8.0 Phase II Results

8.0 PHASE II RESULTS

In December 2005 and January 2006, A.D. Marble & Company of Conshohocken, Pennsylvania, conducted a Phase II archaeological investigation of 7NC-E-175. The Phase II investigation consisted of the excavation of 16, one-meter-square units across the site (Figure 15). A summary of these test units can be found in Table 1. These units produced a total of 43 prehistoric artifacts. Historic artifacts, primarily coal/coal ash/slag and very small brick fragments, were also recovered from the upper horizons. A complete catalog of artifacts can be found in Appendix E. Phase II testing identified no prehistoric features. No historic features were encountered, save for plow scars, which were observed in several units.

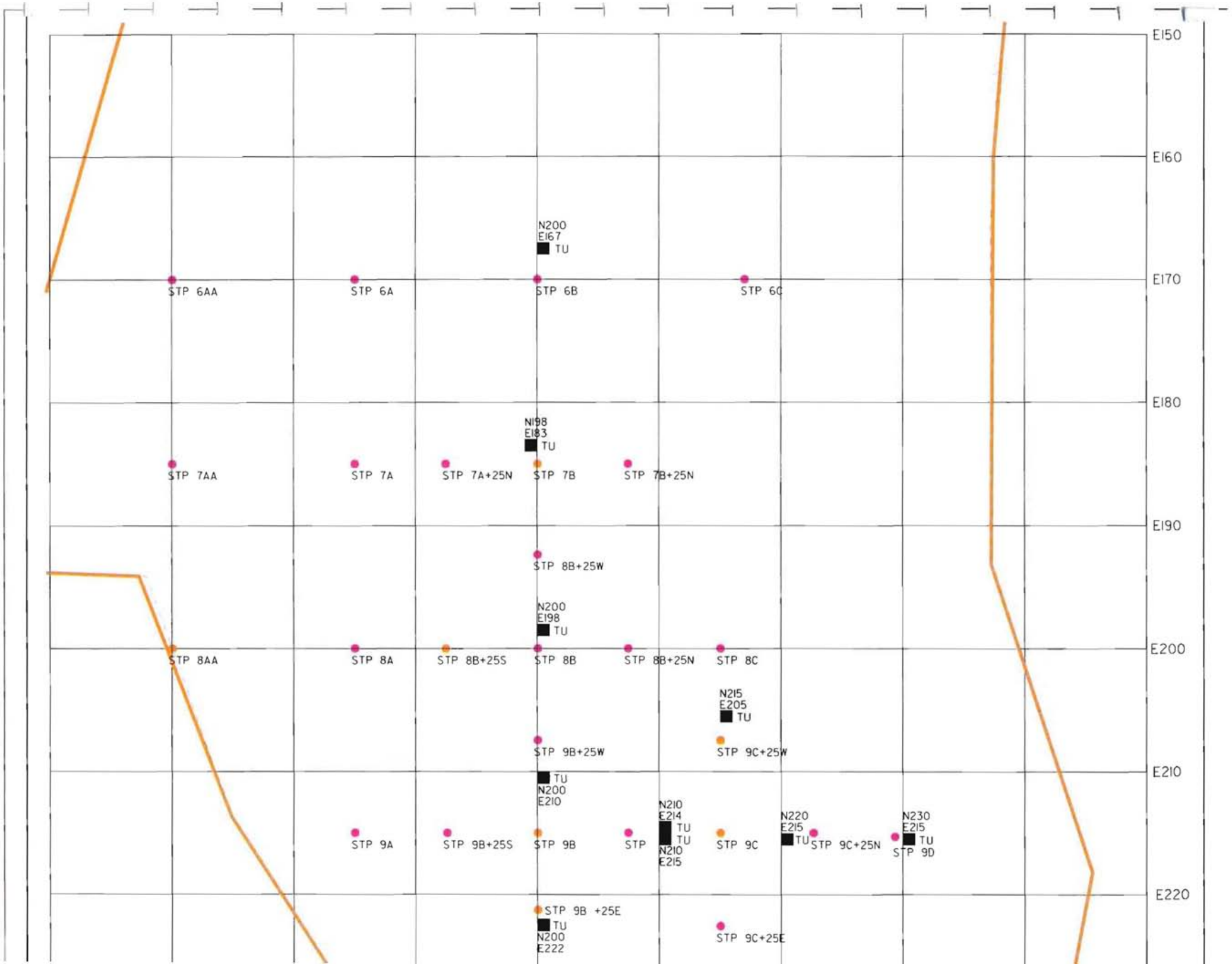
Table 1: Summary of Phase II Test Units.

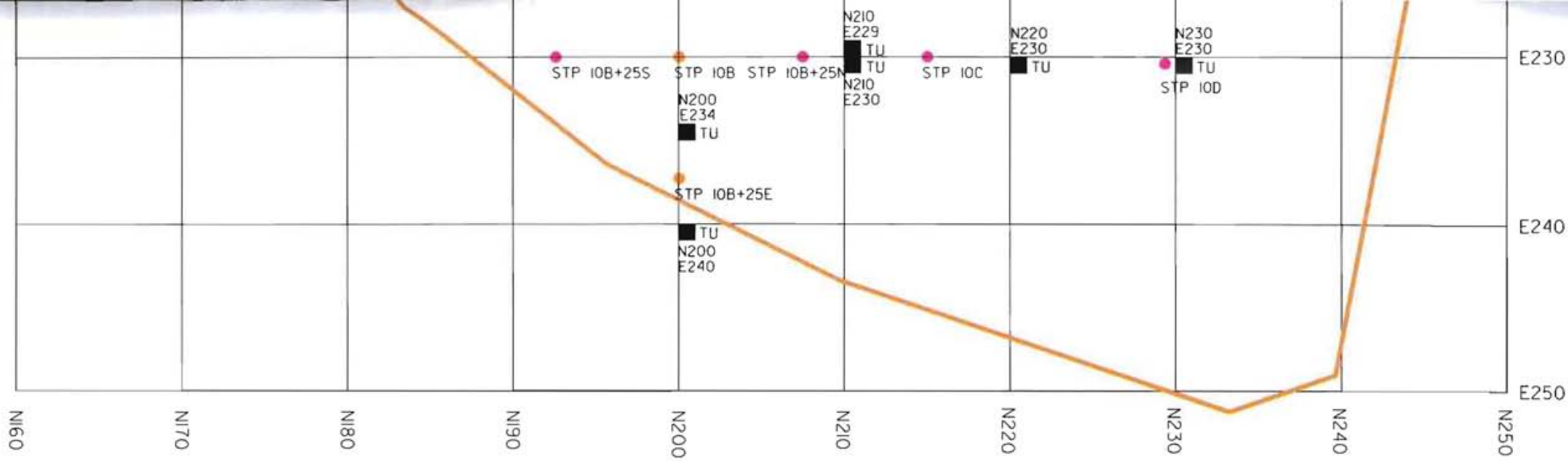
TU Designation	Prehistoric artifacts in O & A horizons	Prehistoric artifacts in B horizons
N200/E167	0	0
N199/E183	(1)	0
N200/E198	3	0
N200/E210	1	0
N200/E222	0	1
N200/E234	0	0
N200/E240	0	0
N215/E205	2	0
N210/E214	4	1
N210/E215	4	5*
N220/E215	1	0
N230/E215	1	0
N210/E229	5	5
N210/E230	2	3
N220/E230	3	0
N230/E230	(1)	0

*Note: Includes two artifacts from the Ab/B interface. Also, items in parentheses are possible artifacts.

