.W. Osbaker. The house has a concrete block foundation, and according to Mr. Brown who purchased the farm in the 1940s, was built in the 1920s by the previous owner. No earlier structures appear on either Byles' (1859) or Beers' (1868) historical atlases, or the 1906 topographic map of the Dover area. The structure, however, does appear on Bausman's 1939 map of Kent County. No subsurface testing was conducted at K-3982, but it is likely that the structure has associated archaeological remains.

Because Phase I testing was not completed, less is known about the five prehistoric sites. All of these prehistoric sites are located along the north side of an unnamed tributary of Taylor's Gut (Figure

FIGURE 10

Detail of Beers' 1868 Atlas Showing Area 2 and the D. Palmatory Property



8). These sites are located in a fallow field and were identified by single line of shovel tests excavated at 20 foot intervals. These transects were excavated along small one to two foot rises of Matapeake and Mattapex silty loam. Broad, ephemeral drainages and associated Othello silts separated each transect. Pedestrian survey was not possible because of negligible ground visibility.

The largest of the five prehistoric sites north of Taylor's Gut is 7K-A-124. Site 7K-A-124 is located along the edge of a historically unplowed woodline along the north bank of Taylor's Gut at the extreme inland limit of tidal influence on that waterway (Figure 8). The site extends into an adjacent fallow field, but the core of the site appears to lie in an unplowed, wooded area. This unplowed area is situated on a 12' sandy bluff overlooking Taylor's Gut.

FIGURE 11

Location of all Phase I Tests at 7K-A-122 (Area 2)

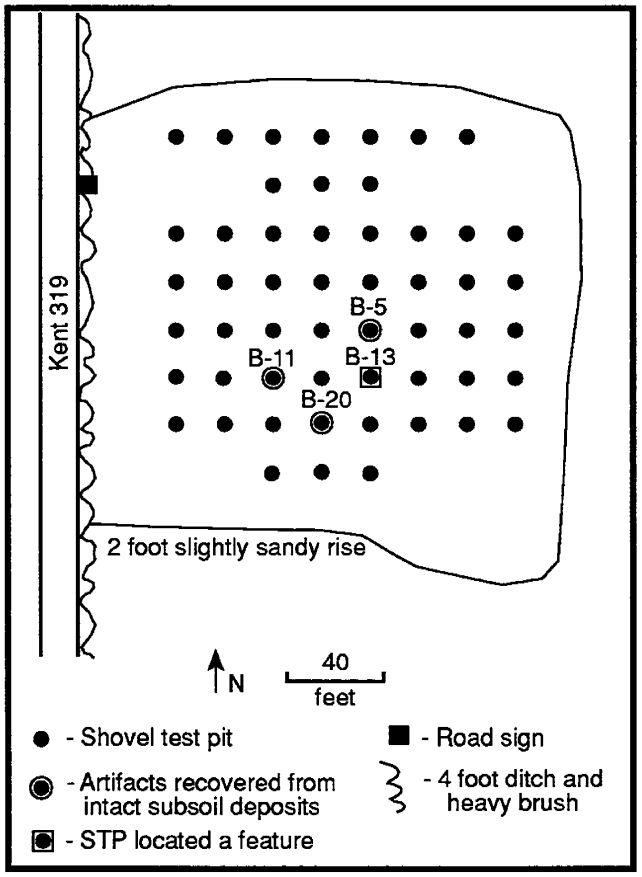
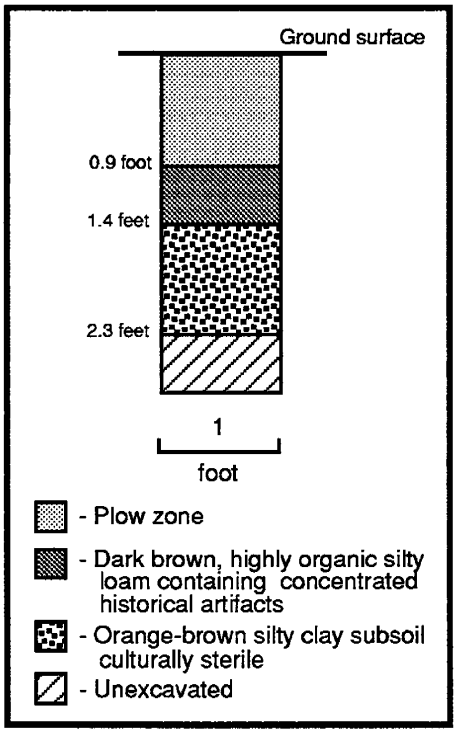


FIGURE 12

Profile of STP B-13, 7K-A-122

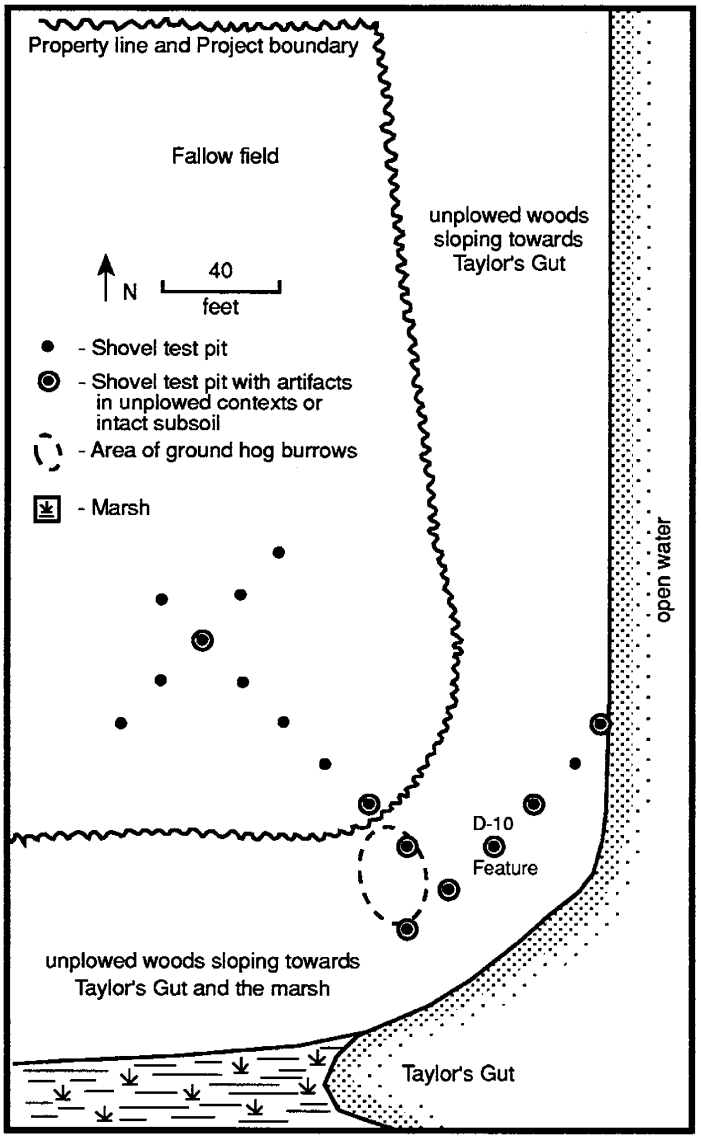


A total of 17 shovel tests were excavated at 7K-A-124. Part of the site was determined to be unplowed. The location of all tests and the unplowed portion of the site is shown in Figure 13. Prehistoric artifacts were recovered from all but two tests. Artifacts were recovered from intact subsoil and unplowed contexts in eight tests.

One prehistoric feature containing a jasper Woodland II triangle point was located in shovel test D-10. This feature, part of a larger hearth, consisted of a concentration of 25 pieces of fire-cracked rock. The projectile point and fire-cracked rock were recovered from a medium yellow-brown clayey loam extending from 0.5' to 1.5' below ground surface (Figure 14). No highly organic or identifiable feature fill was located. The soils encountered in Shovel Test Pit D-10 are typical of site 7K-A-124. A dozen additional pieces of fire-cracked rock were observed in the spoils of a nearby ground hog burrow. Such burrows may have disturbed a small portion of the site.

FIGURE 13

Location of all Phase I Tests at 7K-A-124 (Area 2)



A total of 44 pieces of debitage and 78 pieces of fire-cracked rock were found during partial Phase I testing at 7K-A-124. Quartz was the most common raw material, but a variety of other materials including jasper, chert, chalcedony, quartzite, and rhyolite were recovered. Over half of all flakes (60%) were quartz. The presence of prehistoric features in unplowed contexts and the range of lithic raw materials recovered in only these limited tests indicates that 7K-A-124 is a significant prehistoric site.

Three of the four remaining prehistoric sites in Area 2, 7K-A-121, 7K-A-119, and 7K-A-120, consist of small lithic scatters along the edges of shallow, ephemeral drainages (Figures 8 and 15). These sites are located in a fallow field on slight 1' to 2' Mattapex silty loam rises. Each site has been plowed and contained the same simple stratigraphy of a 0.8' thick silty loam plow zone atop a yellow-brown, slightly silty clay subsoil (Figure 16). Shovel tests were systematically excavated at each site and prehistoric artifacts were found in the majority of the tests. Artifacts were also recovered from intact subsoil contexts, but testing was limited because of curtailed access.

A total of six shovel test pits were excavated at 7K-A-121 (Figure 15). These tests were excavated along a single transect perpendicular to the existing woodline. A quartz flake and an argillite flake were

FIGURE 14

Typical Soil Profile of 7K-A-124 (STP D-10)

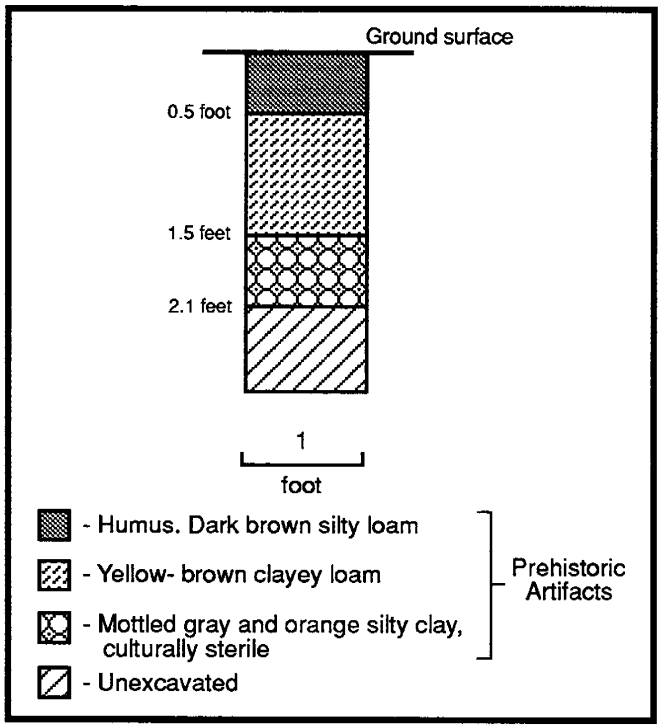


FIGURE 16

Typical Soil Profile of 7K-A-121, 7K-A-119 and 7K-A-120 (STP F-3)

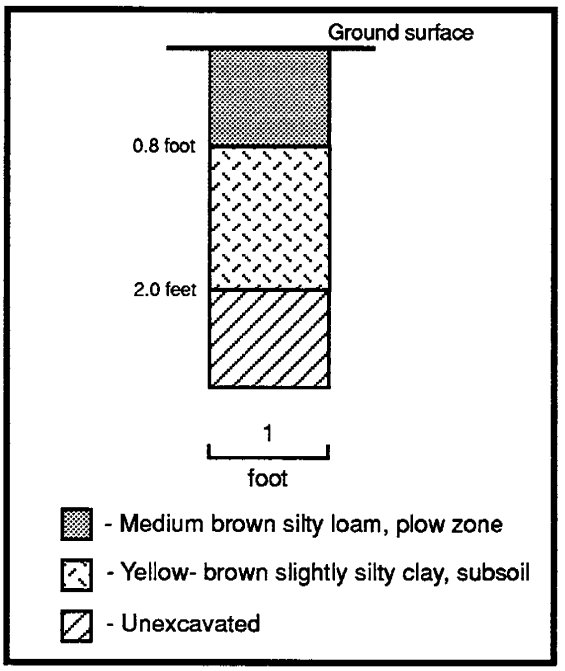
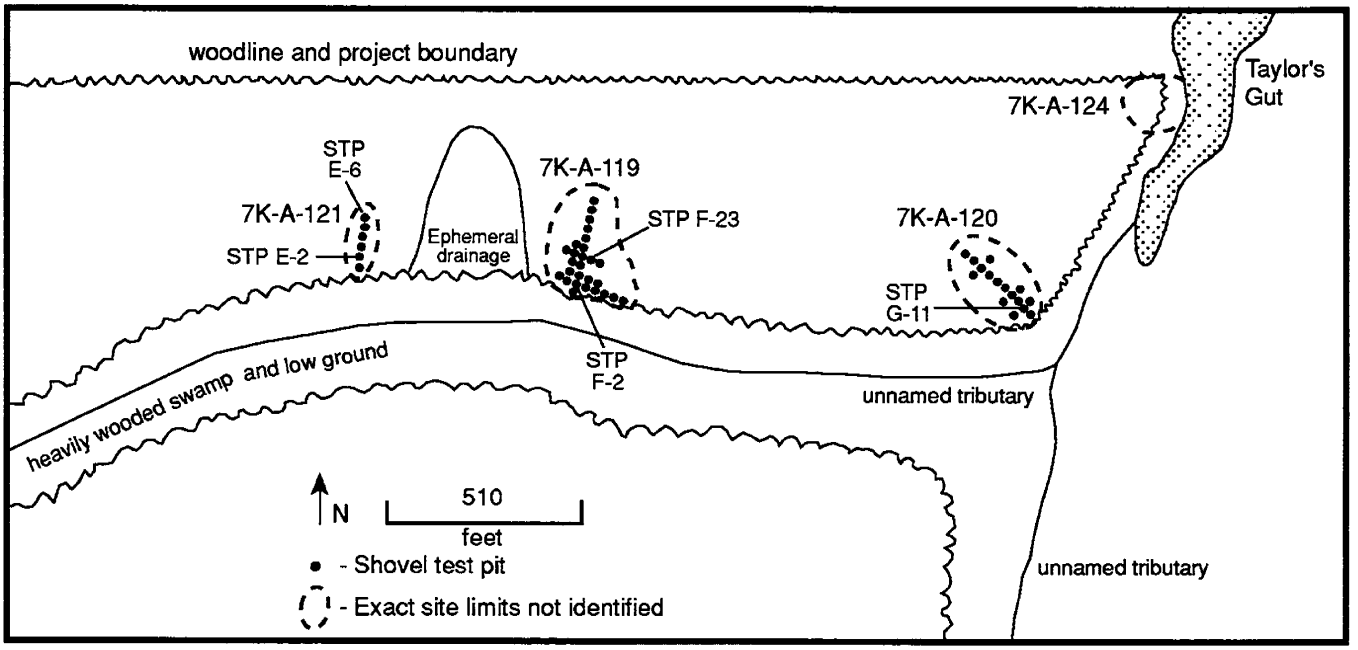


FIGURE 15

Location of all Phase I Tests at 7K-A-121, 7K-A-119, and 7K-A-120 (Area 2)



recovered from the plow zone of two tests, E-6 and E-2. No subsoil artifacts were recovered, but the potential for such deposits and intact features is high.

A total of 27 shovel tests were excavated on a 20' grid at 7K-A-119 (Figure 15). Prehistoric artifacts, primarily jasper, quartz, and chert flakes, were recovered from 18 tests. One diagnostic artifact, a chert bifurcate dating to the Archaic Period (6500 B.C. to 5500 B.C.), was found in the plow zone of Shovel Test Pit F-2. A total of five chert, jasper, and quartz flakes were recovered from intact subsoil contexts in three shovel tests. A possible prehistoric feature consisting of carbon flecks in the subsoil was identified in Shovel Test Pit F-23. No feature limits or other artifacts were recovered.

A total of 16 shovel tests were excavated at 7K-A-120 (Figure 15). Site 7K-A-120 is located on a slight 2' rise surrounded by low, poorly-drained Othello clays. Shovel tests were excavated along a single transect at 20' intervals and additional tests were excavated at 40' intervals along either side. Prehistoric artifacts, primarily quartz, jasper, and chert flakes, were found in eight tests. One diagnostic artifact, a small fragment of a grit tempered prehistoric ceramic, possibly Minguannan, was located in the subsoil of Shovel Test Pit G-11. A total of six fire-cracked rocks were found, including two found near the ceramic sherd in Shovel Test Pit G-11. The presence of both ceramics and fire-cracked rock indicates some level of domestic occupation. The potential for further intact artifact deposits and prehistoric features is high.

The remaining prehistoric site; 7K-A-123, located in Area 2 consisted of a single badly plow-scarred hammerstone recovered from the surface during pedestrian survey (Figure 8). Intensive pedestrian survey in a 200' by 200' area around this hammerstone with excellent surface visibility failed to locate any other evidence of prehistoric activity. Site 7K-A-123 thus represents an isolated find.

Conclusions and Recommendations

Phase I survey identified seven sites in Area 2. Testing was curtailed because of access restrictions and changes in proposed wetland construction designs, but six sites were partially tested by the Phase I survey. No Phase I testing was undertaken south of Kent 6 because access was denied by the landowner. Two historical sites were located: 7K-A-122, the remains of a mid- to late nineteenth century structure that appears on Byles' (1859) and Beers' (1868) historical atlases, and K-3982, an

extant early twentieth century farm. Phase I testing was completed at 7K-A-122. Diagnostic nineteenth century artifacts and cultural features were found in intact contexts and the potential for further significant archaeological remains is high. Although this site will not be impacted by proposed borrow pit and wetland replacement plans, a Phase II survey is warranted if 7K-A-122 is impacted by any future construction or development. Phase I testing was not completed at K-3982 and the potential National Register eligibility of this site is not known.

Five prehistoric sites were partially tested by Phase I testing. Four of these sites, 7K-A-119, 7K-A-120, 7K-A-121, and 7K-A-124, are oriented to Taylor's Gut and its tributaries. The fifth prehistoric site, 7K-A-123, is an isolated find. Prehistoric artifacts were recovered from intact subsoil deposits in three of the sites along Taylor's Gut: 7K-A-124, 7K-A-119, and 7K-A-120. Intact prehistoric features were identified at two of these sites, 7K-A-124 and 7K-A-119. The potential for intact features at 7K-A-121 and 7K-A-120 is likewise high. Diagnostic artifacts dating from the Archaic (6500 B.C. to 5500 B.C.) and Woodland II periods (A.D. 1000 - A.D. 1650) were recovered from 7K-A-119 and 7K-A-120 respectively.

Partial Phase I testing suggested that four of the prehistoric sites were potentially National Register eligible and thus warranted Phase II testing: 7K-A-119, 7K-A-120, 7K-A-121, and 7K-A-124. Phase II testing, however, was not undertaken because of highway design changes and accessibility. If Area 2 is chosen as a future site for borrow pit or wetland replacement further Phase I testing and probably Phase II testing of these sites is recommended.

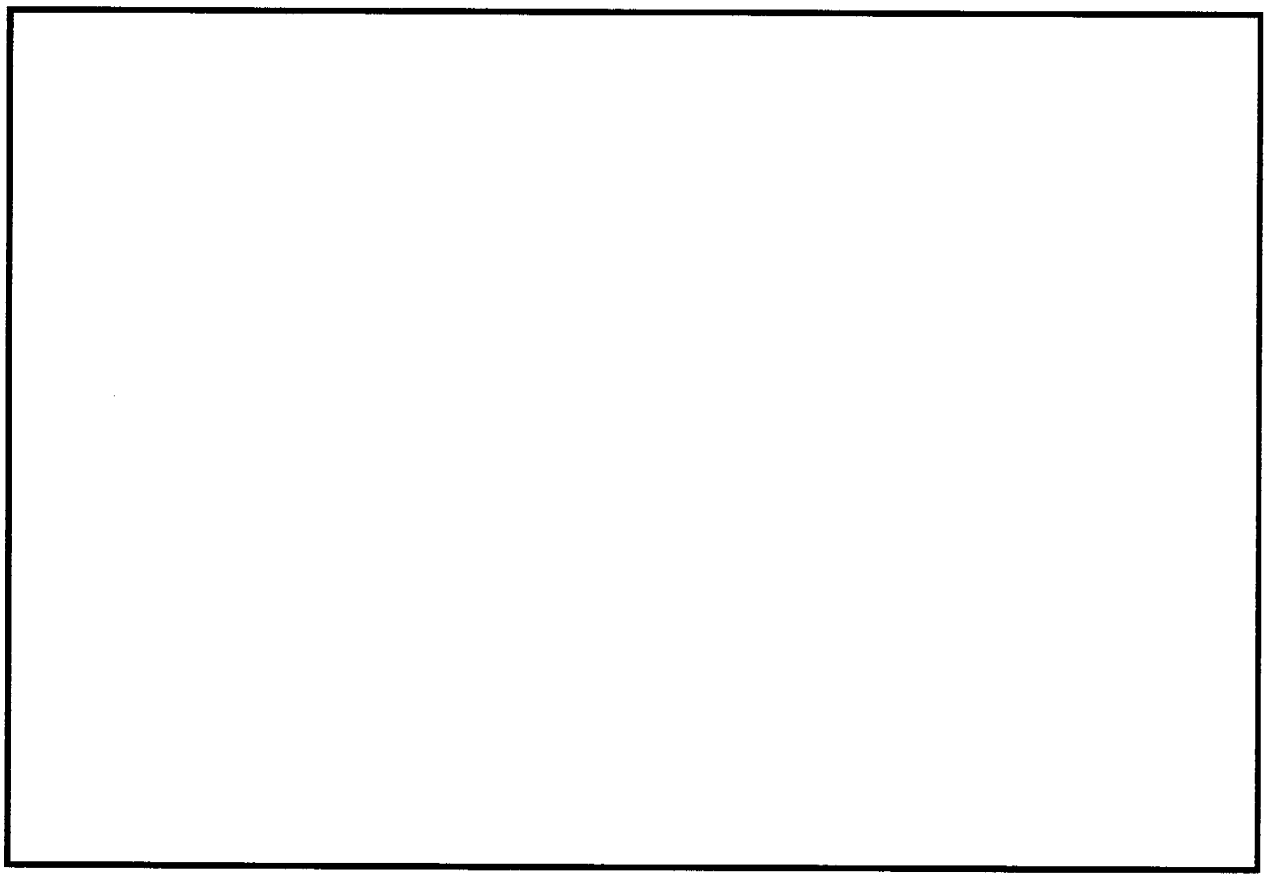
AREA 3, POLLACK PROPERTY

Area 3 is located south of Smyrna along the east side of present Route 13 (Figure 1). The Pollack property is a 50 acre agricultural field bounded on the north by a woodlot along the Leipsic River, on the east and south by Alston Branch, and on the west by the proposed right-of-way of State Route 1. Alston Branch is a major tributary of the Leipsic River. One large multicomponent prehistoric and historical site, 7K-C-203, is located in Area 3.

The Pollack property is comprised of a mosaic of relatively high, well-drained Sassafras sandy loams, a prime setting for prehistoric and historical occupations. An aerial view of the Pollack site

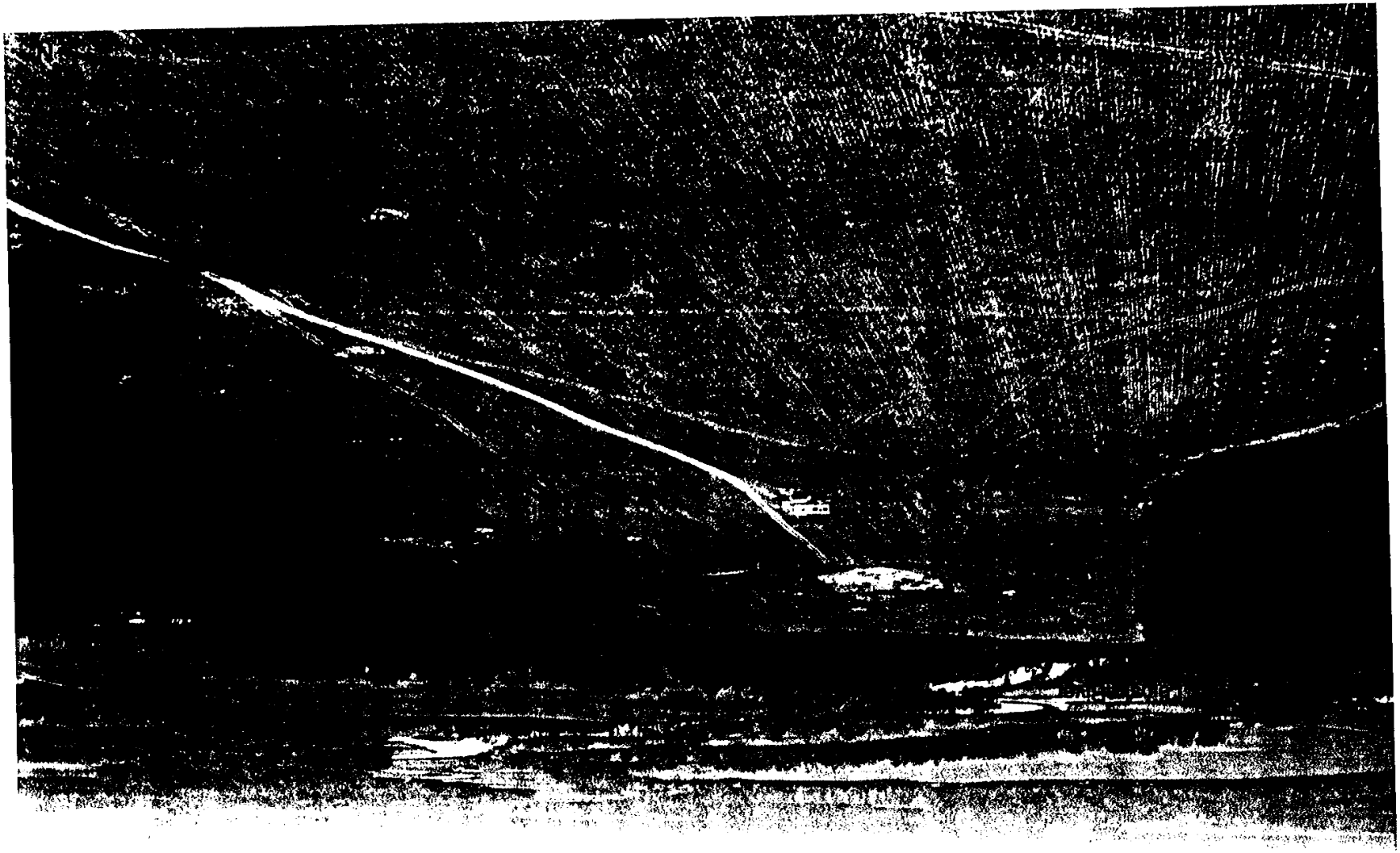
PLATE 1

Aerial View of the Pollack Site (7K-C-203), Looking East April 1991



looking towards the east clearly shows these settings (Plate 1). Since 1985, the site has been cultivated with no-till corn. The northern edge of Pollack property is bounded by a historically unplowed, 12.5 acre woodlot. This unplowed woodlot is along the south side of the Leipsic River and corresponds roughly to the initial limits of 7K-C-203 as the site was defined when it was nominated for listing on the National Register of Historic Places in 1989 (Riley et al. 1993). These woods consist of a mature stand of hardwoods, predominantly beeches and oaks.

Elevations in Area 3 range from approximately 30 feet above sea level along the western project boundary to 11 feet above sea level near the confluence of the Leipsic River and Alston Branch. An extensive tidal marsh borders the Leipsic, but the majority of Area 3 consists of moderately drained Sassafras sandy loam of up to 5% slope. Severely eroded slopes of up to 40% exist on the 15 foot bluffs located along the Leipsic River and Alston Branch.



