according to individual test units. Field notes for each test pit included thickness, color and textural characteristics of horizons encountered, and cultural materials recovered. If prehistoric cultural material was encountered, four shovel tests bracketing the original unit were excavated at a preferred standard distance of three meters from it. If these tests yielded additional material, a decision was made whether to implement Phase II investigations.

For reference purposes, shovel tests were grouped into transects, each transect receiving a letter designation and including a continuous sequence of shovel tests. Shovel tests were numbered with a sequence for each transect in ascending order from south to north. The locations of these transects are depicted in Figures 14, 41, 69, and 82, and additional details are provided in Table 3.

The aim of Phase II investigations was to define limits, integrity and stratigraphic context of archaeological sites warranting such study so that a determination of National Register Eligibility could be made. Field procedures included controlled surface collection or excavation of systematic shovel test grids to determine material concentrations. High density areas were then tested with measured excavation units to determine stratigraphic context and detect cultural features.

PHASE I AND II INVESTIGATIONS

To facilitate discussion of cultural resources identified by background research or Phase I field reconnaissance survey, the Project Area was divided into four segments: 1) from Summit

TABLE 3

ROUTE 896 - SHOVEL TEST PIT TRANSECTS, (SOUTH TO NORTH)

Segment	Transect	STP #'S	Total STP'S	Location	Test Interval
1	"P"	1-10	10	W of Rte. 896; SW of Lums Pond	30 M
1	"I"	1-10	10	E of Rte. 896; W of Lums Pond; S of Labrador Lane	20 M
1	"B"	1-13	13	E of Rte. 896; N of Labrador Lane	20 M
1	"C"	1-10,10.5, 12, (C-11 & 9.9 1X1 meter units)	12	E of Rte. 896; N and S of Howell School	20 M
1	"A"	1-9	9	W of Rte. 896; NW of Lums Pond	20 M
1	"N"	1-16	16	E of Rte. 896, S of Porter Road	20 M
2	"N"	17-26	10	E of Rte. 896; N of Porter Road	Var
2	"N"	27-44	18	E of Rte. 896; N of Porter Road	Var
2	"G"	1-30	30	W of Rte. 896	20 M
2	"F"	1-23	23	E of Rte. 896 (Bypass); South of Glasgow	20 M Dual Tr
2	"F"	24-45	22	E of Rte. 896 (Bypass); S of Rte. 40	30 M Dual Tr
2	"F"	46-62	17	E of Rte. 896 (Bypass); N of Rte. 40	20 M Dual Tr
2	"F"	63-75, 72.1, 72.2, 72.3 72.4	17	E of Rte. 896 (Bypass); N and S of Muddy Run	20 M
2	"F"	76-78	3	E of Rte. 896; N of of Muddy Run	20 M
3	"D"	1-18	18	E of Rte. 896	30 M

TABLE 3 (CONT)

ROUTE 896 - SHOVEL TEST PIT
TRANSECTS, (SOUTH TO NORTH)

SEG-MENT	TRAN-SECT	STP #'S	TOTAL STP'S	LOCATION	TEST INTERVAL
3	"E"	1-16, 16.1, 16.2, 16.3, 16.4	20	E of Rte. 896; S of 408 Junction	20 M
3	"M"	1-3,	3	W of Rte. 896; S of 408 Junction	20 M
3	"H"	1-11, 16-24, 24.1, 24.2, 24.3, 24.4	24	W of Rte. 896 & 408 Junction	20 M
3	"E"	17-2, 28.1, 28.2, 28.3, 28.4, 29.1 29.2,	19	E of Rte. 896; N of 408 Junction	20 M
3	"E"	30, 30.1, 31-49	21	E of Rte. 896; N of 408 Junction	20 M
3	"E"	50-56	7	E of Rte. 896; S of Old Baltimore Pike	30 M
3	"E"	57-76	20	E of Rte. 896; S of Old Baltimore Pike	20 M
3	"E"	77-81	5	E of Rte. 896; N of Old Baltimore Pike	20 M
3	"E"	82-87, 89-103	21	E of Rte. 896; E of Iron Hill	20 M
3	"K"	1-7	8	W of Rte. 896; S of Old Baltimore Pike	Var
3	"J"	1-7, 10-16, 8 and 9 1X1 meter units)	14	W of Rte. 896; Iron Hill	20M
4	"L"	1-6	6	E and W of Rte. 896; N of I-95	Var

Key

N - North
S - South
E - East
W - West

(N) - Total STP's for Transect
Var - variable interval
STP - shovel test pit

Bridge Approach to Porter Road; 2) from Porter Road to the Dupont Glasgow Plant 896 entrance (Glasgow Bypass); 3) from the Dupont Glasgow Plant 896 entrance to the I-95 Interchange; and 4) from the I-95 Interchange to the West Chestnut Hill Road Intersection (Figure 2).

Segment 1 - Background Research

There exits a high potential for the presence of prehistoric resources within this segment of the project area near the Porter Road and Howell Road intersections (Figure 4). These areas contain well-drained settings adjacent to small tributary streams which Custer (1986) and Custer and DeSantis(1986) predict often to be the location of micro-band base camps and procurement sites during the Archaic through Woodland II periods. Background research indicated that this section of Route 896 from Summit Bridge approach to Porter Road has remained within its present road bed since the early eighteenth century. This suggests that there exists a high potential for the location of historic sites dating to the late eighteenth through twentieth centuries. At the same time, this portion of the project corridor remains almost entirely agricultural and has not been subjected to recent development as have more northerly sections. The only substantial land alteration was the creation of Lums Pond, a nineteenth century impoundment.

Historic resources in the segment are primarily nineteenth century in age, relating to the agricultural enterprises which dominated this portion of the Project Area (Figure 9 and Table 4). Resources involving three prominent families in Pencader Hundred, the Bouldens, the Howells, and the Caziers, are noted

TABLE 4

ROUTE 896 CULTURAL RESOURCES IDENTIFIED
BY BACKGROUND RESEARCH IN SEGMENT 1

	Resource	CRS#	Comments
1)	Mount Vernon Place	N-3974	out of ROW; fire damage, 1970
2)	J. B. Cazier Tenancy #2	N-10611	in ROW; eligible to Nat'l R
3)	Clement House	N-7649	out of ROW
4)	Unnamed Preh. Site	N-3926	out of ROW
5)	Unnamed Preh. Site	N-3779	out of ROW
6)	Unnamed Preh. Site	N-3778	out of ROW
7)	Bellview Farm	N-3975	out of ROW
8)	School House #57	N-5014	out of ROW; fire damage, 1986
8a)	M. H. Parson House	*	out of ROW
9)	J. Boulden House	N-3976	out of ROW; fire damage, 1986
10)	C. Boulden House	N-3986	out of ROW
11)	M. Stanton House	*	out of ROW; fire damage, 1986

Key
* - No CRS number exists
Nat'l R - National Register

SEE FIGURE 9 FOR SITE LOCATIONS

for the segment. The J. Boulden (N-3976) and C. Boulden (N-3986) houses, for example, belonged to members of these families in the nineteenth century. Bellview Farm (N-3975) was built and owned by the Howell Family, and Mount Vernon Place (N-141) was one of two mansion homes belonging to Jacob B. Cazier in the late nineteenth and early twentieth centuries. Constructed in the 1859, Mount Vernon Place was the residence of wealthy gentleman

farmer Jacob. B. Cazier, and stood until the 1970's when it was destroyed by fire.

All of these historic resources lie outside of the Project right-of-way; however, the 1906 USGS Wilmington Quadrangle Topographic Map illustrates a structure adjoining the west side of Route 896 immediately north of the driveway entrance to Mount Vernon Place (Figure 10). This location is within or close to the proposed right-of-way. Aerial photos on file at the Soil Conservation Service, Glasgow office, from 1937 exhibit no evidence of this structure, suggesting its removal before this time. This structure was included in Cazier's Mt. Vernon Place Farm and would presumably have functioned as a tenant or service facility.

Other historic resources close to but outside the proposed right-of-way include School House #57 (N-5014), situated north of the junction of Route 896 and Howell School Road. During the mid-1800's School House #57 was located in another structure on the north side of Howell School Road, further to the east (Figure 11). Constructed at approximately the turn of the century, this structure is illustrated on the above noted 1906 USGS Topographic Map. The property was altered by building campaigns during its use as a residence and suffered fire damage in 1986. The structure lies outside the ROW limits on the east side of Route 896.

One other resource, the M. Stanton House/Farmstead lies west of Route 896 at the northern limit of the segment (Table 4). Depicted on Rea and Price (1849) (Figure 11), Beers (1868) (Figure 12), Baist (1893) (Figure 13), and the 1906 Topographic

Map, it is unusual for its situation so close to Route 896, but lies outside the Project ROW limits.

Segment 1 - Survey Results (Figure 14)

Plowed and fallow fields comprise most of the right-of-way in this portion of the Project Area. Phase I field reconnaissance survey in Segment 1 resulted in discovery of seven archaeological sites, five of these with prehistoric components, one purely historic, and one site with both prehistoric and historic materials (Figure 15). All but the last of these sites were located by surface reconnaissance of plowed fields. Prior disturbance to the proposed right-of-way, such as strip development and fill deposition, was minimal in this Segment and is shown in Figure 14.

Brennan Site #2 (7NC-F-66, N-10282)

Beginning in the southern portions of the segment, the Brennan Site #2 is located 10 meters west of Route 896 and 45 meters south of the junction of Labrador Lane with Route 896. A single Woodland II triangular projectile point of gray chert was discovered during reconnaissance of plowed fields here. One angular fragment of quartzite, possibly a core fragment, was also recovered. Although within the zone of direct impact of proposed construction, the absence of additional prehistoric artifacts and the low potential for buried cultural materials at this locus made Phase II investigations unwarranted.

Jacob B. Cazier Tenancy Site #2 (7NC-F-64, N-10284)

Field survey located the Jacob B. Cazier Tenancy Site #2 in a plowed field northwest of the junction of Route 896 and the driveway entrance to Mount Vernon Place (N-141) (Plate 1).

PLATE 1

JACOB B. CAZIER TENANCY SITE #2, LOOKING EAST

Background research indicated a structure of undetermined identity at this location from the late 1800's to the early 1900's. Reconnaissance of the plowed field revealed a concentration of ceramics, brick, and glass distributed across a gentle northeast-trending slope (Figure 16). Flagging of artifacts revealed site limits as 120 feet north of the driveway and 120 feet west of Route 896, with the highest density of material to the southeast. An uncontrolled surface collection of ceramic and vessel glass yielded glazed redware, gray salt-glazed stoneware, plain and transfer-printed whiteware and pale and dark-green vessel glass fragments, all compatible with the presumed occupation dates for the structure. The Site's location almost entirely within the proposed right-of-way and its potential for sub-plowzone features made Phase II investigations necessary.

Additional background research was conducted on the site as part of Phase II investigations. Jacob B. Cazier's ancestors had lived in this part of Delaware for several generations, since his great-great-grandfather, Mathias Van Bibber, purchased portions of the St. Augustine Manor tract from Augustine Herrman in 1714. This included lands stretching from east of the Bohemia River to the Delaware, between Appoquinimink and St. George's Creek. Jacob Cazier was born into a wealthy gentleman farmer family in 1833. At the death of his father Henry Cazier in 1859, he received more than 1000 acres of farmland in Cecil County, Maryland, and Pencader Hundred (WR X-1-293), and over $15,000.00 from his father's personal estate (Estate Settlement, Henry Cazier, 12/3/1860). This enabled him to retire "from the practical work

of farming" at the age of 26 that year to live at his mansion "Mount Vernon Place" (Scharf 1888:949) (Plate 2).