8.1 Site Stratigraphy

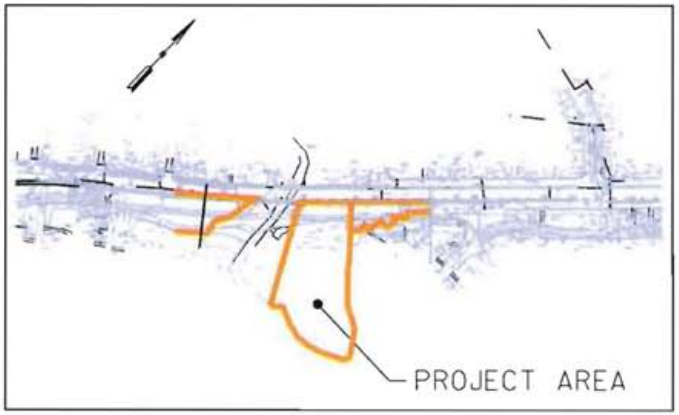
Phase II excavations revealed differing stratigraphic conditions in three portions of the site. These differences were primarily manifested within the upper, or historic, horizons, and indicated differences in land use. Consistent with the Phase I findings in the western portion of the site, Phase II testing identified some degree of disturbance within the upper horizons. Again, this portion of the site consisted of a manicured grove of purposefully planted pine trees and


E150
E160
E170
E180
E190
E200
E210
E220
N200
E167
TU
STP 6AA
STP 6A
STP 6B
STP 6C
N198
E183
TU
STP 7AA
STP 7A
STP 7A+25N
STP 7B
STP 7B+25N
STP 8B+25W
N200
E198
TU
STP 8AA
STP 8A
STP 8B+25S
STP 8B
STP 8B+25N
STP 8C
N215
E205
TU
STP 9B+25W
STP 9C+25W
TU
N200
E210
N210
E214
TU
TU
N210
E215
N220
E215
TU
N230
E215
TU
STP 9A
STP 9B+25S
STP 9B
STP
STP 9C
STP 9C+25N
STP 9D
STP 9B +25E
TU
N200
E222
STP 9C+25E



LEGEND

- ■ PHASE II 1m2 TEST UNIT
- ● STP PHASE I WITH PREHISTORIC
- ● STP PHASE I WITHOUT PREHISTORIC



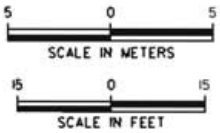


Figure 15

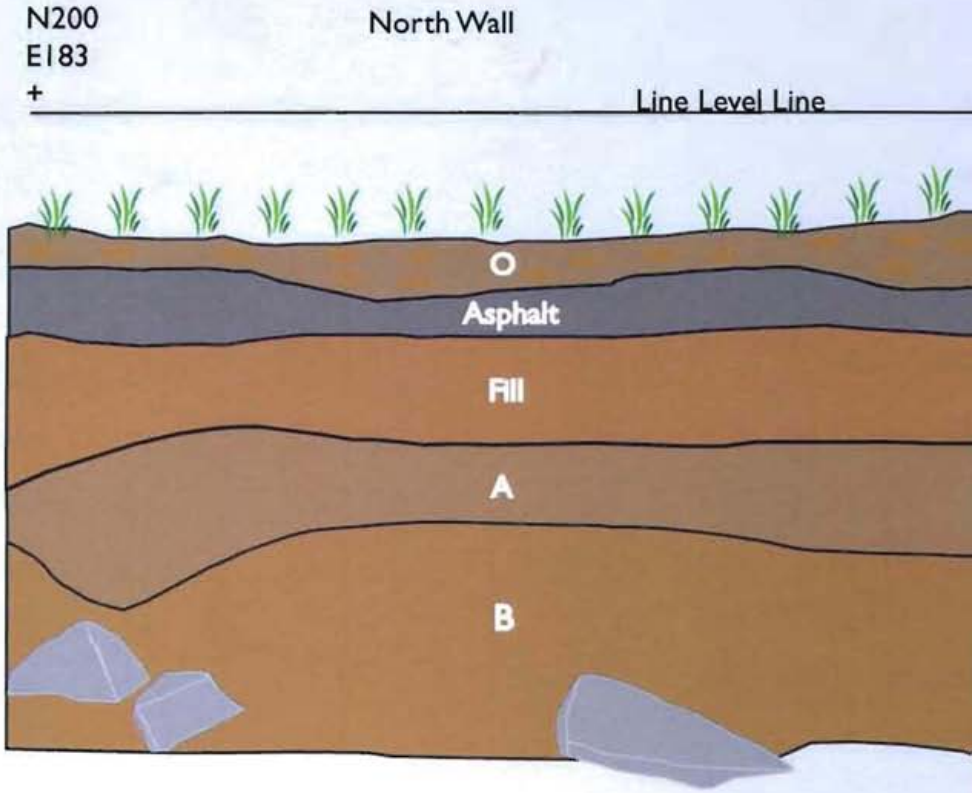
PHASE II BASE MAP
SR 141 ROADWAY IMPROVEMENTS

other tree species. This area apparently served as a backyard for the dwelling that once stood near SR 141.

In TU N200 E167, the westernmost Phase II unit, the soil profile consisted of a fairly straightforward profile of an O-horizon, overlying a plowzone (Ap), and then subsoil (B). However, the plowzone exhibited patches of subsoil within in it. Also, several deeper troughs of plowzone were identified at the Ab/B interface. These troughs were wider and deeper than plow scars, and appeared more like tire ruts. The next unit to the east (TU N199 E183) also displayed some degree of disturbance (Figure 16). Beneath the O-horizon, the degraded remains of a macadam driveway were encountered, no doubt a residual feature related to the dwelling that stood to the west along Route 141. This degraded macadam was found overlying a layer of compacted silt loam and rock fill, which capped a compressed and truncated Ap-horizon. Like the unit to the west, rut-like depressions were observed at the Ap/B interface.

Beyond the tree grove, the site was covered by an overgrown, scrubby forest with dense underbrush that included Virginia creeper and multiflora rose (Photograph 9). The western portion of this overgrown forest displayed a soil profile that included a series of stacked, narrow A-horizons. The soils of TU N200 E198, depicted in Figure 17, were most emblematic of these conditions (Figure 17). As the profile from this unit shows, three subtly different A-horizons were present beneath a fairly thick O-horizon. The middle A-horizon (AC) contained fine sand, suggesting accretion of slopewash materials.[2] Interestingly, in TU N200 E198, artifacts were recovered from only the uppermost A-horizon (A1). These included a jasper point, a jasper flake, and a glass fragment. The first subsoil stratum beneath the A-horizons was a somewhat leached BE-horizon. An argillic horizon (Bt) followed. The next unit to the west, TU N200 E210, displayed a very similar, though slightly attenuated profile, as the three A-horizons were not quite as thick as they appeared in TU N198 E200. In TU N200 E210, the A-horizons all produced historic items, primarily coal, all the way to the A2/E interface. Also, this unit revealed a true E-horizon, which appeared above the argillic Bt-horizon subsoil.

[2] This location is a low upland and is situated three meters above the stream level. Hence, it is highly unlikely that the AC-horizon represents flood-deposited sediments.



O = 10YR 5/3 Brown silt lo
yellowish brown silt loam

Asphalt

Fill = 7.5YR 5/6 Strong bro
10YR 5/6 yellowish brown
with angular rocks

A = 10YR 5/4 Yellowish bro

B = 10YR 5/6 Yellowish bro

Key

mottles

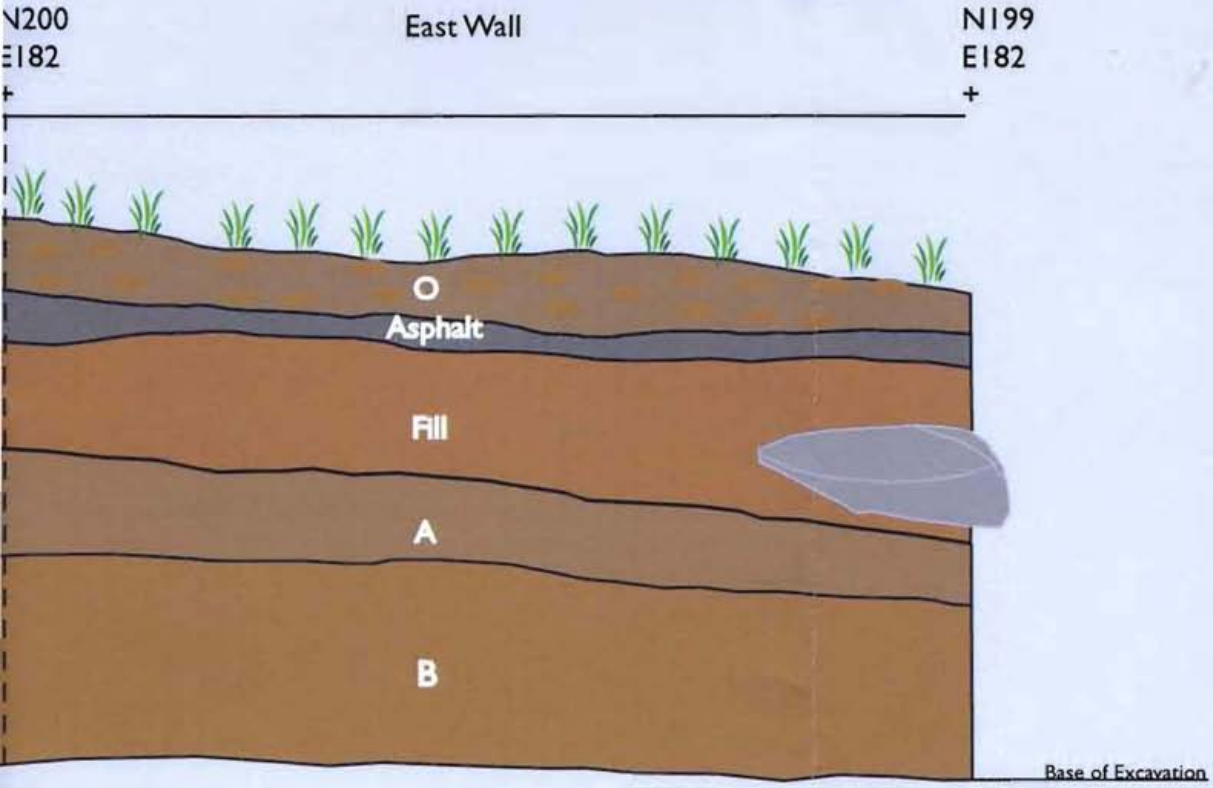
non-cultural rock

20 10 0 20

Scale 1inch = 20 centimeters

Map Document: X:\Graphics\Projects\P-732\Mapping\Phase3\TU\N199E183Profile.ai

Combined Archaeological Report
Phase IB Survey of Parcels 1-8 and Phase II Investigation of Site 7NC-E-175
SR 141 Centre Road Corridor Improvements