Previous Surveys

The Pollack site was first identified by pedestrian survey in 1985. The survey initially identified 7K-C-203 as a surface scatter of flakes and fire-cracked rock along the edge of the woodlot bordering the Leipsic River. The controlled surface collection was completed as part of the survey of the proposed State Route 1 corridor. Ground surface visibility was very poor, less than 5%. One fragment of shell-tempered prehistoric ceramic was found near the center of the field at a loci labeled 7K-C-202.

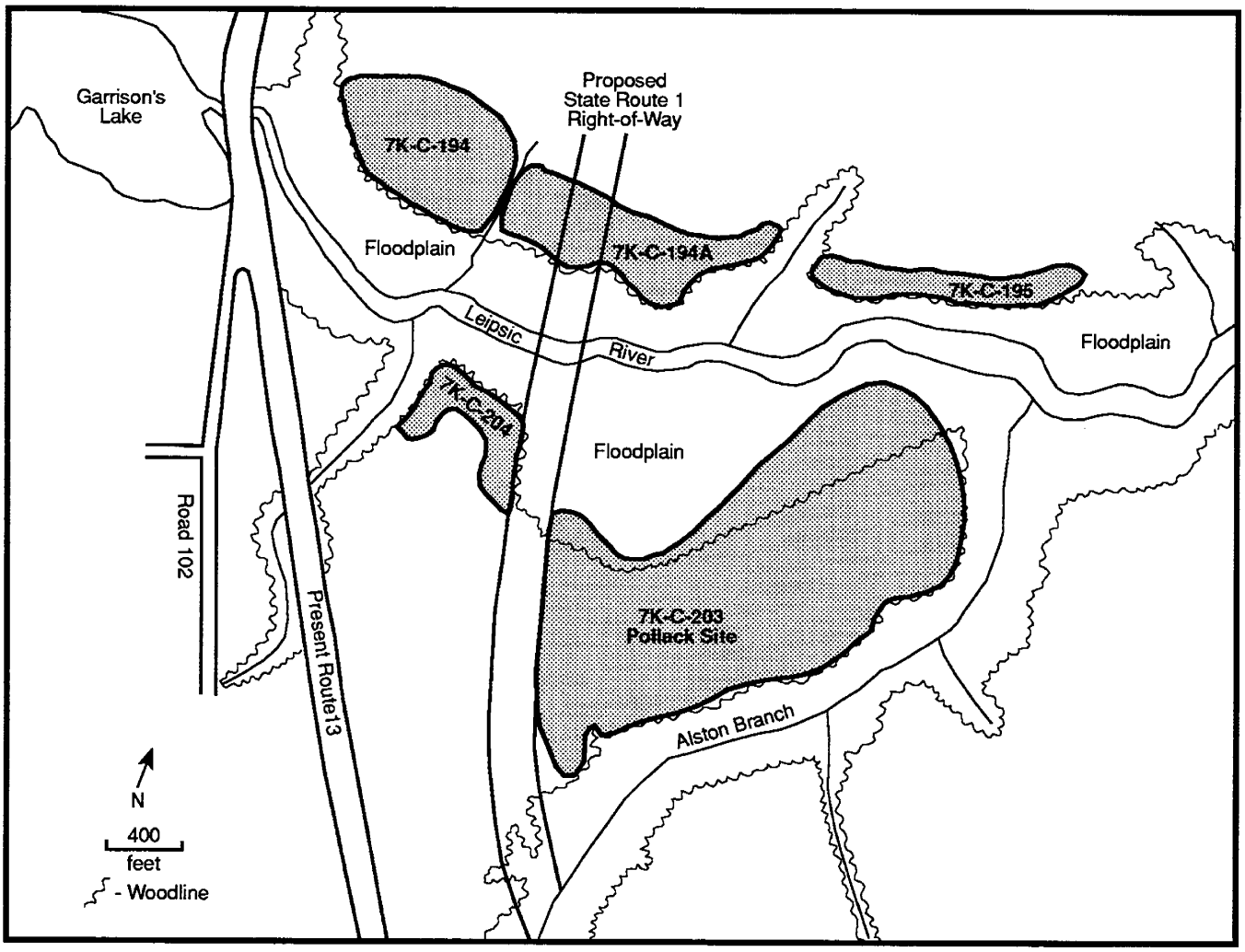
A subsequent pedestrian survey in August, 1988 under slightly improved surface visibility located a continuous scatter of fire-cracked rock and flakes along the present woodline south of the Leipsic River. This woodline corresponds to a sandy bluff approximately 15 feet above the swampy floodplain. Artifacts were found continuously between 7K-C-203 and 7K-C-202 indicating that 7K-C-202 is a surface find related to the larger 7K-C-203. Thus 7K-C-203 came to refer to the entire 50 acre agricultural field and adjacent 12 acre unplowed woodlot east of the proposed State Route 1 right-of-way.

The second pedestrian survey of 7K-C-203 in 1988 also found the first diagnostic prehistoric artifact at the site. This artifact was a rhyolite Koen-Crispin broadspear from the Woodland I Period (3000 B.C. - A.D. 1000). Initial Phase II studies consisted of a series of shovel test pits laid out in the woodlot along the Leipsic River bank in order to better define the site limits (Riley et al. 1993). These shovel test pits extended eastward through 7K-C-203 and into a historically unplowed woodlot which extended along the south bank of the Leipsic River from the known limits of 7K-C-203 to the confluence of the Leipsic River and Alston Branch. The woodlot measured approximately 500 meters (1700 feet) in length and covered about five hectares (12 acres).

Based upon the distribution of artifacts in the shovel test pits, 1 m x 1 m test units were later excavated in the woodlot along the shovel test pit line. Most of the shovel test pits and test units contained flakes, fire-cracked rocks, projectile points, or bifaces. Although no intact hearths or perceptible pit features were found in any of these initial test units, the presence of tools, charcoal, debitage, and fire-cracked rock at such depths indicates an occupation of some temporal duration and that features were probably present in undisturbed contexts. Artifacts were also encountered to a depth of 70 centimeters below ground surface indicating the presence of intact buried prehistoric landscapes and a high potential

FIGURE 17

Location of all Sites in the Middle Leipsic River Valley Archaeological District

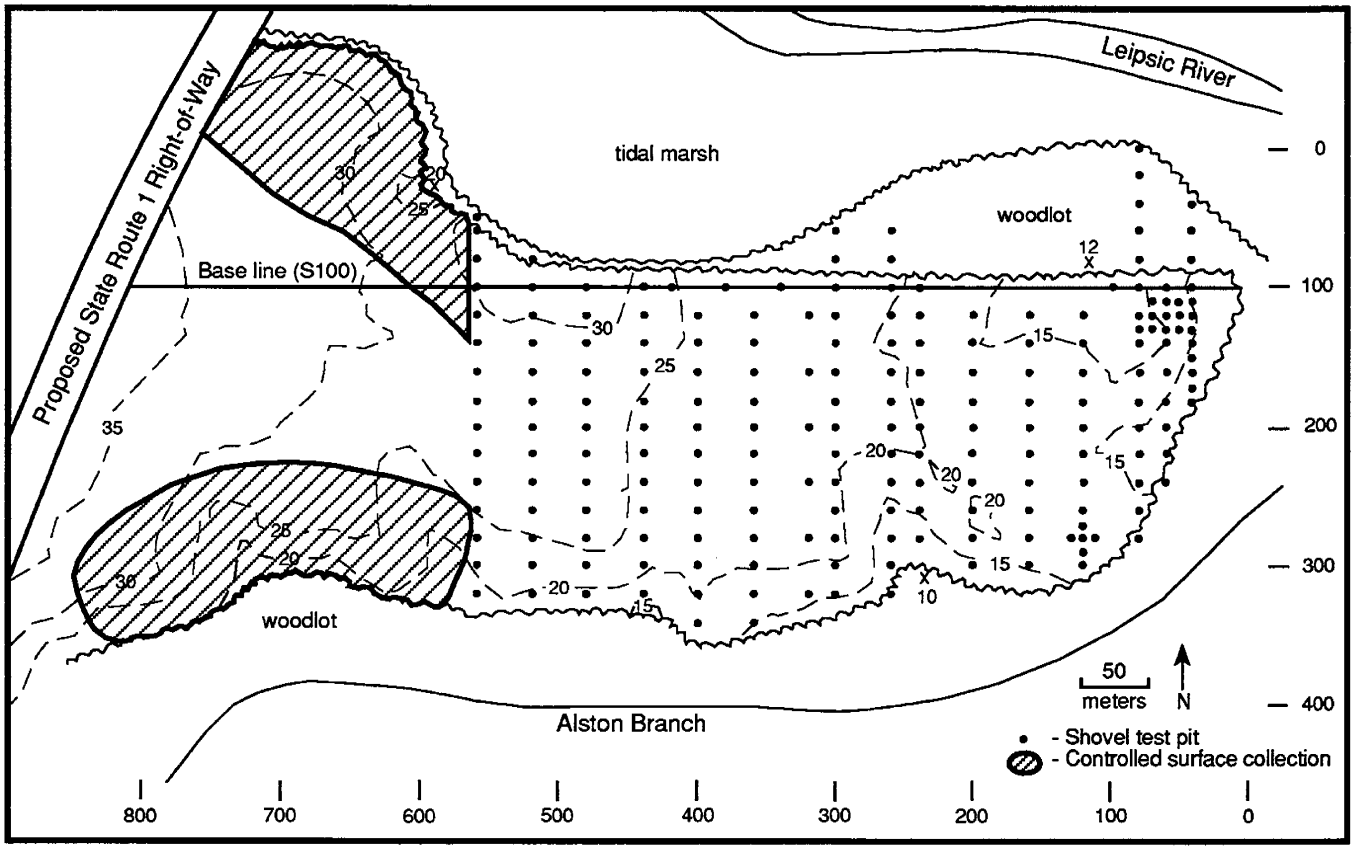


for intact archaeological features. Additionally, while local chert, jasper, quartz, and quartzite were the most common raw materials, a significant percentage of all flakes were non-local argillite and rhyolite (5%).

The presence of non-local argillite and rhyolite and their place in the technology and social structure of the inhabitants of 7K-C-203 is an important research theme in current prehistoric archaeology in the Mid-Atlantic. This theme has already been explored at a number of other sites in the Leipsic, St. Jones, and Murderkill drainages of central Delaware (Custer, Bachman, and Grettler 1986; Custer and Bachman 1986; and Bachman, Grettler, and Custer 1988).

FIGURE 18

Location of all Phase I Tests, Pollack Site (7K-C-203)



On the basis of these attributes, 7K-C-203 was nominated to the National Register of Historic Places as part of the Middle Leipsic River Valley Archaeological District. This district consisted of 7K-C-203 and four associated sites (7K-C-194, 7K-C-194A, 7K-C-195 and 7K-C-204). The location of all five sites is shown in Figure 17. The closest site to the Pollack site was 7K-C-204, a small surface scatter located approximately 200 feet to the west. Site 7K-C-204 consisted of four separate loci indicated by seven flakes and 60 fragments of fire-cracked rock. The three other sites, 7K-C-194, 7K-C-194A and 7K-C-195, were located on the north bank of the Leipsic River.

Additional Phase I Survey

An additional Phase I survey was made of the plowed portions of 7K-C-203 in the spring of 1991. This survey was undertaken to locate and identify all significant cultural resources in the Pollack property

to be impacted by proposed borrow pit and wetland replacement. This additional survey was undertaken because of the low surface visibility over the entire 50 acre field and the high potential for significant cultural remains as indicated by earlier surveys.

The Phase I survey of the Pollack field consisted of a pedestrian survey of the entire field and adjacent woodlot, a controlled surface collection where visibility permitted, and the excavation of 202 shovel test pits over an area approximately 600 meters long and 300 meters wide (Figure 18). These tests were located along a single grid set over the entire 50 acre parcel. The baseline of this grid was arbitrarily established 10 meters south and parallel to the woodline along the northern edge of the field. This base line, the S100 line, extended from the corner of the field near the confluence of Alston Branch and the Leipsic west 800 meters to the proposed State Route 1 Right-of-Way.

The location of this baseline and all Phase I tests in the Pollack field is shown in Figure 18. Shovel tests were excavated along the crests and immediate slopes of slight, five to ten feet high sandy rises that occurred throughout the project area. Previous Phase I and II testing along the Middle Leipsic River (Bachman, Grettler, and Custer 1988; Riley et al. 1993) had identified sites in similar settings.

Shovel testing began along transects 20 and 40 meters apart from the W40 line near the confluence of the Alston Branch and extended west to the W560 line. Shovel tests were then dug at 20 meter intervals along individual transects from the baseline at S100 south to the Alston Branch 200-340 meters away. The location and distribution of all prehistoric artifacts recovered from the W0 to W280 transects are shown in Figure 19. The same information for the remaining shovel tests located from the W300 to the W560 transect are shown in Figure 20. The distribution of all historical artifacts is similarly shown in Figures 21 and 22. Areas of severe erosion where artifacts in intact contexts were unlikely were pedestrian surveyed, but not shovel tested.

Phase I testing located three general areas of concentrated historical and prehistoric artifacts at the Pollack site. The location of these areas is shown in Figure 23. The largest of these areas was located near the confluence of the Leipsic River and Alston Branch. Historical and prehistoric artifacts were found consistently in this confluence area east of the W200 line from the baseline at S100 to Alston Branch near S300 (Figures 19 and 21). A total of 79 shovel tests were dug in and around this area. Overall

FIGURE 19

Phase I Prehistoric Artifact Distribution, STP Transects W0-W200, Pollack Site

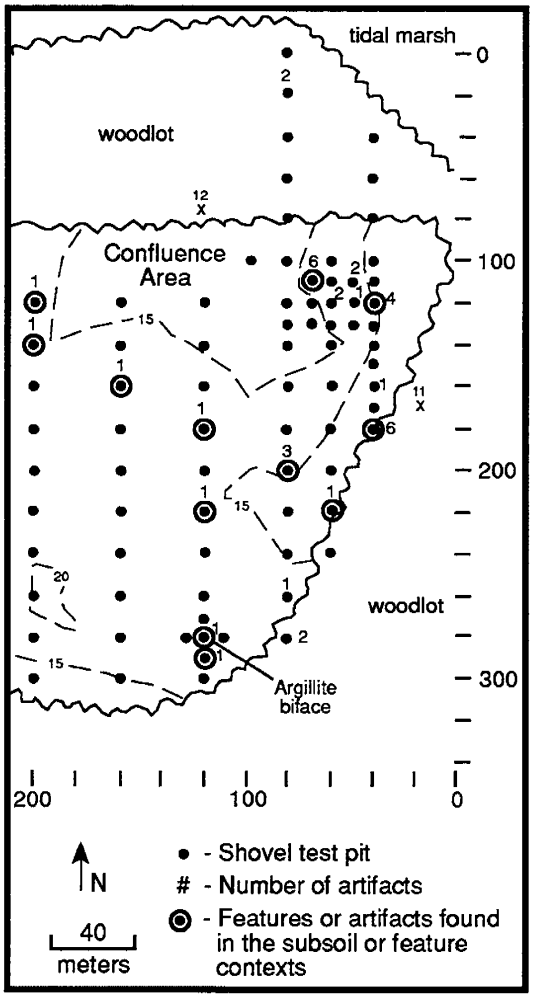
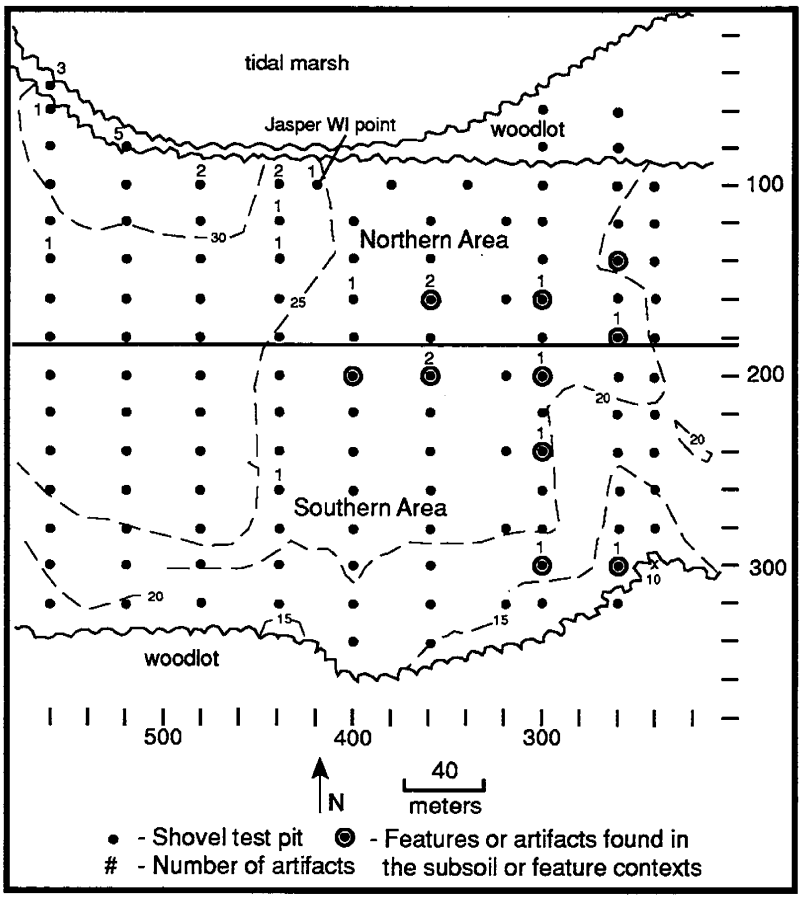


FIGURE 20

Phase I Prehistoric Artifact Distribution, STP Transects W220-W560, Pollack Site



artifact densities, however, were relatively low. All 9 of the shovel test pits containing historical artifacts contained less than four, and typically only one or two artifacts. All of the 19 shovel tests containing prehistoric artifacts contained less than six, and typically only one or two prehistoric artifacts.

Despite these low densities, diagnostic mid-eighteenth century and Woodland I artifacts were found. Diagnostic historical artifacts included three eighteenth century white clay pipe bowl fragments. These three artifacts were found with small bone, brick, and redware fragments in Shovel Test Pits S120 W80 and S120 W70. One of the pipe fragments from S120 W70 came from an intact historical feature below the plow zone. A profile of Shovel Test Pit S120 W70 is shown in Figure 24. This historical feature

FIGURE 21

Phase I Historical Artifact Distribution, STP Transects W0-W200, Pollack Site

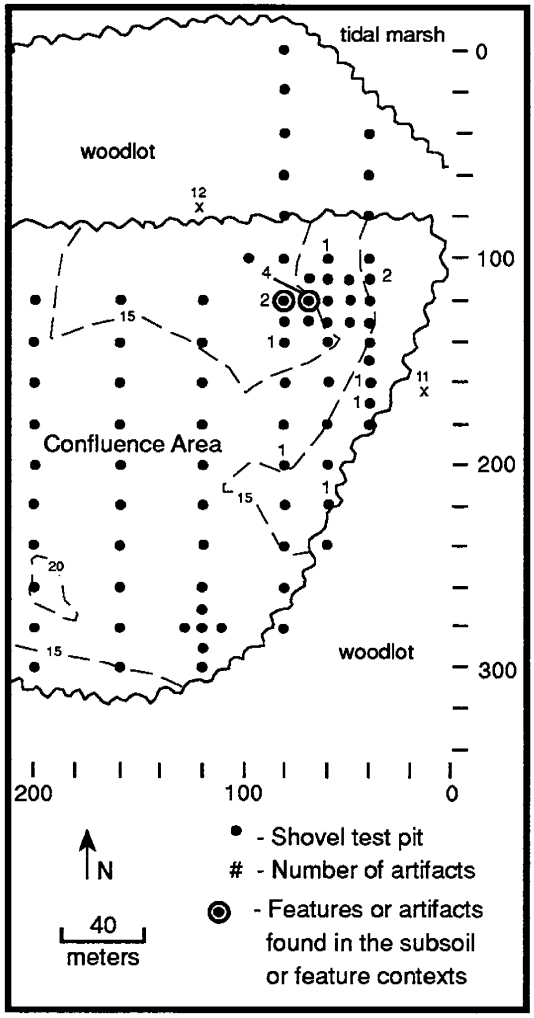
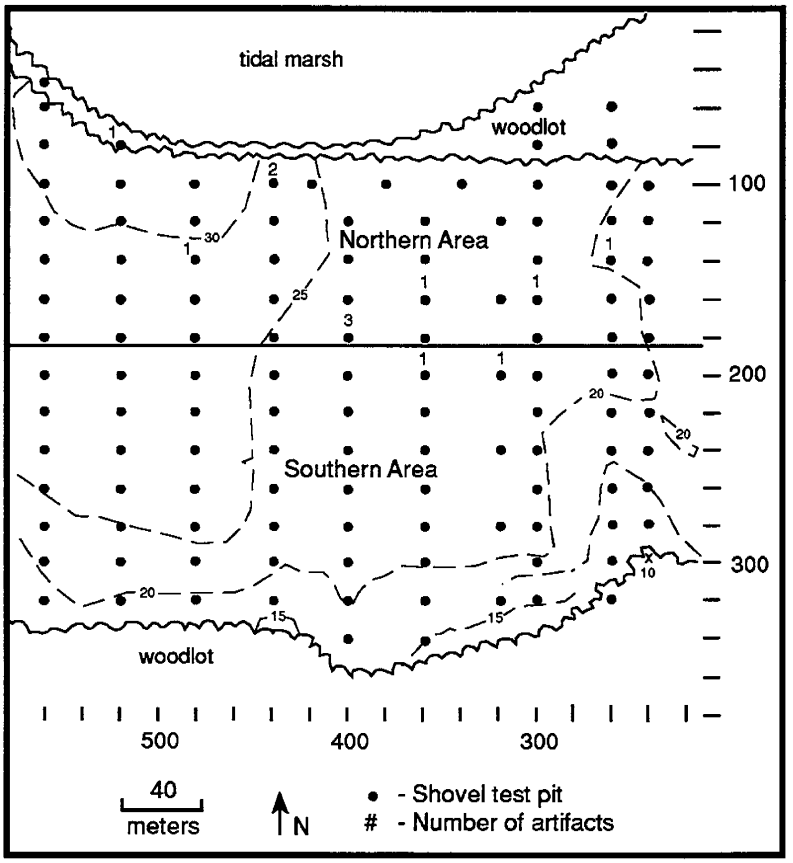


FIGURE 22

Phase I Historical Artifact Distribution, STP Transects W220-W560, Pollack Site



was defined by a dark gray-black silty sand stain. The silty sands of this stain contained small flecks of charcoal and reddened sands, indicating that the soil had been burnt. These feature soils ranged from 30 to 70 centimeters below ground surface. The 30 centimeters of plow zone above this feature was a dark brown, moderately organic silty sand. Below this feature was a sterile subsoil comprised of coarse yellow-brown sands mottled with fine gray clays and red sands. Shovel Test Pit S120 W70 contained sterile subsoil that extended from 55 cm to the end of excavation at 90 cm below ground surface.

FIGURE 23

Areas of Concentrated Prehistoric and Historical Artifacts From Phase I Testing, Pollack Site

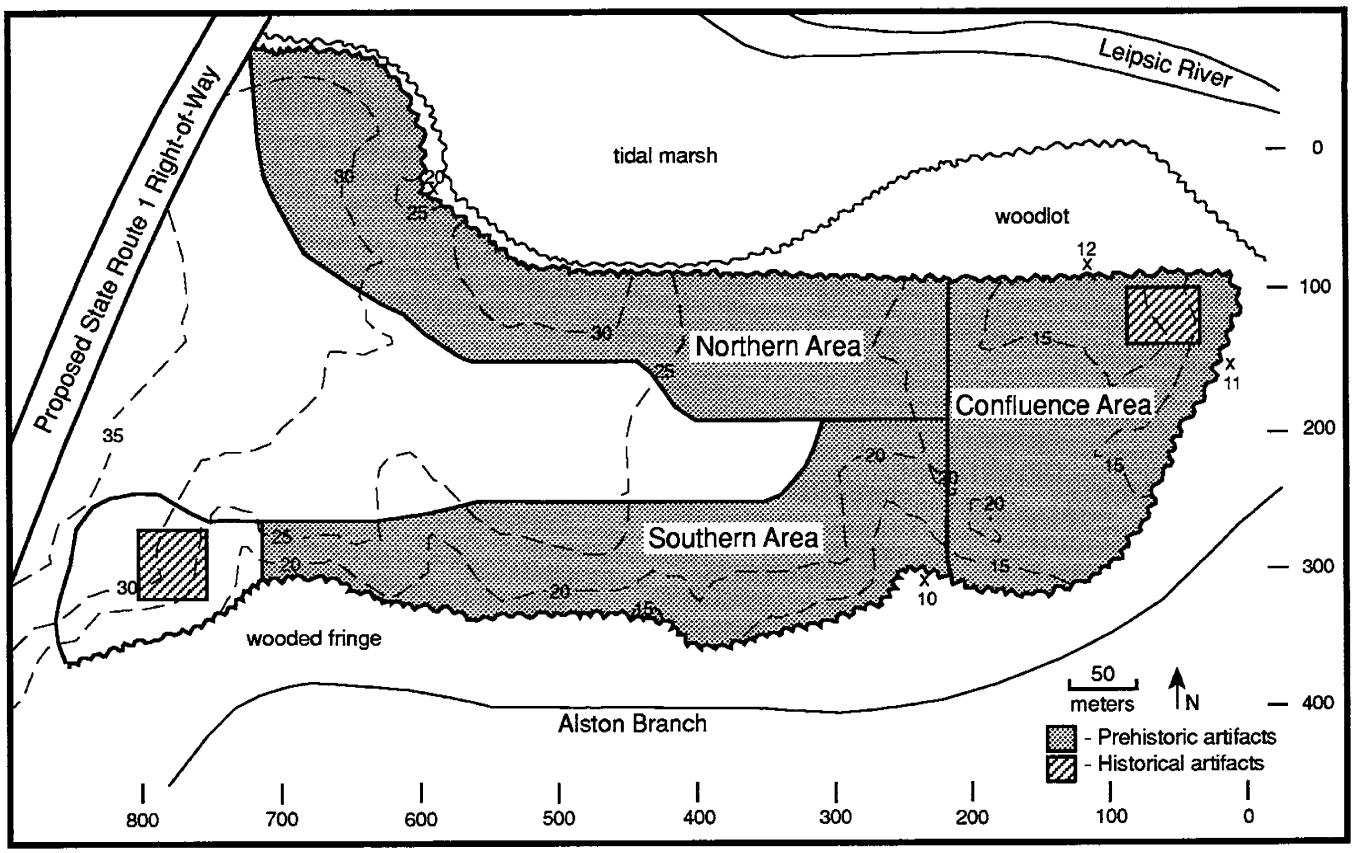
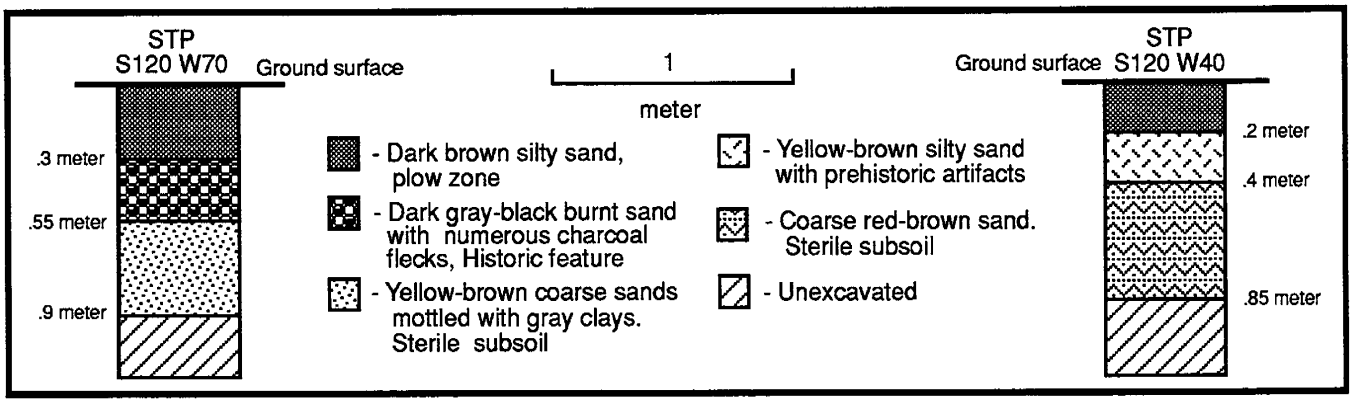


FIGURE 24

Profiles of Shovel Test Pits From Near the Confluence Area, Pollack Site



One diagnostic prehistoric artifact was found near the confluence of the Leipsic River and Alston Branch. This artifact was a Woodland I argillite biface fragment found at S280 W120 near Alston Branch (Figure 19). Lithic flakes, charcoal, fire-cracked rock, and other nondiagnostic prehistoric artifacts were found in 19 other shovel tests in this area. No prehistoric pottery or other tools were recovered. All of the debitage except for one chalcedony flake was from local chert, jasper, quartz and quartzite. A summary of all of the artifacts found during additional Phase I and II shovel test pit and test unit excavations is given in Appendix I.