Jacob was a wealthy man, and at least in the early years, seems to have continued the success of his father in farm endeavors; by the time Scharf's History Of Delaware was published in 1888, he had added 2000 acres of farmland to his holdings. He is featured in Scharf's discussion of New Castle County, being depicted as a model of enterprise and achievement: "...his flourishing farms attest to his almost ubiquitous presence and oversight" (1888:950).

While Phase II field investigations of the Jacob B. Cazier Tenancy Site #2 were being conducted, two local residents visited on separate occasions to report that it had been the tenant residence of a black retainer for Jacob B. Cazier during the late 1800's and early 1900's. Mr. Ronald Ogden reported in particular that the man had been the carriage-driver for Cazier and that his last name was Stevenson. Examination of census records for the Jacob B. Cazier household in 1870 and 1900 reveal no individual of this name, but this is probably because the only non-family individuals included were domestic servants living at the Mansion.

One point of confusion is the age of Mount Vernon Place itself. Rea and Price depict a structure belonging to Henry Cazier in its location in 1849 (Figure 11). Scharf indicates, however, that the mansion of this name which Jacob Cazier resided in was newly-constructed at the time of his father's death in 1859 (1888:949). Scharf's depiction of Mount Vernon Place reveals a three-story Victorian residence with Mansard roof and

PLATE 2
MOUNT VERNON PLACE (N-141)

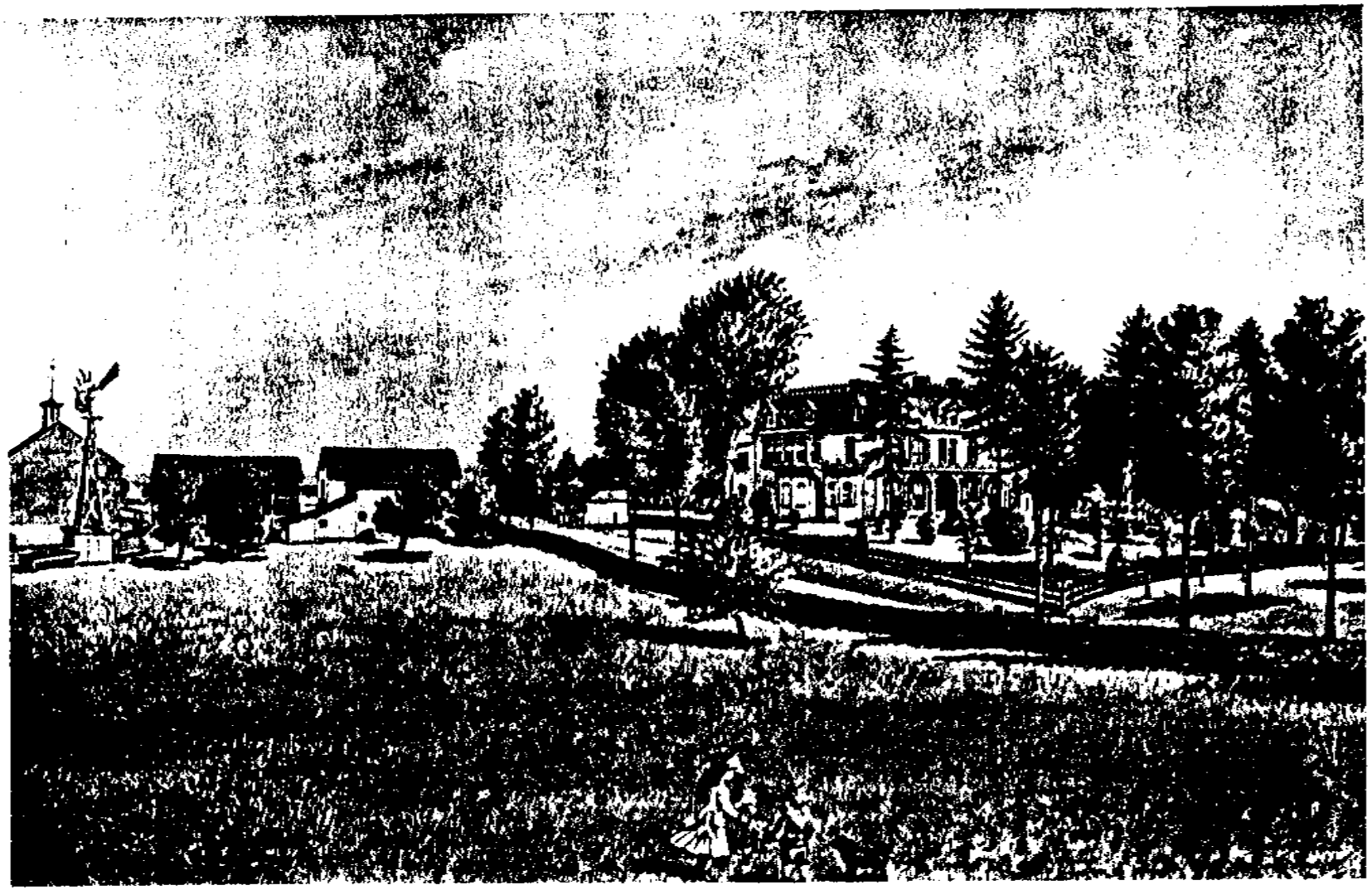


photo credit: Scharff, History of Delaware. 1888:949

dormers, and cresting trim along the roofline (Plate 2). Such characteristics are typical of the Second Empire Style, fashionable from 1855 to 1885, and suggests that Jacob Cazier either tore down and rebuilt or drastically remodelled the previous structure at the onset of his residence there.

Mount Vernon Place served as Jacob B. Cazier's primary residence throughout his life. At his death in 1918, he was survived by his wife, Hannah M., and a daughter, Edna C. Townsend, wife of George L. Townsend, Jr. Jacob's early success in farming may not have continued in his later years; between 1907 and 1918, he sold off a number of farms and tracts of land that had been acquired in the late 1800's. At his death, his real estate holdings, including the Mount Vernon Place Farm, had diminished to 1,030 acres (Probate File, 21 May 1920). Mount Vernon Place was bequeathed to his wife, Hannah, (WR L-4-143), who died intestate three years later, resulting in his daughter, Edna C. Townsend, obtaining the property through Letters of Administration (WR P-4-445).

Edna Townsend sold Mount Vernon Place in 1941 (DR N-43-259). By this time, the residence on the tenancy site #2 had been demolished, as aerial photos from 1937 show no evidence of it. In the 1970's the Mount Vernon Place Mansion suffered severe damage from a fire, although some of its walls still stand today.

Phase I survey having determined site limits based on surface materials, Phase II investigation was geared to detect sub-plowzone features. Systematic shovel testing was employed to determine areas of high artifact density in plowzone deposits to guide subsequent location of measured test units (Figure 16).

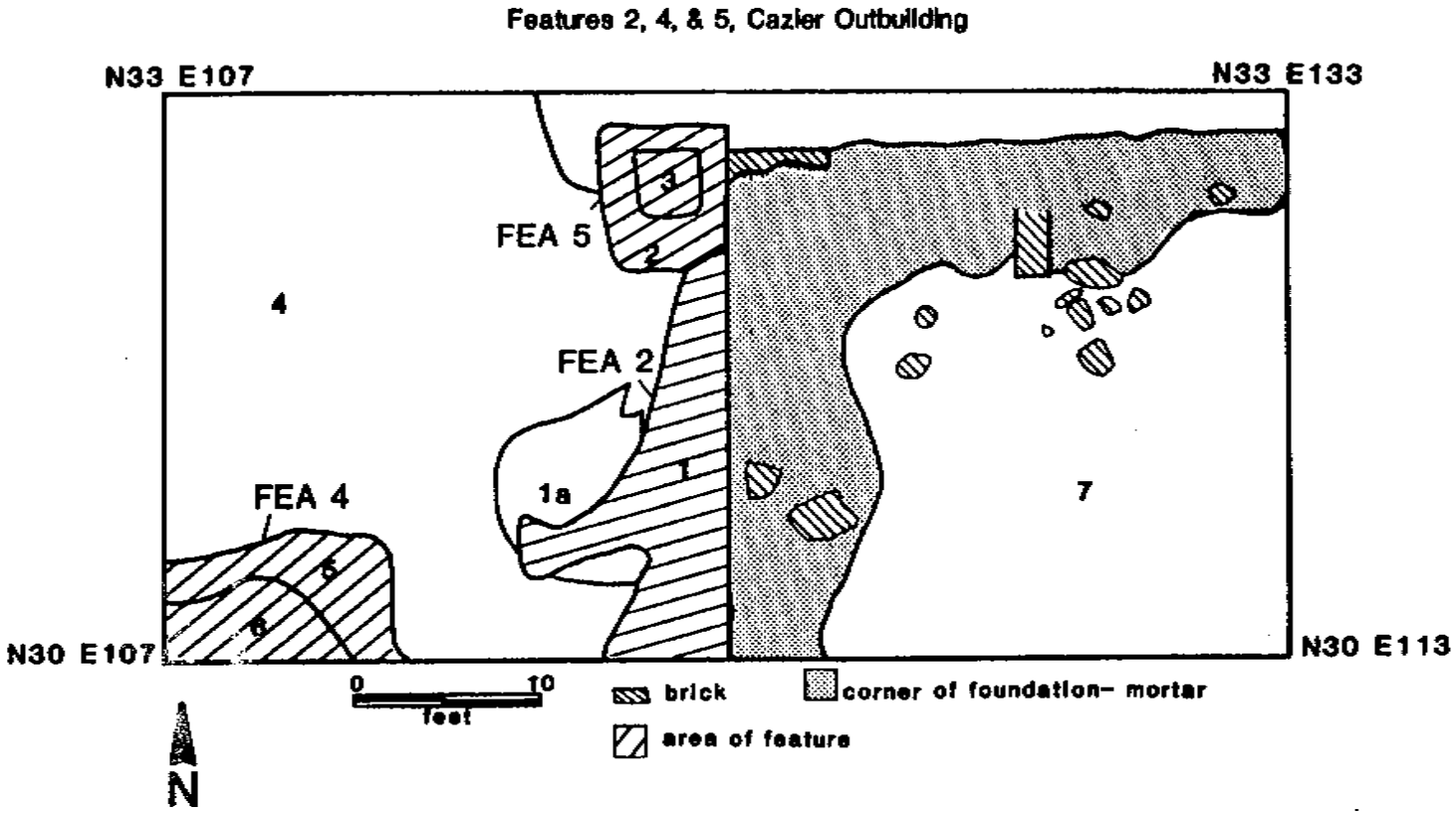
Thirty-six shovel tests were excavated to 50 centimeter depths at systematic twenty foot intervals. Of note was a feature (#7) encountered in shovel test N60E60 with cultural deposits extending 2 feet below surface.

Plotting of material frequencies revealed highest densities in the plowzone for all artifact classes converging in the southeastern sector of the site (Figure 17-21). Excavation of 3 x 3 foot test units at 10 foot intervals in this area uncovered post hole and post mold features and a brick house foundation with associated builders trench at the plowzone-subsoil interface (Figure 16).