m mottled with 10YR 5/6

n slightly mottled with
ghtly sandy silt loam

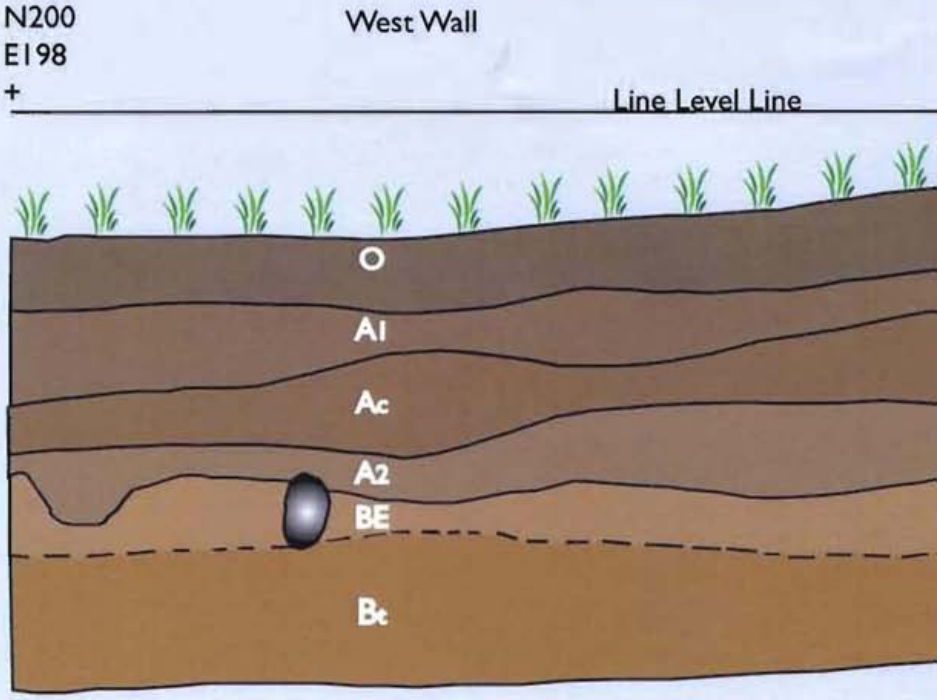
n slightly sandy silt loam

n clay silt loam

Figure 16
Test Unit N199 E183 West and North Wall Profiles
SR 141 Centre Road Corridor Improvements
Elsmere, New Castle County, Delaware

Source: Phase II Test Unit Profiles

Photograph 9: Parcel 4, 7NC-E-175, Phase II test area in the vicinity of TU N210/E215, view north (December 2005).



O = 10YR 3/2 Very dark gr

A1 = 10YR 4/3 Brown san

Ac = 10YR 4/3 Brown to 4
sandy silt loam

A2 = 10YR 5/3 Brown silt

BE = 10YR 6/4 Light yellov
yellowish brown clay silt (r

Bt = 10YR 5/6 Yellowish br

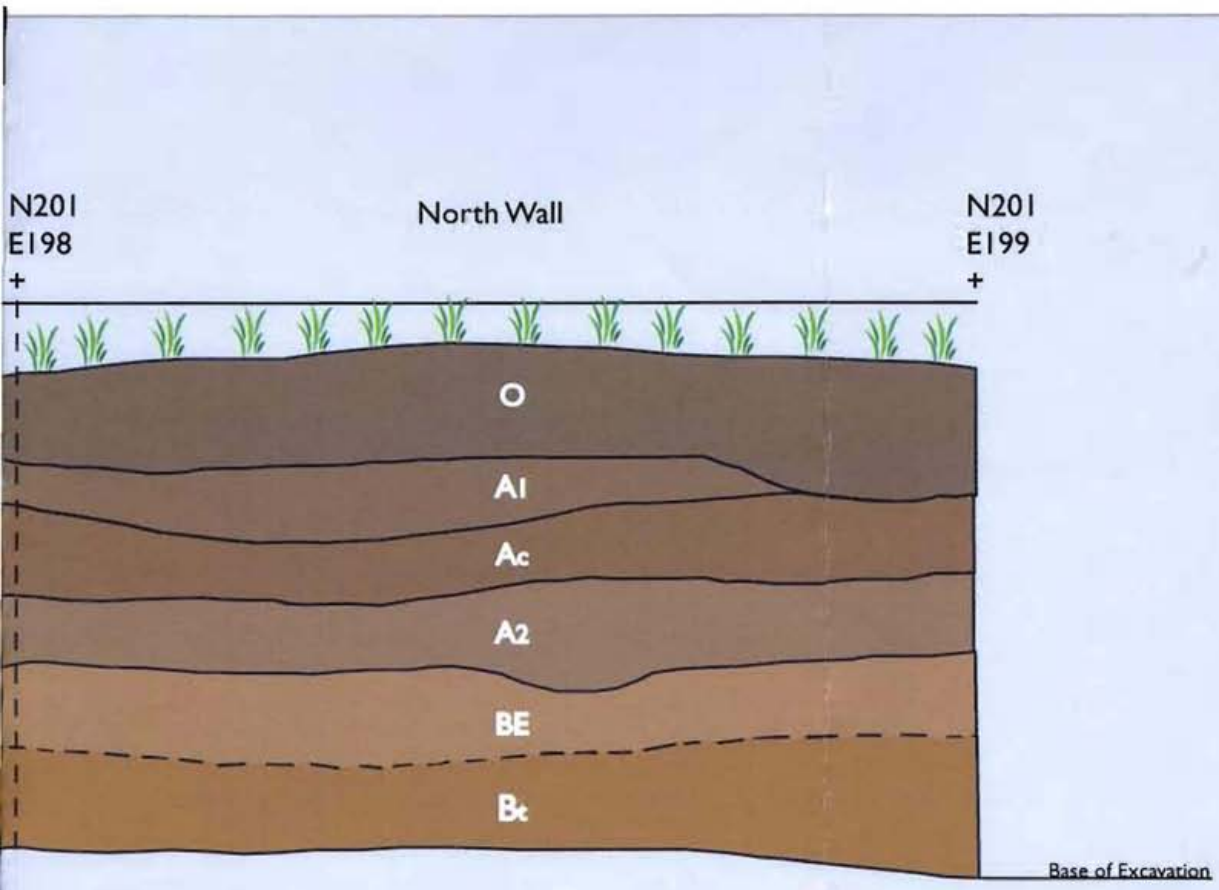
Key

Root Disturbance

20 10 0 20

Scale 1inch = 20 centimeters

Map Document: X:\Graphics\Projects\P-732\Mapping\PhaseIII\TU\N200E198Profile.ai



yish brown silt loam

y silt loam

4 dark yellowish brown

oam

sh brown to 10YR 5/6
x)

wn clay silt

Figure 17
Test Unit N200 E198 West and North Wall Profiles
SR 141 Centre Road Corridor Improvements
Elsmere, New Castle County, Delaware