Although prehistoric artifact densities were low, five of the 36 shovel tests (14%) near the confluence (east of W100 and south of S100) recovered prehistoric artifacts from intact subsoil or feature contexts. These intact contexts were located below the plow zone and consisted of a thin layer of yellow-brown silty sands. The thickness of these buried intact soils varied from less than 10 cm to over 50 centimeters. A profile of one shovel test pit containing artifacts in these intact soils, Shovel Test Pit S120 W40, is shown in Figure 24. The presence of numerous small flecks of charcoal in this soil was interpreted as evidence of possible prehistoric features. Similar buried soils were associated with prehistoric features at the nearby Leipsic site, 7K-C-194A (Riley et al. 1993).

The other two areas of concentrated historical and prehistoric artifacts at the Pollack site were along the two woodlots bordering the property. The northern concentration bordered the unplowed woodlot along the Leipsic River and the southern concentration bordered the wooded fringe of Alston Branch (Figure 23). Between these two concentrations a total of 27 shovel tests were excavated and no significant artifacts were recovered.

The northern concentration consisted of a 500 meter long by 100 meter wide scatter of prehistoric artifacts from W200 to the eastern edge of the State Route 1 Right-of-Way at W700 (Figures 20, 22, and 23). This area was characterized by gently rolling, well-drained contours. Elevations in this area ranged up to 35 feet above sea level and included the highest spots in the entire 50 acre Pollack field. The westernmost portion of this northern area was less than 10 meters south of the wooded bluffs overlooking the Leipsic River floodplain. This westernmost portion near the proposed State Route 1 right-of-way was also successfully pedestrian surveyed because of slightly improved visibility (5%-10%).

A total of 56 shovel test pits were excavated in this northern area of the Pollack field. Artifacts were found in 11 tests (20%). Artifact densities were low, from one to five artifacts per test. The pedestrian survey of the westernmost portion found similar low densities of prehistoric artifacts. No significant concentrations of historical artifacts were found and only one diagnostic prehistoric artifact was found. This artifact was a Woodland I jasper triangular projectile point found in Shovel Test Pit S100 W420 (Figure 20).

Although no other diagnostic prehistoric artifacts were found in this northern area, four shovel tests encountered buried intact soils or prehistoric features. Three of these four shovel tests also found prehistoric flakes and fire-cracked rock in these intact contexts. Both contexts consisted of yellow-brown silty sands between the plow zone and red-brown sand and gravel subsoil. These soils were identical to those found near the confluence and shown in Figure 24. The presence of charcoal in some of these soils indicated prehistoric features.

The southern concentration of artifacts was located in a 600 meter long and 50 to 100 meter wide band along Alston Branch (Figure 23). This band extended from W200 to W800. This southern area was more severely eroded than either the confluence or northern area. The southern area was bisected by three large eroded ravines incised nearly eight vertical feet into the surrounding sandy ridges. These eroded areas are the remains of ancient ephemeral drainages into Alston Branch. These eroded areas were pedestrian surveyed (visibility 10%-25%), but not shovel tested. Shovel testing was limited to the less defaulted high ground between these eroded areas.

A total of 67 shovel tests were excavated in the southern part of the Pollack field. Historical artifacts were found in two of these tests and very low densities of prehistoric artifacts were found during the pedestrian survey (Figure 20). All three of the flakes recovered came from plow zone contexts. No diagnostic prehistoric artifacts were recovered during either shovel testing or pedestrian survey.

The only exception to these areas of low artifact density was a concentration of brick, olive bottle glass, and redware fragments on a small, moderately eroded knoll near the proposed State Route 1 Right-of-Way. These artifacts were found between W740 and W800 (Figure 23). No diagnostic ceramics or other historical artifacts were found, but the presence of olive bottle glass suggests an eighteenth century occupation.

Despite distinctly low artifact densities, the presence of diagnostic historical and prehistoric artifacts in all three areas indicates the presence of significant archaeological remains. Although the wide interval between shovel tests could not identify loci limits, the presence of diagnostic artifacts in both plow zone and feature contexts led to the determination that all three areas warranted Phase II testing.

Additional Phase II Survey

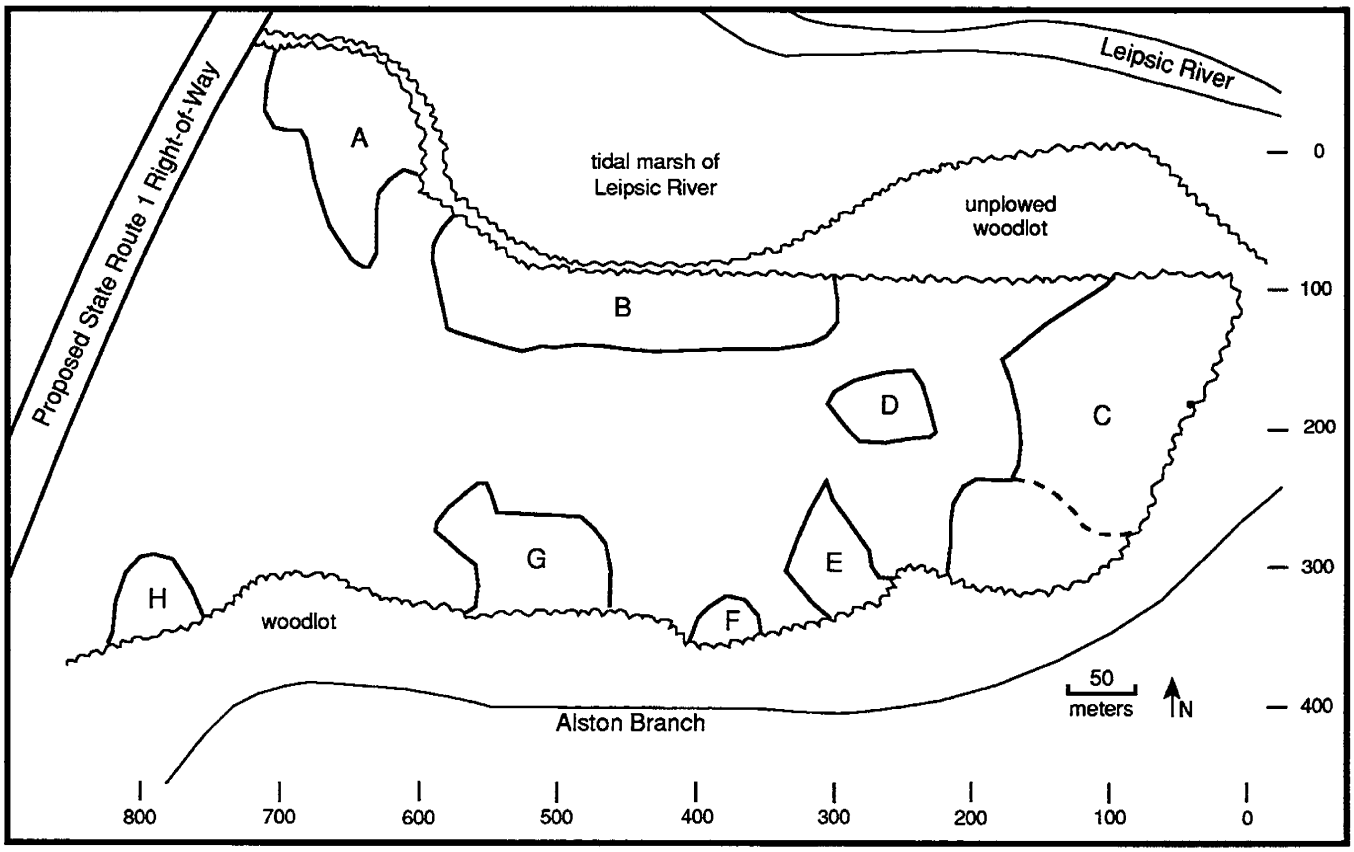
Phase II testing was undertaken at the Pollack site to identify the limits of the site and to generate a meaningful data recovery plan if avoidance proved impossible. As the Pollack site had already been listed on the National Register of Historic Places, Phase II testing emphasized site limits and developing an accurate data recovery plan.

Phase II testing of the site was conducted in the spring of 1991, immediately following the Phase I survey. Phase II consisted of the excavation of 1,585 1 m X 1 m test units in the three general areas of concentrated historical and prehistoric artifacts located by the Phase I survey (Figure 23). These test units were dug as part of a 1% sample of the nearly 20 acres of the Pollack field where artifacts were found during Phase I testing. Specifically, this 1% sample consisted of the excavation of one 1 m X 1 m test unit in every 10 m x 10 m block.

Phase II testing located eight distinct loci of historical and prehistoric activity at the Pollack site. The location of these eight areas, 7K-C-203A to C-203H, is shown in Figure 25. These areas also appear in an aerial view of the Pollack site shown in Plate 2. Significant prehistoric components were found in seven areas: 7K-C-203A, B, C, D, E, F, and G. Significant early eighteenth century components were also found in areas 7K-C-203C and C-203H. Each of these areas was defined by the presence of significant concentrations of artifacts, cultural features, and the presence of intact, artifact-bearing strata. The presence of these characteristics clearly confirms the eligibility of 7K-C-203 for listing in the National Register of Historic Places. The results of initial Phase II testing at each of the eight areas of the Pollack site will be presented next. A summary of all the historical and prehistoric artifacts recovered during Phase I and II plow zone testing is summarized in Appendix I.

FIGURE 25

Location of Phase II Areas, 7K-C-203A to 7K-C-203H, Pollack Site



Area A (7K-C-203A)

Area A of the Pollack site is located in the extreme northwest corner of the parcel (Figure 25, Plate 2) near the eastern edge of the proposed State Route 1 Right-of-Way. Area A is bounded on the north by the bluff edge of the Leipsic River floodplain. This bluff edge is heavily wooded and approximately 15' above the floodplain. To the east, Area A is bounded by a deep, heavily eroded ephemeral drainage oriented to the adjacent floodplain. This drainage separates Area A from Area B to the east. Area A is bounded on the south and west by a large area of culturally sterile soils.

The limits of Area A are shown in Figure 26. Also shown in Figure 26 are total prehistoric artifact counts. The limits of 7K-C-203A were determined by topographical features, artifact densities, and the presence of cultural features. A total of 125 test units at 10 meter intervals were excavated during Phase II testing. Area A was defined as a 2.3 acre area of low to high artifact densities and intact cultural

PLATE 2

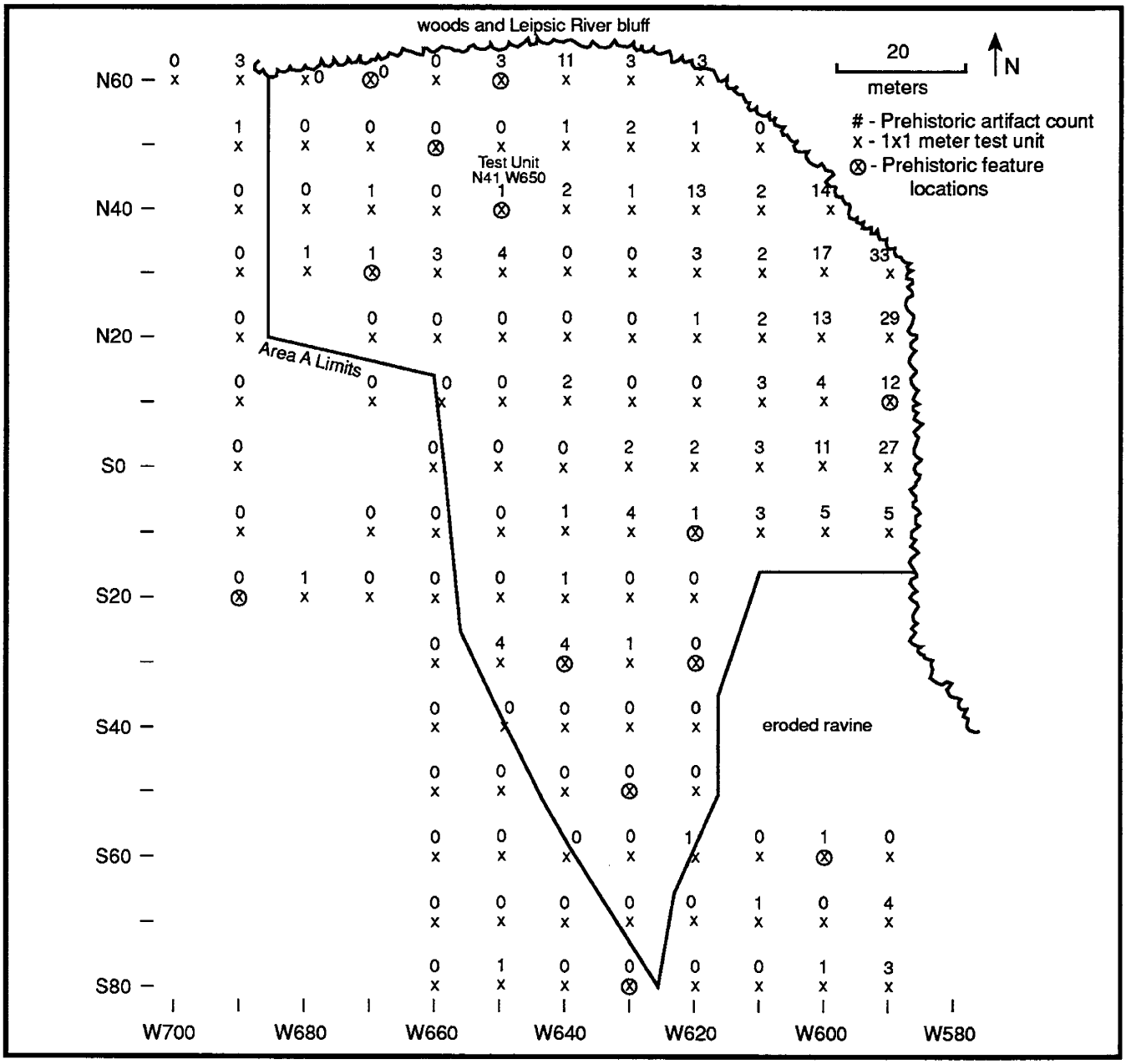
Aerial View of the Pollack Site (7K-C-203), Showing Areas A-H, Looking West, April 1991

features. A total of 13 prehistoric features were identified and the location of these features is also shown in Figure 26.

Artifact densities in Area A ranged from one to 33 prehistoric artifacts per 1 m x 1 m test unit. Artifact densities were consistently highest (11-33 artifacts per test unit) along the woodline bordering

FIGURE 26

Prehistoric Artifact Count and Feature Distribution in Area A, 7K-C-203A

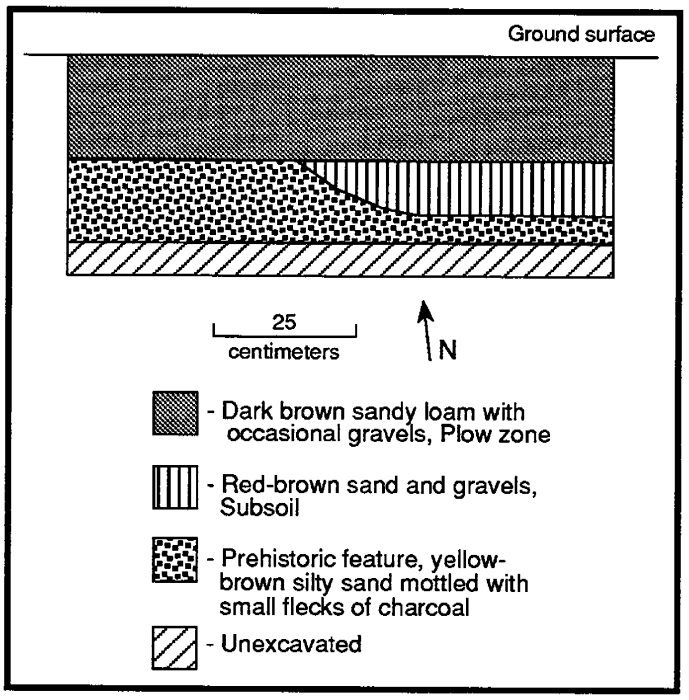


the Leipsic River bluff and floodplain (Figure 26). This area, however, was also the most deflated and prehistoric features were found more often in the better preserved southern and western parts of Area A (Figure 26).

The thirteen features in and around Area A were defined by deposits of medium yellow-brown silty sand mottled with varying amounts of small charcoal flecks. A profile of a typical test unit with

FIGURE 27

Profile of Test Unit N41 W650, Area A, Pollack Site



a feature (Test Unit N41 W650) is shown in Figure 27. These features were not tested during the Phase II survey, but appeared to be similar to pit features excavated at the nearby Leipsic site (7K-C-194A). The Leipsic site is located on the north side of the Leipsic River almost directly across from Area A (Figure 17).

The general stratigraphy of Area A consisted of a simple dark brown sandy loam plow zone underlain by sterile yellow, red, and brown sand subsoil. Both of these soils are shown in Figure 27. Varying amounts of small, heavily worn gravels were found in the plow zone. The highest concentrations of gravels indicating deflated soils were found along the eastern edge of Area A. Occasional prehistoric artifacts were found in this ravine, but their context was poor and this area was not included in Area A.

A total of 250 prehistoric artifacts were found during Phase II testing in Area A. All of these artifacts were found in the plow zone. Five diagnostic prehistoric artifacts were found and all date to the Woodland I period. Two of these artifacts were projectile points: two jasper stemmed points (Plate 3;C and E). The remaining three diagnostic artifacts were small sherds of prehistoric ceramic tentatively identified as Hell Island and Mockley wares. Although both sherds were small and poorly preserved, evidence of quartz and mica temper in one sherd identified it as Hell Island. The presence of grit and shell in the other sherd suggests Mockley ware. Hell Island ceramics have been associated with the Webb Complex in central Delaware and Mockley ceramics have been associated with the Carey Complex from the nearby Carey Farm site near Dover (Custer 1989:176). Both of the Webb and Carey complexes date to the late Woodland I period ca. A.D. 0 to A.D. 1000 (Custer 1989: 166).

Although no diagnostic artifacts from the later Woodland II period were found in Area A, the potential for these remains is high. Moreover, the presence of prehistoric artifacts and cultural features

PLATE 3

Sample of Woodland I Points from the Pollack Site (7K-C-203)

A - Ironstone Stemmed Point B - Quartzite Stemmed Point C - Jasper Stemmed Point D - Argillite Stemmed Point E - Jasper Stemmed Point F - Jasper Stemmed Point G - Chert Stemmed Point H - Jasper Stemmed Point I - Chert Kirk Point (Archaic)

in both plow zone and undisturbed contexts led to the determination that Area A was a significant part of the Pollack site. The large size and integrity of Area A indicates a high potential for additional intact cultural remains. Thus Area A warrants Phase III data recovery operations if proposed borrow pit and wetland reclamation excavations are undertaken. No evidence of any significant historical occupation was identified in Area A.

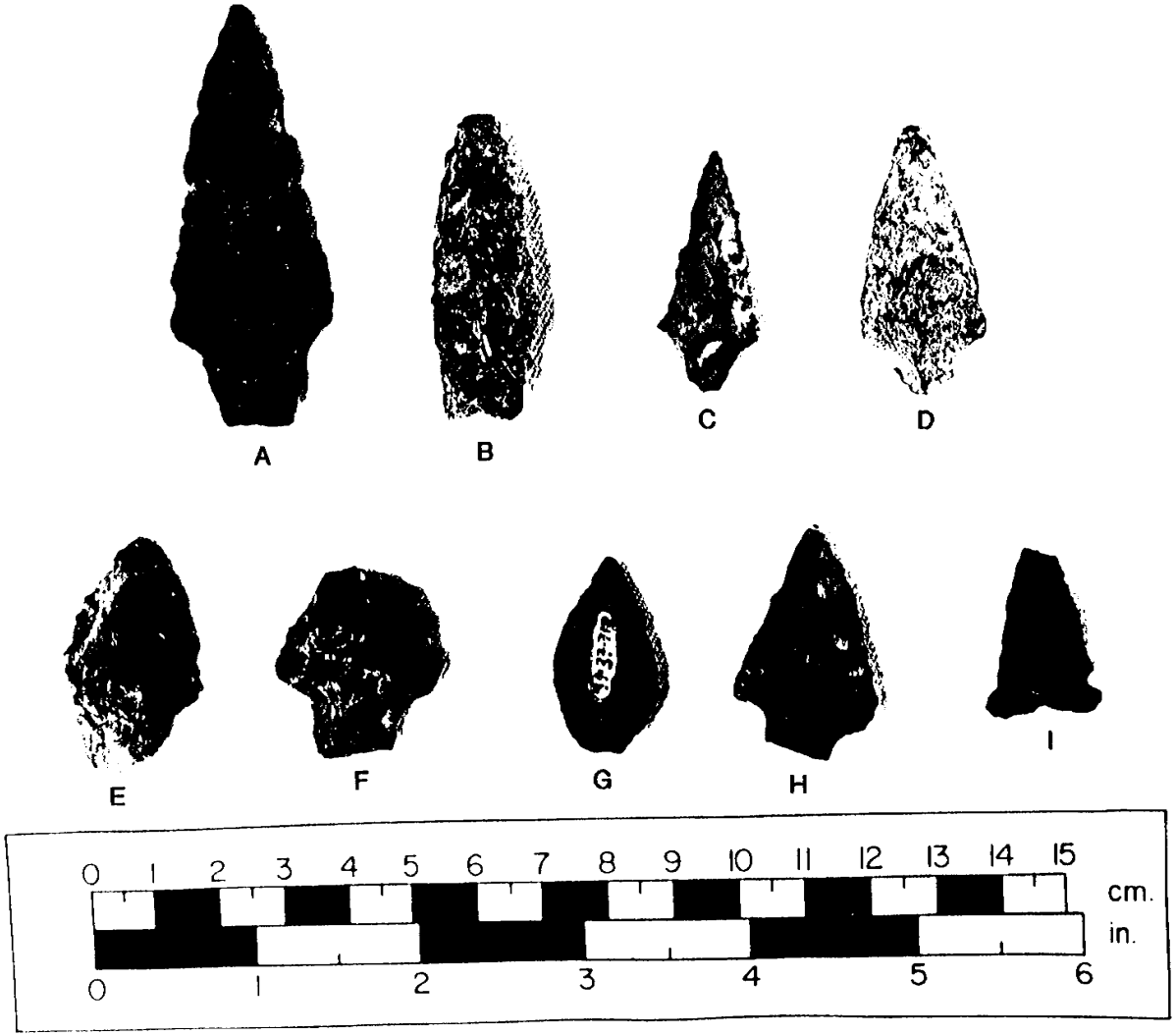
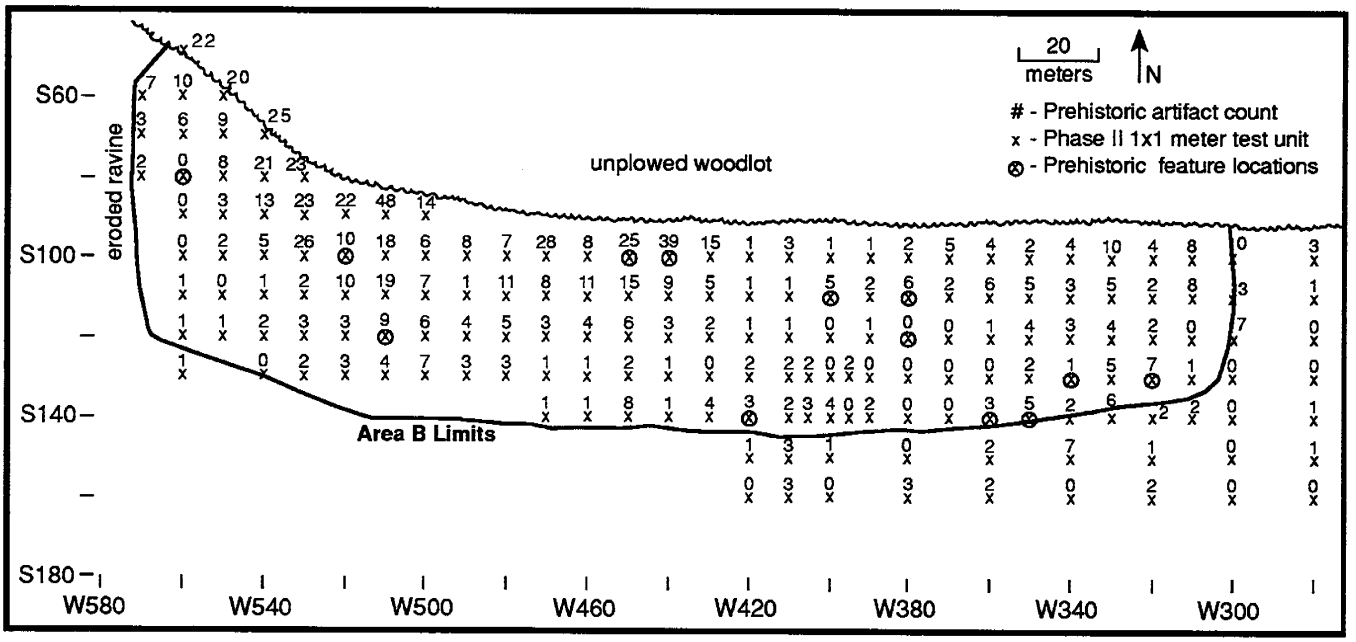

A
B
C
D
E
F
G
H
I
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
cm.
in.
0 1 2 3 4 5 6

FIGURE 28

Prehistoric Artifact Count and Feature Distribution in Area B, 7K-C-203B



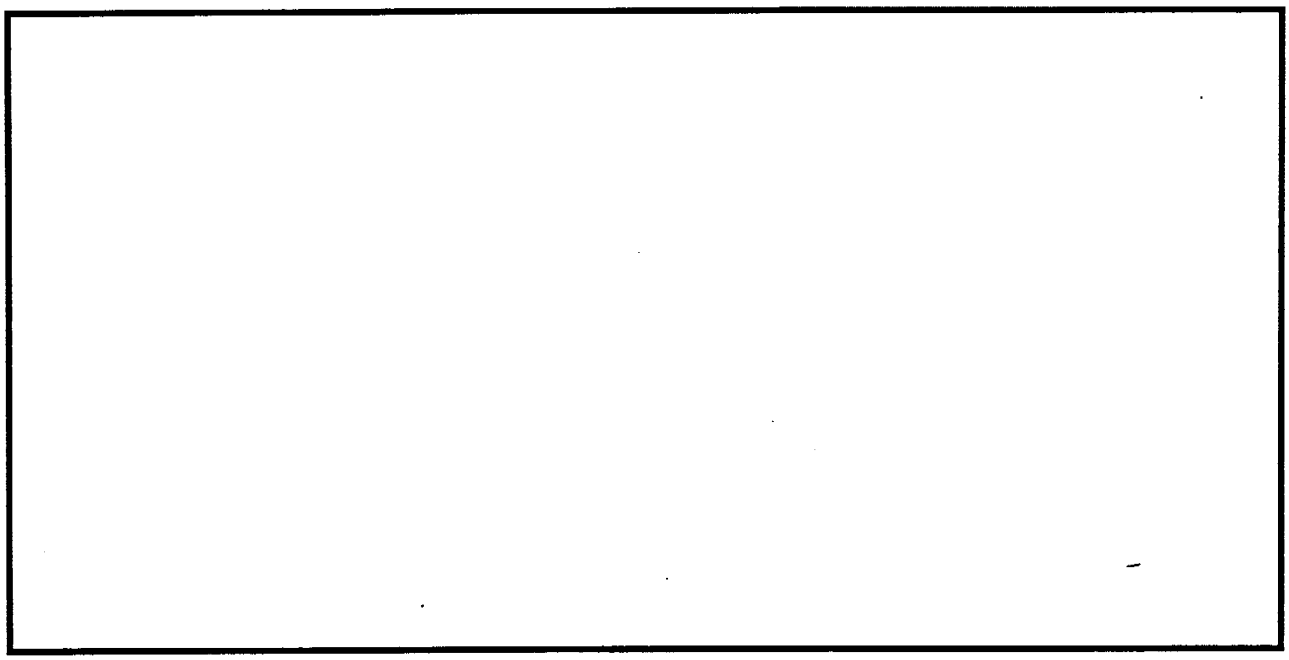
Area B (7K-C-203B)

Area B was defined as a 3.3 acre strip of relatively high artifact density along the northern edge of the Pollack field (Figure 25, Plate 2). Area B is located east of Area A and is bounded on the west by the shared eroded ravine. The southern and eastern limits of Area B were defined by a large area of very low artifact density in the middle of the Pollack field. The northern edge of Area B was defined by the treeline of the unplowed woodlot portion of the Pollack site. Phase I testing determined that Area B is a continuation of a larger occupation extending into this woodlot.