Excavation of test units N30E110, N30E113, N20E110, and N15E113 uncovered the northwestern corner and western wall of the foundation (Figures 22 and 23). The adjoining builders trench (Feature 2) was clearly visible in test units N30E110 and N20E110 after removal of the plowzone. In addition, test units N30E113 and N15E113 exposed intact deposits present inside the foundation walls. Excavation of the sandy loam fill of Feature 2 in N20E110 along the west wall of the structure revealed a six course brick foundation capped with mortar extending 1.7 feet below plowzone. The trench sloped steeply down to the base of the foundation (Figure 24). Screening of feature fill in this unit yielded glass, brick and mortar fragments. Auger testing to the south and east revealed that despite encroachment, construction of the existing Route 896 roadbed did not impact the foundation. Augering revealed the dimensions of the structure as 22 by 16 feet.

FIGURE 22

Jacob B. Cazier Tenancy Site #2 Test Unit N3E110/N30E113, Plan View



1- mottled orange and brown sandy loam
1a- medium brown clayey loam
2- medium brown silty loam
3- dark brown sandy silt
4- mottled tan and brown silty loam
5- mottled dark to light coarse sand
6- brown silty loam. no coarse sand
7- greyish brown clayey silt. interior of foundation

FEA 2- builders trench, adjoining N.W. corner of foundation
FEA 4- probable postmold and posthole
FEA 5- probable postmold and posthole

FIGURE 23

Jacob B. Cazier
Tenancy Site #2 Test Unit
N20E110, Feature 2 Plan View

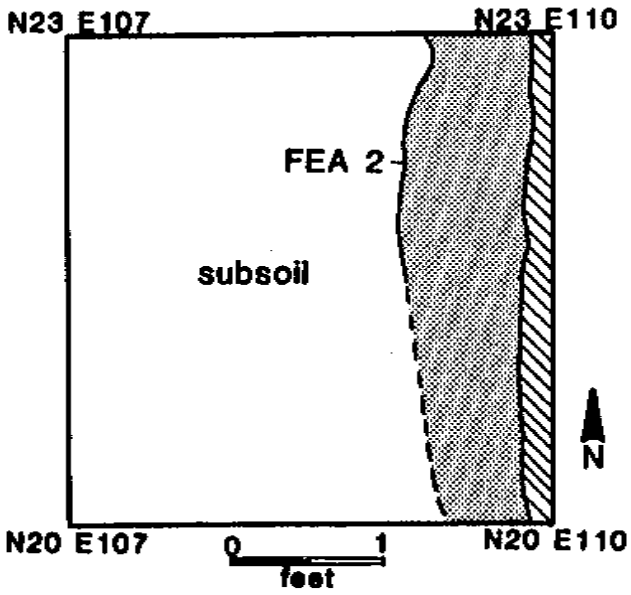
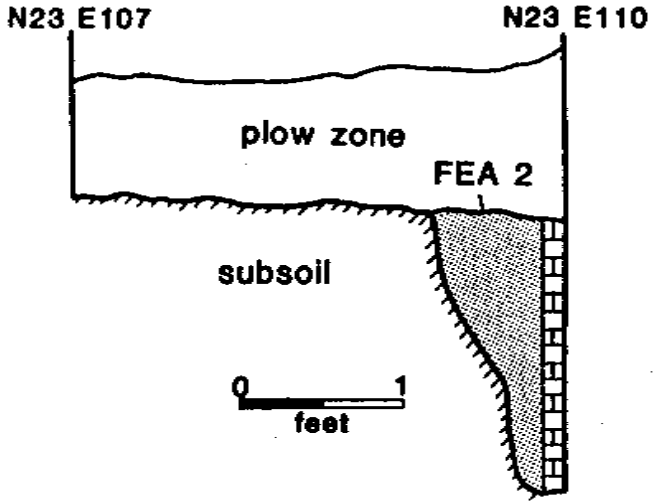


FIGURE 24

Jacob B. Cazier Tenancy Site #2
Test Unit N20E110, Feature 2
East/West Cross-section



subsoil- light olive brown clayey loam

FEA 2- builders trench. yellow-brown sandy loam

brick. west wall of foundation

Additional features around the structure included two pairs of post molds and post holes at the northwestern corner of the foundation (Features 4 and 5) (Figure 22) and a post mold and post hole (Feature 1) and post mold (Feature 6) ten feet west of the foundation in test unit N25E100 (Figure 25). Feature 1 appeared in plan as a dark brown, semi-circular stain surrounded on three sides by a lighter, mottled tan and gray deposit that was roughly square in shape. Sectioning of this feature revealed the brown stain of the post mold extending to 1.0 foot, and the surrounding post hole fill extending 1.55 feet in depth (Figure 26). Contents of feature fill included small amounts of whiteware, window glass, cut nails, mortar and bone. Several mortar fragments were recovered from the base of the feature. Feature 6 lay .20 feet east of Feature 1, appearing as a brown, circular stain .22 feet in diameter and extending 1.2 feet below plowzone (Figure 27). Its fill produced whitware, redware, brick, and mortar fragments. Both features are interpreted as evidence of structural posts, probably supporting a porch roof adjoining the west wall of the house.

To investigate Feature 7, plowzone was removed in four contiguous test units around STP N60E60, exposing two areas of dark brown clayey or silty loam interspersed with areas of irregular, mottled orange, tan, and gray sandy loam (Figure 28). Removal of a 2 x 3 foot section in unit N60E63 showed this to be a large trash pit feature with a maximum depth of 1.5 feet below plowzone (Figure 29). Its horizontal dimensions extended beyond the 6 x 6 foot area of contiguous exavation units. The mottled sandy loam proved to be redeposited subsoil variably capping the

FIGURE 25

Jacob B. Cazier Tenancy Site #2
Test Unit N25E100, Plan View

Features 1 & 6, showing feature 1
(postmold and posthole) and feature 6 (postmold)

plan view at plowzone/subsurface interface

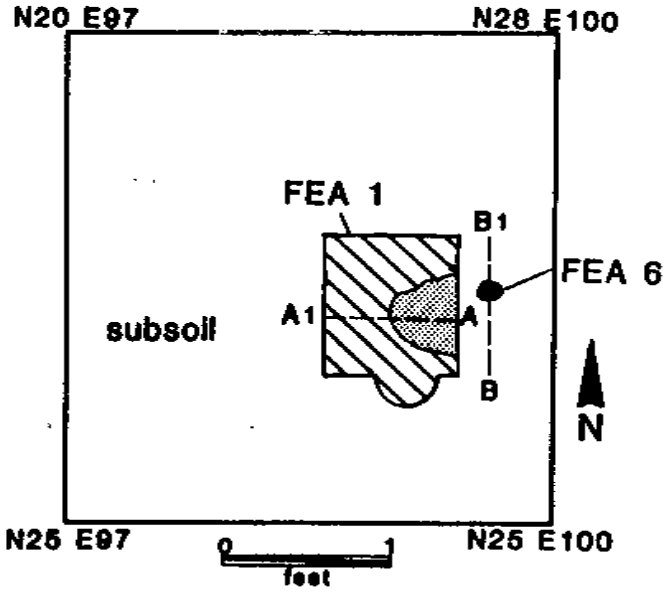
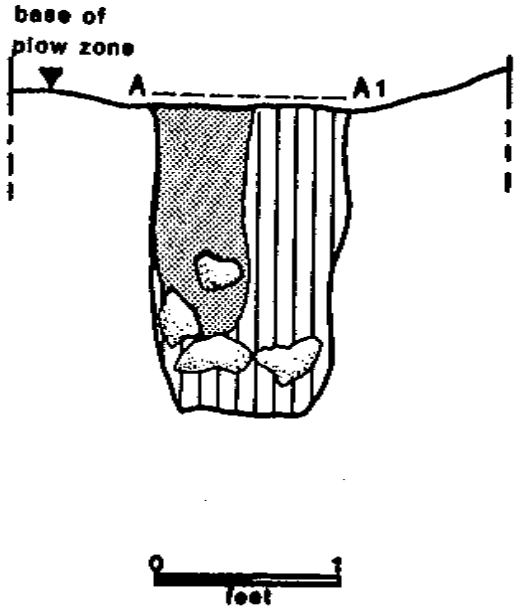


FIGURE 26

Jacob B. Cazier Tenancy Site #2
Test Unit N25E100, Feature 1, East/West Cross-section



post hole post mold stain mortar

A _____ A1 cross-section Feature 1 B _____ B1 cross-section Feature 6

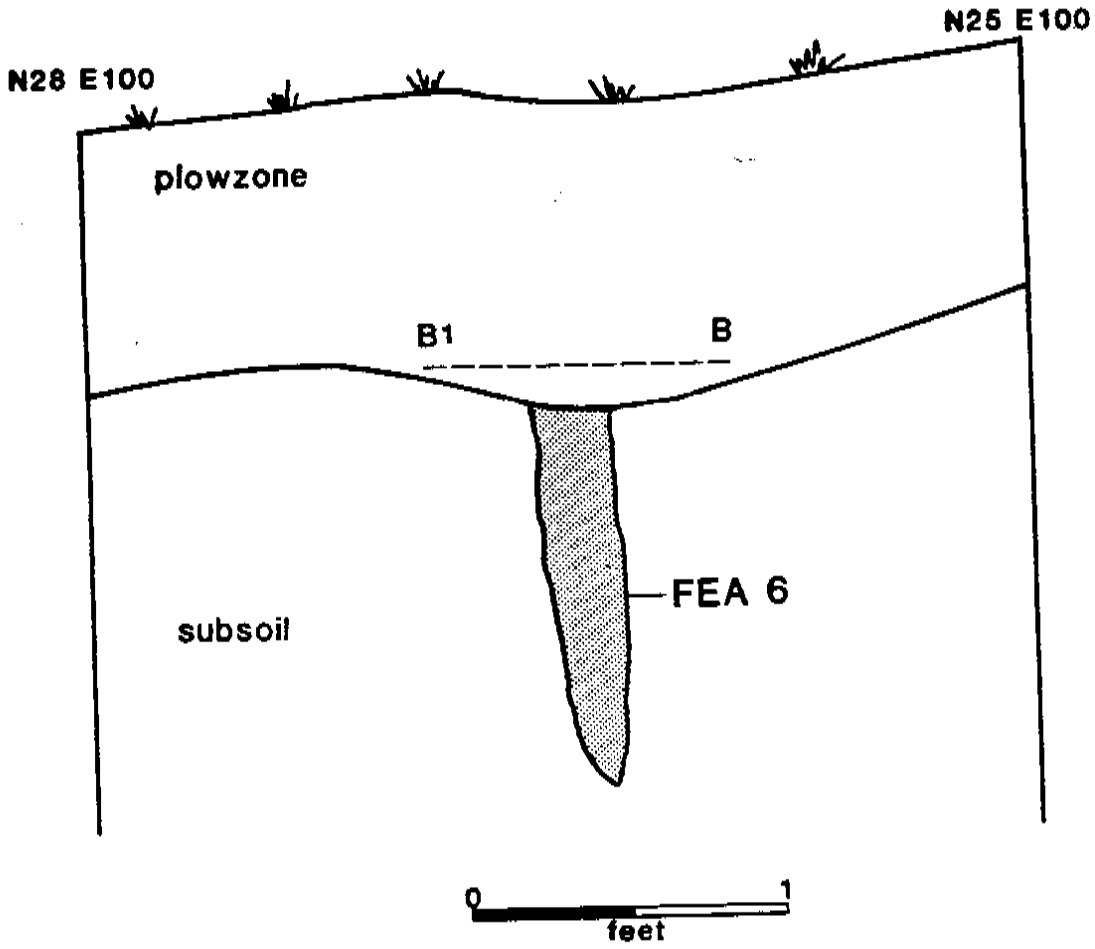
feature 1- postmold: dark brown clayey sand
posthole: mottled light tan and dark brown clayey sand