Source: Phase II Test Unit Profiles

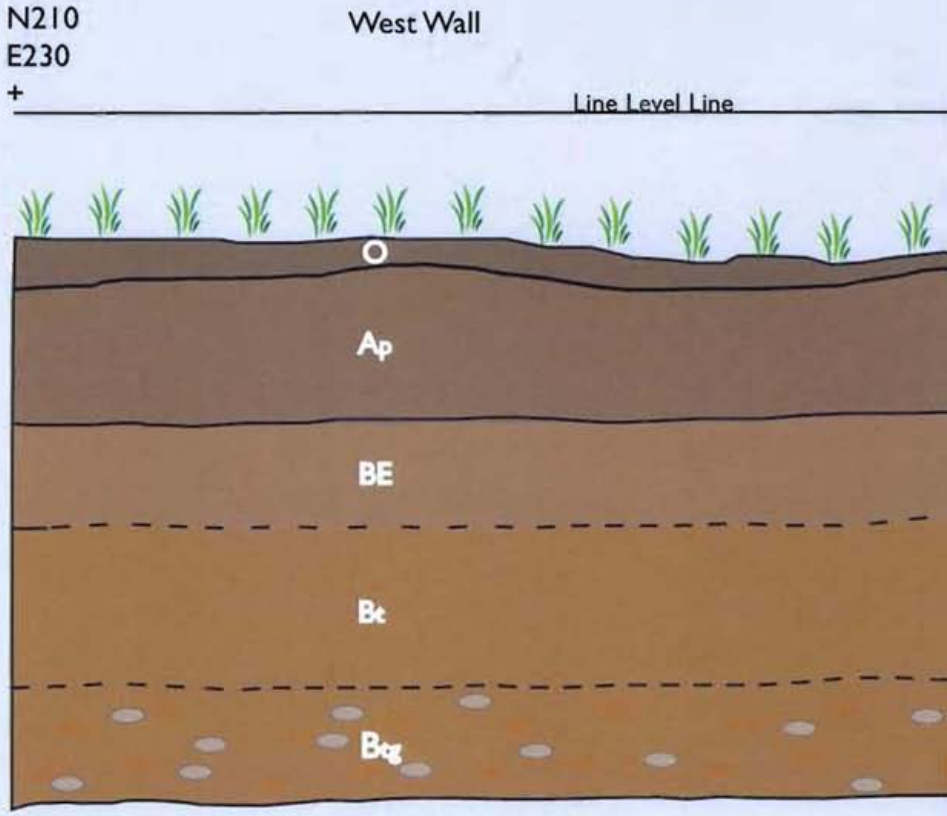
The profiles suggest that the area had either not been plowed or had been plowed a long time ago prior to the use of modern moldboard implements, perhaps during the very early Euro-American occupation of the area. Some accumulation of colluvium was also evident. Together, this data suggests that the area in the vicinity of N200 E198 and N200 E210 was not cultivated in late historic or modern times and perhaps served as a treeline.

Units to the east and northeast, however, clearly show evidence of cultivation. The soil profile east of the E210 line was that typical of an abandoned agricultural field. The profile of TU N210 E230 is illustrative of the typical plow zone over subsoil stratigraphy encountered in a farm area (Figure 18). Beneath the thin O-horizon, a classic plowzone (Ap), complete with plow scars, is visible at the Ap/B interface. The plowzone was not very thick, which seemed to suggest pre-modern plowing. In virtually all the units west of the E210 line, low densities of historic artifacts, which consisted mostly of coal/coal ash, were found in the Ap-horizon. Additionally, prehistoric artifacts, mainly quartz and jasper debitage, were also found in the Ap-horizon. Subsoil beneath the plowzone in TU N210 E230 consists of a BE-horizon overlying a Bt-horizon, and finally a somewhat gleyed Btg-horizon at the base of the unit. Precontact artifacts were found in low numbers in the subsoil, though almost exclusively in the uppermost subsoil horizon (BE). In total, 15 prehistoric artifacts were recovered from the subsoil.[3] This accounts for 37.5 percent of the total artifact count

8.2 Features

The Phase II investigation of 7NC-E-175 identified no prehistoric cultural features. Also, no purposefully-created historic features (i.e., post holes, trash middens, etc.) were found within the Phase II test area. Plow scars were observed at the Ap/BE interface in several units in the eastern portion of the site. These included TUs N215/E205, N200/E222, N210/E214, N210/E215, N210/E230, and N220/E230. These scars were shallow and displayed a consistent concave profile. Scars typically measured 1 to 2 cm deep and 10 to 15 cm in width. Natural features were also observed. These included root stains, which were seen in virtually every test unit. Unit N220/E215 also contained a burned tree root stain, which extended at least 80 cm below the top of the BE-horizon. Excavated separately from the surrounding subsoil, this stain contained no

[3] This includes two quartz artifacts found at the Ap/BE interface in TU N210/E215.



Key

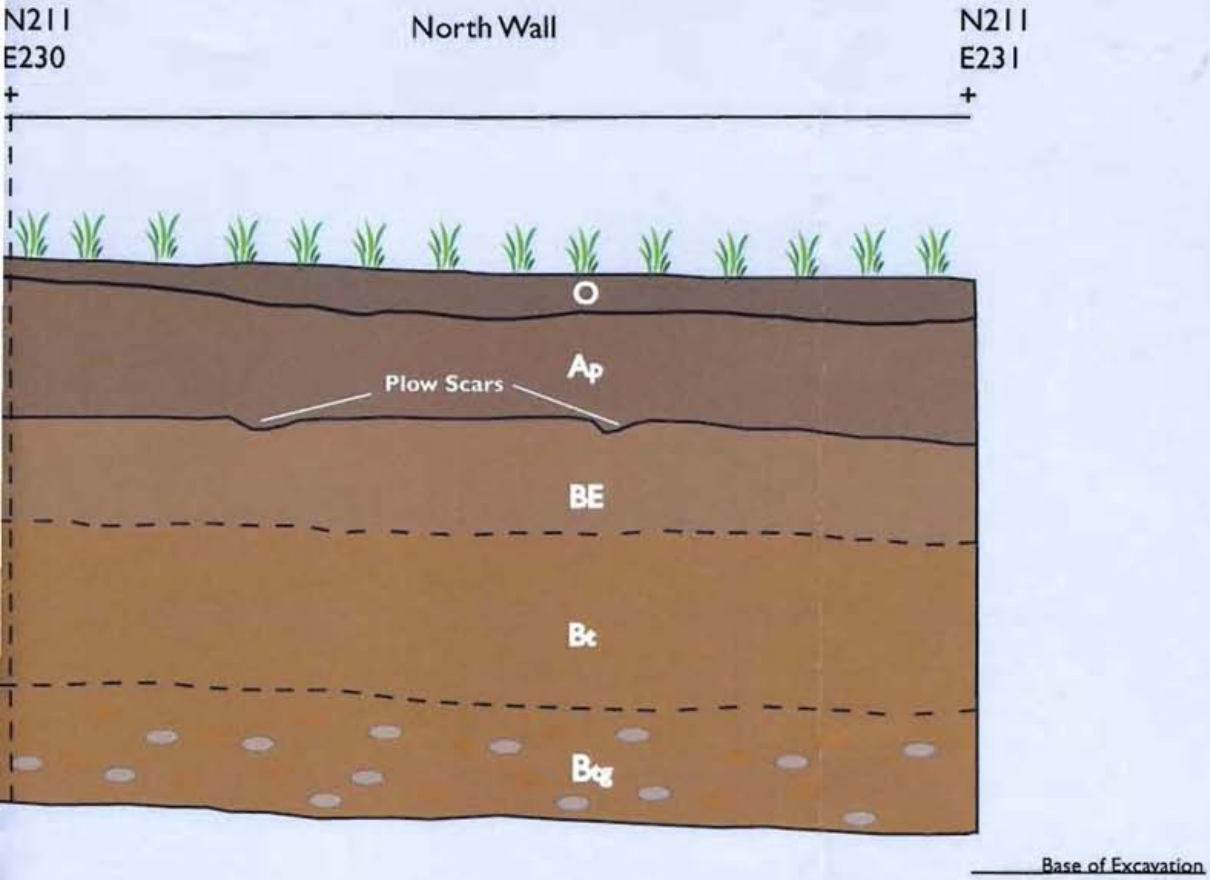
Mottles

20 10 0 20

Scale 1 inch = 20 centimeters

Map Document: X:\Graphics\Projects\P-722\Mapping\Phase II\TUN210E230Profile.ai

Combined Archaeological Report
Phase IB Survey of Parcels 1-8 and Phase II Investigation of Site 7NC-E-175
SR 141 Centre Road Corridor Improvements



O = 10YR 3/2 Very dark grayish brown silt loam with roots and organic matter

Ap = 10YR 4/3 Brown to 5/3 brown silt loam

BE = 10YR 5/4 Yellowish brown to 10YR 5/6 yellowish brown clay silt

Bt = 10YR 5/6 Yellowish brown silty clay

Btg = 10YR 5/6 Yellowish brown with mottles of 7.5YR 5/8 strong brown and 10YR 7/1 compacted silty clay

Figure 18
Test Unit N210 E230 West and North Wall Profiles
7NC-E-175
SR 141 Centre Road Corridor Improvements
Elsmere, New Castle County, Delaware

Source: Phase II Test Unit Profiles

artifacts. Other natural features included small rodent runs. Additionally, two very large groundhog holes were found during the Phase II in the vicinity of TU N220 E215.