The limits of Area B and total prehistoric artifact counts are shown in Figure 28. A total of 172 test units were dug inside and near Area B. Prehistoric artifacts, primarily fire-cracked rock and local cobble chert, jasper, and quartz flakes, were recovered from 123 of the 141 test units (87%) in Area B. Artifact densities ranged from one to 39 artifacts per 1 m X 1 m test unit. Artifact densities were generally highest along the northern and western edges of Area B. These two edges are adjacent to the unplowed woodlot portion of 7K-C-203. On Figure 28, these two areas of high artifact density (greater than 10 artifacts per test unit) appear north of S100 and west of W440.

PLATE 4

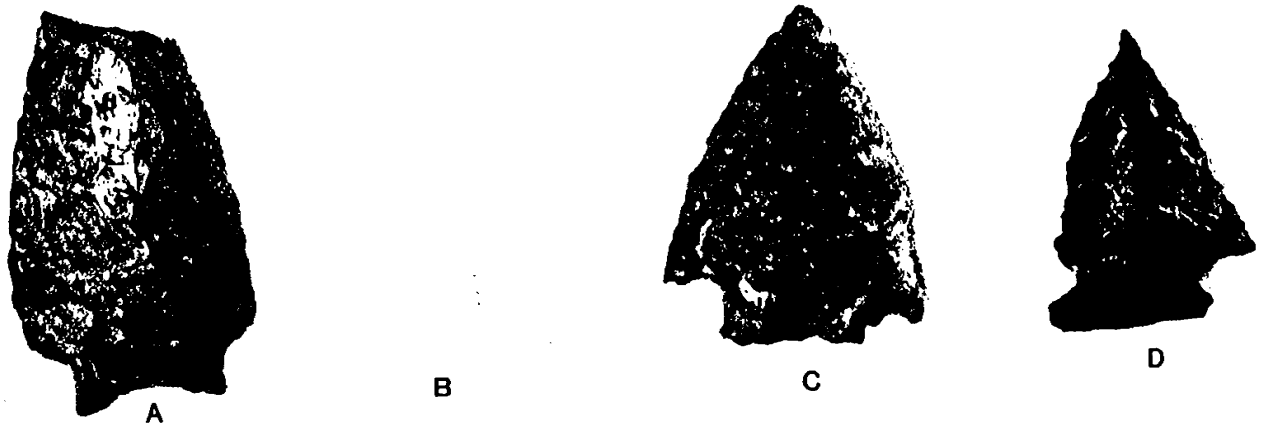
Sample of Late Paleo-Indian and Archaic Points from the Pollack Site (7K-C-203)



A - Jasper Corner Notched Point B - Quartz Bifurcate Point C - Jasper Palmer Point D - Jasper Kirk Point

Prehistoric features were found throughout Area B (Figure 28). Despite slightly lower artifact densities, the eastern half of Area B was less eroded and thus prehistoric features were slightly more common. As with Area A, the prehistoric features in Area B were defined by undisturbed deposits of yellow-brown silty sand below the plow zone. These feature soils contained varying amounts of charcoal and are probably the remains of prehistoric pit houses or storage pits similar to those found at the nearby Leipsic site (7K-A-194A). The stratigraphy of Area B, however, was identical to that of Area A (Figure 27) and no significant differences in plow zone, feature, or subsoils were seen.

Fourteen diagnostic prehistoric artifacts were found in Area B during Phase II testing. Although artifacts from the Archaic and Woodland II periods were also found, the majority of the diagnostic artifacts in Area B dated to the Woodland I period. The Woodland I artifacts consisted of three jasper stemmed points, one argillite point tip, and two small sherds of probable Hell Island and Mockley ceramics. An Archaic occupation of Area B was indicated by a quartz bifurcate and a jasper Kirk projectile point (Plate 4,B and D). No diagnostic Woodland II period projectile points were found, but


A
B
C
D

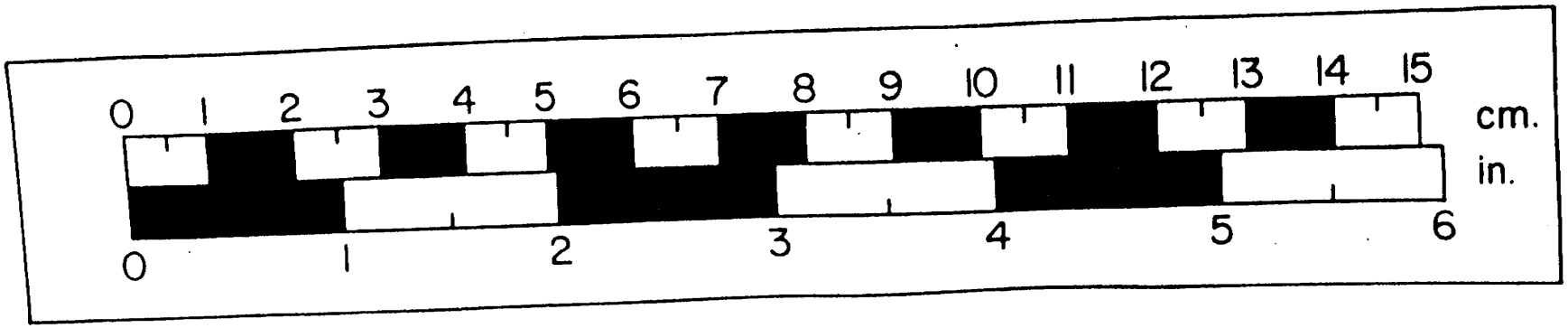
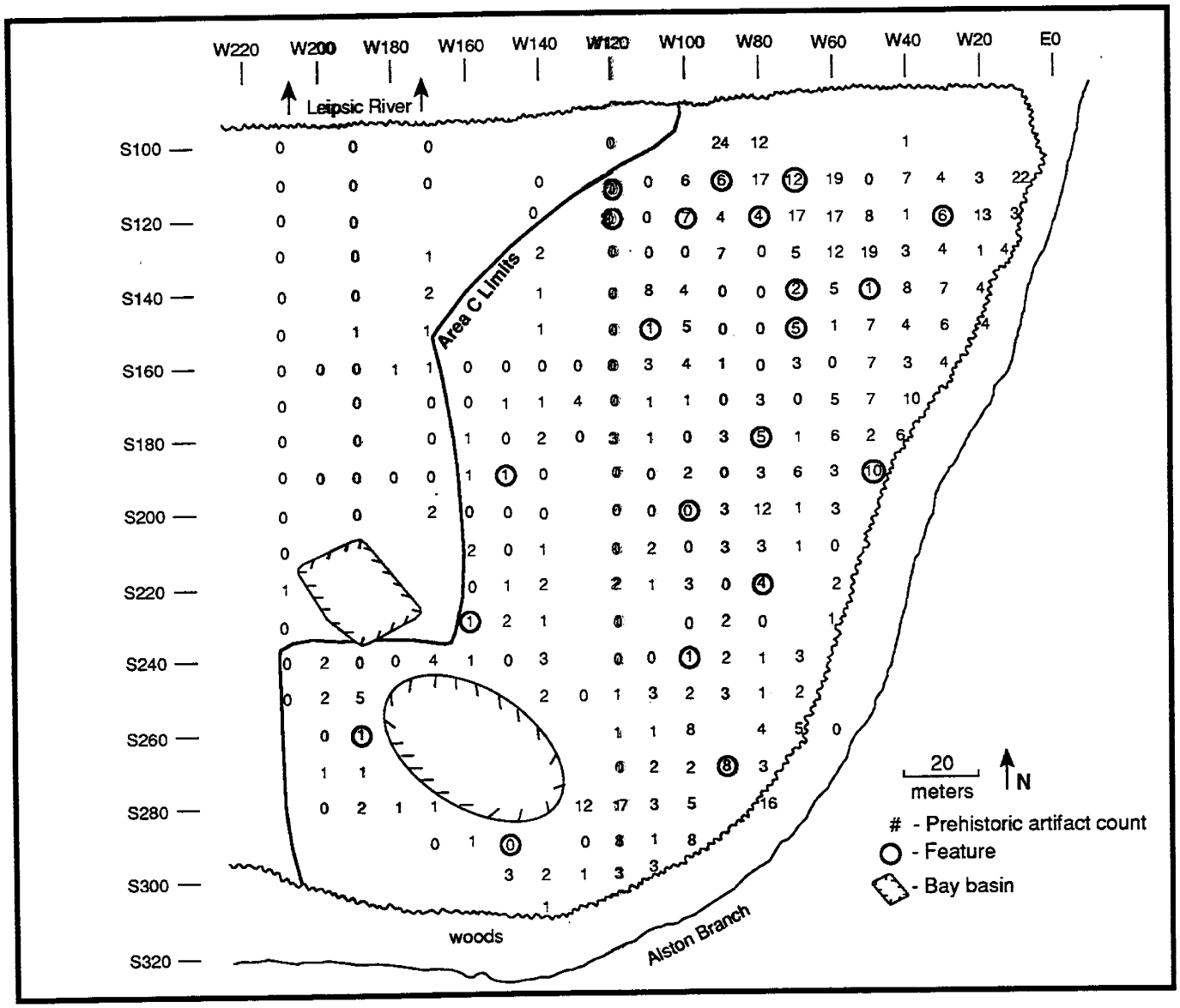

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
cm.
in.
0 1 2 3 4 5 6

FIGURE 29

Prehistoric Artifact Count and Prehistoric and Historical Feature Distributions in Area C, 7K-C-203C

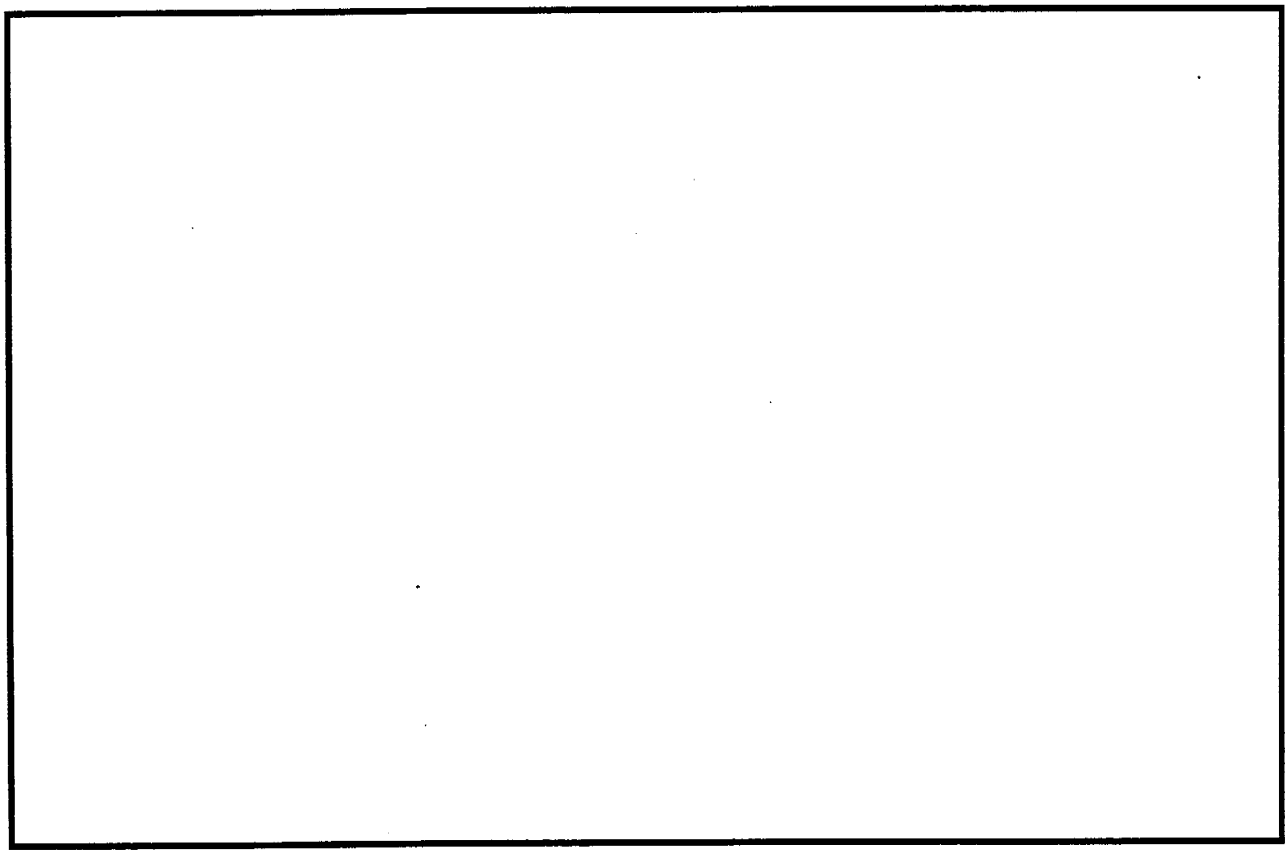


four small fragments of probable Minguannan and Townsend ceramics were found. No evidence of any significant historical remains were identified.

The presence of prehistoric artifacts and cultural features in both plow zone and undisturbed contexts led to the determination that Area B was a significant part of the Pollack site. The large size and integrity of Area B indicates a high potential for additional intact cultural remains. Thus Area B warrants Phase III data recovery operations if proposed borrow pit and wetland reclamation excavations are undertaken.

PLATE 5

1% Sample of Phase II Test Units in Area C of the Pollack Site (7K-C-203C), Looking East



Area C (7K-C-203C)

Area C was the largest area of prehistoric and historical activity found at the Pollack site. Area C was located in the northeast corner of the Pollack field near the confluence of the Alston Branch and Leipsic River (Figure 25, Plate 2). Area C was bounded on the north by the unplowed woodlot and bounded on the south and east by Alston Branch. The western limit of the site was defined by a large area of very low artifact density.

The limits of Area C and total prehistoric artifact density is shown in Figure 29. A total of 256 test units were excavated to define the limits of Area C. One unit was dug near the southwest corner of every 10 m x 10 m block. Some of these tests are shown in Plate 5. Two significant archaeological components were identified in the approximately 7.2 acres of Area C. The largest archaeological component was a prehistoric occupation that spanned the Archaic to Woodland II periods (6500 B.C.

N

PLATE 6

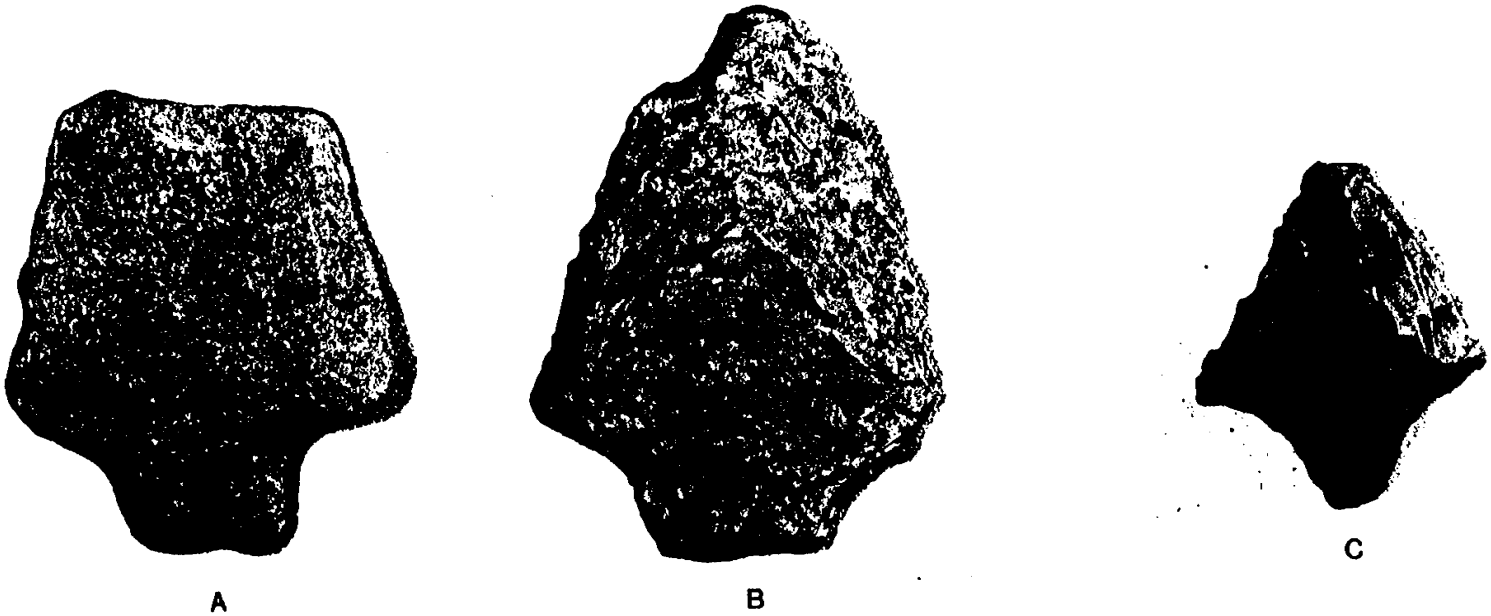
Sample of Broadspears from the Pollack Site (7K-C-203)

A - Argillite Broadspear B - Rhyolite Broadspear C - Jasper Broadspear

to A. D. 1650). Diagnostic artifacts from the Woodland I and Woodland II periods were recovered during Phase II testing. Prehistoric artifact densities ranged from one to 24 artifacts per test unit. As with the other areas of the Pollack site, prehistoric artifact densities were highest along the unplowed woodlot to the north and Alston Branch to the east and south. Significant concentrations of prehistoric artifacts, including argillite and rhyolite flakes, were found throughout Area C. Prehistoric features were also found under the plow zone throughout Area C (Figure 29). These prehistoric features were defined by the same yellow-brown silty sands and charcoal found in Areas A and B.

A total of 19 diagnostic prehistoric artifacts were found in Area C. Eleven of these artifacts were small sherds of probable Hell Island, Wolfe Neck, and Mockley ceramics. All of these ware types date to the Woodland I period. Two Minguannan sherds from the Woodland II period were also found in Area C.

The remaining six diagnostic artifacts were Woodland I jasper, ironstone, argillite, and quartz stemmed and triangle projectile points. Two Lehigh/Koens-Crispin broadspears, one made of argillite


A
B
C

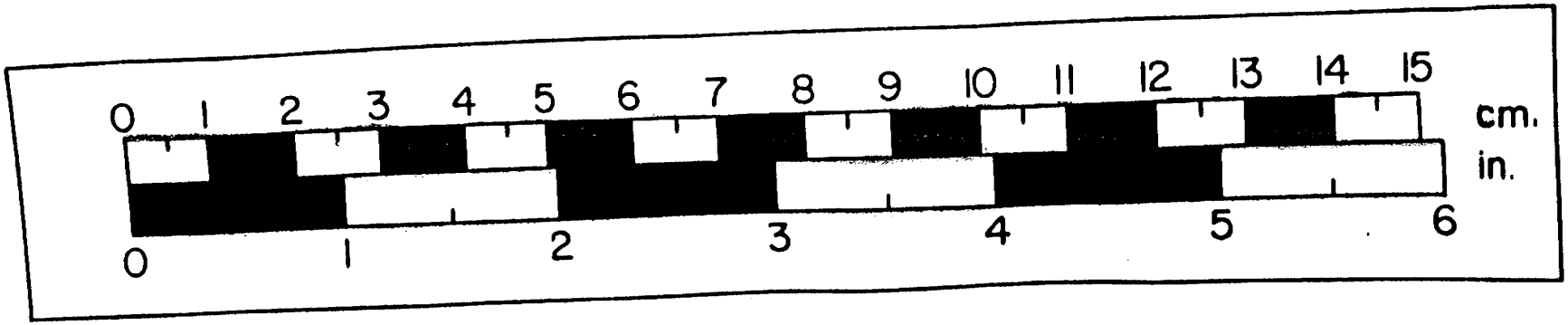
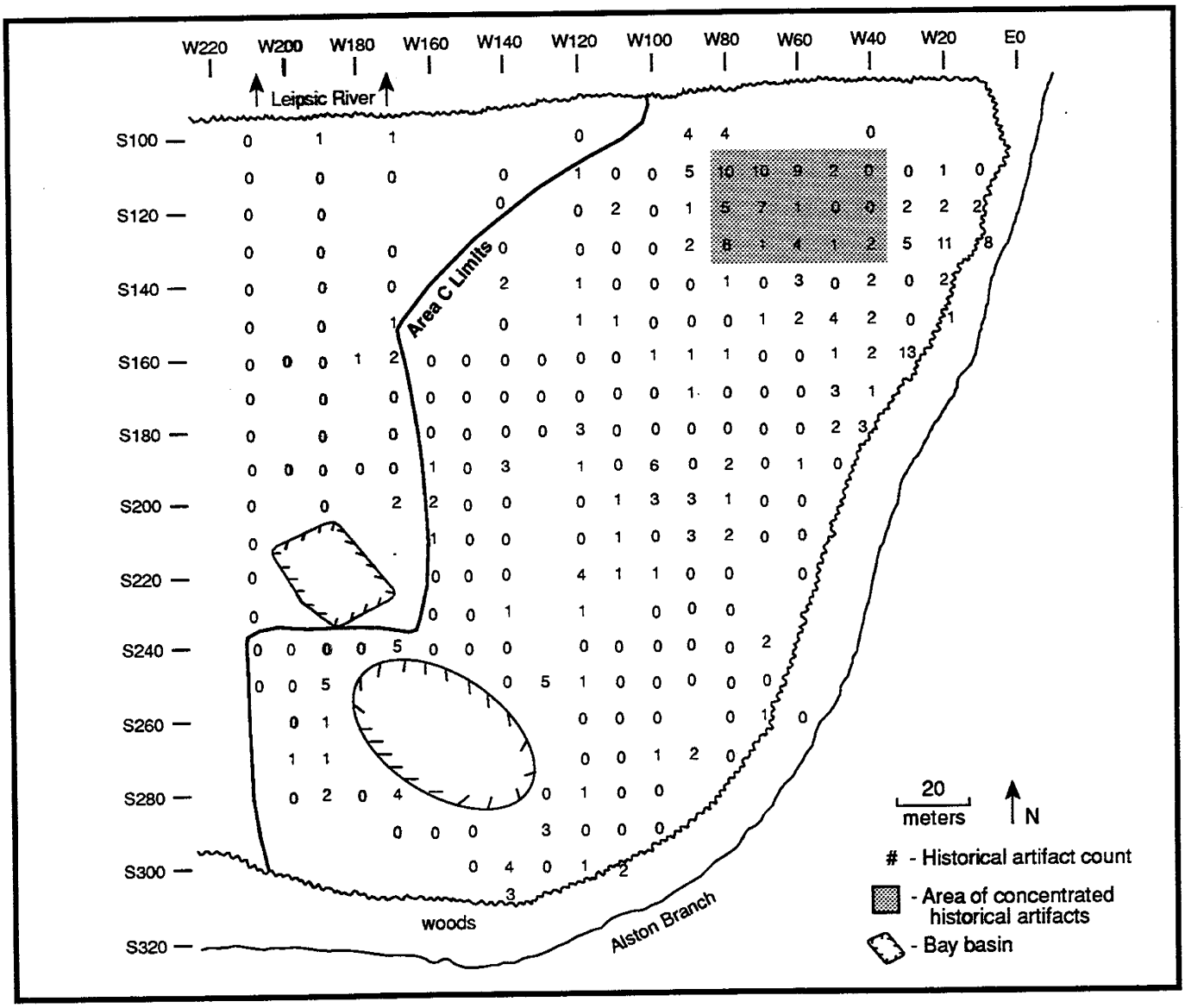

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
cm.
in.
0 1 2 3 4 5 6

FIGURE 30

Historical Artifact Count in Area C, 7K-C-203C



and the other of rhyolite, were found. Both of these broadspears appear in Plate 6,A and B. The only other diagnostic argillite artifact was a stemmed point found near Alston Branch. This artifact also appears with other Woodland I stemmed points in Plate 3,D. The range of raw materials of these Woodland I points is typical of Woodland I sites in central Delaware where local cobble jaspers, cherts, quartzes and chalcedonies were the most common lithic resources utilized. This range of raw materials is also reflected in the large numbers of flakes, cores, and utilized flakes with cortex found throughout Area C (Appendix I).