feature 6- dark brown sandy loam

subsoil- yellow-brown sandy clay

FIGURE 27

Jacob B. Cazier Tenancy Site #2 Test Unit N25E100, Feature 6 North/South Cross-section



plowzone- medium brown silty loam

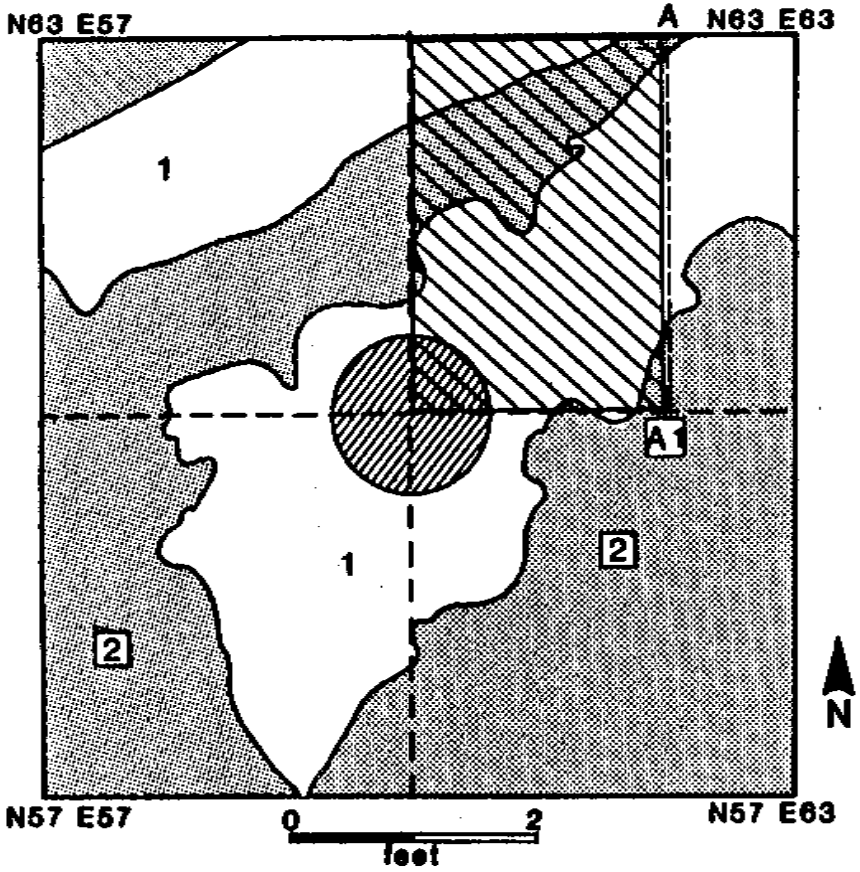
subsoil- yellow brown sandy clay

feature 6- dark brown sandy loam

B1_____B transect feature 6

FIGURE 28

Jacob B. Cazier Tenancy Site #2 Test Units N57E60, N57E63, N60E60, N60E63, Plan View feature 7, showing top of feature with suface of feature fill variably overlain by redeposited subsoil

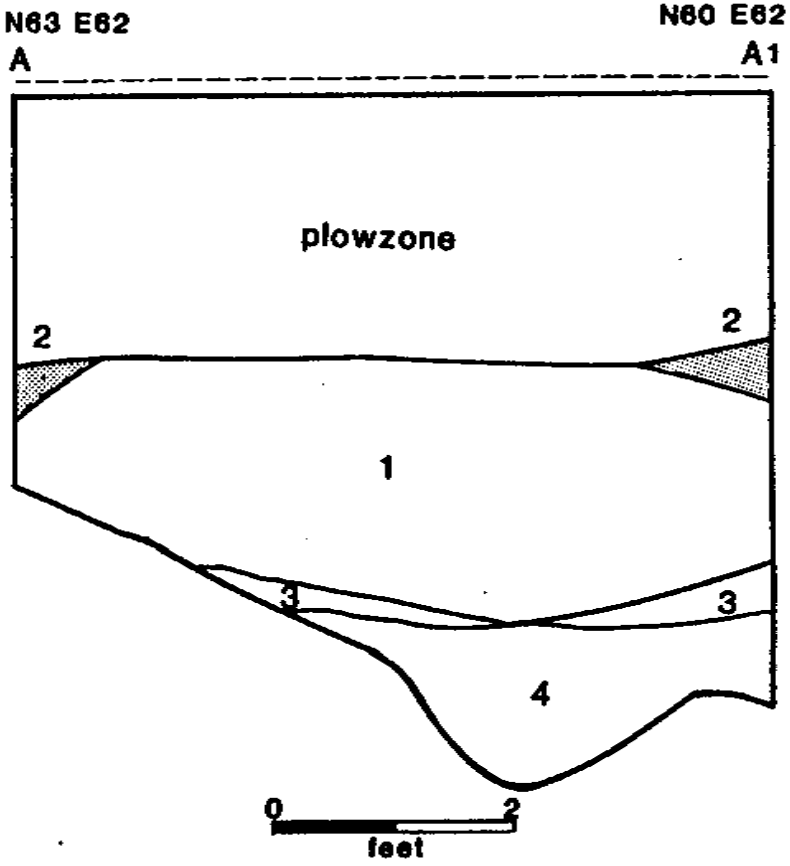


STP section excavated below plowzone

1. feature fill- dark brown clayey loam
2. redeposited subsoil- yellow-brown silty loam

FIGURE 29

Jacob B. Cazier Tenancy Site #2 Profile, East Wall of Excavated 2′ x 3′ Section within Unit N60E63



A_____A1 east wall profile cross-section

3. feature fill- very dark gray-brown clayey loam
4. feature fill- dark brown clayey loam

feature fill, which was redeposited when the pit was filled in.

Ceramics from feature fill removed in the 2 x 3 foot excavated section of N60E63 included redware, whiteware, ironstone, yellowware, and stoneware. Other items recovered included kaolin pipe fragments, window and vessel glass, brick, cut nails, and bone. Table 5 briefly summarizes the description, interpretation and provenience of all features encountered during Phase I and II investigations of the site.

As expected, Phase II testing of the site yielded historic material reflecting domestic occupation of the site (Plate 3). Ceramics recovered are dominated by whitewares, redwares and ironstone, with minority amounts of creamwares, pearlwares, yellowwares, stonewares and porcelain (Plate 4). Among architectural materials, nails of the cut variety were recovered almost exclusively. Such materials agree well with an occupation span indicated by background research from the mid-late nineteenth to early twentieth centuries.

To summarize, Phase II field study of the site revealed the presence of an intact house foundation and associated features below the plowzone. Datable cultural materials suggest an occupation from the mid-nineteeth into the early twentieth centuries, corroborating background research which indicated that the structure had been demolished in the early 1900's. These findings agree with reports of local informants that the site functioned as a tenant residence for a retainer of Jacob B. Cazier in the mid-late nineteenth and very early twentieth centuries.

TABLE 5

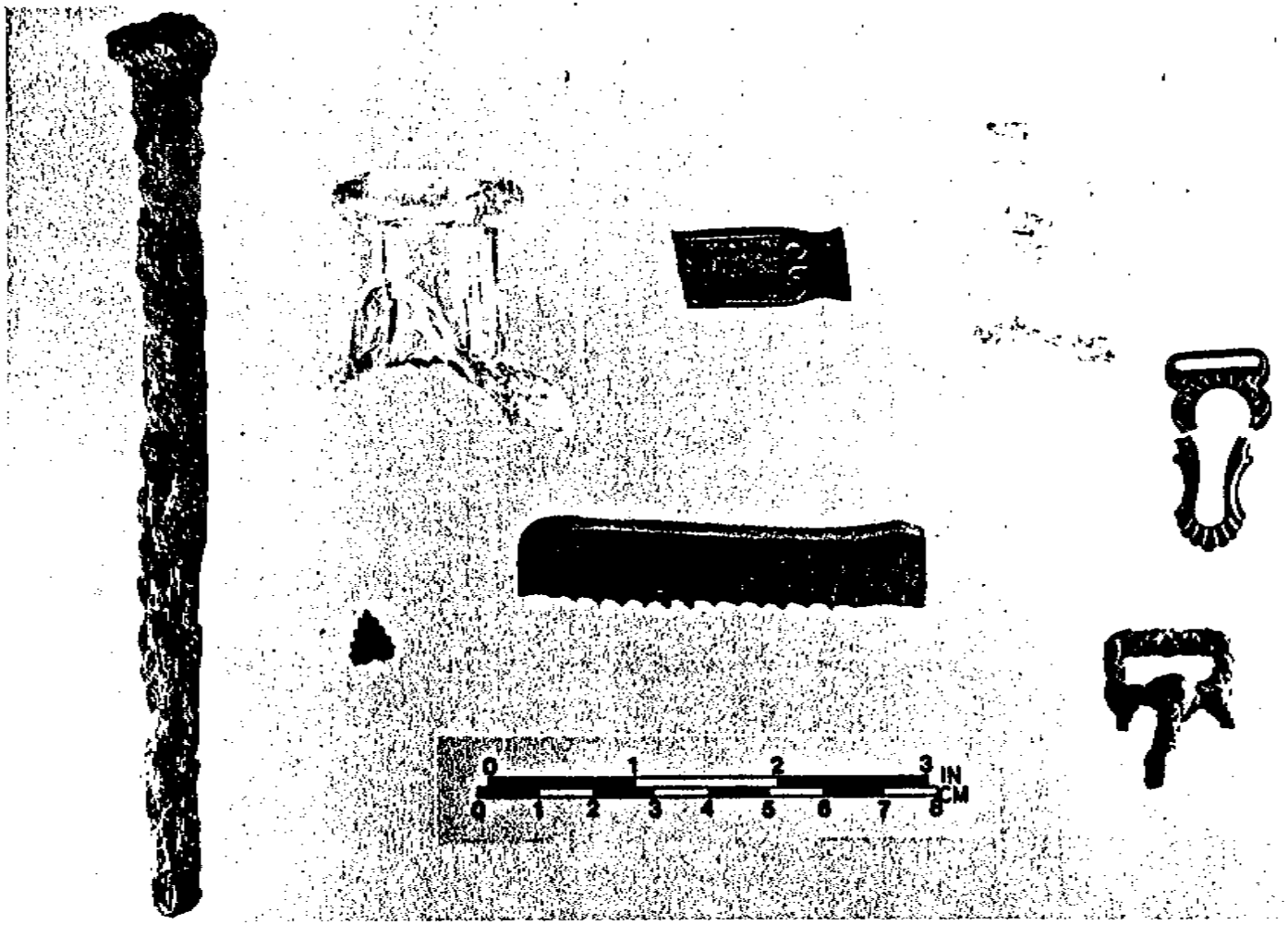
FEATURES ENCOUNTERED IN PHASE I AND II INVESTIGATIONS OF THE JACOB B. CAZIER TENANCY SITE #2 (7NC-F-64)
(Descriptions are plan view, except where noted)