8.3 Discussion of Phase II Historic Findings

A total of 142 historic/modern artifacts were recovered during the Phase II testing of Site 7NC-E-175. These are listed below in Table 2. The historic artifact collection is most likely attributable to refuse dumping associated with the occupation of the dwelling(s) that stood near Route 141. Consistent with the Phase I findings, the historic/modern artifacts recovered from the Phase II investigation appear to span the period between mid- to late-nineteenth century through the twentieth century. While few firmly dateable artifacts were recovered, a nineteenth-century component is inferred by the presence of redware, light olive bottle glass, and to some extent, cut nails. Twentieth-century items include an asbestos tile, plastic, machine-made bottle glass, and an aluminum can fragment.

Table 2: Historic Artifacts Recovered During the Phase II Investigation, 7NC-E-175.

Artifact Group	Artifact Type	Count	Comments
Architectural	Brick fragments	47	most fragments weigh 2 g
	Window glass	4	
	Asbestos tile	1	
	Nail/spike, cut	3	
	Nail, wire	3	
	Nail, indeterminate type	1	
	Staple	1	
	Asphalt	2	
Domestic	Bottle glass, amber	2	
	Bottle glass, colorless	8	
	Bottle glass, cobalt blue	1	
	Bottle glass, light olive	1	
	Can, aluminum	1	
	Plastic/cellophane	3	includes a plant marker
	Redware	5	four sherds are lead-glazed
	Porcelain	1	Undecorated
	Metal button	1	heavily corroded, non-ferrous
	Garden hose, rubber	2	
Heating	Coal/coal cinder/coal slag	49	
	Charcoal	1	
Misc.	Plexiglas fragment	1	
	Plastic	2	rigid, unidentified function
	Stone	2	painted green, could be architectural

In terms of historic artifact distribution, several patterns are discernable (Figure 19). Generally, units yielded an average of between nine and eleven historic/modern artifacts. Somewhat lower concentrations were observed on the southeastern portion of the site. A relative concentration of historic artifacts (n=22) was encountered in TU N220 E230. This unit produced 14 small brick fragment (weighing just over 15g in total), two cut nails, a piece of window glass, and five pieces of coal. While this was a relatively high historic artifact count for the site area, the artifact numbers from TU N220 E230 were still too low to suggest the remains of a demolished structure of some type within the APE.

8.4 Discussion of Prehistoric Findings

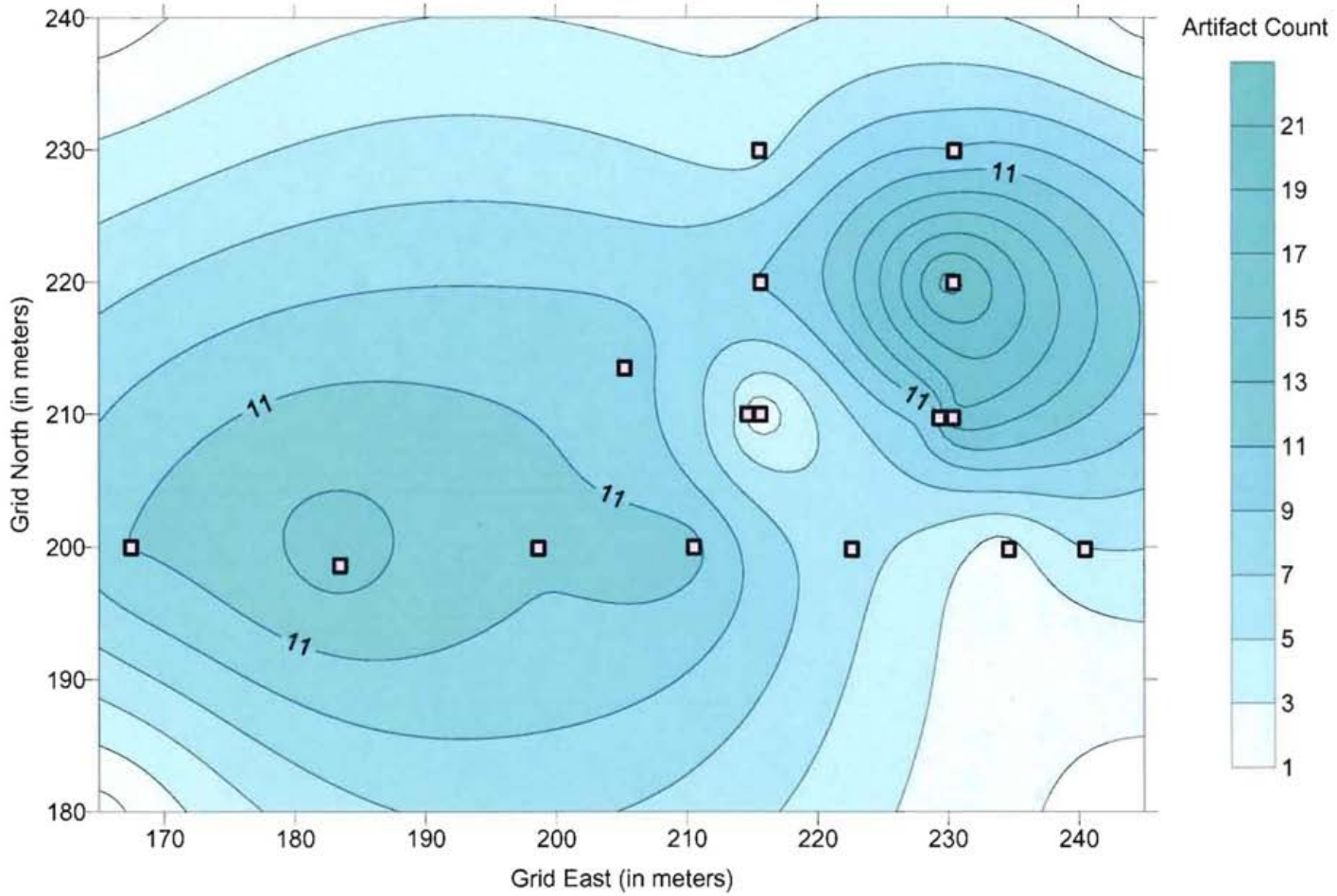
The Phase II investigation of 7NC-E-175 produced a total of 41 conclusive prehistoric artifacts and two items classified as possible prehistoric artifacts. Again, the Phase I survey of Parcel 4, which encompasses 7NC-E-175, produced eight conclusive prehistoric artifacts and four pieces classified as possible prehistoric artifacts. Hence, the combined Phase I and II investigations of the site yielded a total of 49 prehistoric artifacts and six possible artifacts. These items are listed below in Table 3. As Table 3 illustrates, the prehistoric assemblage from 7NC-E-175 was dominated by jasper and quartz debitage. Low numbers of flake tools were also recovered. Only one biface, one projectile point, and one fire-cracked rock (FCR) were recovered. No prehistoric pottery was found at the site. A detailed analysis of the recovered artifacts is presented in section 8.4.2.

Table 3: Total Prehistoric Artifacts, Phase I/II Investigations, 7NC-E-175.

		Material						
		Jasper	*Chert*	*Quartz*	*Quartzite*	*Indeterminate*	Count	Percentage
Artifact	*Debitage*	21	2	17(3)	1(1)	(1)	41(5)	83.6%
	Flake Tool	3	(1)	2	-	-	5 (1)	10.9%
	Biface	-	-	1	-	-	1	1.8%
	Point	1	-	-	-	-	1	1.8%
	FCR	-	-	-	1	-	1	1.8%
	Count	25	2 (1)	20 (3)	2 (1)	(1)	49 (6)	
	Percentage	45.5%	5.5%	41.8%	5.5%	1.8%		

Note: Items in parentheses denote possible artifacts.

Figure 19
Distribution of Historic/Modern Artifacts, All Horizons: Phase II, 7NC-E-175
SR 141 Centre Road Corridor Improvements
Elsmere, New Castle County, Delaware



8.4.1 Artifact Distribution

In terms of vertical distribution, artifacts were encountered in the upper, historic/modern horizons (Fill, O, A/Ap) and in the subsoil (predominately the upper subsoil layer formed by the BE-horizon). Table 4 lists the artifact counts by horizon. As this table shows, the majority of artifacts (73 percent) were from the historic/modern horizons, with the A/Ap-zone singularly producing the highest percentage. None of these upper horizons are interpreted to be intact, prehistoric surfaces. Rather, the upper layers were impacted by a variety of historic and modern activities, mostly plowing. Plowing would have truncated the uppermost prehistoric surface (which was likely an intact A-horizon prior to plowing). This would have deposited artifacts into the Ap-horizon. Subsequent erosion and plowing could have brought up more prehistoric artifacts from the underlying subsoil deposits.

Table 4: Artifact Counts by Horizon: Phase I/II Investigations, 7NC-E-175.

		Material						
		Jasper	*Chert*	*Quartz*	*Quartzite*	*Indeterminate*	Count	Percentage
Horizon	Surface	-	-	1	-	-	1	1.8%
	Fill	1		(1)	-	-	2	3.6%
	O	-	(1)	2 (1)	(1)	-	5	9.1%
	A/Ap	15	2	12 (1)	1	(1)	32	58.2%
	B*	9	-	5	1	-	15	27.3%

*Note: Includes two artifacts from the Ab/B interface. Also, items in parentheses denote possible artifacts.