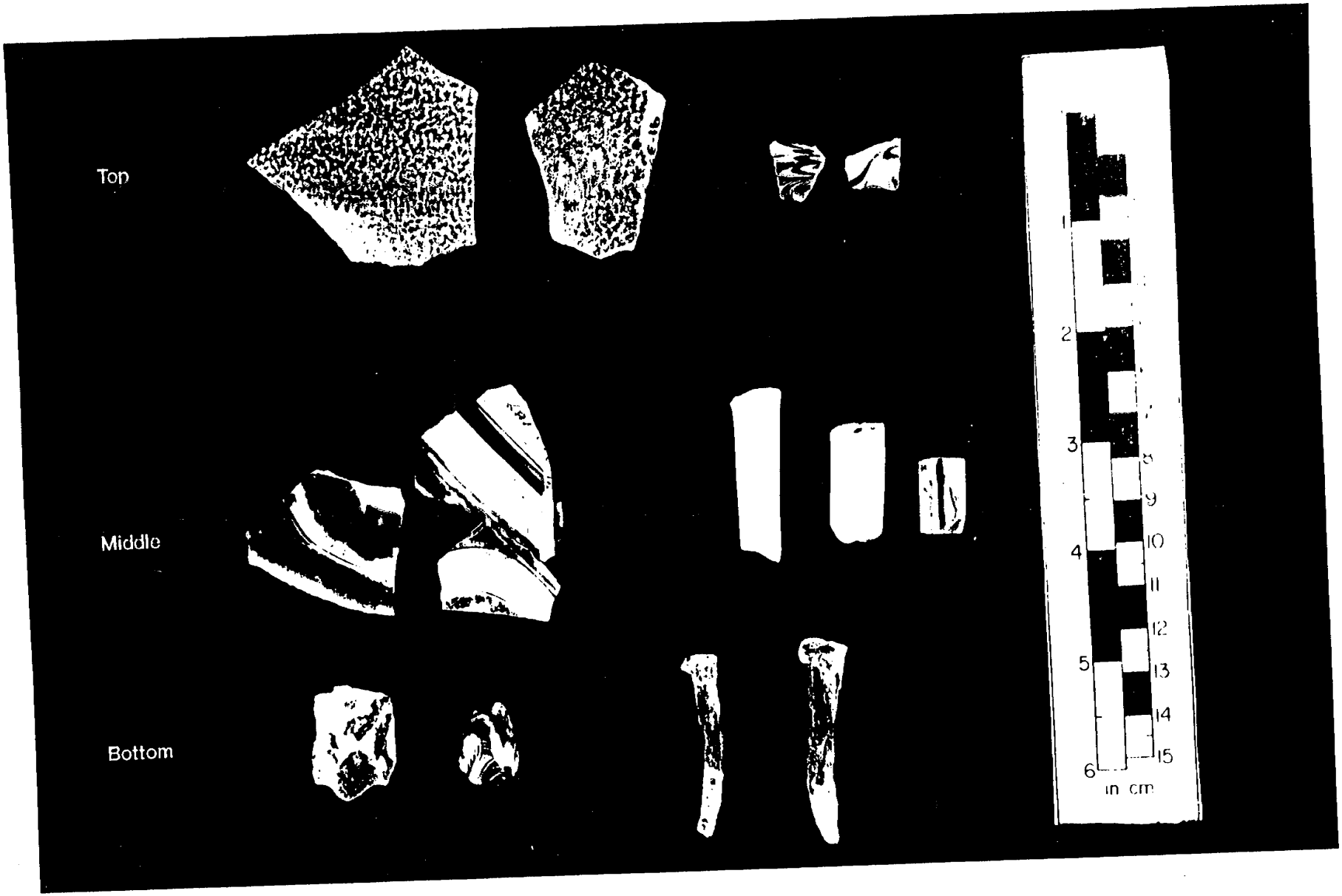
PLATE 7

Late Seventeenth and Early Eighteenth Century Artifacts from Area C of the Pollack Site (7K-C-203C)

Top - Bellarmine Stoneware, Comb Decorated Staffordshire Middle - Rhenish Blue and Gray Stoneware, White Clay Pipe
Bottom - English Gunflints, Wrought Nails

The second significant archaeological occupation of Area C was a late seventeenth to early eighteenth century historical occupation. The primary evidence of this occupation was a concentration of diagnostic late seventeenth to early eighteenth century artifacts found in the northeast corner of Area C near the confluence of the Leipsic River and Alston Branch. The historical artifact counts for Area C showing this area of medium to high artifact density (four to ten artifacts per test unit) are shown in Figure 30.

Diagnostic late seventeenth to early eighteenth century artifacts from Area C included kaolin pipe stem fragments, cut nails, and olive green bottle glass fragments. Diagnostic eighteenth century ceramics included sherds of slip-decorated redwares, Staffordshire earthenwares, and English brown salt-glazed stoneware. A representative sample of these diagnostic early eighteenth century artifacts is shown in


Top
Middle
Bottom
1
2
3
4
5
6
in
cm
8
9
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11
12
13
14
15

FIGURE 31

Prehistoric Artifact Count and Feature Distribution in Areas D and E, 7K-C-203D and 7K-C-203E

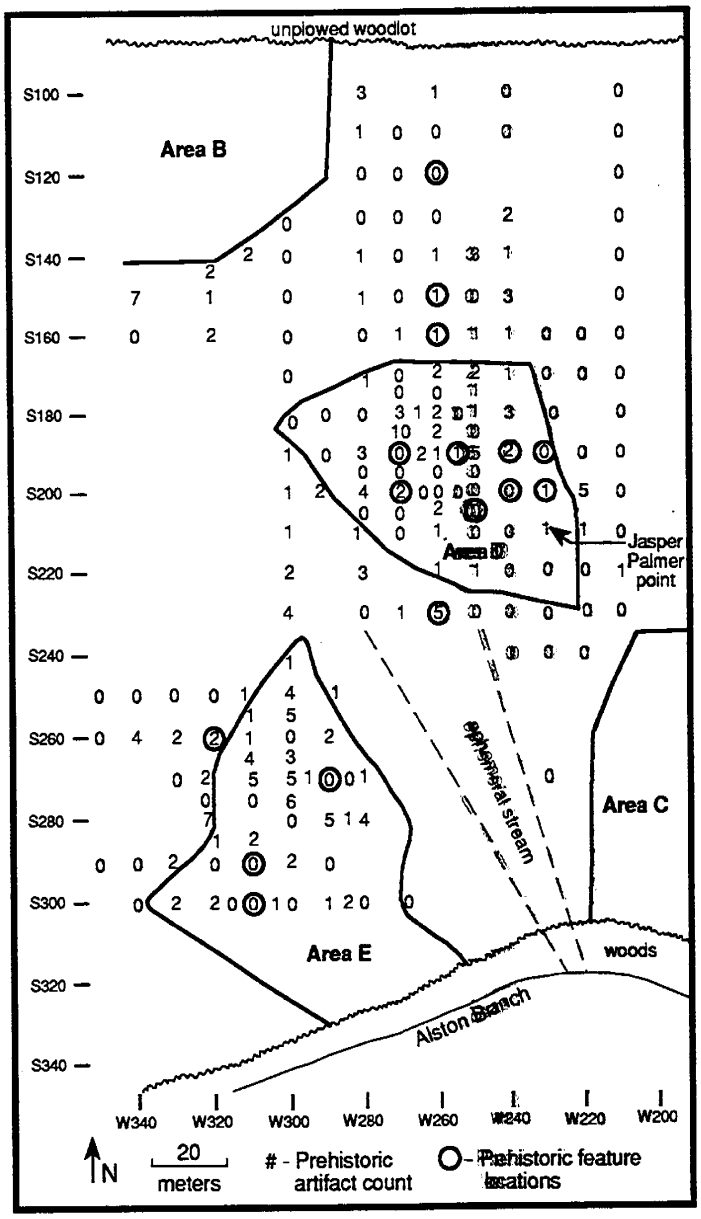


Plate 7. Square, shovel-cut post molds and probable trash pit features were also found. The edge of one of these historical trash features was found in Test Unit S119 W80 (Figure 29). The presence of both domestic and architectural artifacts and features indicates the remains of a farmstead and thus a high potential for additional intact eighteenth century features and artifact deposits.

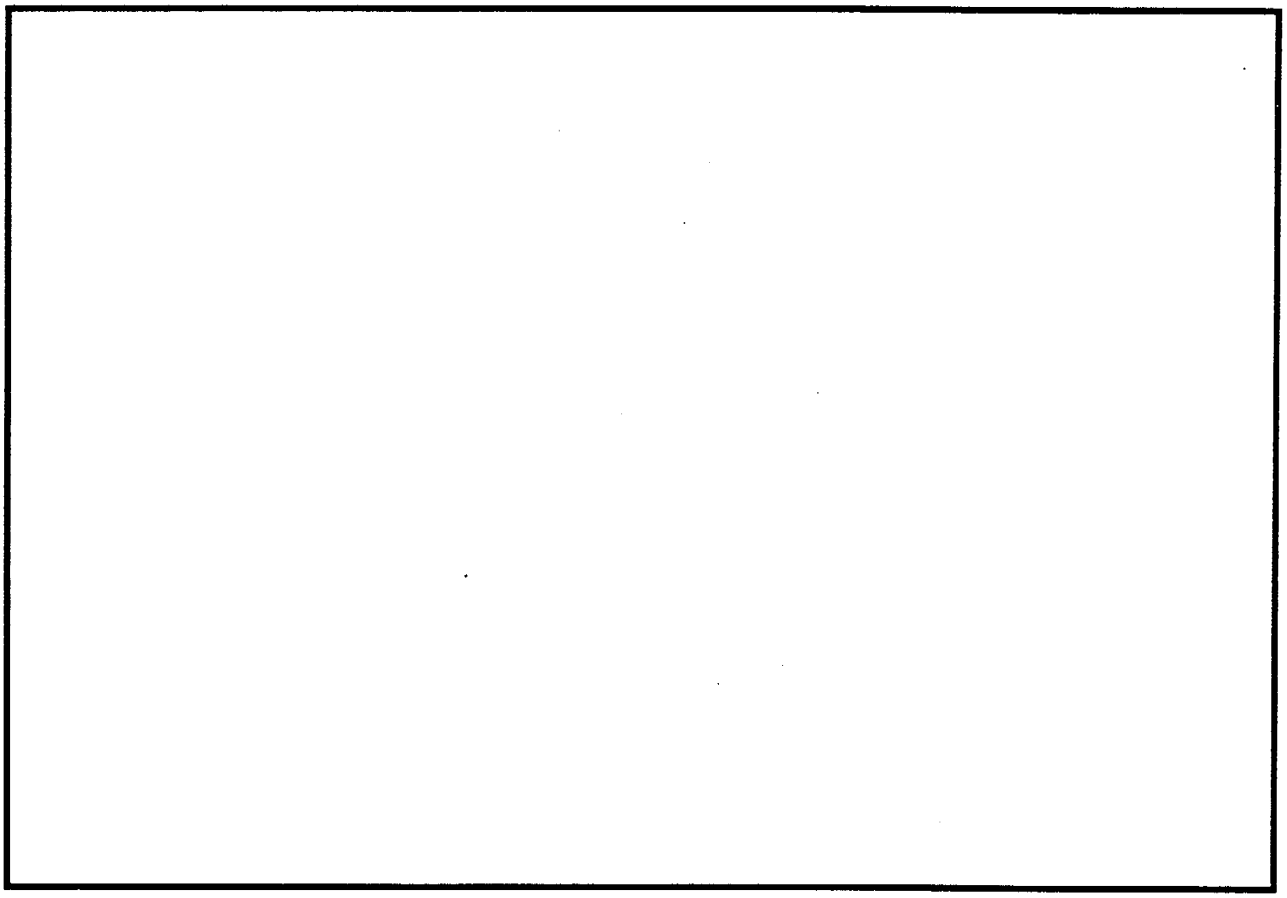
The presence of historical and prehistoric artifacts and cultural features in both plow zone and undisturbed contexts led to the determination that Area C was a significant part of the Pollack site. The large size and integrity of Area C indicates a high potential for additional intact cultural remains. Thus Area C warrants Phase III data recovery operations if proposed borrow pit and wetland reclamation excavations are undertaken.

Areas D, E, F, and G (7K-C-203D, E, F, and G)

Four small areas of prehistoric activity were identified south of Areas A and B and west of Area C (Figure 25). All four of these areas, Areas D, E, F, and G, contained low and very low artifact densities and limited evidence of intact features. All four areas were also oriented to Alston Branch to the south. Evidence of moderate to severe erosion and deflation was encountered in all four areas. Overall site integrity in Areas D, E, F, and G was determined to be less than in Areas A, B, C, and H.

PLATE 8

Excavating Phase II Test Units in Area D of the Pollack Site (7K-C-203D), Looking West



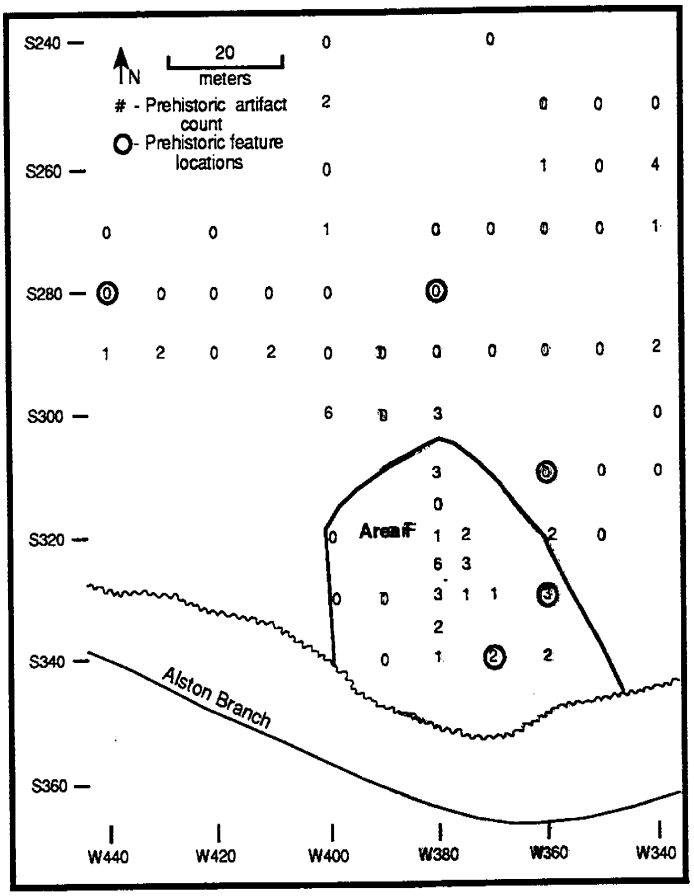
Area D (7K-C-203D) was defined as a 0.7 acre concentration of prehistoric artifacts and features along Alston Branch (Figure 25, Plate 2). Area D was located on a slight, sandy knoll approximately midway between Areas B and C. This knoll was located at the head of a small, heavily eroded ephemeral drain into Alston Branch 80 meters to the south. The site limits and prehistoric artifact counts in Area D are shown in Figure 31. Although artifact densities were generally very low (less than two artifacts per test unit), one test unit at S184 W270 contained ten artifacts, the highest artifact density encountered in Area D. A photograph of Phase II testing in progress in Area D is reproduced in Plate 8.

Prehistoric features were encountered in 8 of the 54 test units (15%) excavated in Area D. Prehistoric features were concentrated along the top and adjacent slopes of the slight sandy knoll dominating Area D. Feature preservation appeared to be slightly greater along the immediate slopes of

N

FIGURE 32

Prehistoric Artifact Count and Feature Distribution in Area F, 7K-C-203F



the knoll where soils from the moderately eroded crest insulated prehistoric features from subsequent plowing and erosion. As with the features found in Areas E, F, and G, the features in Area D were defined by the same yellow-brown silty sand and charcoal as elsewhere at the Pollack site.

Immediately north and south of Area D were more significantly eroded areas where four poorly-preserved prehistoric features on the W260 line were found (Figure 31). These four features were excluded from Area D because of poor preservation and extensive soil deflation. Thus the site limits of Area D correspond to site integrity, artifact densities, and presence of intact, cultural features.

Area E (7K-C-203E) was identified as a small, 0.9 acre area of low prehistoric artifact density and occasional prehistoric features southwest of Area D and west of Area C (Figure 25, Plate 2). Area E was located along the west side of the ephemeral stream separating 7K-C-203D and 7K-C-203C. Moderate erosion was encountered throughout Area E and the limits of this area were determined by site integrity, artifact densities, and the presence of cultural features. The eastern and southern parts of Area E were the most severely eroded areas. Despite the soil deflation in Area E, significant concentrations of prehistoric artifacts and features in intact contexts were located by Phase II testing.

Prehistoric artifacts were recovered from the plow zone in 24 of the 36 total test units (67%) excavated in Area E. Artifact densities were consistently low and ranged from one to six artifacts per test unit (Figure 31). The highest relative densities of artifacts (four to six artifacts per test unit) were found along a sandy ridge parallel to the W300 line. This slight ridge was oriented adjacent to the

ephemeral stream to the east and perpendicular to Alston Branch to the south. Evidence of three prehistoric features were found along the eastern and western slopes of this ridge (Figure 31). Features were found in a similarly protected setting in adjacent Areas C and D.

Area F (7K-C-203F) was defined as a small area of prehistoric artifacts and intact prehistoric features west of Area E (Figure 25, Plate 2). Area F consisted of a gradually sloping terrace oriented to Alston Branch to the south. Although the entire 0.3 acre of this loci was moderately eroded, prehistoric artifacts and features were located by Phase II testing. The limits and prehistoric artifact counts at 7K-C-203F are shown in Figure 32. Prehistoric artifact densities were consistently low (less than three artifacts per test unit). One test unit at S324 W380, however, recovered six prehistoric artifacts.

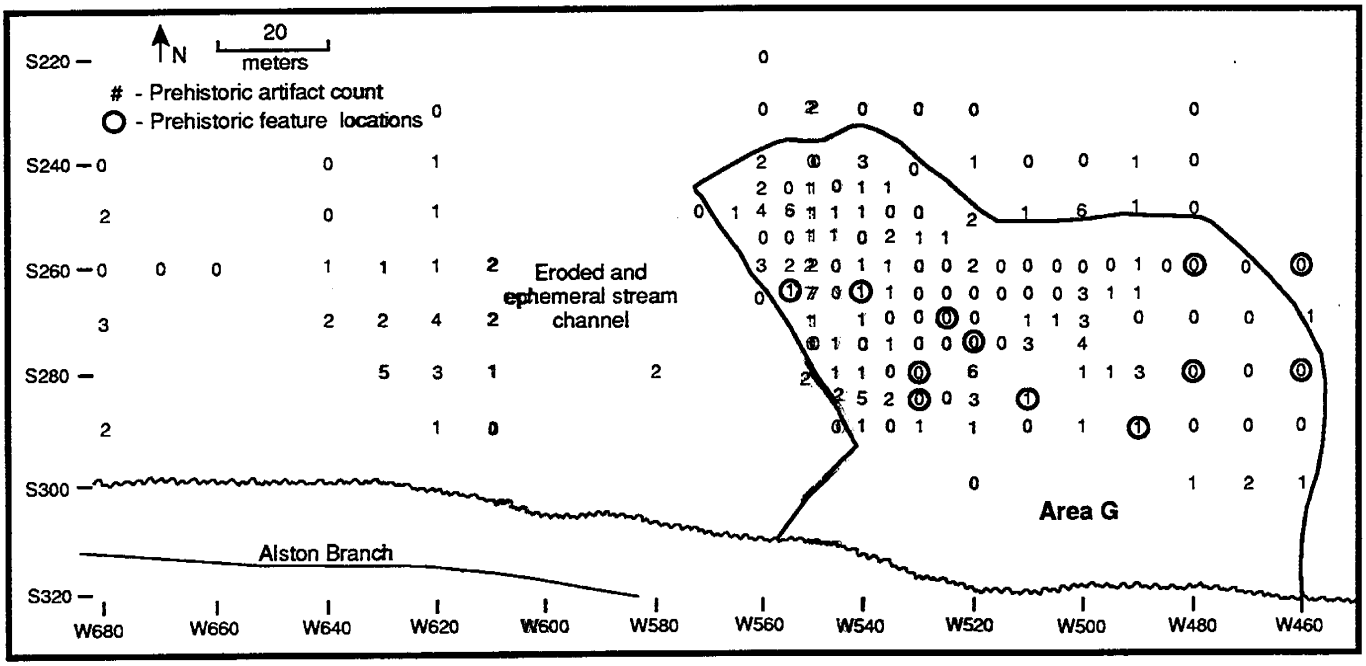
One diagnostic prehistoric artifact was found in Area F. The artifact was a rhyolite Woodland I stemmed point. The presence of two prehistoric features in Area F indicated the potential for further artifacts and intact features (Figure 32). Evidence of three additional prehistoric features was found north of Area F in areas of very low artifact density (one to two artifacts per test unit) and moderate to severe erosion. Thus the limits of Area F were determined by artifact density, site preservation, and the presence of prehistoric features. Both of the prehistoric features in Area F were comprised of dark yellow-brown silty sands and charcoal preserved by slope wash from the surrounding higher ground. Prehistoric features were found in similar settings in Areas C, D, and E.

Area G (7K-C-203G) consisted of a small 1.6 acre area of low artifact and feature density 60 meters west of Area F (Figure 25, Plate 2). Area G was dominated by a slight sandy ridge oriented to Alston Branch 20 meters to the south. Area G was bounded on the west and east by heavily eroded ephemeral drainages and associated areas of no prehistoric artifacts. The southern boundary of Area G was the woodline of Alston Branch. The site limits and total prehistoric artifact counts in Area G are shown in Figure 33. The limits of 7K-C-203G were determined by site integrity, artifact densities, and the location of cultural features.

Artifact densities in Area G ranged from one to seven prehistoric artifacts per test unit. Artifact densities were highest (two or more artifacts per test) along the western edge of Area G (Figure 33). This western part of 7K-C-203G was sited along the eastern edge of a deep, heavily eroded ephemeral stream channel. Test units were excavated along both sides of this channel, but only the eastern side of the

FIGURE 33

Prehistoric Artifact Count and Feature Distribution in Area G, 7K-C-203G



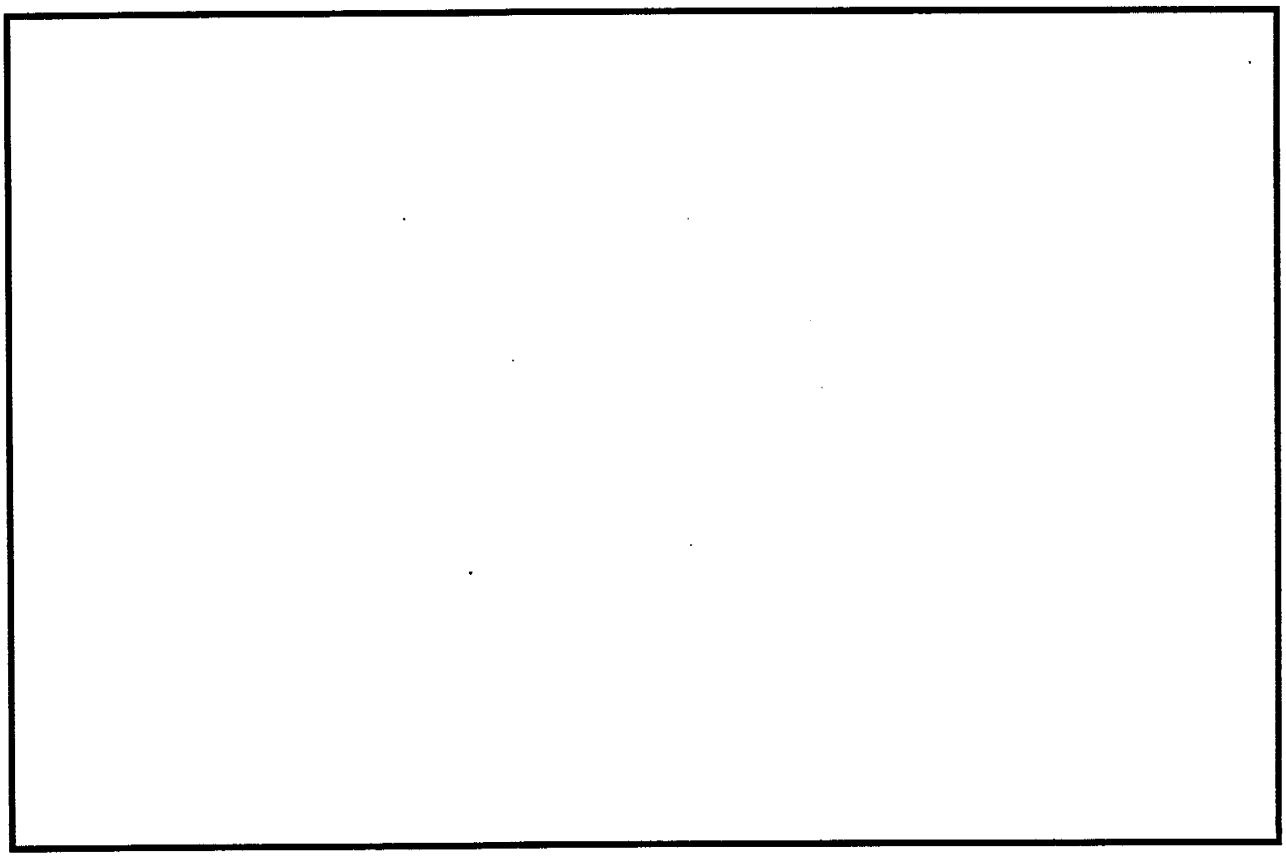
channel in Area G contained evidence of features or even minimal artifact concentrations. Phase II testing in this eastern part is shown in Plate 9. Evidence of prehistoric features was found below the plow zone in 11 of the 113 test units (10%) dug in Area G. The location of these 11 deposits of yellow-brown silty sand and charcoal indicating prehistoric features is shown in Figure 33.

Seven diagnostic prehistoric artifacts were found in Areas D, E, F, and G. All of these artifacts were projectile points dating to the Late Paleo-Indian, Archaic, and Woodland I periods. The oldest point was a jasper Palmer point recovered from Area D (Test Unit S209 W230). This artifact appears in Plate 4,C. Similar corner-notched points have been associated with the late Paleo-Indian period (ca. 7500 B.C.- 6500 B.C.) in Delaware (Custer 1989:88). This projectile point was the oldest diagnostic artifact found at the Pollack site.

The six remaining diagnostic artifacts in Areas D, E, F, and G were stemmed and corner-notched varieties of Woodland I and possibly Archaic period projectile points. Five Woodland I points were recovered. Three points were stemmed jasper points, one was rhyolite, and one was quartzite. The single Archaic point was a large, corner-notched jasper point with a concave base and distinct basal thinning

PLATE 9

Excavating Phase II Test Units in Area G of the Pollack Site (7K-C-203G)



(Plate 4,A). This point was found in Area G (Test Unit S239 W540, Figure 33). Similar basal thinning and grinding has been attributed by Coe (1964) for side-notched points from the Hardaway site in the North Carolina Piedmont.

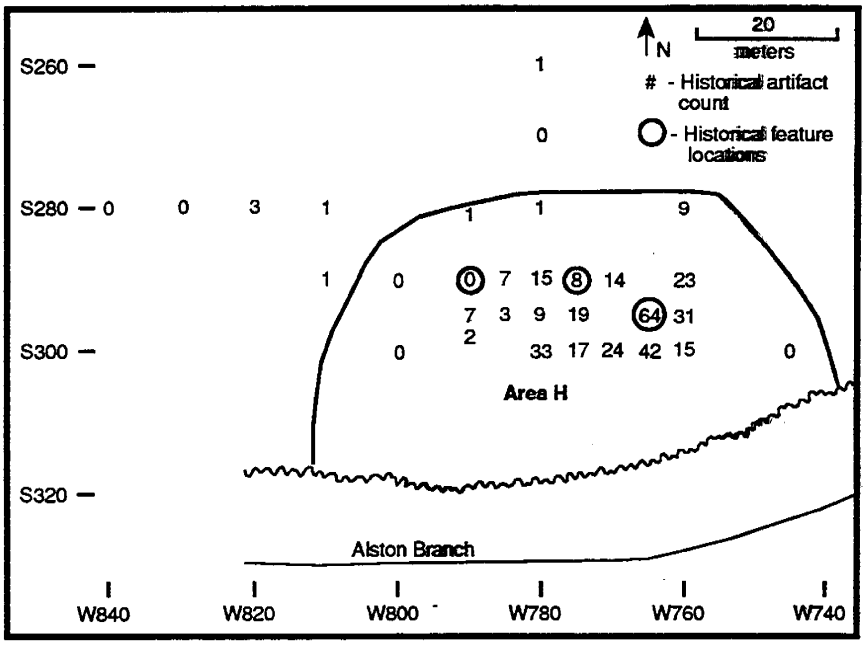
No prehistoric ceramics or other temporally diagnostic prehistoric artifacts were found in Areas D, E, F, and G. The most common artifacts recovered were flakes, fire-cracked rock, and utilized flakes from local jaspers, cherts, and quartzes. A small number of cobble cores and a hammerstone indicating primary lithic reduction were also found. Similar collections of fire-cracked rock and cores, flakes, and tools made from local materials were found throughout the Pollack site.