Fea.#	Prov.	Description	Interpretation
1	N25E100	Square stain containing lighter circular discoloration; cross-sectioning revealed feature extends 1.55 feet below plowzone.	Post Mold/ Post Hole
2	N30E110 N20E110	Linear stain adjacentto exterior of foundation; cross-sectioning revealed feature tapers downward to base of foundation, 1.7 feet below plowzone.	Builder's Trench
3	N25E100	Small dark stain incompletely exposed in north wall of unit; subcircular in plan and profile.	Rodent Burrow
4	N30E110	Square stain containing lighter circular discoloration west of foundation.	Post Mold/ Post Hole
5	N30E110	Square stain containing darker square discoloration adjacent to northwest corner of foundation.	Post Mold/ Post Hole
6	N25E100	Small circular stain west of foundation; cross-sectioning revealed its extension 1.2 feet below plowzone.	Post Mold
7	N60E60	Large, irregular dark stain, variably overlain by redeposited subsoil; Limits of feature extend beyond 6x6 foot area of plowzone stripping. Cross-sectioning in N60E63 exposed base of feature at 1.5 feet below plowzone.	Trash Pit

Key
Prov. - Provience
Fea. - Feature
N - North
E - East

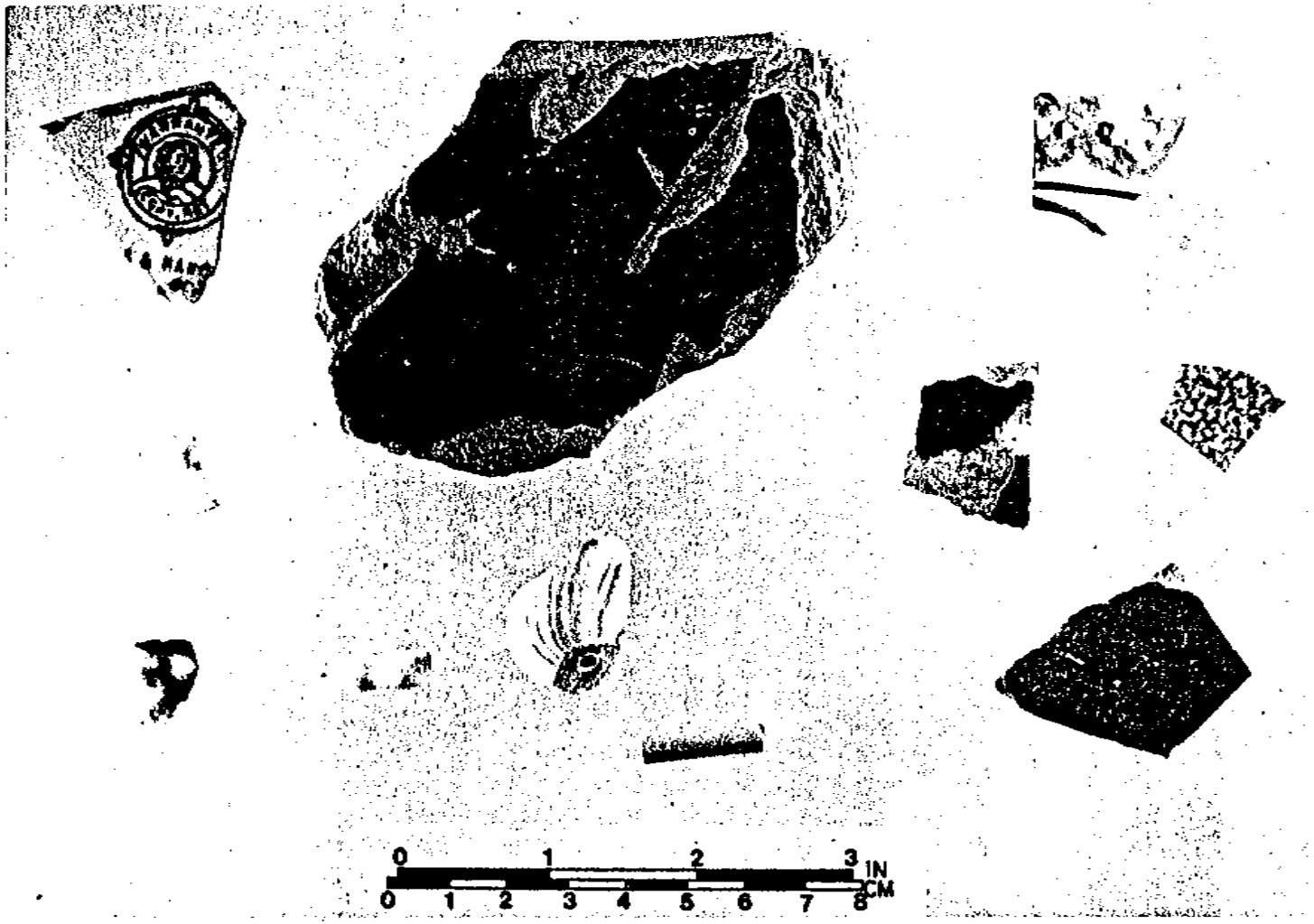
PLATE 3

MISCELLANEOUS ARTIFACTS RECOVERED IN PHASE I/II INVESTIGATIONS AT THE JACOB B. CAZIER TENANCY SITE #2



TOP ROW (left to right): metal spike (C.N. 85/57/36), glass bottle neck (C.N. 85/57/15), metal name plate (C.N. 85/57/17), glass bottle neck (C.N. 85/57/33), metal hose support-2 pieces (C.N. 85/57/25). BOTTOM ROW (left to right): metal leaf decoration (C.N. 85/57/25), comb (C.N. 85/57/25) metal belt buckle (C.N. 85/57/24)

PLATE 4
CERAMICS RECOVERED IN PHASE I/II INVESTIGATIONS AT THE JACOB B. CAZIER TENANCY SITE #2



TOP ROW (left to right): whiteware with transfer-printed makers mark (C.N. 85/57/33), glazed redware (C.N. 85/57/8), whiteware with handpainted and sponge decoration (C.N. 85/57/33). MIDDLE ROW (left to right): porcelain doll's head fragment (C.N. 85/57/36), Rockinghamware (C.N. 85/57/33), whiteware with sponge decorarion (C.N. 85/57/33). BOTTOM ROW (left to right); porcelain figurine piece (C.N. 85/57/5), porcelain doll's arm fragment (C.N. 85/57/36), clay pipe bowl fragment (C.N. 85/57/8), clay pipe stem fragment (C.N. 85/57/35), glazed stoneware (C.N. 85/57/23).

The Jacob B. Cazier Tenancy Site #2 is considered eligible for inclusion to the National Register under Criterion "D". It can provide data for comparison with other tenant sites in Delaware. The site also constitutes a resource for the study of spatial patterning of black households before and after the turn of the century, an area which has received little attention from archaeologists to date. The data generated by this study of an ethnic household could be compared to similar research at nineteenth century black sites by Otto (1980, 1984), Geismar (1980), Baker (1980), Schuyler (1974), and others.

Central portions of the site, including the foundation and several associated features, lie within the direct impact zone of the proposed construction. A large trash pit, and possibly other features of this type, constitute peripheral but significant areas of the site, and are located in the zone of secondary impact. Avoidance is the recommended mitigation alternative. Should this not prove feasible, then data recovery is recommended for the site, due to its location within direct and secondary impact zones of proposed construction. A determination-of-eligibility form has been completed and is included in Appendix II.

Brennan Site #3 (7NC-F-67, N-10286)

The Brennan Site #3 was discovered on level terrain 40 meters west of Route 896 and 360 meters south of the junction with Howell School Road. Reconnaissance of the plowed field here resulted in recovery of one narrow-bladed, contracting-stemmed Woodland I point of ironstone. Because no other cultural material was recovered, and due to the low liklihood of buried

remains, no additional work was undertaken on this site.

School House #57 Site (7NC-F-65, N-5014)

The School House #57 Site is located immediately east of Route 896 and 30-40 meters north of Howell School Road. Fifty meters further north, an unnamed creek flows southeasterly to Lums Pond. The School House #57 Site consists of both prehistoric and historic material, the latter relating to School House #57, an early twentieth century structure which stands east of Route 896, outside of the project limits. This structure has been subject to several building campaigns after its conversion to a private residence and convenience store which substantially altered the original configuration. These alterations have also disturbed ground intermediate between the structure and Route 896 such that any archaeological remains west of the structure relating to the original school house would have been disturbed.

Phase I testing was conducted in the vicinity to detect undisturbed school house related features and potential prehistoric remains. Shovel Test Pit #10 in Transect C north of the structure yielded a Woodland II triangular projectile point of gray chert, in addition to an assortment of historic and recent cultural material (Figure 14). Excavation of a 1x1 meter square, one meter to the south yielded disturbed fill deposits to a depth of 85 centimeters which produced both historic and recent materials throughout and a single jasper flake from level 3 (20-30 centimeters below surface). The prehistoric cultural material was most likely redeposited, probably during conversion of School House #57 to a residence. The original context of the

prehistoric site has been disturbed and Phase II studies were therefore not conducted.

Amelia Graw Site (7NC-F-62, N-10241)

Phase I survey located the Amelia Graw Site (7NC-F-62, N-10291) 50 meters north of the same unnamed stream noted above, and 15 meters east of Route 896. Small quantities of chert and quartz debitage and two FCR fragments were recovered from the plowed surface of a small knoll. Ten meters further east, a single jasper flake was recovered as well. All of this material lies just outside of the proposed ROW however, and will escape impact from proposed construction. Phase II investigations were therefore unwarranted.

Mary R. Johnson Site (7NC-F-63, N-10292)

The Mary R. Johnson Site is situated southwest of the junction of Route 896 and Denny Road. The site lies south of the unnamed creek feeding Lums Pond. Phase I surface reconnaissance of plowed fields encountered prehistoric material in two locations. Area "A" yielded a contracting-stemmed Rossville-like quartz projectile point, an early-stage biface reject made on a cobble of chalcedony or chert, and small amounts of debitage of several raw materials, including jasper, quartz, quartzite, and chert. These materials were discontinuously distributed over a gentle northeast trending slope south of the creek/stream. Area "B" is located 75 meters south on level terrain. Surface collection here produced a single stemmed Woodland I projectile point of quartz.

Because the field was fallow when surveyed and surface visibility was moderate to poor, Phase I investigation also

included excavation of a shovel test pit transect through Area "A" at 20 meter intervals, 30 meters west of Route 896, (Figure 30). This testing produced no additional prehistoric material. The low density of prehistoric material visible on the surface and its lack of spatial patterning, combined with the absence of buried remains, precluded Phase II investigation here.