Again, the BE-horizon yielded the most prehistoric artifacts of the subsoil deposits (n=11). Two were also found at the BE/Bt-interface and two were recovered from the Bt-horizon, exclusively. Interestingly, artifacts were found in the subsoil in the same relative proportions of raw material as they were in the historic/modern deposits. This suggests several possibilities. First, the artifact-yielding subsoil could represent a portion of the prehistoric site that was left intact after plowing. The BE-horizon may represent a portion of a heavily weathered, former A-horizon. The only temporally diagnostic artifact from the site is a jasper corner-notched point that appears to have a Woodland I vintage, suggesting that the site could be as old as 5,000 BP. This may have been a sufficient period of time for an A-horizon to become a mineralized BE-horizon. The second possibility is that the precontact artifacts migrated downward into the subsoil from an undisturbed A-horizon via bioturbation during prehistoric times. This A-horizon would have been obliterated by historic-era plowing. Since no historic artifacts were recovered from the

subsoil, bioturbation does not seem to have been a factor in placing artifacts into the subsoil during the historic/modern era. It is possible that both of these scenarios are correct.

An analysis of the horizontal distribution of precontact artifacts at 7NC-E-175 showed that the area around N210 E215 to N210 E230 was the densest part of the site (Figure 20). The four units in this area produced the highest artifacts counts of all the Phase II units. Artifact counts from these units area are as follows: N210 E229 (n=10), N210 E230 (n=5), N210 E214 (n=5) and N210 E215 (n=9) (Table 1). Beyond this area, artifact density dropped off quite rapidly, as Figure 20 indicates.

In terms of the horizontal distribution of prehistoric artifacts between the main stratigraphic units, the upper historic/modern horizons (O/A/Ap) versus the subsoil (BE/Bt), a very similar pattern is apparent (Figure 21). Again, artifact density is greatest in the area between N210 E215 and N210 E230. Prehistoric artifacts were found in the subsoil in the four units in this area, N210 E229, N210 E230, N210 E214 and N210 E215, as well as in TU N200 E222. One quartz flake was also found in the subsoil of Phase I STP 9C+25W. A test unit placed near this STP, TU N215 E205, produced no prehistoric artifacts from the subsoil.

When the distribution of quartz and jasper, by far the two most commonly represented lithic materials at the site, is plotted, several patters are evident (Figure 22). Two areas of jasper artifacts are evident. The first is of a very low density and is on the western portion of the Phase II test area. The second area is relatively denser and is centered around TU N210 E229 and N210 E230 in the eastern portion of the Phase II test area. An area that yielded quartz artifacts overlaps these two jasper areas (Figure 22). The center of this quartz concentration is in the area of TU N210 E215 and N210 E214. The relative concentrations around N210 E229-230 and TU N210 E214-215 appear to indicate that two separate activity areas, one in which jasper was being knapped and the other in which quartz items were used and flaked. Unfortunately, due to the lack of temporally diagnostic artifacts or dateable contexts, there is no way of telling when these events occurred.

Figure 20
Distribution of Prehistoric Artifacts, All Horizons: Phase I/II, 7NC-E-175
SR 141 Centre Road Corridor Improvements
Elsmere, New Castle County, Delaware

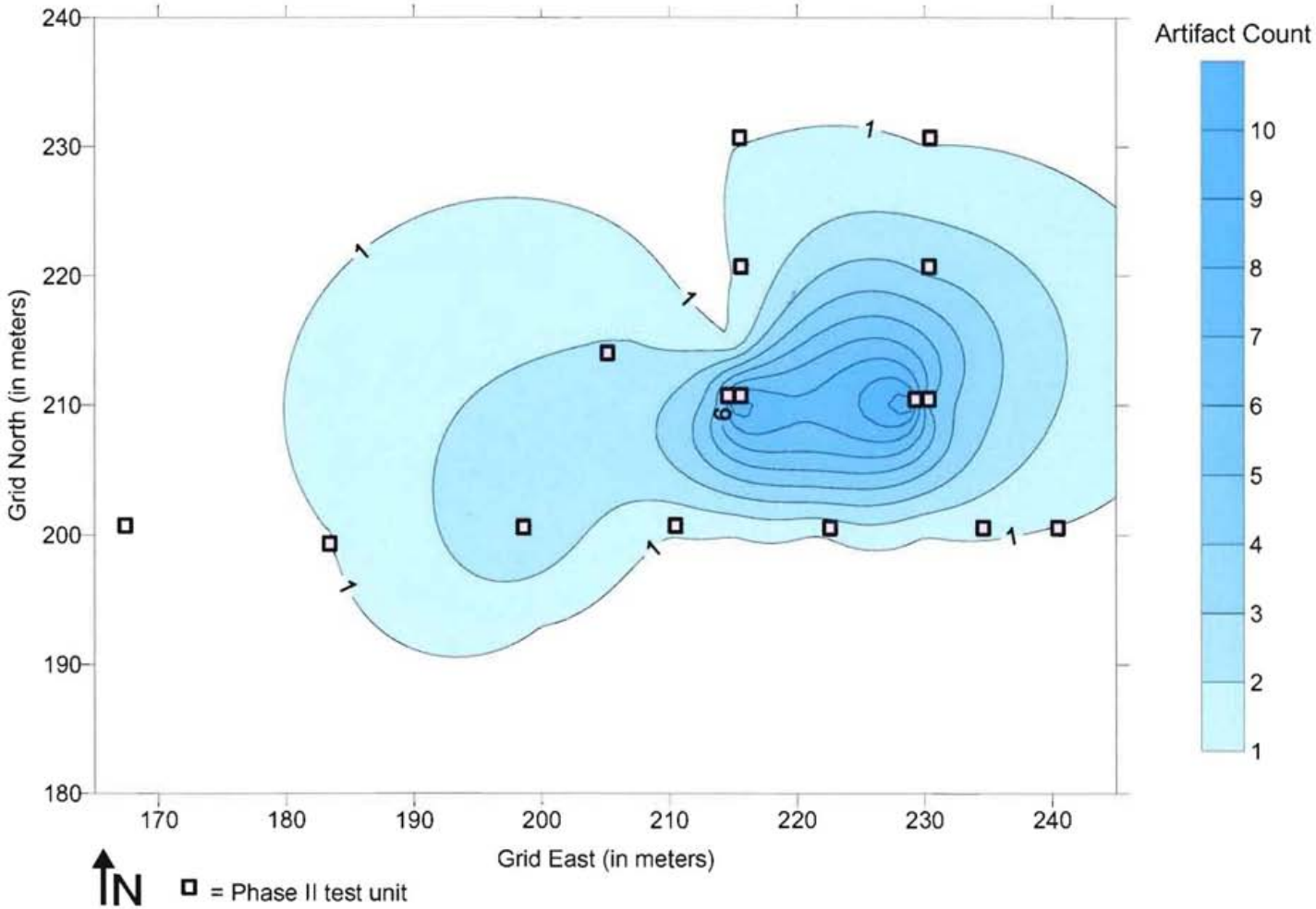
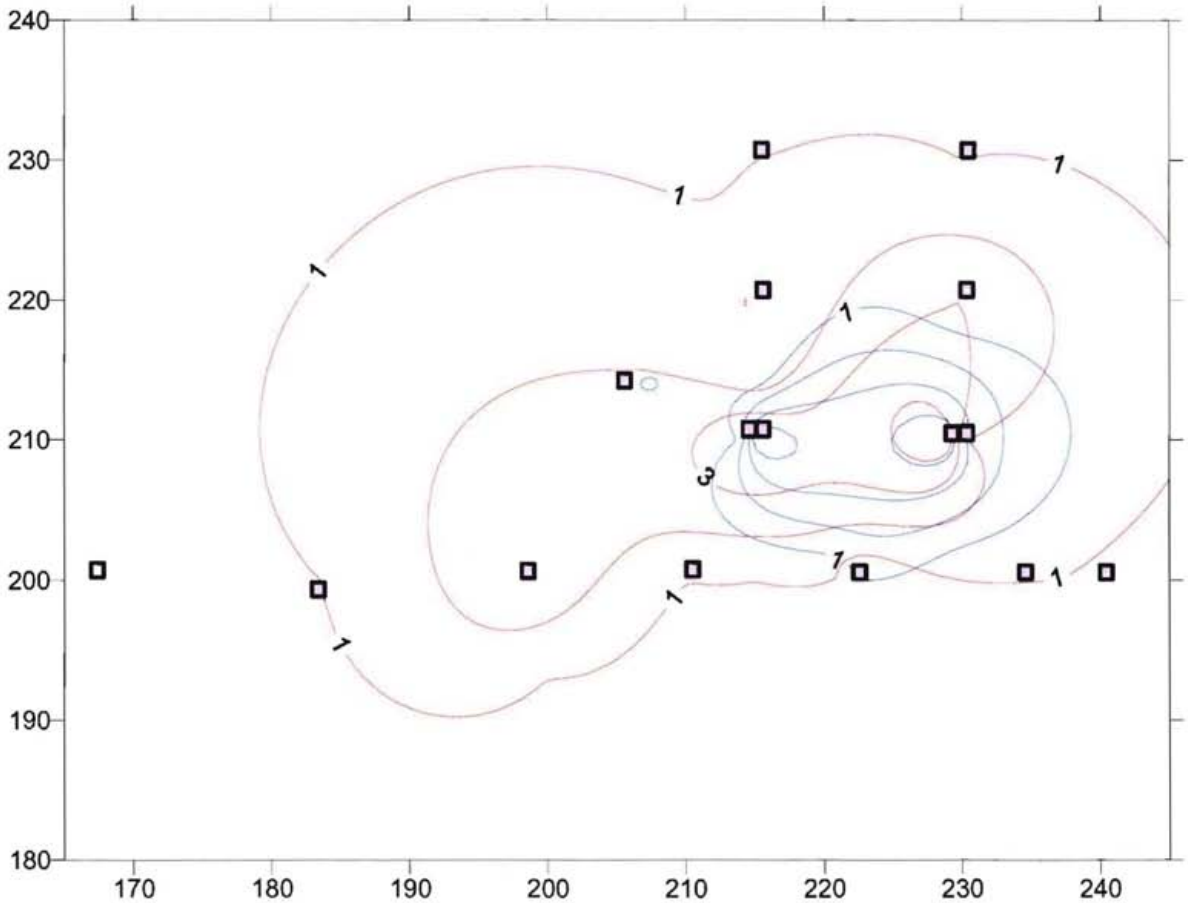