The presence of low, but significant artifact densities and the limited integrity of Areas D, E, F, and G led to the determination that these areas warranted a modified Phase II testing plan. This additional Phase II testing would consist of the mechanical exposure of all features and the excavation of most, if

N

FIGURE 34

Historical Artifact Count and Feature Distribution in Area H, 7K-C-203H



not all, significant cultural features. No plow zone sampling would be undertaken because of the consistently very low artifact densities found during initial testing.

Area H (7K-C-203H)

Area H is located west of Area G along the north side of Alston Branch (Figure 25, Plate 2). Figure 34 shows the limits and total historical artifact count for Area H. Area H is the remains of a early eighteenth century farmstead. A total of 24 test units were excavated in Area H, 20 of which contained diagnostic early eighteenth century domestic and structural artifacts. Artifact densities ranged from one to 64 historical artifacts per test unit. These highest artifact densities (greater than 19 artifacts per test unit) in Area H constituted the highest artifact densities of any other part of the Pollack site.

Diagnostic historical artifacts recovered from Area H included kaolin pipe stem fragments and wrought nails. Diagnostic eighteenth century ceramics included one small fragment of Rhenish blue and gray salt-glazed stoneware and several fragments of early Staffordshire earthenwares and English white salt-glazed stonewares. A representative sample of these late seventeenth to early eighteenth century artifacts found in Area H are shown in Plate 10.

Three historical features were also identified in the area of highest artifact density in Area H (Figure 34). The presence of both architectural and domestic artifacts and features indicates the presence of a structure and a high potential for additional intact historical features and artifact deposits.

One diagnostic prehistoric artifact was found in Area H. This artifact was a small chert Woodland I corner-notched projectile point found in a heavily eroded plow zone context. Similar points have been

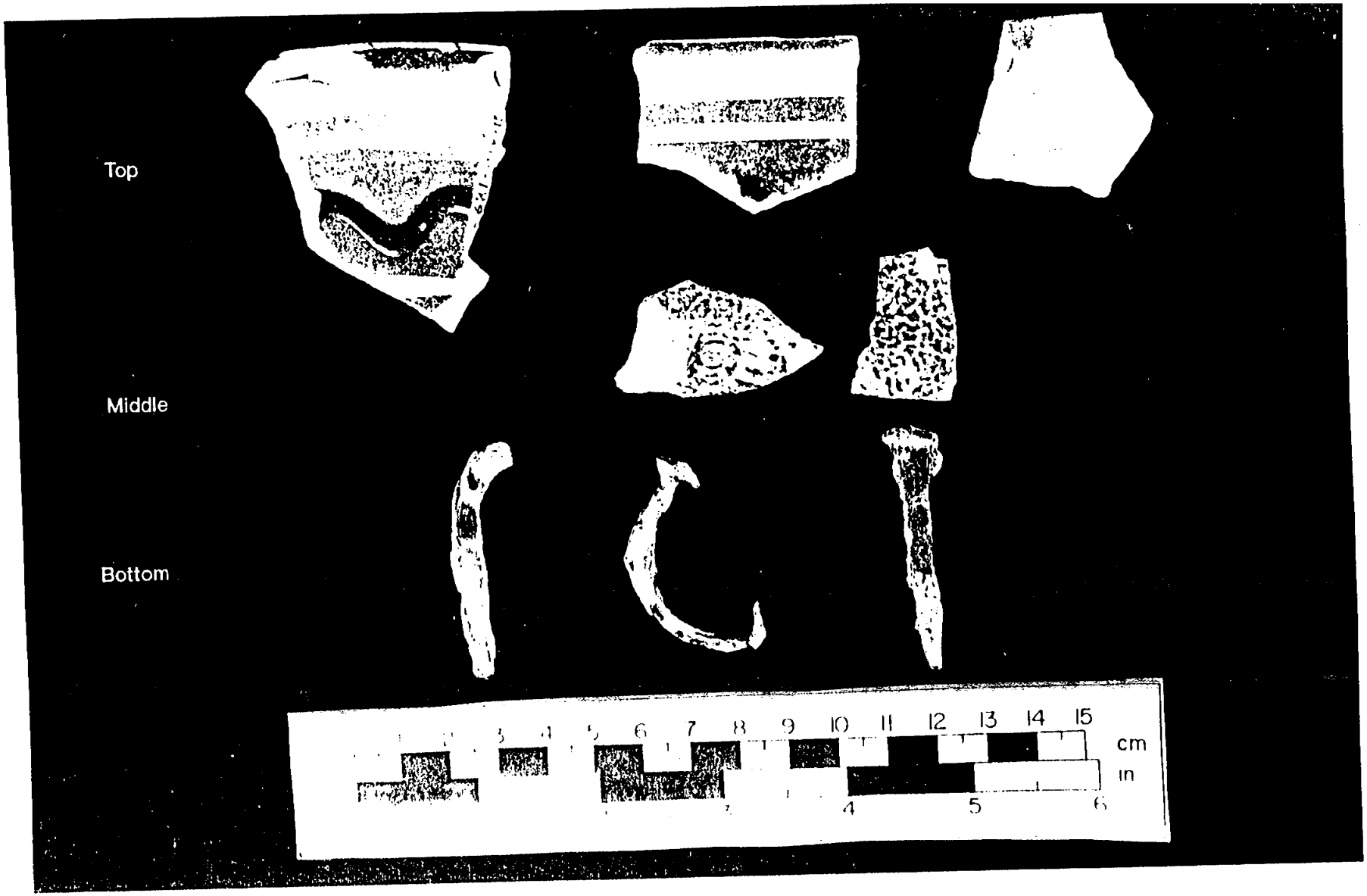
PLATE 10

Late Seventeeth-Early Eighteenth Century Artifacts from Area H of the Pollack Site (7K-C-203H)

Top - Slip Decorated Redware Middle - Bellarmine Stoneware Bottom - Wrought Nails

dated to the late Paleo-Indian and early Archaic periods in central Delaware (Custer 1989: 87). No other diagnostic artifacts came from Area H and only nine other prehistoric artifacts were found during Phase II testing. These nine artifacts consisted of small fire-cracked rock fragments and jasper, chert, and quartz flakes. All of these artifacts came from extremely eroded contexts along Alston Branch and no evidence of prehistoric features was located.

The presence of historical artifacts and cultural features in both plow zone and undisturbed contexts led to the determination that Area H was a significant part of the Pollack site. The large size of the area and high density of historical artifacts in Area H indicate a high potential for additional intact cultural remains. Thus Area H warrants Phase III data recovery operations if proposed borrow pit and wetland reclamation excavations are undertaken.


Top
Middle
Bottom
cm
in

Conclusions and Recommendations

Additional Phase I and II testing at the Pollack site identified eight discrete areas of historical and prehistoric occupation. The limits of each of these eight areas, 7K-C-203A to 7K-C-203H, were determined on the basis of artifact density, site integrity, and the presence of intact cultural features. Additional Phase II testing was determined to be warranted for the four smallest areas (Areas D, E, F, and G) where limited integrity and low artifact and feature densities were found. Areas A, B, C, and H, however, were determined to warrant Phase III data recovery operations if proposed borrow pit excavations and wetland replacement operations are undertaken.

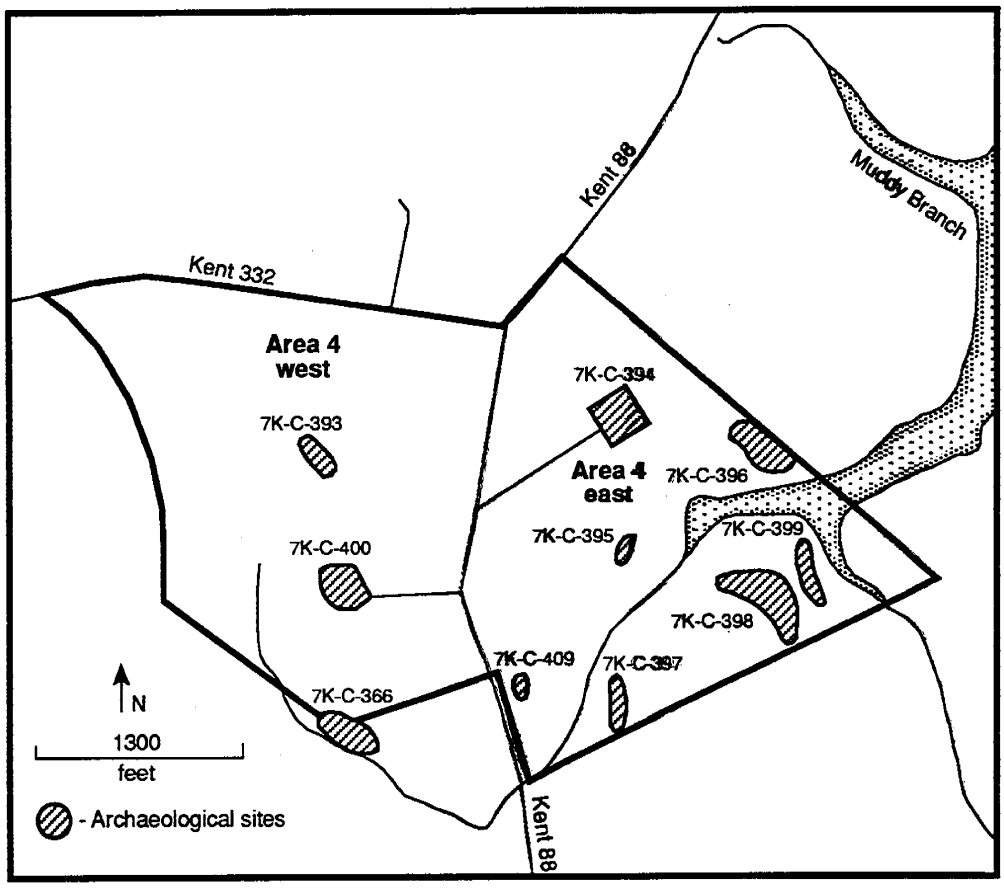
Based on the large numbers of artifacts and features recovered, site 7K-C-203 is most likely a series of prehistoric base camps. These base camps probably correspond to the seven areas of concentrated prehistoric artifacts identified by intensive Phase II testing (7K-C-203A to 7K-C-203G). The two historical components in 7K-C-203C and 7K-C-203H appear to be the remains of two discrete late seventeenth to early eighteenth century structures.

The large size of the prehistoric features found at the Pollack site suggests that they are house pits or storage pits. These features were found in discrete concentrations indicating that "household clusters," or residential locales, were present at the site during Woodland I and Woodland II times. Artifacts dating to the Archaic period were also recovered, but no evidence of features from this time period was identified. The potential for features from this earlier period, however, is high.

The most recent Phase II excavations clearly confirm that 7K-C-203 is eligible for listing on the National Register of Historic Places under Criterion "D". Excavations at the site show that it contains significant, well-preserved prehistoric and historical features in good stratigraphic context. Preservation of floral remains within the features is good and will allow the study of prehistoric diets. The presence of numerous house features and associated storage pits within "household clusters" allows the analysis of archaeological materials by prehistoric social units. Such analyses will clarify the nature of prehistoric social organizations during the early part of the Woodland I period, which is a time period when these social organizations were undergoing pronounced change (Custer 1989:296-297). Furthermore, because the household clusters seem to date to different time periods within the Woodland Period, it should be possible to examine changes in the organization of households over time.

FIGURE 35

Location of all Archaeological Sites in Area 4



AREA 4, KENT 88

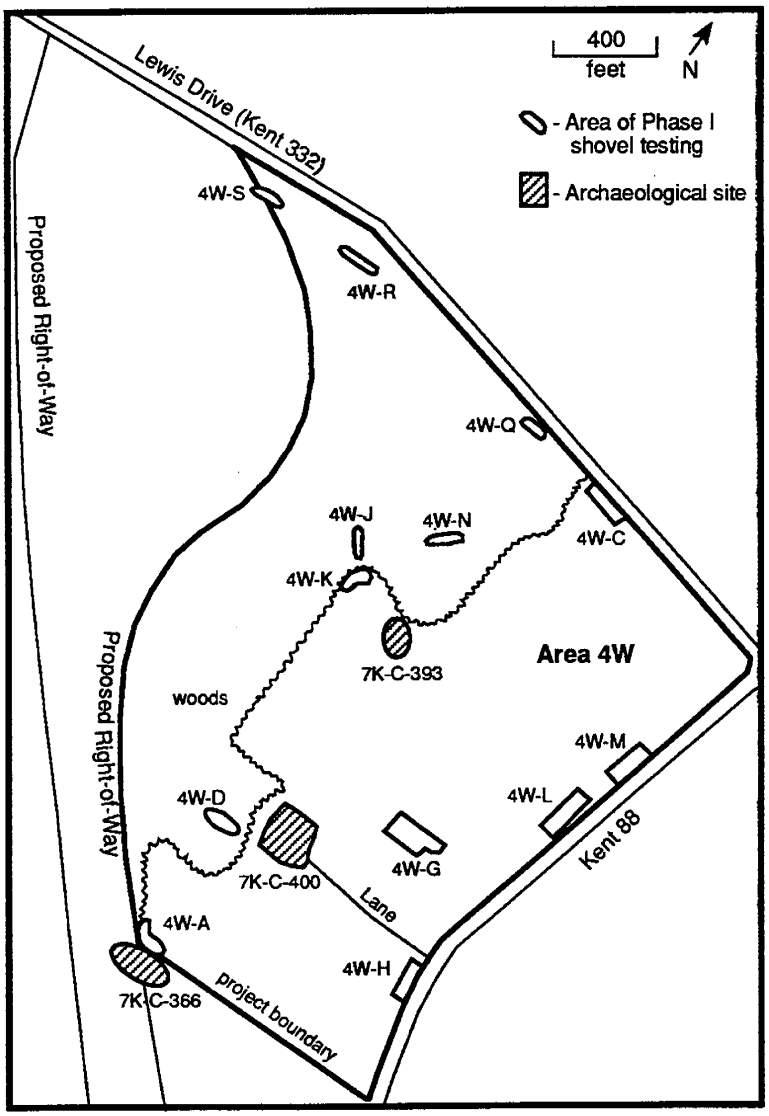
Area 4 is located approximately one half mile east of Dover along present Kent 88 (Figures 1 and 35). The portion of Area 4 east of Kent 88 was labeled Area 4E to distinguish it from the portion west of Kent 88, Area 4W. A total of nine historical and prehistoric archaeological sites were identified by Phase I testing in Area 4. These nine sites and a previously identified prehistoric site, 7K-C-366, are shown in Figure 35. Two of the sites, 7K-C-393 and 7K-C-400, are located in Area 4W. The remaining seven sites, 7K-C-394 to 7K-C-399, and 7K-C-409, are located in Area 4E. A discussion of the sites in each portion of the project area follows.

Area 4W is bounded on the east by Kent 88 and on the north by Kent 332 (Lewis Drive). Most of the area is a fallow field associated with the historical farmhouse on the parcel, 7K-C-400 (K-2071). Ground surface visibility was nil and no surface collection was possible. The easternmost part of Area 4W is a low, poorly-drained woodlot dominated by heavy Othello clays. Intermittent drainages into Muddy Branch hold water most of the year. Elevations range from less than 10' to approximately 24' above sea level. The cultivated portions of Area 4W are generally higher and better-drained silty and sandy loams.

The location of all Phase I tests in Area 4W is shown in Figure 36. A total of 16 areas were tested by shovel test pits oriented to independent 20' and 40' grids. These shovel tests were placed in areas of

FIGURE 36

Location of all Areas of Phase I Shovel Testing and all Archaeological Sites in Area 4W



high, medium, and low prehistoric and historical site potential. The eastern-most edge of one known prehistoric site, 7K-C-366, was tested and two new archaeological sites, 7K-C-393 and 7K-C-400, were located.

7K-C-400 is the remains of a mid- to late nineteenth century agricultural complex (K-2071). The site is located 600' west of Kent 88 at the end of an extant driveway (Figure 36). The dwelling house, barn and outbuildings associated with 7K-C-400 were recently destroyed by fire and only one structure, a three-sided machinery shed is still standing. A structure appears on the site as early as 1859 when Byles' atlas of that year shows a structure associated with "H. Wilson" (Figure 37). Henry Wilson was a noted area landowner. The site also appears on Beers' 1868 atlas and was associated with "A. J. Wilson," probably Henry Wilson's son Alexander (Figure 38).

The H. Wilson Farm was occupied until the 1980s and appears on various twentieth century maps, including the 1906 U.S.G.S. topographic map and Bausman's 1939 map of Kent County. The last occupant of the farm, Mrs. Ruth Davis, was born in the house around the turn of the twentieth century. The location of the dwelling is marked by the remains of a partial concrete block foundation, a small chimney and attached television antenna, and charred roof rafters.

FIGURE 37

Detail of Byles' 1859 Atlas Showing Area 4 and the "H. Wilson" and "A. Laws" Farms

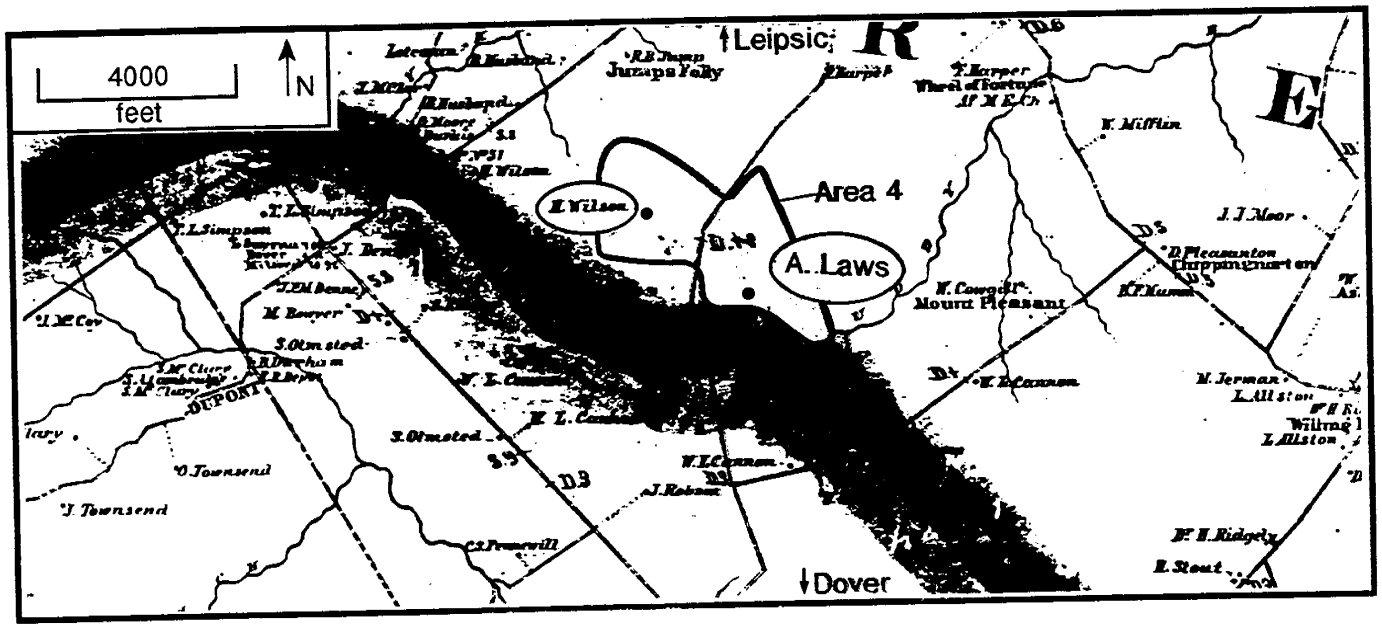


FIGURE 38

Detail of Beers' 1868 Atlas Showing Area 4 and the "A.J. Wilson" and "A. Laws" Farms

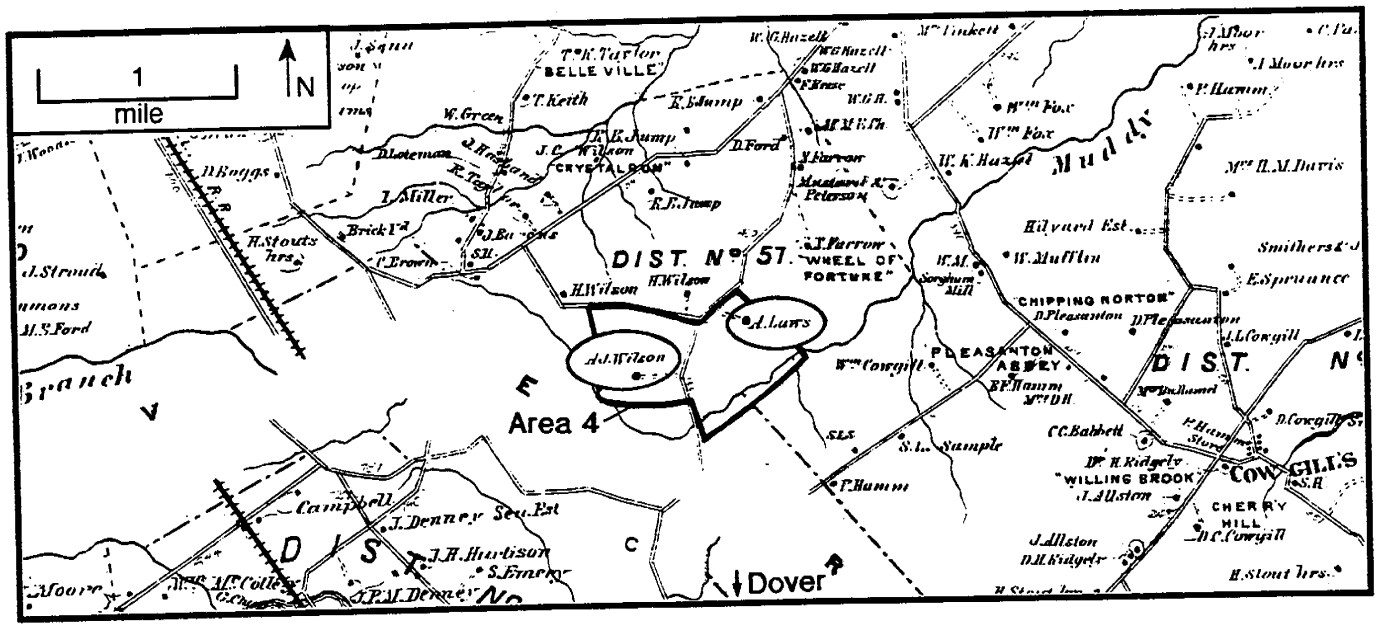


FIGURE 39

Location of all Phase I Tests at the H. Wilson Farm Site (7K-C-400)

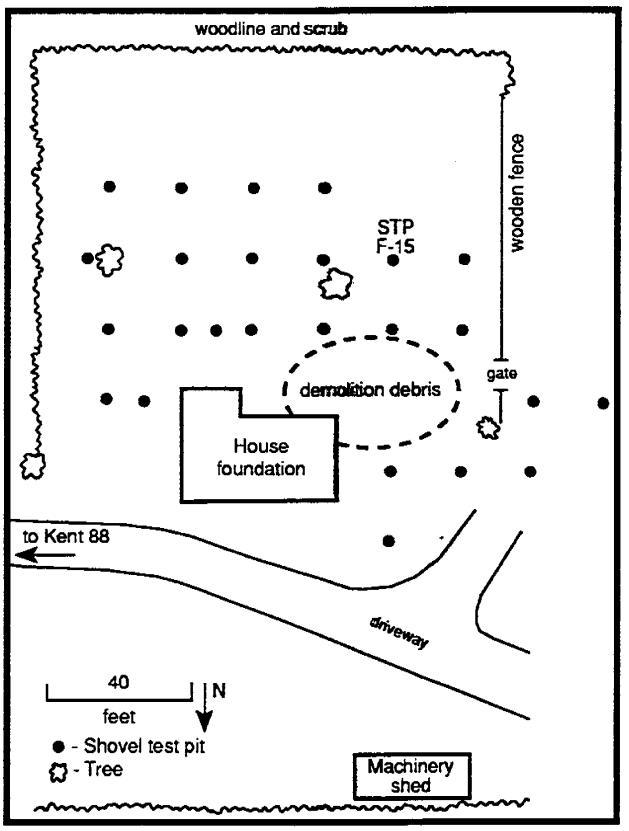
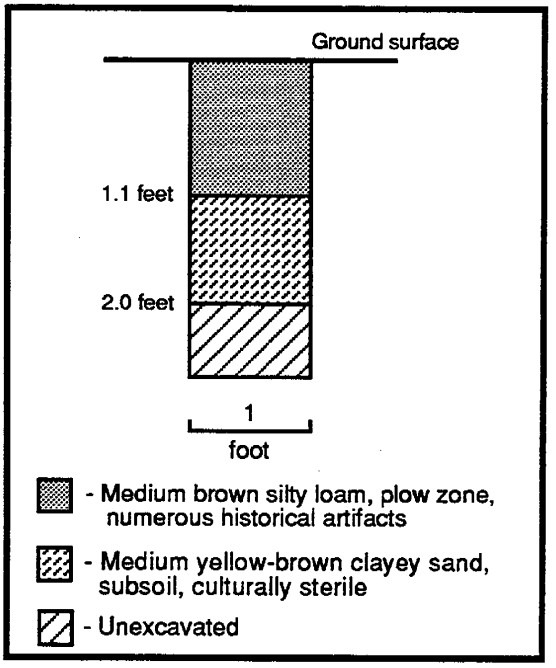


FIGURE 40

Typical Soil Profile of the H. Wilson Farm Site (7K-C-400), STP F-15



Phase I testing consisted of a pedestrian survey of the remains of the dwelling and associated outbuildings and the excavation of 25 shovel test pits on a 20' grid around the house foundation. The location of these shovel tests with respect to the house foundation is shown in Figure 39. Historical artifacts were recovered from all of the tests. Diagnostic nineteenth and twentieth century redware, whiteware, cut and wire nails, and clear and aqua molded bottle glass fragments were recovered. A summary of all of the artifacts found at 7K-C-400 and the other sites in Area 4 is given in Appendix I.