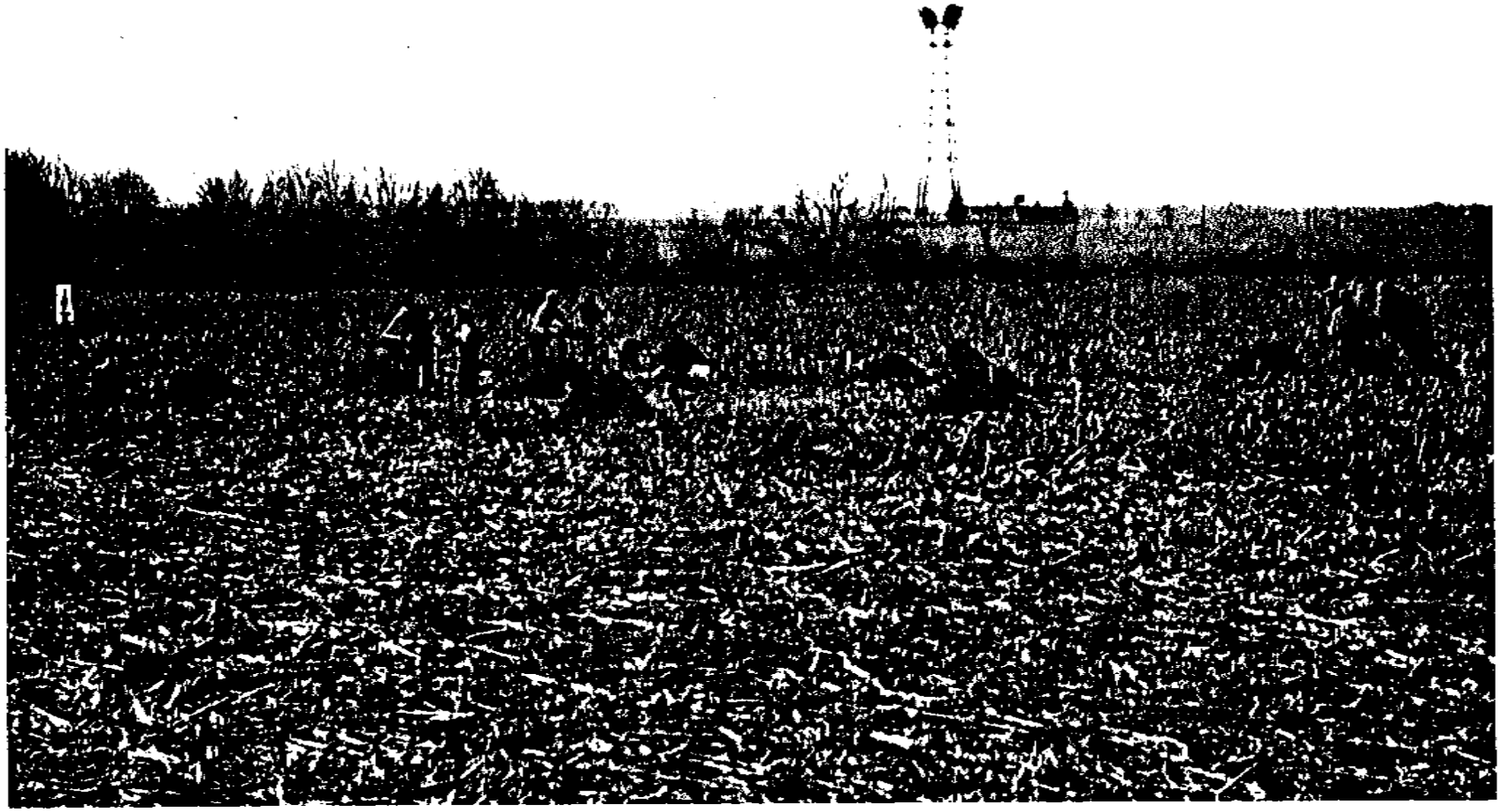
Brennan Site #1 (7NC-F-61, N-10290)

The Brennan Site #1 is located along the western margin of Route 896, 300 meters north of the junction of Denny Road and Route 896 (Plate 5). Materials from the site are distributed over a gentle, south-facing slope, overlooking a stream head which flows in a southeasterly direction to Lums Pond.

The Brennan Site #1 was located during Phase I reconnaissance of plowed fields within the ROW west of Route 896. An extensive scatter of jasper artifacts was observed, consisting primarily of debitage. Flagging of individual artifacts revealed that the scatter, designated Area "A", extended 100 meters west from Route 896, while its northern limits coincided with an east-west trending ridge, running south and downslope for a distance of 70 meters (Figure 31). Also observed was a second, smaller scatter of prehistoric material, designated Area "B", which consisted primarily of quartz and gray chert artifacts and lay fully outside of the ROW, southwest of the jasper scatter (Figure 31). There appeared to be no overlap between these two artifact concentrations. Situation of a large portion of the jasper scatter within the proposed ROW west of Route 896 made Phase II investigations necessary.

PLATE 5

BRENNAN SITE #1, LOOKING SOUTHEAST



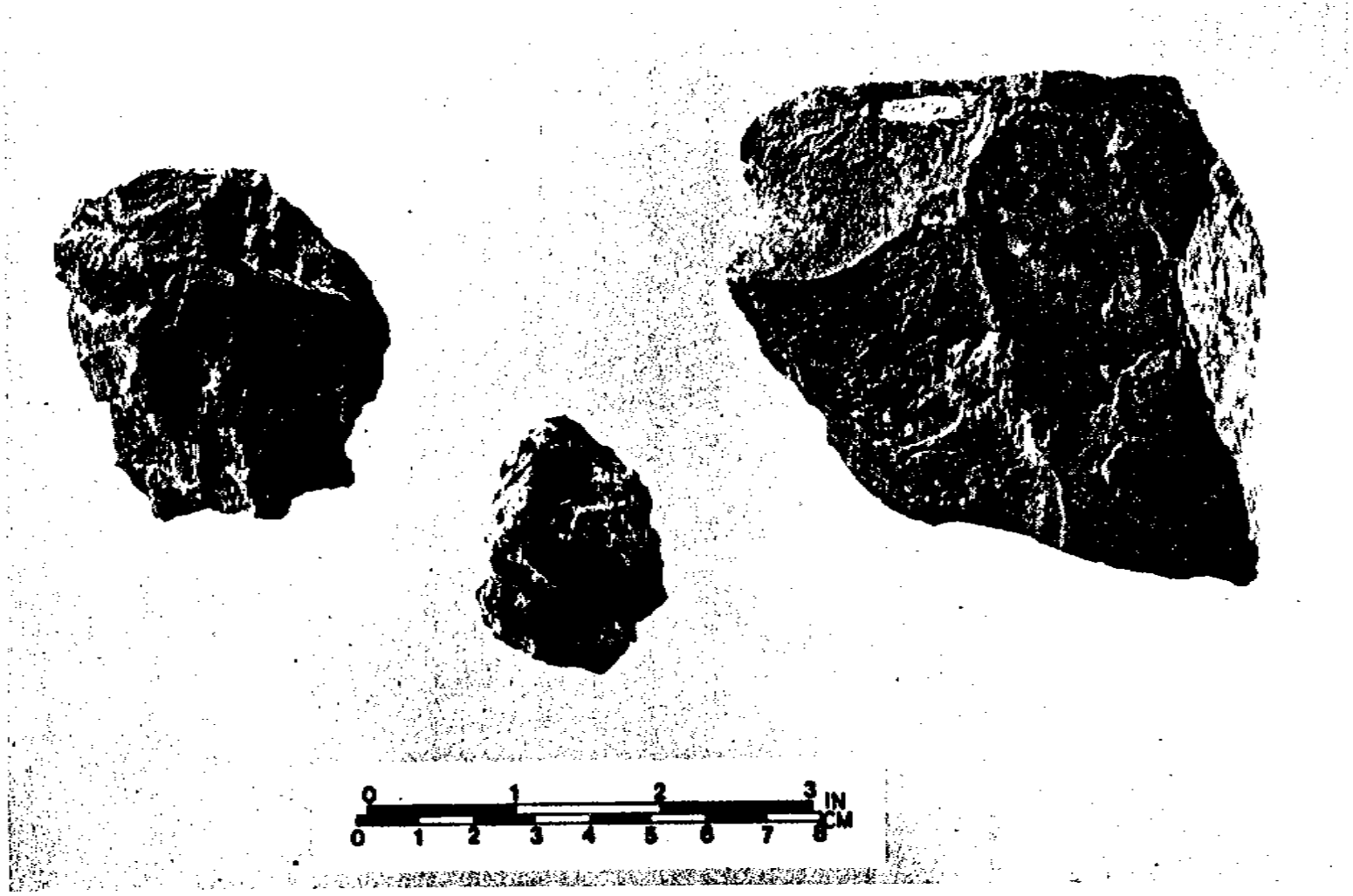
A controlled surface collection of the jasper scatter, Area "A", was conducted to determine site limits more precisely and derive information on within-site patterning (Figure 31). A total of 84 ten by ten meter units were surface collected; 67 produced prehistoric material. This consisted primarily of jasper debitage, some of it quite large, and also including three blocky cores (Plate 6), one unifacial tool, and two stemmed Woodland I Period projectile points (Plate 7).

Reexamination of the chert and quartz scatter to the southwest, Area "B", revealed that its limits did not overlap with the jasper concentration. For comparitive purposes, a non-intensive, uncontrolled surface collection was performed on this occupation area; this yielded an assemblage dominated by cobble quartz, with lesser amounts of gray chert. Jasper and quartzite constituted small, minority percentages of the raw materials. The bulk of the assemblage consisted of detritus from reduction of quartz cobbles, although two unifaces, two bifaces, and a stemmed Woodland I Period projectile point base were also recovered.

Mapping of artifact densities from the controlled surface collection of the jasper scatter, Area "A", revealed two concentrations centered at S5W30 and S10W60 (Figure 31). Roughly half of the eastern concentration is within the ROW. Subsurface testing was conducted on this eastern concentration to determine stratigraphic context and test for potential subsurface features. Twenty-six 1 x 1 meter test units were excavated in the central portion of this eastern high density area at systematic four meter intervals. Three additional units were excavated at 30 meter intervals along the west 30 line downslope to detect

PLATE 6

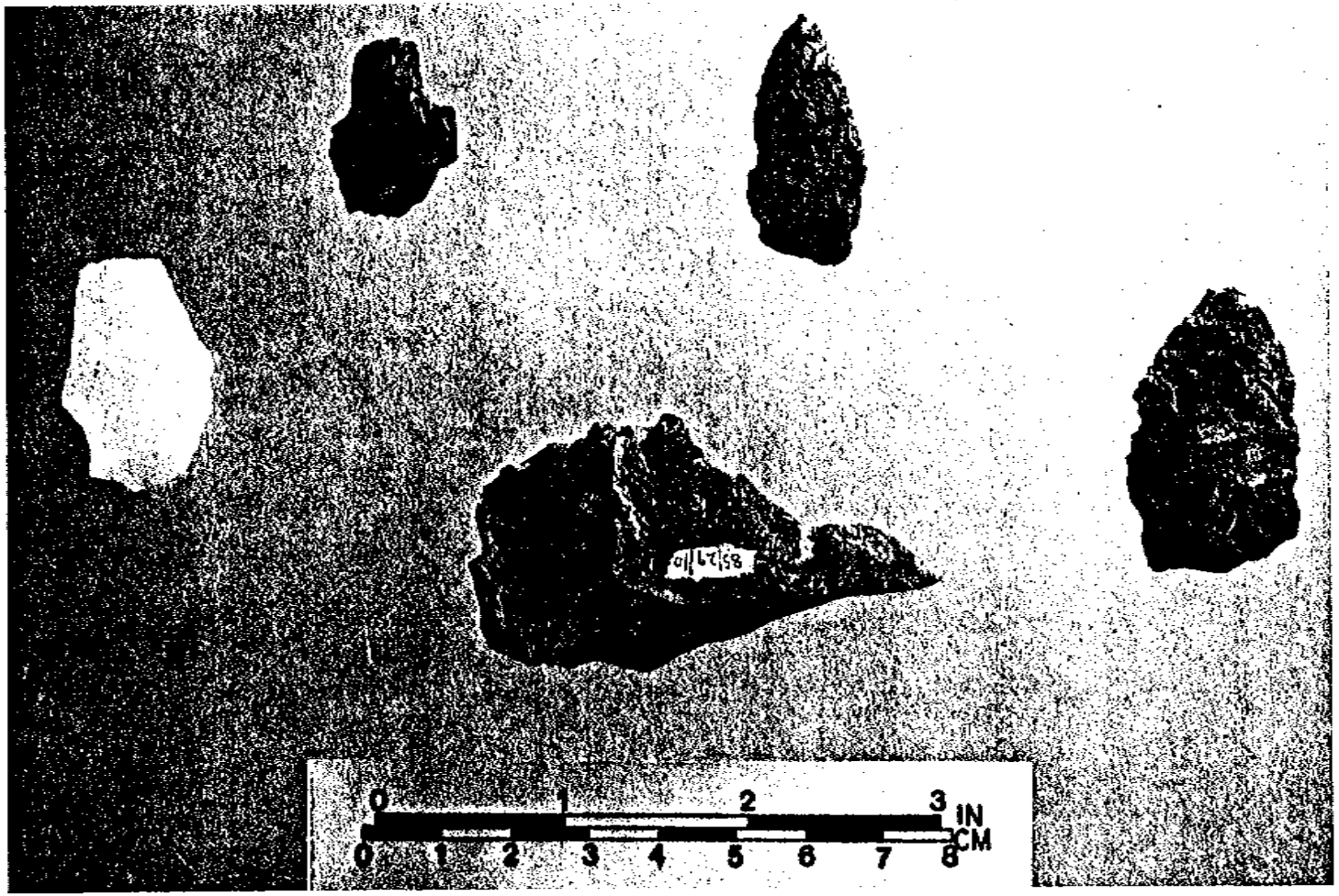
JASPER CORES RECOVERED IN PHASE I/II INVESTIGATIONS AT THE BRENNAN SITE #1, AREA "A"