Figure 21
Comparison of Prehistoric Artifact Distribution in the O/A Horizons and B-horizons: Phase I/II, 7NC-E-175

SR 141 Centre Road Corridor Improvements
Elsmere, New Castle County, Delaware

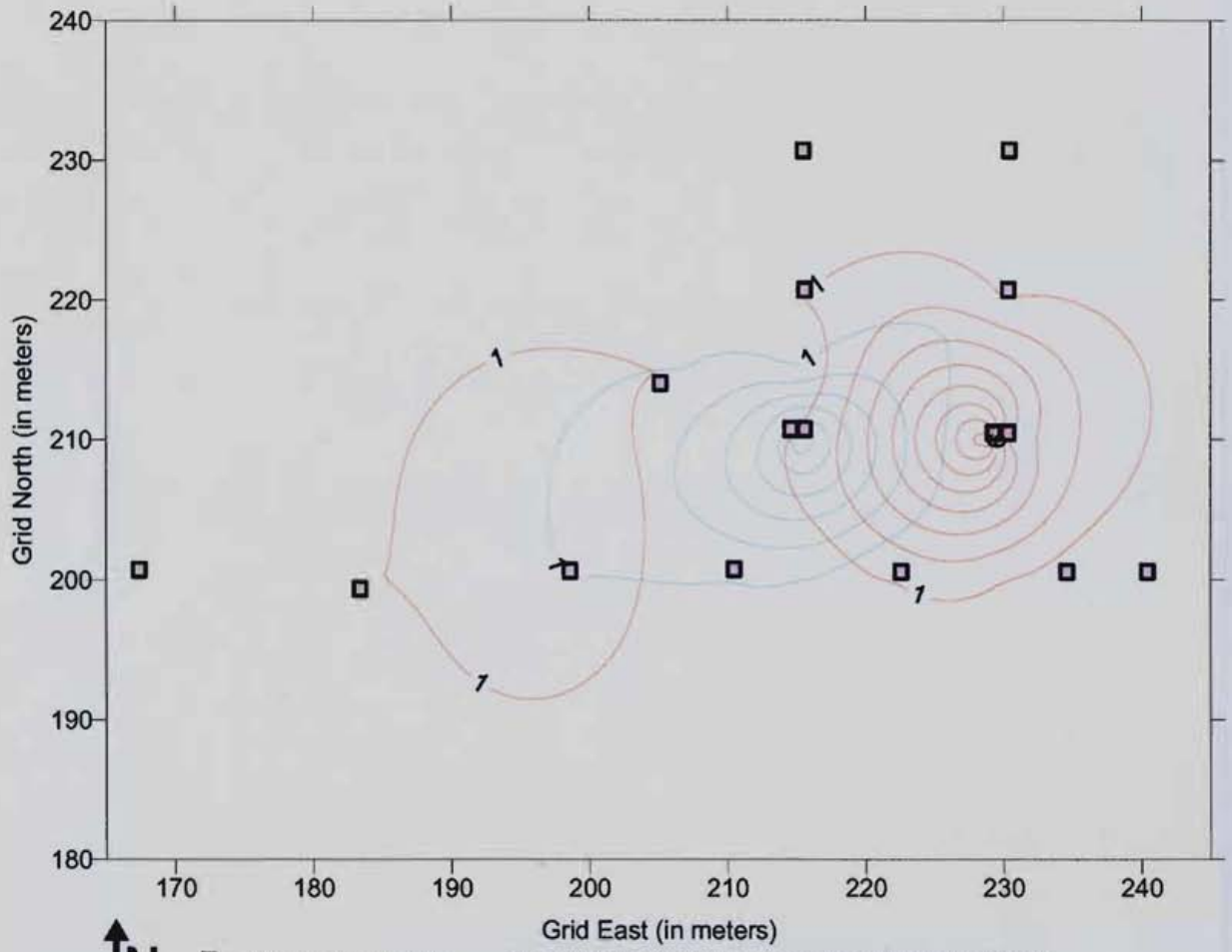


N

□ = Phase II test unit

Note: Red contour lines represent prehistoric artifacts found in the O and A horizons.
Blue contour lines represent prehistoric artifacts found in the B horizons.

Figure 22
Distribution of Quartz and Jasper Artifacts, All Horizons: Phase I/II, 7NC-E-175
SR 141 Centre Road Corridor Improvements
Elsmere, New Castle County, Delaware



Note: Orange contours represent jasper artifacts.
Blue contours represent quartz artifacts.
Contours are at one-artifact intervals.

8.4.2 Artifact Analysis

As stated earlier, the combined Phase I survey and Phase II investigation of 7NC-E-175 produced 49 prehistoric artifacts and six items classified as possible prehistoric artifacts (Appendix E). An analysis of the lithic materials represented among the artifacts demonstrated that jasper and quartz made up the two highest percentages of lithic materials from the site (Table 3). Together, jasper (45%) and quartz (42%) account for 87 percent of the total artifact assemblage. Chert (5%), quartzite (5%), and an indeterminate material (2%) account for the remaining artifacts. All of these materials are commonly found at prehistoric sites in the Piedmont/Fall Line and Upper Coastal Plain. These materials were all available in cobble deposits in the Coastal Plain. Furthermore, quartz was available in bedrock and cobble/float sources in Piedmont/Fall Line.

Jasper, as bedrock, also could have been procured from Iron Hill, located approximately 27 kilometers to the southwest of the site. Higher grade jasper from the Hardyston Formations along the Reading Prong north of the Piedmont in eastern Pennsylvania was available to prehistoric people throughout the Middle Atlantic. The Hardyston Formation is located approximately 130 kilometers north of the APE.

A detailed examination of the artifacts revealed that among the two dominant materials, jasper and quartz, both cobble and bedrock sources were exploited. Of the eight quartz artifacts with cortex, six displayed cobble cortex, while two displayed crystalline face cortex. The majority of the quartz artifacts did not display cortex, indicating that they were either late production stage items or were from bedrock sources. Among the jasper, eight artifacts displayed cortex. Of these six had cobble cortex, while two had blocky or nodular cortex indicative of a bedrock source. The latter two jasper artifacts appeared to be from Iron Hill jasper. A third jasper artifact was purple and fairly coarse grained, characteristics consistent with overly heat-treated, lower quality Iron Hill jasper. This material was been observed by one of the authors during data recovery excavations at the Brennan Site (7NC-D-61A) in 1989. This site, which was interpreted to be a quarry-related secondary reduction site, produced some Iron Hill jasper that was purple and relatively coarse grained (Watson and Riley 1994). Other jasper artifacts recovered from

7NC-E-175 was fine-grained, yellow-brown material that appears to be Hardyston jasper. This apparent Hardyston material displayed signs of heat treatment. In fact, 70 percent of the jasper form the site showed reddening consistent with heat treatment.