No historical artifacts were recovered from below the 1.0' plow zone encountered in every shovel test. Artifact density ranged from 5 to 72 artifacts per shovel test. A typical soil profile from 7K-C-400 showing the medium brown silty loam plow zone and underlying yellow-brown clayey sand subsoil appears in Figure 40. Although no artifacts or cultural features were identified below the plow zone,

FIGURE 41

Location of all Phase I Tests at 7K-C-393

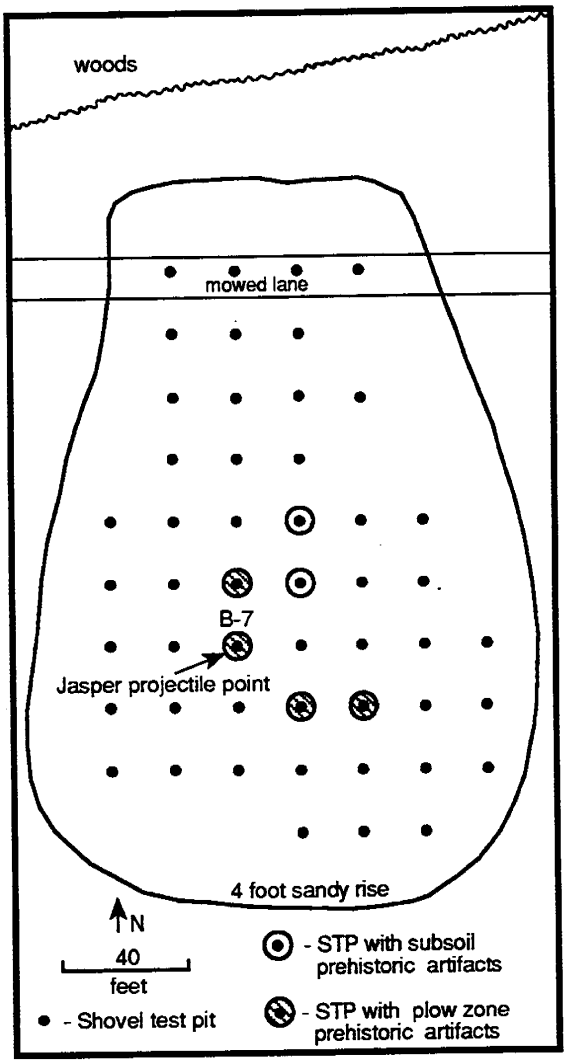
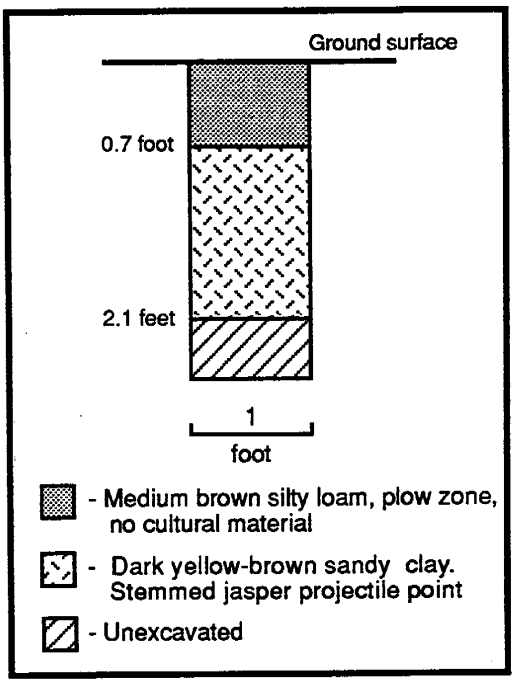


FIGURE 42

Soil Profile of STP B-7, (7K-C-393)

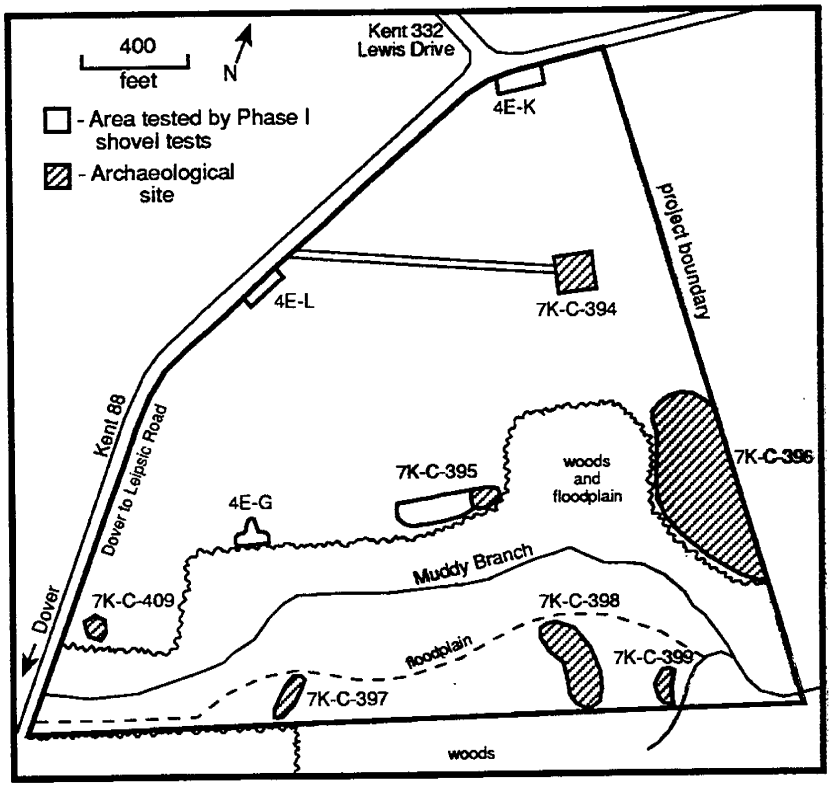


the potential for such deposits is high. Although this site will not be impacted by proposed borrow pit and wetland replacement, a Phase II survey of 7K-C-400 is warranted if this site is impacted by future construction.

Site 7K-C-393 is a small prehistoric site located in a plowed field approximately 700' north of the H. Wilson house (Figure 36). The site is located on a small 4' sandy rise perpendicular to a treeline 75' to the north. West of this rise is a shallow ephemeral drainage. A total of 50 shovel tests were excavated on a 20' grid over the entire rise (Figure 41). Prehistoric artifacts were recovered from six of these tests along the top of the rise. A total of 11 prehistoric artifacts including seven chert, jasper, quartz, and chalcedony flakes, a jasper late stage biface reject, and three fire-cracked rock fragments were recovered. Seven of these 11 artifacts were recovered from below the plow zone in intact subsoil contexts. Subsoil artifacts included the jasper stemmed point and a possible argillite flake. A profile of STP B-7, the test containing the jasper projectile point, is shown

FIGURE 43

Location of all Areas of Phase I Shovel Testing and all Archaeological Sites in Area 4E



in Figure 42. The subsoil in STP B-7 was a dark yellow-brown sandy clay that extended from 0.7' to at least 2.1' below ground surface where excavation was terminated. No cultural features were identified.

Although the rise containing 7K-C-393 is small, approximately 120' by 200', prehistoric artifacts were found in intact subsoil. No cultural features were identified, but the high percentage of artifacts from intact subsoil indicates a high potential for intact cultural features and additional undisturbed artifact deposits.

Although 7K-C-393 will not be impacted by present proposed borrow pit and wetland replacement, this site is potentially National Register eligible. A Phase II survey is thus warranted if the site is impacted by future borrow pit and wetland construction.

Thirteen additional areas were tested by Phase I shovel tests in Area 4W (Figure 36). These loci; 4W-A, C, D, G, H, J, K, L, M, N, Q, R, and S, were tested by a series of shovel tests excavated at 20' intervals in the area of highest site potential. The location of all these tests is shown in Figure 36.

Area 4E is bounded on the west by Kent 88 and includes land on both sides of Muddy Branch. Ten areas tested in Area 4E yielded a total of seven archaeological sites by Phase I testing. The location of all areas of Phase I testing in Area 4E is shown in Figure 43. Four sites, 7K-C-396 through 7K-C-399, were determined to be potentially National Register eligible. Although none of these sites will be impacted by proposed borrow pit and wetland replacement, Phase II testing would be warranted if these

sites were to be impacted by future construction. Three additional areas in Area 4E were shovel tested, but no sites were located.

South of Muddy Branch, the project area is a partially-unplowed woodlot. The unplowed portions are located along the south bank of Muddy Branch. The north bank of Muddy Branch is also wooded, but most of the project area is a no-till soybean field. Elevations vary between nearly sea level along Muddy Branch to 25' above sea level. Area 4E is located immediately north of the northern project limit of the proposed realignment of Kent 88 project. The Kent 88 realignment project area was Phase I and II surveyed in 1989 and 1990 by archaeologists from the University of Delaware Center for Archaeological Research (Grettler et al. 1991b).

The most significant site in Area 4E was 7K-C-398, a multi-component historical and prehistoric site. The site is located on a slight 4'-6' sandy rise along the south bank of Muddy Branch approximately 1800' feet east of Kent 88 (Figure 43). The historical component is the remains of a mid-eighteenth century farm probably similar to the Loockerman's Range component of Dover Downs Hill B (7K-C-365B). Diagnostic eighteenth century artifacts including ceramics and English gunflints were located in a plowed woodlot south of Muddy Branch. Artifacts were recovered from subsoil contexts and an intact historical feature was located. Also located in this area is an early Woodland I site. This prehistoric site extends beyond the area of historical artifacts. Diagnostic prehistoric artifacts included Minguannan, Mockley, and steatite tempered ceramic fragments. Some of these prehistoric artifacts were recovered from intact subsoil contexts and the potential for additional intact cultural features is high.

Site 7K-C-398 is located in a second and third growth forest. The entire site has been plowed and is thickly overgrown with small saplings and trees up to one foot in diameter. The site was located by shovel test pits excavated along the highest portion of the rise south of Muddy Run. A total of 90 shovel tests were excavated at 20' and 40' intervals over the entire small rise (Figure 44).

Cultural artifacts were recovered in nearly every shovel test at 7K-C-398. Two distinct cultural components were discovered: an eighteenth century occupation and an earlier prehistoric component, possibly dating to the Woodland I Period (3000 B.C. - A.D. 1000). These components overlap somewhat, but the areas of most concentrated historical and prehistoric artifacts are distinct.

The primary locus of prehistoric activity as evidenced by artifact density and the presence of artifacts in the subsoil is along the northern edge of the bluff nearest to Muddy Branch (Figure 44). The

FIGURE 44

Location of all Phase I Tests and Total Prehistoric Artifact Distribution at 7K-C-398

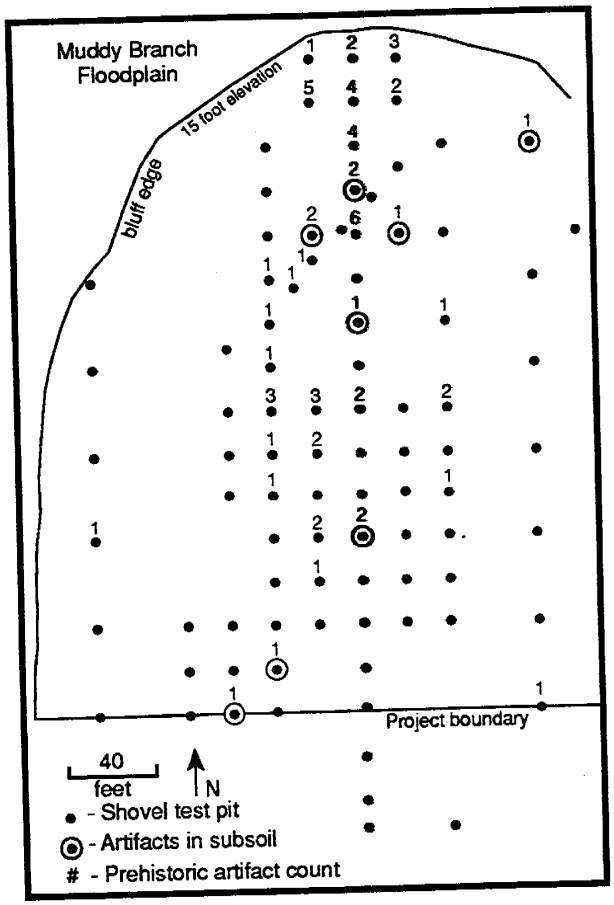
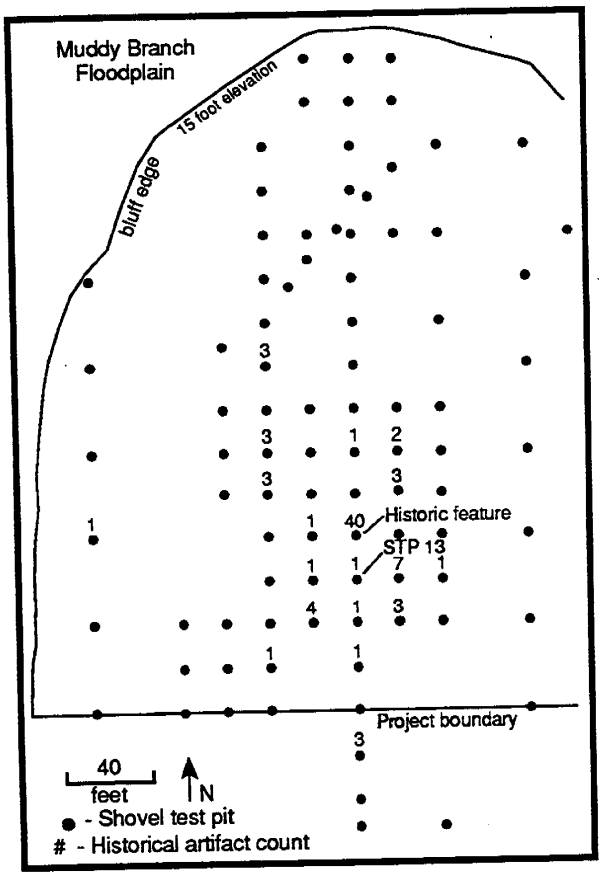


FIGURE 45

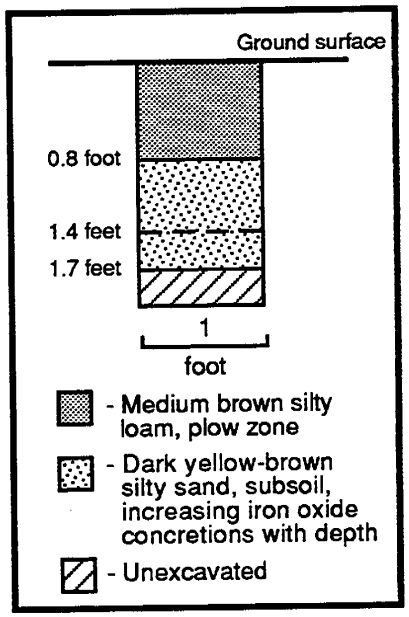
Location of all Phase I Tests and Total Historical Artifact Distribution at 7K-C-398



primary locus of historical activity is along the southern edge of the bluff approximately 100 feet south of the area of concentrated prehistoric artifacts (Figures 44 and 45). Some overlap of the two occupations was seen and it is possible that the historical occupation has disturbed part of the earlier prehistoric site.

Prehistoric artifacts were located in 34 of the 90 shovel tests (38%). A total of 64 prehistoric artifacts were recovered. Artifacts were recovered in undisturbed subsoil deposits in eight of these tests (Figure 44). Artifact densities ranged from one to six artifacts per shovel test. No diagnostic lithic artifacts were found, but 39 flakes and five flake tools were recovered. Eleven prehistoric ceramic fragments were also recovered. All of these artifacts were found in the plow zone and were heavily damaged. The ceramics exhibited a range of tempers indicating Woodland I and possibly Woodland II occupations. Diagnostic Woodland I ceramics consisted of six grit tempered sherds (possibly Hell Island

FIGURE 46
Typical Soil Profile of 7K-C-398, (STP B-13)



ware), one steatite tempered sherd (possibly Marcey Creek ware), and two shell-tempered sherds (possibly Mockley ware). Two fragments of grit and shell tempered ceramics, possibly Killens ware, were also recovered. According to Custer (1989:308-309), Killens ware is commonly associated with the Woodland II Period (A.D. 975 - A.D. 1600). The small size of each of these ceramic sherds precluded further identification. A summary of all prehistoric and historical artifacts recovered from this site is given in Appendix I.

No prehistoric features were identified. Although most of the prehistoric artifacts recovered came from the plow zone, the potential of further intact artifact deposits and intact cultural features is high. A typical stratigraphic profile of 7K-C-398 is shown in Figure 46. The plow zone identified over the entire site extended to approximately 0.8 foot below ground surface. Underlying this medium brown silty loam plow zone were dark yellow-brown silty sands extending to at least 1.4 feet below ground surface. These yellow-brown soils became increasingly mottled with bright red-brown iron oxide concretions with depth.

The presence of diagnostic prehistoric and historical artifacts in intact subsoil deposits at 7K-C-398 indicates that this site is potentially eligible for listing on the National Register of Historic Places. Although this site will not be impacted by proposed borrow pit and wetland replacement and no Phase II survey was undertaken, a Phase II survey of this site would be warranted if this site was to be impacted by future construction.

Two other prehistoric sites were located south of Muddy Branch in the same woodlot as 7K-C-398. These two sites, 7K-C-397 and 7K-C-399, are located on the southern edge of the Muddy Branch flood plain along slight sandy rises approximately 20 feet above sea level (Figure 43). Except for a small unplowed portion of 7K-C-399, both sites have been historically plowed.

Site 7K-C-397 is located approximately 800 feet east of Kent 88 on the westernmost edge of a small 4 foot to 6 foot sandy rise bordering the floodplain of Muddy Branch to the north. A total of 61

FIGURE 47

Location of all Phase I Tests and Total Prehistoric Artifact Distribution, 7K-C-397

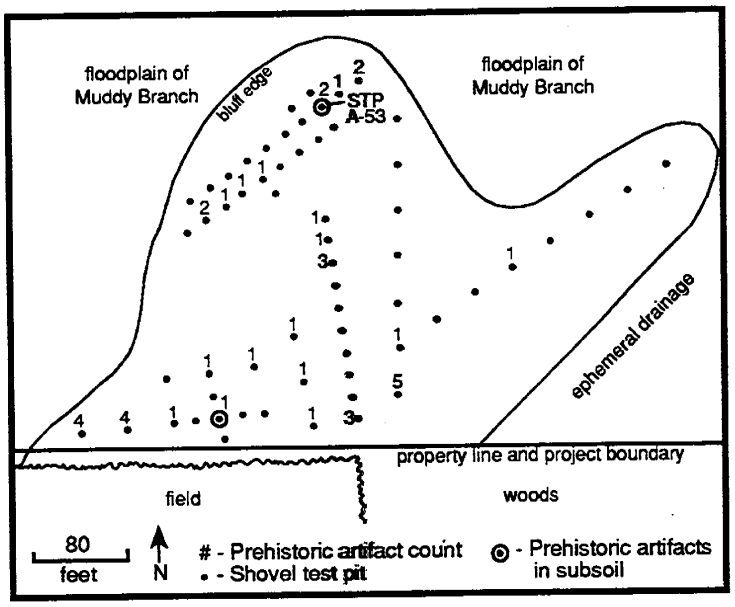
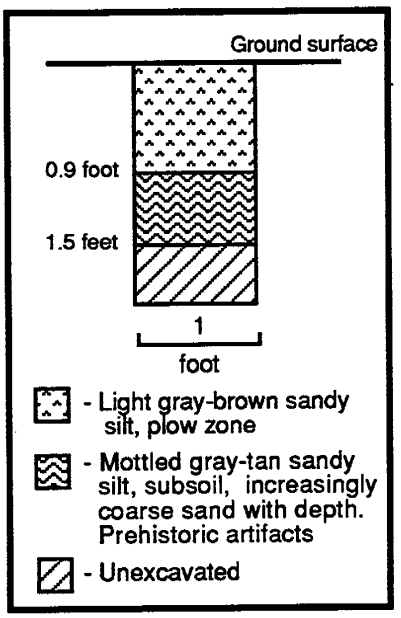


FIGURE 48

Typical Soil Profile of 7K-C-397, (STP A-53)



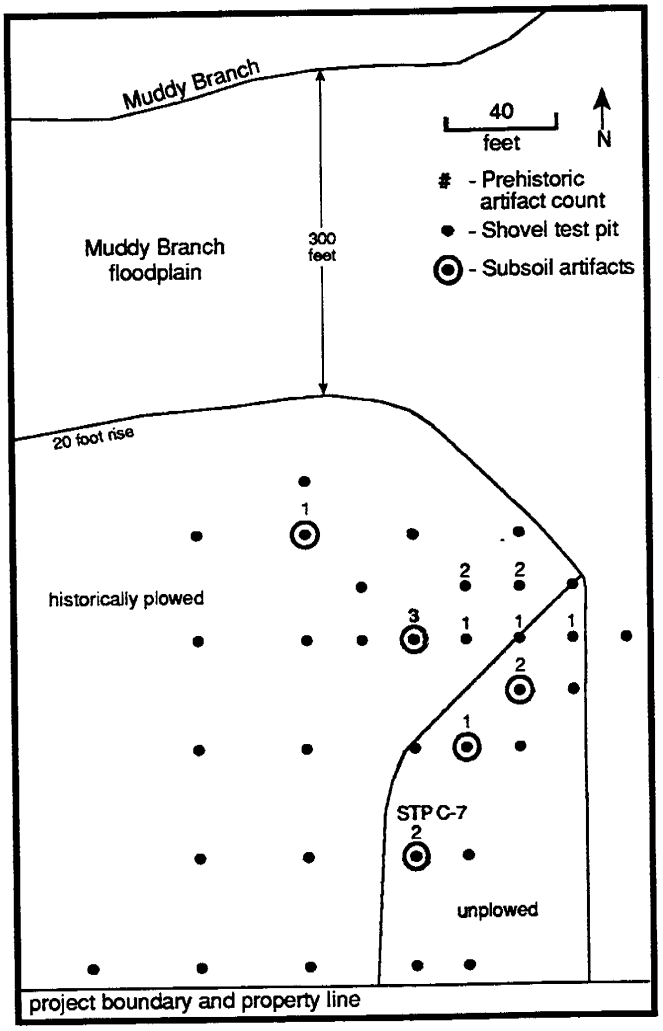
shovel tests were excavated at 20 foot intervals along transects oriented to the highest parts of the rise (Figure 47). Prehistoric artifacts were located in 23 of these tests. No diagnostic artifacts were recovered, but jasper and quartz flakes were recovered from intact subsoil deposits below the plow zone in two shovel tests.

Although prehistoric artifact densities were low, artifacts in the subsoil and the setting of the site indicate a high potential for intact cultural features and further subsoil artifact deposits. The stratigraphy of site 7K-C-397 consisted of a light gray-brown sandy silt plow zone extending to 0.9 feet below ground surface (Figure 48). Below this plow zone was a mottled gray-tan sandy silt subsoil. This subsoil became increasingly coarse and sandy with depth and contained prehistoric artifacts in two shovel tests. A very low density scatter of mid- to late nineteenth and twentieth century artifacts, primarily small coal and clear bottle glass fragments, were also located by Phase I testing. These artifacts are the result of simple plow scatter and do not indicate the presence of a historical site.

The remaining archaeological site located south of Muddy Branch in Area 4E is 7K-C-399. Site 7K-C-399 is located east of both 7K-C-397 and 7K-C-398 near the confluence of Muddy Branch and

FIGURE 49

Location of all Phase I Tests and Total Prehistoric Artifact Distribution at 7K-C-399



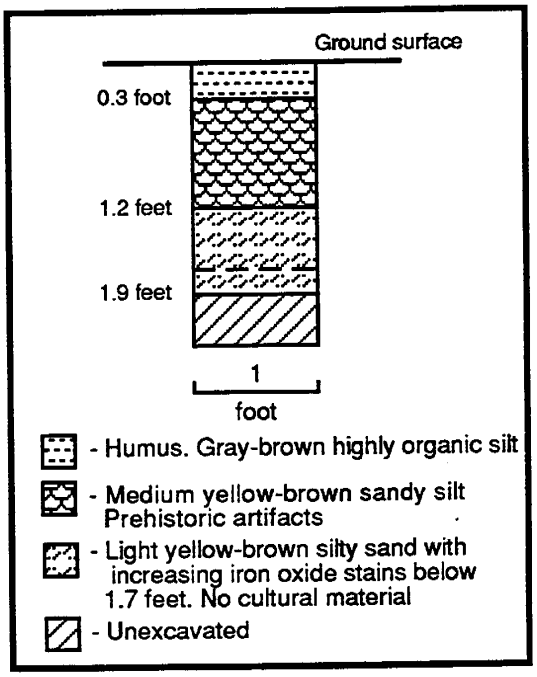
an unnamed tributary (Figure 43). 7K-C-399 is located along the easternmost portion of the same 20 foot elevation contour as 7K-C-398, the multicomponent site approximately 300 feet to the west. Figure 49 shows the location of Phase I testing and total prehistoric artifact counts for 7K-C-399.

Phase I testing consisted of the excavation of 33 shovel test pits at 20 foot and 40 foot intervals. The shovel test pit grid was oriented to the highest portion of the slight sandy rise comprising the site and the floodplains of Muddy Branch and its unnamed tributary to the north and east. A total of 16 prehistoric artifacts, consisting of 14 jasper, quartz, chert and chalcedony flakes and two fire-cracked rocks were recovered from ten shovel tests. A 180' by 200' area was tested and artifact concentrations were greatest along the eastern edge of the site along the edge of the floodplain of the unnamed tributary at its confluence with Muddy Branch.

No diagnostic prehistoric artifacts or cultural features were identified at 7K-C-399. Prehistoric flakes and fire-cracked rocks, however, were recovered from intact subsoil and historically unplowed contexts. The eastern portion of the site, where artifact densities were the greatest at two artifacts per shovel test, was determined to be historically unplowed The extent of this unplowed area is shown in Figure 49. One quarter of the shovel tests excavated in this area located prehistoric artifacts in undisturbed contexts.

The stratigraphy of the unplowed portion of 7K-C-399 is shown in Figure 50. Prehistoric artifacts were recovered from medium yellow-brown sandy silts that extended from below the humus at 0.3 feet

FIGURE 50
Typical Soil Profile of the Unplowed Portion of 7K-C-399, (STP C-7)



to 1.2 feet below ground surface. In the plowed, westernmost portion of the site, prehistoric artifacts were recovered from similar sandy silts down to 1.4 feet below ground surface. Below these artifact bearing silts were culturally sterile light yellow-brown silty sands found to extend as deep as 2.3 feet below ground surface.

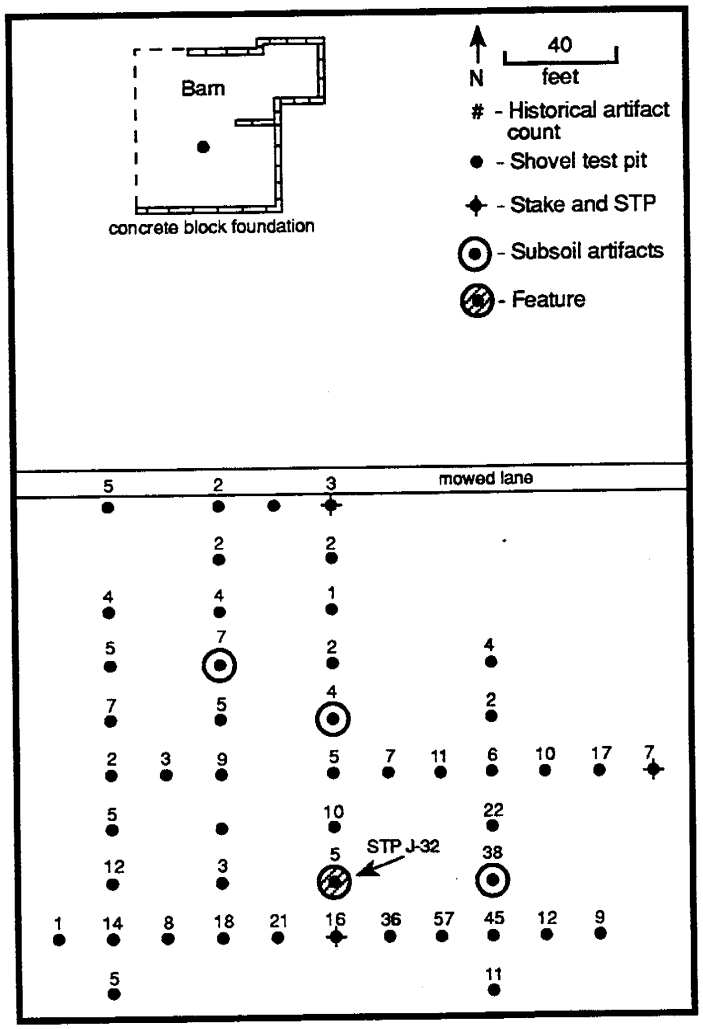
Although no cultural features or diagnostic prehistoric artifacts were recovered, prehistoric artifacts were found in intact subsoil at 7K-C-397 and 7K-C-399. The depth of these intact soils indicates a high potential for further intact artifact-deposits and undisturbed cultural features. No evidence of historical sites was located and small fragments of coal and late nineteenth century bottle glass and whitewares were the most common historical artifacts recovered. Such plow scatter was seen in every loci tested in Area 4. Although both sites are not to be impacted by current construction plans, Phase II testing would be warranted at both sites were they to be impacted by future borrow pit or wetland replacement.