Left: Jasper biface core, S21W37, Phase I Surface Collection
Middle: Jasper biface core, S20W70, Phase II Controlled Surface Collection
Right: Jasper core with vein cortex, S70W40, Phase II Controlled Surface Collection

PLATE 7

ARTIFACTS FROM PHASE I/II INVESTIGATION AT THE BRENNAN SITE #1, AREA "A"



CLOCKWISE FROM LEFT: Stemmed quartz point, S20W80, Phase II controlled surface collection; stemmed jasper point base, S86W66, Phase I surface collection; late stage jasper point preform, S26W48, Phase I surface collection; jasper point preform, N0W30, Phase II controlled surface collection; jasper uniface, S30W20, Phase II controlled surface collection.

archaeological deposits which might have been buried by slopewash.

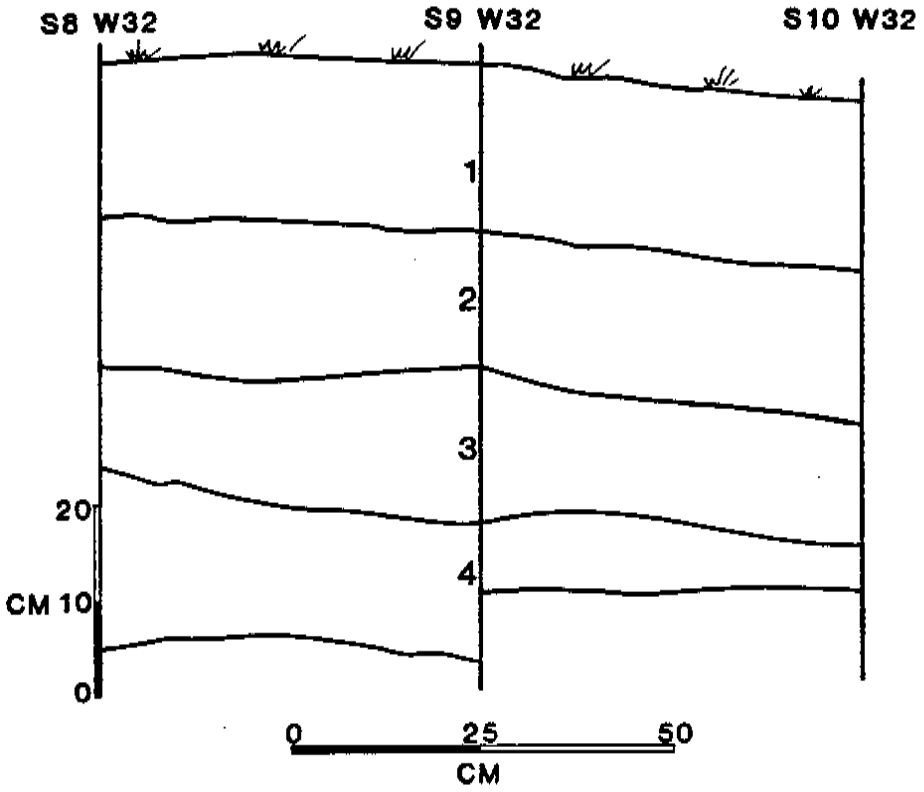
Test units derived substantial amounts of prehistoric material from the plowzone, with density patterns replicating those of surface-collected materials (Figure 32). No features were encountered below the plowzone. Excavation of underlying subsoils by five centimeter levels produced additional artifacts in eleven units. In nine units, these materials were present within 5-10 centimeters of the plowzone-subsoil interface (Figure 33).

In two units at the center of the eastern concentration, however, substantial amounts of prehistoric material were encountered in subsoils underlying the plowzone. Unit S7W27 yielded 11 pieces of jasper debitage from a clayey sand stratum to depths of 40 centimeters below surface. Unit S9W32 produced 34 flakes from three strata, including a clayey loam below plowzone (17-37 centimeters), a sandy clay with pea gravel (37-48 centimeters), and a slightly clayey, coarse-grained sand (48-63 centimeters), with most of the prehistoric material derived from the first two strata. Excavation of an adjoining unit to the south of each of these produced similar results (Figure 34). The sandy clay and gravel deposit encountered in S9W32 and S10W32 presumably derives from Columbia Formation deposits, which are terminal Pleistocene or early Holocene in age. Prehistoric artifacts associated with this stratum may therefore predate the Woodland I Period material from the plowzone. To determine if additional deeply buried materials were present, five existing and two new test units were excavated to depths of 60 centimeters

FIGURE 34

Brennan Site #1

Test Units S9W32, S10W32 Profile, East Wall



1. plowzone- medium brown sandy loam
2. orange-brown clay with coarse sand fraction
3. brown-orange sandy clay with large amounts of pea gravel and coarse sand fraction
4. orange slightly clayey coarse-grained sand with lesser amounts of pebbles, grading down to finer sand and decreasing clay content

or more, bracketing the units S9W32 and S10W32 in the cardinal directions at four and eight meter intervals (Figure 33).

The stratigraphic sequence of S9W32 and S10W32 was not replicated in other units, although gravel deposits were observed in S4W32, S9W42, and S9W37. Three units, S4W32, S14W32, and S19W32 produced single flakes at depths of 30, 60 and 45 centimeters below surface respectively. These excavations yielded substantial amounts of jasper debitage, including two additional blocky cores, and two unifacial tools.

To summarize, controlled surface collection on Area "A" of the Brennan Site #1 and test excavations on its eastern concentration yielded approximately 1150 prehistoric artifacts. Diagnostics include stemmed projectile points from plowzone deposits. Cultural material from the plowzone is interpreted as Woodland I in age, representing perhaps one or two episodes of intensive secondary reduction of jasper raw material derived from a Delaware Chalcedony Complex source. Excavation of sub-plowzone soils on the eastern concentration yielded 105 jasper artifacts. Seventy-three specimens derive from the units S9W32, S10W32, S7W27, and S8W27 constituting a central core area with artifacts present in quantity below the plowzone. In S9W32 and S10W32 thirty-two artifacts were present in a gravel-bearing deposit of presumed early Holocene age, potentially representing a separate, antecedent cultural occupation. The quartz and gray chert scatter documented to the southwest, Area "B", may also date to the Woodland I Period, but clearly represents a separate, unrelated occupation.

Area "A" of the Brennan Site #1 is determined to be eligible to the National Register under Criterion "D". This part of the site was the locus of a specialized station for the secondary reduction of Delaware Chalcedony Complex jaspers and thus fits the procurement site category for the Woodland I Period of Custer (1983). It is significant for two reasons. First, the existence of buried artifacts observed at Brennan #1 is a phenomenon rarely encountered on prehistoric sites located in plowed settings on the Mid-Peninsular Drainage Divide. Second, it constitutes an opportunity to study the procurement and processing of Delaware Chalcedony Complex raw materials, a subject whose study has generally emphasized sites in the immediate proximity of lithic sources. Brennan #1 lies five miles south of the Delaware Chalcedony Complex and thus offers an opportunity to study lithic procurement and processing from the perspective of latter stage reduction. Under the State Management Plan, Woodland I Period data quality within the Mid-Peninsular Drainage Divide generally is poor and the site is likely to yield significant data (Custer 1986).

The location of intact sub-plowzone deposits is at the center of the eastern concentration of the jasper scatter, partially within the ROW. Portions of the site within the ROW will be adversely affected by the proposed construction, while sections of the site adjacent to the ROW will be subject to potential disturbance by secondary impacts.

Avoidance is the recommended mitigation alternative. Should avoidance prove impossible due to the direct and indirect impacts of proposed construction, then data recovery would be the

suggested alternative. A Determination-of-Eligibility form has been completed for this site and is included in Appendix II.

Segment 2 - Background Research

Segment 2 consists of that portion of the proposed ROW which diverges east of existing Route 896 to bypass Glasgow Village (Figure 35 and Table 6).

Well-drained areas adjoining the two watercourses in this segment of the project area exhibit high potential for prehistoric sites (Figure 4). Based on settlement pattern models presented in Custer (1986) and Custer and DeSantis (1986), micro-band base camps and procurement sites would be expected in these environmental settings. The potential for historic site location is also high within this segment as the project area includes the eastern fringe of the late eighteenth century village of Aikentown and because the present roadbed of Route 896 was constructed on the original eighteenth century Old Glasgow Road along which numerous eighteenth, nineteenth and twentieth century houses were built (Figures 10, 11, 12, and 13).

For most of its history, Glasgow has remained a small hamlet and its role in Pencader Hundred's history has always been minor despite its central location in the Hundred. Its development as a community began in the eighteenth century. References at the Battle of Cooch's Bridge are simply to Aiken's Tavern, after the Inn tended by Mathew Aiken. By the end of the century, it was being referred to as "Aiken Town" (map of Samuel McGregor 1791), itself replaced by the reference Glasgow by the early nineteenth century. Scharf notes that in the last quarter of the 1800's,

TABLE 6

ROUTE 896 CULTURAL RESOURCES IDENTIFIED
BY BACKGROUND RESEARCH IN SEGMENT 2

Resource	CRS#	Comments
12) R.T. Cann House	N-3983	out of ROW; demolished 1982
13) CannFamilyStructure	*	not extant;pres. destroyed
14) Cann Family Str's. (2)	*	not extant; pres. destroyed
15) J. Cann House	N-3977	out of ROW
16) Newcastle/F-T RR ROW	N-422	in ROW; on Nat'l Register
17) A. Adair House	N-3903	out of ROW
18) W. Miles Site	*	out of ROW
19) W. D. Adair Farmstead	N-3982	partly in ROW; not eligible
20) John Scott Site	N-10607	in ROW; not eligible
21) Standing Structure	N-3980	out of ROW
22) Standing Structure	N-3979	out of ROW
23) The Hermitage/J. Frazer	N-3990	out of ROW
24) Aikens Tavern District	N-3875	out of ROW
25) School House #56	N-3881	out of ROW
26) Thos. Williams Site	N-10900	in ROW; elig. to NR
27) Mrs. Frazer House	*	out of ROW
28) Koval Site	N-6321 a & b	out of ROW
29) M. Fowler's Barn	*	out of ROW

Key
* - No CRS number exists

SEE FIGURE 35 FOR SITE LOCATIONS

Glasgow consisted of "two churches, a school-house, a post office, two stores...a hotel, a blacksmith and wheelwright shop, and about twenty-five residences" (1888:958). The village has remained small in scale for most of its subsequent history, although some post World War II growth has occurred as a result of residential and commercial development.