Therefore, based on the material types and sources, it is clear that the Native Americans who visited the site had access cobble deposits in the nearby Coastal Plain, which provided chert, jasper, quartz and quartzite. Again, the Coastal Plain begins approximately 2.0 kilometers south of the site. They also likely had direct access to the jasper at Iron Hill to the southwest. Just how they acquired Hardyston jasper cannot be said for certain. It is possible that they procured the material directly or obtained it via trade with groups to the north.

An examination of the physical attributes of the prehistoric artifacts from 7NC-E-175 was also revealing. An analysis of flake attributes indicated that both biface and core-derived objects were worked at the site. This is true for both the jasper and quartz artifacts. Evidence of the reduction of core-derived items is fairly limited to cobbles, though one jasper primary flake did have blocky/nodular cortex consistent with a bedrock-derived core. This piece also appeared to have possibly originated from the Iron Hill jasper deposits. Also, one quartz primary flake and a quartz chunk displayed a crystalline cortex, suggesting a bedrock source. The remaining core-derived pieces were obviously originated as cobbles or pebbles. Five of the jasper artifacts and six quartz artifacts displayed cobble cortex. Also, one chert flake and a quartzite chunk (possible artifact) also had cobble cortex. Still, the initial (primary) reduction of cobbles likely did not occur on site. This is inferred by the lack of high quantities of shatter, presence of actual cobble cores, and the low incidence of flakes with a high percentage of their dorsal surfaces covered by cobble cortex. What is more likely is that objects that were initially derived from cobbles were further reduced or reworked at the site. Interestingly, none of the cobble-derived flakes displayed a remnant biface edge and only one displayed signs of utilization. This item, a heavily weathered fragment of a jasper flake tool, showed signs of use-wear and had been heated and/or heat-treated.

Biface reduction also occurred at the site. A total of 18 artifacts showed evidence of either bifacially-derived, primarily later-stage reduction. Three of these items were actual bifaces: a

jasper corner-notched point from TU N198 E200 (Bag #108), a utilized middle-stage quartz biface fragment from TU N210 E214 (Bag#141), and a multi-purpose quartz flake tool made from an early-stage biface fragment from TU N210 E215 (Bag#147) (Photograph 10). This physical evidence for biface reduction among the flake population includes presence of remnant biface edges on or near the platform and a higher number of multi-directional dorsal flake scars. Remnant biface edges were observed on eight flakes (jasper n=4, quartz n=3, and quartzite n=1). The average dorsal flake scar count for the flakes determined to be bifacially-derived was five. It appears that secondary- and tertiary-stage biface reduction was performed at the site. This is consistent with later stage stone tool shaping and resharpening activities.

The site yielded a number of flaked stone tools that shed some light on other activities that were conducted there. Tools include a jasper corner-notched point with tang damage (Photograph 10). Again, this point was found in an upper historic layer in TU N198 E200. The point is similar to the Brewerton side-notched variety as described by Ritchie (1961). The point also bears some resemblance to fishtail and Lamoka varieties also described in Ritchie (1961). Similar points have been found in the Piedmont in Pennsylvania and northern Delaware (Custer 1996). Custer also noted that side-notched points were used throughout the Woodland I period in Delaware (1984:82). Given the available data, the point is likely from the Woodland I period, which extended from 3,000 BC to AD 1000. This point, which has been resharpened, provides evidence that hunting was occurring at the site. It is possible that the point was discarded after the tang was damaged. Also, the point may have been lost during hunting and the tang was later broken.

Other jasper tools include an end scraper found in the plowzone of TU N220 E215 (Photograph 10:Bag 109). This item also appears to have some side scraper wear as well. The scraper is an expedient tool made from a blocky flake fragment. The scraper was manufactured from heat-treated jasper that appears to be visually similar to Iron Hill material. Two other jasper tools were made from cobble-derived material. These include an expedient flake tool made from a secondary flake (TU N200 E198, A2, Bag #108), and a utilized cortical flake or heat spall (TU N220 E230, Ap, Bag #132). Both of these items show signs of fire reddening, possibly from heat treatment.

Photograph 10: Selected artifacts, Phase II, 7NC-E-175 (January 2006).

Other tools include the aforementioned utilized middle-stage quartz biface fragment from the Ap-horizon in TU N210 E214 (Photograph 10:Bag#141) and a multi-purpose quartz flake tool made from an early-stage biface fragment from the Ap/BE-interface in TU N210 E215 (Photograph 10:Bag#147). Both of these tools show multiple wear surfaces consistent with cutting and scraping, and the biface from TU N210 E215 also has possible spoke shave wear. The final quartz tool is a utilized quartz flake, which was also recovered from the Ap/BE-interface in TU N210 E215. Finally, a possible chert flake tool was recovered from the O-horizon in TU N199 E183 (Bag#112). This item has apparent bifacial flaking on one margin and unifacial flaking on other margin. However, it seems tumbled or water-worn and is very small, making positive identification difficult.

Together, these tools indicate that some degree of resource processing was occurring at the site. It is likely that this represents the processing of game resources procured during hunting. This could also include hide preparation (indicated by scraper wear) and tool maintenance (indicated by spoke shave wear).

8.4.2 Interpretations of Prehistoric Findings

The archaeological data collected during the Phase I and II investigations of Site 7NC-E-175 demonstrates that a variety of activities occurred at the site. These include the reduction of cobble- and bedrock-derived items. Primary cobble and bedrock reduction probably was not a main activity at the site, due to the absence of hammerstones and high percentages of shatter and primary flake. Rather, items such as cores, bifaces, and primary flakes, were further reduced at the site. Biface reduction appears to have been more of a prominent activity than core reduction.

Tool forms indicate that resource procurement focused on hunting was the primary activity at the site. The low upland on which the site is situated would have served as excellent dry and level ground to process game procured from the adjacent wetlands just to the south of the site and from the sloping hills north of the site. The wetlands around Little Mill Creek may have attracted a wide range of game species. Also, the creek would have served as a necessary source for water for the Native Americans who worked at the site. Although plant sources could have also been

collected here, no ground-stone tools, pottery or obvious plant processing tools were found at the site. This suggests that plant resource collection and processing was not a major focus at the site.

The absence of storage features, hearths, larges quantities of FCR, and pottery, and the overall very low density of prehistoric artifacts strongly suggest that 7NC-E-175 was not a habitation site, but rather served as a temporary procurement station. The site most likely served larger sites to the south along the Christina River and Churchman's Marsh. Several large sites interpreted to be base camps, such as the Clyde Farm Site (7NC-E-6), are located just south of the APE. It is also quite possible that the site served larger camps along the White Clay Creek to the north in the Piedmont.

Analysis of artifacts indicates that the Native Americans who visited the site utilized material from a variety of lithic sources, including Coastal Plain cobble resources, Iron Hill bedrock jasper, and Hardyston Formation bedrock jasper. This indicates varying degrees of mobility, and in the case of the Hardyston material, possible trade with groups to the north. As regards to mobility, it is possible that the Native Americans who visited 7NC-E-175 regularly occupied the nearby Coastal Plain. Again, the jasper and chert, and likely the quartz and quartzite cobble-derived artifacts, more than likely originated as cobbles from the nearby Coastal Plain. The presence of cobble-derived artifacts bolsters the argument that 7NC-E-175 served as a procurement station for nearby base campsites in the Coastal Plain.

As only one temporally-diagnostic artifact was recovered during the Phase I/II investigations, dating the site is problematic. As mentioned above, the jasper point found in TU N200 E198 indicates that Native Americans utilized the site during the Woodland I period, which spans a 4,000-year time span. Unfortunately, no dateable charcoal was recovered from a secure, cultural context (i.e., a feature). Also, no carbon was observed in the BE-horizon in the test units that produced the higher subsoil artifact numbers. Therefore, subtle artifact clusters, like the areas of relatively high quartz and jasper artifact finds near N210 E215 and N210 E230, cannot be dated. These clusters may represent near-contemporaneous events by the same group, or completely disassociated events that occurred thousands of years apart. Still, the range of lithic materials and the wide (albeit light) diffusion of artifacts across a broad portion of Parcel 4 suggest multiple

events. It is likely that the site was visited dozens, if not hundreds, of times over the course of the Native American inhabitation of the region. Also, the presence of 7NC-E-175 in a relatively rare preserved portion of northern New Castle County suggests that many more sites of a similar nature once dotted the lower reaches of the Piedmont/Fall Line area. Again, according to site file research, no prehistoric sites have yet to be identified within the Little Mill Creek drainage. This is certainly a factor of mid- to late-twentieth-century development, which has no doubt obscured or obliterated other similar sites that once existed within the nearby area. Similar small, short-term procurement sites were identified by Thunderbird Archaeological Associates north of the current APE. These include 7NC-B-7, Areas A and B (CRS #N-9568), which were interpreted as Piedmont Upland limited procurement sites from the Middle and Late Archaic periods (Barse 1983:57-58).