Four archaeological sites were identified north of Muddy Run in Area 4E (7K-C-394, 7K-C-395, 7K-C-396, and 7K-C-409; Figures 35 and 43). Three of these sites, 7K-C-395, 7K-C-396, and 7K-C-409, are prehistoric sites located in similar settings as the sites located south of Muddy Run. The remaining site, the Alexander Laws Farm site (7K-C-394) is the remains of a mid-nineteenth century to mid-twentieth century farm similar to 7K-C-400, the farm located west of Kent 88 in Area 4W. All of these sites are located in the same agricultural field and each site has been completely plowed.

The single historical archaeological site, 7K-C-394, appears on both Byles' (1859) and Beers' (1868) historical atlases (Figures 37 and 38). The site appears on both maps as a structure associated with Alexander Laws, a known area landowner. The Alexander Laws Farm site was occupied into the 1970s and the remains of a concrete block barn foundation and associated silo were visible until February

FIGURE 51

Location of all Phase I Tests and Total Historical Artifact Distribution at the Alexander Laws Farm Site (7K-C-394)



1991 when they were bulldozed by persons unknown. These foundations, however, were visible at the time of the Phase I survey in November 1990 and were used to orient the grid of shovel test pits excavated at the site (Figure 51).

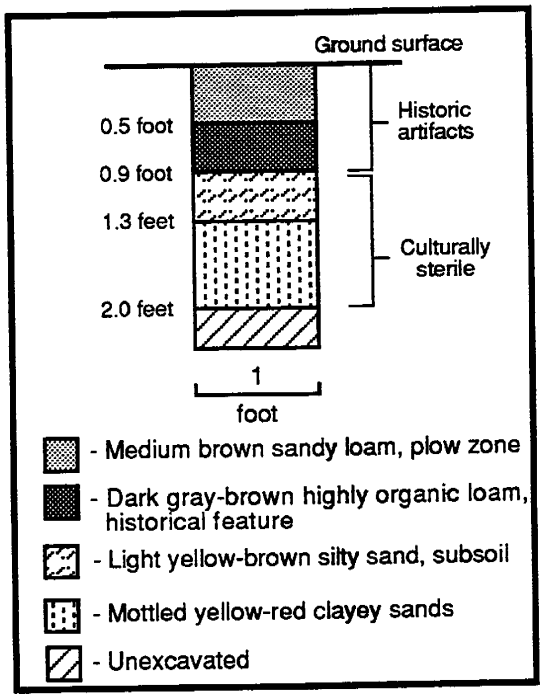
A total of 48 shovel tests were excavated at 20 foot and 40 foot intervals south of the concrete block barn foundation. These tests were located in the area of the farm house shown on numerous twentieth century maps including Bausman's 1939 map of Kent County and the most recent (revised 1981) U.S.G.S. topographic map.

The density of total historical artifacts clearly identifies the location of the farmhouse at the Alexander Laws site (Figure 51). Artifact densities ranged from one to 57 artifacts per shovel test pit. High artifact densities, between 15 and 57 artifacts per shovel test, were identified approximately 200 feet south of the barn in the area indicated by historical maps as the location of the dwelling. Other evidence of a structure can be seen in the presence of artifacts below the plow zone and the single cultural feature located at the site in STP J-32 (Figure 51). This feature consisted of a highly organic and artifact-laden silty loam between the plow zone and sterile light yellow-brown silty sand subsoil (Figure 52). No evidence of a foundation of the domestic structure was located.

The artifacts recovered from the feature fill of STP J-32 included two chimney glass fragments, three brick fragments, two wire nails, and three clear window glass fragments. Other such typical

FIGURE 52

Soil Profile of STP J-32 Showing Historical Feature at the Alexander Laws Farm Site (7K-C-394)



mid- to late nineteenth century structural and domestic artifacts were recovered from the 1.0 foot thick plow zone of 7K-C-394 (Figure 52). Diagnostic nineteenth and early twentieth century artifacts included whiteware, white granite ware, yellowware, and American porcelain ceramic fragments; fully automated machine-made amber, aqua, and clear bottles; wire nails, and coal. Numerous white milk glass canning jar seals and diagnostic nineteenth and early twentieth century Ball and Mason jar fragments were also found, particularly in the area of the domestic structure indicated by historical maps and Phase I shovel testing. Although only one intact cultural feature was identified and only three of the 48 shovel tests (1%) contained artifacts in the subsoil, the potential for further intact features and artifact deposits is high. Thus Phase II testing is warranted if this site is impacted by future construction.

The three remaining sites located in Area 4E; 7K-C-395, 7K-C-396, and 7K-C-409, are prehistoric sites located along slight to moderate sandy rises north of Muddy Branch (Figures 35 and 43). All three sites are located in the same agricultural field as the Alexander Laws Farm site and all have been completely plowed.

The largest and most significant of these prehistoric sites is 7K-C-396 (Figures 35 and 43). Site 7K-C-396 consists of a roughly continuous low density scatter of prehistoric artifacts along a 400 foot by 160 foot sandy rise north of Muddy Branch (Figure 53). This sandy rise of Sassafras soils varies slightly between 4 feet and 6 feet in height and is located approximately 600 feet east of the Alexander Laws Farm site.

Phase I testing at 7K-C-396 consisted of the excavation of 109 shovel tests at 20 foot and 40 foot intervals over the entire 400 foot by 160 foot rise (Figure 53). Prehistoric artifacts were recovered in

FIGURE 53

Location of all Phase I Tests and Total Prehistoric Artifact Distribution at 7K-C-396

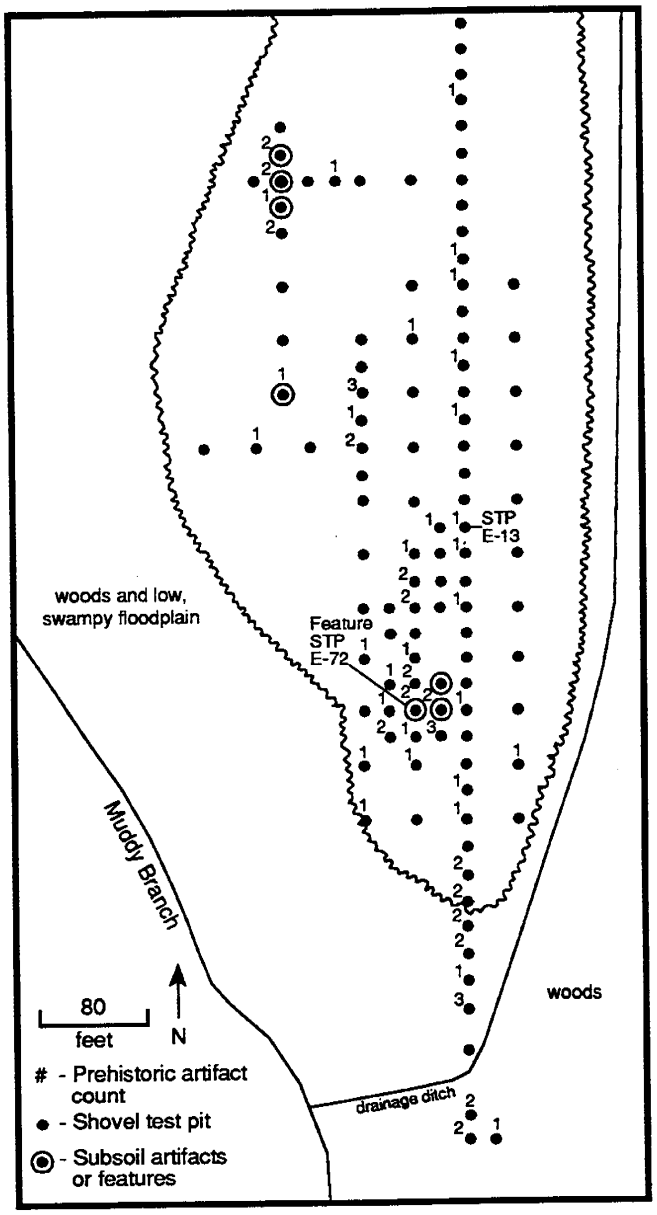
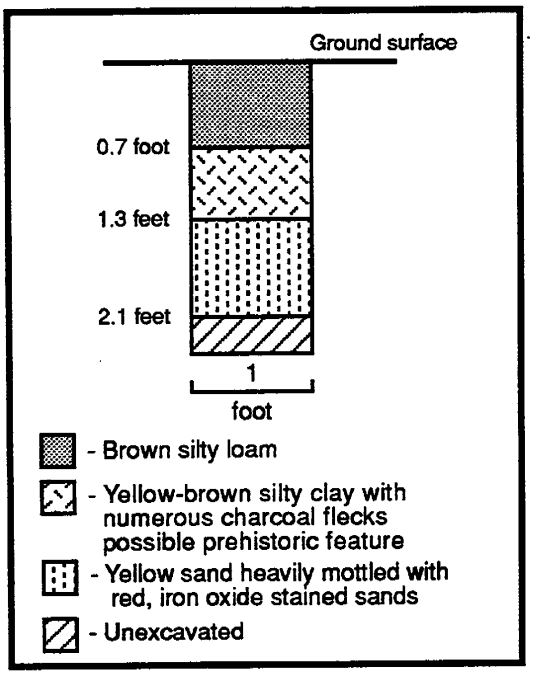


FIGURE 54

Soil Profile of STP E-72 Showing Possible Prehistoric Feature, 7K-C-396

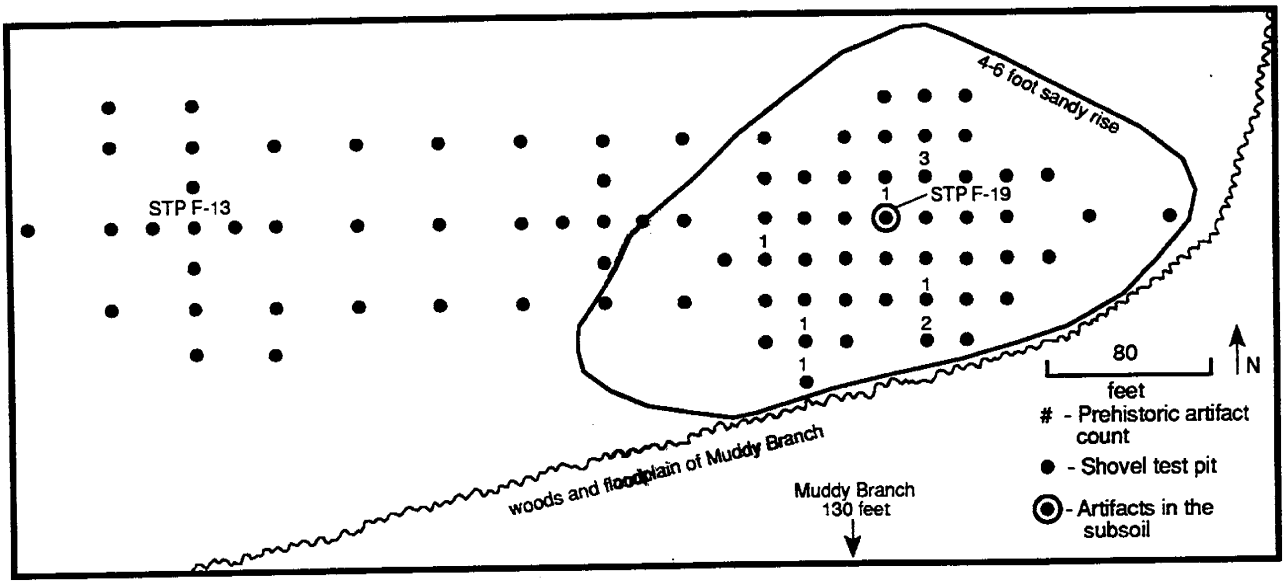


49 tests (44%). Seven of these 49 tests also located prehistoric artifacts below the plow zone in intact subsoil contexts. One possible prehistoric feature was located in these intact soils. This feature was defined by charcoal flecks in the subsoil, but no artifacts or feature edges were located. A profile of STP E-72 showing this possible feature is shown in Figure 54.

A variety of prehistoric artifacts were recovered from 7K-C-396. Artifact density ranged from one to three prehistoric artifacts per shovel test. Prehistoric artifacts recovered included a chert stemmed point, grit-tempered ceramics (probably Minguannan), and a rhyolite flake. All of these artifacts came from the plow zone. Jasper and quartz flakes were the only artifacts recovered from the subsoil. Fire-cracked rock was also found in the plow zone.

FIGURE 55

Location of all Phase I Tests and Total Prehistoric Artifact Distribution at 7K-C-395

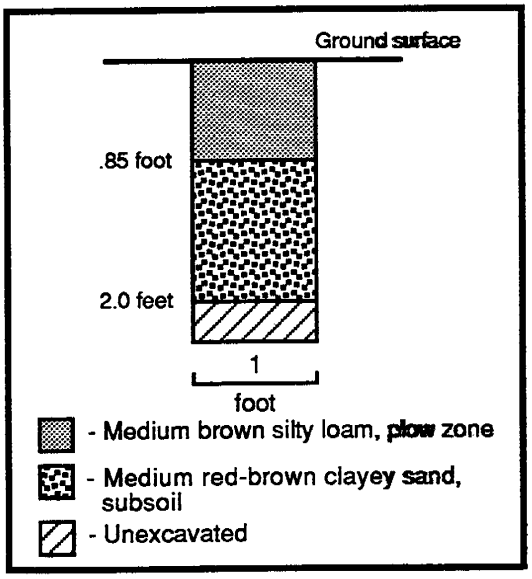


The presence of both a stemmed point and possible Minguannan ceramics indicates a Woodland I (3000 B.C. - A.D. 1000) and possible Woodland II (A.D. 1000 - A.D. 1600) occupation. The presence of diagnostic artifacts, artifacts in intact subsoil contexts, non-local lithic material, and preserved prehistoric cultural features led to the determination that 7K-C-396 warrants Phase II testing if the site is ever impacted by future construction. As 7K-C-396 is not to be impacted by proposed borrow pit and wetland replacement, no further work is recommended at this time.

The second prehistoric site north of Muddy Branch in Area 4E is 7K-C-395. Site 7K-C-395 is located on a slight 4 foot to 6 foot sandy rise approximately 200 feet north of Muddy Branch (Figures 35 and 43). The site is located in a fallow field and was identified by shovel tests excavated at 20 foot and 40 foot intervals along the present woodline. A total of 84 shovel test pits were excavated and prehistoric artifacts were recovered from seven tests over a small, 80 foot by 90 foot area (Figure 55). A total of ten prehistoric artifacts were recovered: five quartz and jasper flakes, two chalcedony flakes, two small fire-cracked rock fragments, and one quartzite Woodland I stemmed point (3000 B.C. - A.D. 1000). This stemmed point was heavily worn and was found in the subsoil in STP F-19 and was the only artifact found below the plow zone over the entire site. A profile of STP F-19 showing a typical soil

FIGURE 56

Typical Soil Profile of 7K-C-395, (STP F-19)



profile of 7K-C-395 is given in Figures 55 and 56.

Prehistoric artifact densities were consistently very low at 7K-C-395. Only three of the seven artifact-bearing shovel tests contained more than one artifact. Only one artifact was recovered from below the plow zone and no cultural features were identified. Phase I shovel tests excavated over the entire rise at 20 foot intervals yielded no other artifacts and the potential for further artifacts or cultural features is low. The low density of prehistoric artifacts and the low potential for further artifacts led to the determination that 7K-C-395 does not warrant Phase II testing.

Historical artifacts were recovered from 24 of the 84 total shovel tests excavated at 7K-C-395 (Figure 57). One small fragment of a slip-decorated redware vessel was recovered from STP F-13 approximately 300 feet west of the area of prehistoric artifacts (Figure 57). This redware sherd, typically a diagnostic eighteenth century artifact, was recovered from

FIGURE 57

Location of all Phase I Tests and Total Historical Artifact Distribution at 7K-C-395

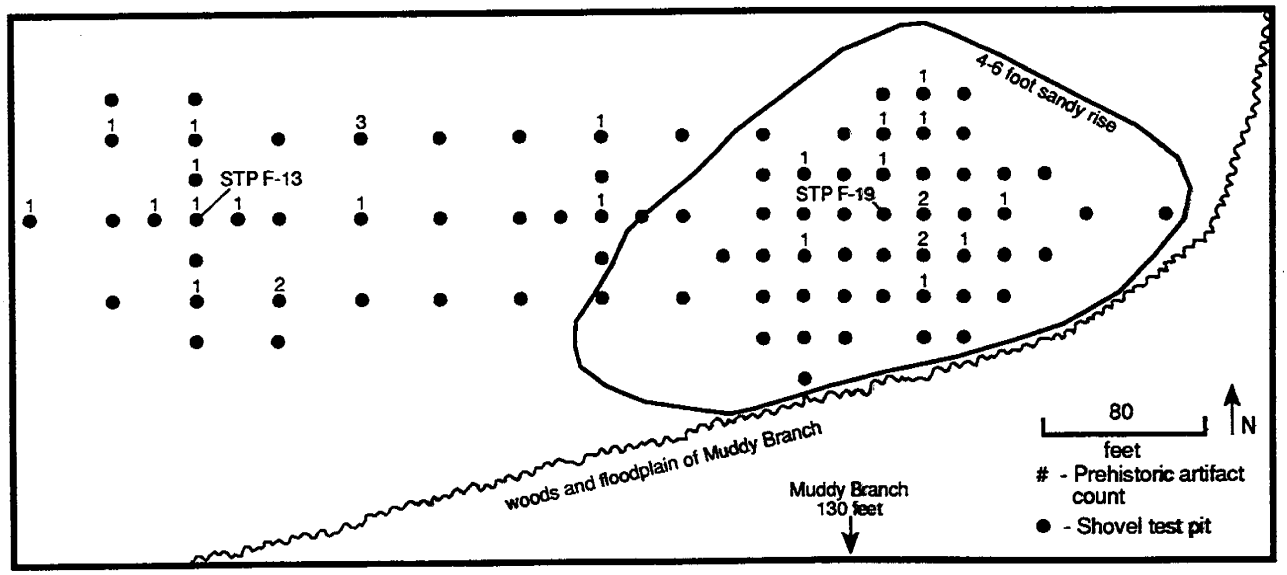
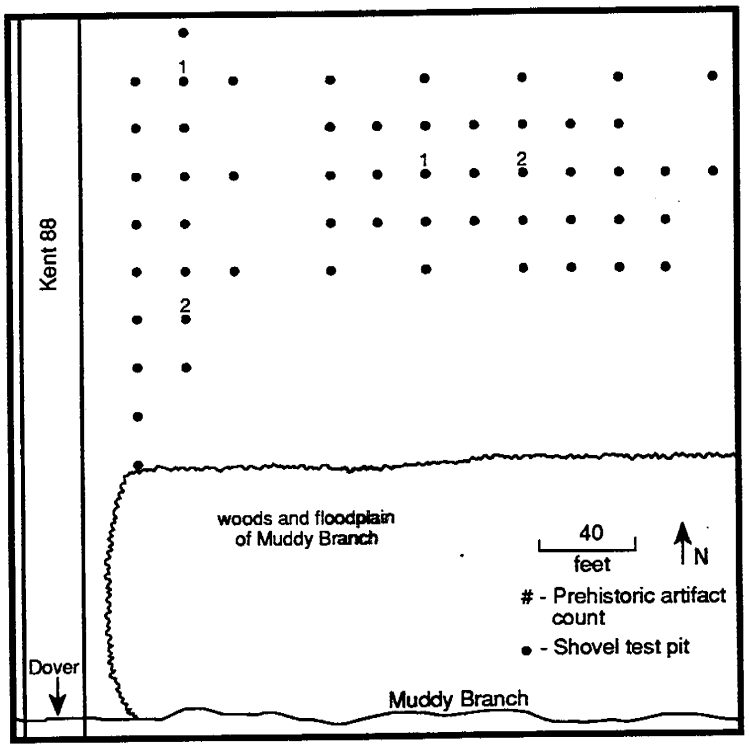


FIGURE 58

Location of all Phase I Tests and Total Prehistoric Artifact Distribution at 7K-C-409



the plow zone and additional shovel tests were excavated in the area. Historical artifact densities remained very low (one artifact per shovel test) and no evidence of a historical site was identified. The few historical artifacts recovered were typically late nineteenth and early twentieth century coal, whiteware, and aqua and amber bottle glass fragments. These artifacts represent simple plow zone scatter deposits probably from the Alexander Laws Farm site house (7K-C-394) located approximately 800 feet to the north. No historical artifacts or cultural features were identified in intact deposits and no further work is recommended.

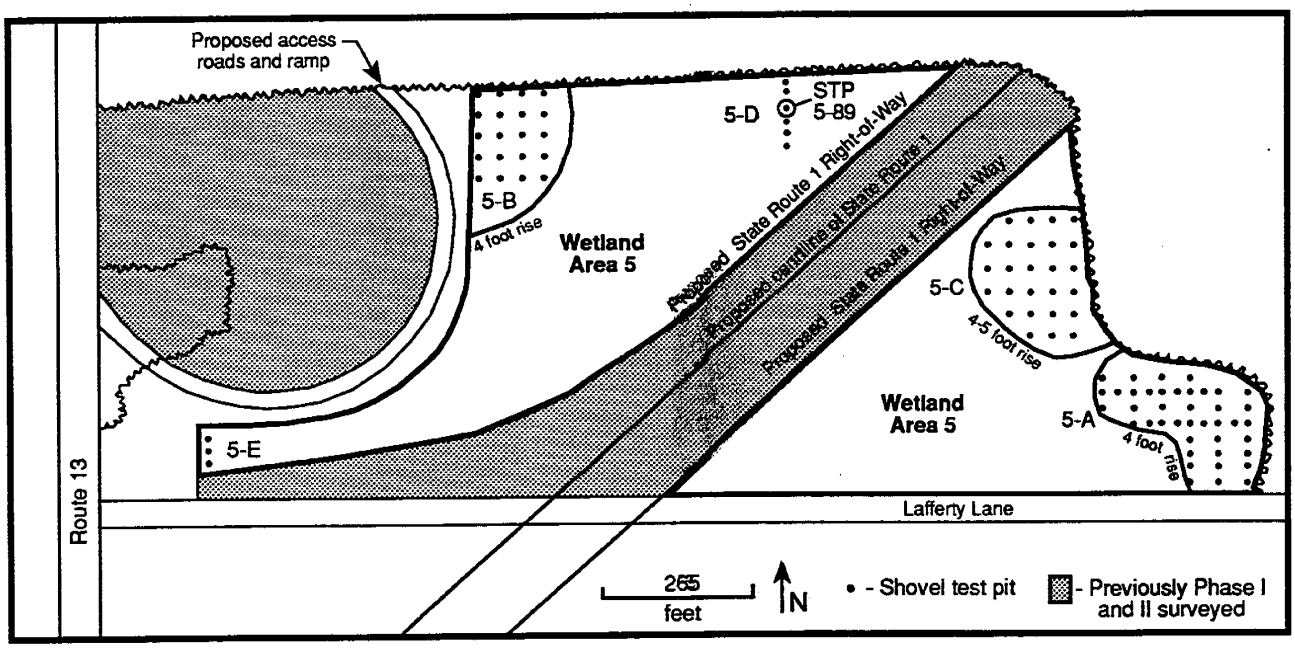
The final archaeological site identified north of Muddy Branch in Area 4E is 7K-C-409. This site is bounded on the west by Kent 88 and is located on a slight 4 foot sandy rise north of the densely wooded floodplain of Muddy Branch (Figures 35 and 43). Prehistoric artifacts were located in four of 55 total shovel tests (Figure 58). These artifacts consisted of two chert flakes, one fire-cracked rock fragment, one quartz flake, one jasper flake, and two chalcedony flakes. Shovel tests were excavated at 20 foot and 40 foot intervals along the entire rise, but no other prehistoric artifacts were recovered. All artifacts came from the plow zone and no cultural features were identified. In addition, no diagnostic prehistoric artifacts were recovered and the site does not warrant Phase II testing.

Conclusions and Recommendations

A total of nine archaeological sites were located in Wetland Area 4. Although this property will not be impacted by present design plans, seven sites were determined to warrant Phase II testing if

FIGURE 59

Location of all Phase I Tests in Area 5



impacted by future construction. Two of these seven sites, 7K-C-400 and 7K-C-394, are historical sites. One site, 7K-C-398, is a multi-component site consisting of the adjacent remains of a mid- to late eighteenth century farm and an earlier prehistoric occupation. The remaining four sites warranting future Phase II testing are prehistoric sites: 7K-C-393, 7K-C-397, 7K-C-399, and 7K-C-396.

AREA 5, LAFFERTY LANE

Area 5 is located southeast of Dover along the north side of Lafferty Lane (Figures 1 and 59, Plate 11). Area 5 is a large moderately- to poorly-drained fallow field bisected by the proposed State Route 1 right-of-way. The field is comprised predominantly of Sassafras sandy loam with large pockets of poorly-drained Fallsington soils. Elevations range from 20 to 30 feet above sea level. The highest elevations in the area correspond to slight 4' to 6' sandy rises along the edges of the poorly-drained Fallsington soils.

Area 5 was initially pedestrian surveyed in 1987 as part of the Phase I survey of the proposed State Route 1 corridor. The field was planted in soybean and surface visibility was good with approximately 20% of the ground visible. Four archaeological sites; three prehistoric, and one historical, were located

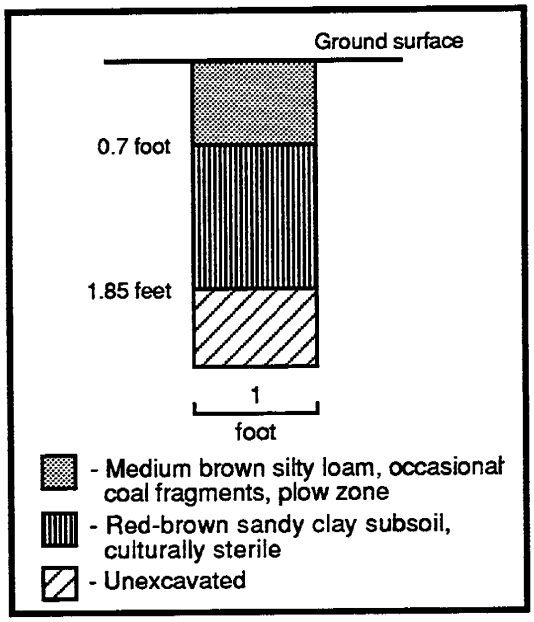
PLATE 11

Aerial View of Area 5 (Lafferty Lane), November 1990

(Bachman, Grettler, and Custer 1988). All four sites were determined not eligible for listing on the National Register of Historic Places.

FIGURE 60

Typical Soil Profile in Area 5 (STP 5-89)



The Phase I survey of the proposed borrow pit and wetland replacement portion of Area 5 tested five additional potential site locations. The location of these five sub-areas; 5-A to 5-E, is shown in Figure 59. A total of 96 shovel tests were excavated at 20' and 40' intervals at these locations.

No historical or prehistoric sites were located by these tests in Area 5. Testing was concentrated on three slight 4' sandy rises: 5-A (41 STPs), 5-B (20 STPs), and 5-C (26 STPs). Two other small rises, 5-D and 5-E, were tested by six and three shovel test pits respectively (Figure 59).

Historical artifacts, predominantly coal, were recovered from the majority of the shovel tests excavated. Whitewares and amber and clear bottle glass fragments were also common historical artifacts recovered. Consistently low artifact densities of one to two artifacts per shovel test were recovered in all subareas. These artifacts are the result of simple field scatter and no evidence of any historical site was identified. In addition, no artifacts were recovered from the consistent red-brown sandy clay subsoil of Area 5. The plow zone in Area 5 varied between 0.7' and 0.8' thick. The stratigraphy of Area 5 varied little over the entire parcel and a typical profile is shown in Figure 60.

Conclusions and Recommendations

No historical or prehistoric sites were located in Area 5. All of the previously located sites in the adjacent proposed right-of-way of the State Route 1 corridor have been determined not eligible for listing on the National Register of Historic Places. Thus, no further work is recommended in Area 5.