North of Porter Road, a 200' section of the New Castle and French Town Railroad ROW (N-422) lies within the proposed ROW and will be impacted by proposed construction. However, since it consists solely of the bed on which the stone sleepers and rails for the railroad were originally laid and later removed, it does not have associated archaeological materials. Consequently, no archaeological investigation of this National Register property was undertaken within the Railroad right-of-way proper, although adjacent fields were included in Phase I survey.

Historic resources related to another prominent Pencader Hundred family, the Canns, are located at the southern limit of the segment. Immediately west of Route 896 and north of the New Castle and Frenchtown Railroad right-of-way sits the J. Cann House (N-3997). This four-bay brick structure was one of several properties owned by the prosperous Cann family during the late eighteenth to early twentieth centuries; a second house of this family, the R.T. Cann House (N-3983), stood several hundred feet to the east, prior to demolition in 1982. Both structures are depicted in Rea and Price (1849) (Figure 11), Beers (1868) (Figure 12), and Baist (1893) (Figure 13), and are also illustrated in an 1836 New Castle County Orphans Court Record (O-1-106), produced following the death intestate of William Cann

(Figure 36). This record also reveals three intervening structures, immediately east of present Route 896 and south of the New Castle and Frenchtown Railroad right-of-way, associated with one or both of these residences. Two are small, one-story structures, while the third is depicted as a more substantial, two-story, three-bay building. None of these appear in 1937 aerial photos on file at the Glasgow Soil Conservation Service for this part of the Project Area. All lie within or close to the proposed ROW.

Further north, Segment 2 diverges eastward from existing Route 896, skirting the fringe of Glasgow. The proposed ROW passes east and west, respectively of the A. Adair (N-3903) and W. D. Adair (N-3982) farmsteads, both illustrated on Beers (1868) (Figure 12). Rea and Price (1849) (Figure 11) depicted the latter property as well under the name "A. Underwood," (Annabelle), wife of Solomon Underwood, who devised the property to William D. Adair (W.R. V-1-105). The original farm residence here still stands, south of existing Route 40, but its interior has been gutted for use as a stable by horse farm operators who currently lease the property. The proposed ROW will impact two twentieth century barns associated with the horse farm west of the residence. Because of its compromised state as an historic structure, the farmstead was determined to be not eligible for the National Register by the Bureau of Archaeology and Historic Preservation in 1981. Because the proposed ROW is located on the periphery of the original farmstead, and because of the small amount of cultural material encountered in Phase I testing of

Transect "F", STP's 40 through 45 in this vicinity, no archaeological site was designated and no Phase II investigations were conducted.

Interviews with local residents revealed the location of the William Miles Site, the locus of several prehistoric components east of the Project ROW. The site is located southeast of Glasgow on a small knoll immediately north of an east-flowing stream which empties into Belltown Run. No testing or surface collection was conducted at this site because of its location roughly 400 feet east of the Project ROW. The private collections of William Miles and Z. Mielnnikiewicz, discoverers of the site, were cataloged, however, and these tabulations are included in Appendix III of this report. Materials recovered from the Site are restricted to lithics. A variety of stemmed projectile point types indicate the presence of several Woodland I components, and a possible bifurcate point base suggests an Archaic occupation as well. The diversity of raw materials represented in these two collections indicates numerous visits to this locus by prehistoric groups.

Northwest of the W.D. Adair property and south of the New Castle and Frenchtown Turnpike, Beers illustrates another residence of "J. Scott" (Figure 12). This is the same residence indicated south of the New Castle and Frenchtown Turnpike on the 1906 USGS Wilmington Quadrangle Topographic Map. Deed research reveals that a John Scott and wife owned this property and residence until it was conveyed to a William H. Brotten in 1875 (Table 7). This same 16 acre tract passed through a succession of

TABLE 7

DEED CHAIN - JOHN SCOTT SITE

Seller	Buyer	Deed	Date	Acres	Price
John Scott and wife Margail	William H. Brotten	(D)10-110	12-18-1875	16 Ac.	
William H. Brotten and wife Anne V.	Peter D. Griffith	(D)G-11-483	1-11-1879	16 Ac.	$1,500.00
Peter D. Griffith and wife Catherine A.	John H. Frazer of Wilmington	(D)S-11-494	9-11-1880	16 Ac.	$1,500.00
John H. Frazer (J. Pierce Gould, Sheriff)	Star Loan Association	(D)O-16-244	7-23-1894	16 Ac.	$100.00
Star Loan Association	Dugald B. Smith	(D)P-16-553	11-7-1894	16 Ac.	$750.00
Dugald B. Smith	Duncan B. Smith	(D)G-23-214	3-15-1911	16 Ac.	$5.00
Duncan B. Smith	Frank V. Brown	(D)M-23-231	7-15-1911	16 Ac.	$1,600.00

Key
Ac. = Acerage
(D) = New Castle County Deed Record

owners until Frank V. Brown acquired it in 1911. DelDOT design maps for the first episode of Route 40 construction in 1922 indicate a "frame house" belonging to Frank V. Brown 300 feet west of the J. Frazer/"Hermitage" driveway entrance (Figure 37). DelDOT design maps for the dualization of Route 40 in 1934 again illustrate this structure as a "2 1/2 Story House" with front porch and rear additions evident, situated on the proposed median between the east and west-bound lanes (Figure 38). Two associated outbuildings and a barn lie south of the proposed east-bound lane. Plans for subsequent alterations to Route 40 by DelDOT in 1945 and 1951 do not illustrate any structures at this location, but do show placement of a median crossover immediately east of the residence location (Figure 39). Aerial photographs from 1937 (Department of Agriculture, Soil Conservation Service, Glasgow Office), include this portion of the Project Area but do not reveal any extant structure in this location. North of Route 40, the proposed ROW in Segment 2 heads northwest; east of the ROW and not affected is the extensive "Hermitage" estate (N-3990), owned by J. Frazer in the mid-nineteenth century and depicted on Rea and Price (1849) (Figure 11), Beers (1868) (Figure 12), and Baist (1893) (Figure 13) atlases.

Further northwest, Beers (1868) (Figure 12) illustrates several structures below Muddy Run; property owners designated are "Mrs. Williams" and "Mrs. Ferris." This cluster of structures is also depicted on Baist, (1893) (Figure 13), but without owners' names. The 1906 USGS Wilmington Quadrangle (Figure 10) clearly reveals one structure potentially within the right-of-way, east of a small north-flowing feeder stream of Muddy Run.

Research into New Castle County Road Papers revealed one final historic resource for Segment 2, north of Muddy Run. The platt of a petition for straightening and improvement of this road in 1828 depicts a structure just west of the road bed, labelled "M. Fowler's Barn" (Figure 40). No subsequent documents depict this structure, however. Furthermore, it appears that this would have stood outside the proposed ROW; recent industrial landscaping in this location would have destroyed any archaeological remnants.

Segment 2 - Survey Results (Figure 41)

Segment 2 consists of that portion of the proposed ROW which diverges east of existing 896 to bypass Glasgow village. As with Segment 1, current land use in this portion of the corridor consists primarily of lands under cultivation. The major exception is the middle section of the Bypass, where it passes through an area of scrub forest east of the Hodgson Vocational-Technical School and then across Sunview Horse farm. Disturbance from construction and development is minimal over most of the Segment, with the worst recent impacts associated with the construction of Route 40 north of Sunview Horse Farm. Plowing had exposed ground surfaces enabling surface reconnaissance in these areas (Figure 41). Shovel testing was employed elsewhere, primarily in the middle portion of the segment.

Phase I Survey of Segment 2 of the Route 896 Project located three archaeological sites (Figure 42). One of these yielded prehistoric materials exclusively, (Jarmon) while the John Scott Site exhibited evidence of a disturbed nineteenth century occupation. The Thomas Williams Site contains both historic and

prehistoric cultural material in tree locations. Phase I survey and testing in fields adjoining the New Castle and Frenchtown Railroad ROW in the Project corridor failed to produce any archaeological material relating to this resource. Similarly, south of the railroad ROW and east of Route 896, shovel testing in Transect "N" at 30 foot intervals did not yield archaeological evidence of the Cann Family structures depicted in the Orphans Court Record of the William Cann Estate (Q-1-106) noted earlier.

Jarmon Site (7NC-D-113, N-10902)

Surface reconnaissance of plowed fields north and south of New Castle and French Town Railroad ROW revealed a discontinuous low-density distribution of artifacts subsequently designated the Jarmon Site (Figure 43). This site is the locus of several cultural occupations represented by nine projectile points recovered comprising several Woodland I notched and stemmed forms manufactured from a range of raw material types. Of note is one corner-notched jasper specimen of possible late Paleo-Indian origin, found west of the ROW. These points and only four pieces of debitage were recovered from two areas north ("A") and south ("B") of the railroad ROW. Area "B" consists of a single point find, while Area "A" contained the remaining material, scattered over an area of 300 X 600 meters, with no apparent patterning or concentration. For these reasons, and because of the low potential for buried remains, no Phase II investigations were conducted at the site.

John Scott Site (7NC-D-110, N-10287)

The John Scott Site is located in Glasgow, 1000 feet east of the U.S. Route 40/Route 896 intersection, on the median strip

separating east- and west-bound lanes of Route 40. It lies immediately west of a median cross-over lane which is now officially closed to traffic.

Background research indicated the presence of a farmstead or residence belonging to John Scott in this location by 1868. Joint reference to both deed records and prior design maps for several episodes of Route 40 construction enabled prediction of this resource's location abutting the west edge of the median cross-over. Phase I pedestrian survey revealed a low rise forty feet west of the cross-over; this was assumed to be the buried remains of the structure. Hence, no subsurface testing was conducted in this Phase of the site's investigation.

Phase II research at this location was initially intended to confirm buried structural remains and also to determine the context and limits of additional cultural material (Figure 44). Sod stripping of 2 foot wide trenches within an established grid revealed that this low mound was actually a decaying, buried tree stump. Field strategy was altered to excavate shovel test pits at systematic 20 foot intervals in this vicinity to detect areas of high artifact density as potential indicators of structural remains and other features. Twenty feet south, at N20W0, shovel testing encountered a dense accumulation of buried fieldstone. One 4 x 4 foot test unit here (N18W0) documented the presence of demolition fill, including brick, fieldstone, and mortar, to a depth of 2.2 feet below surface. A two foot wide exploratory trench excavated west from this location uncovered a truncated western foundation wall, 1.3 feet below surface, between N18-20 and W14-16. Interior whitewash was observed adhering to the

eastern, and therefore interior, face of this wall. Bucket augering, employed to trace the extent of the wall, revealed its complete removal by demolition just north and south of the test trench (Figures 45-48).

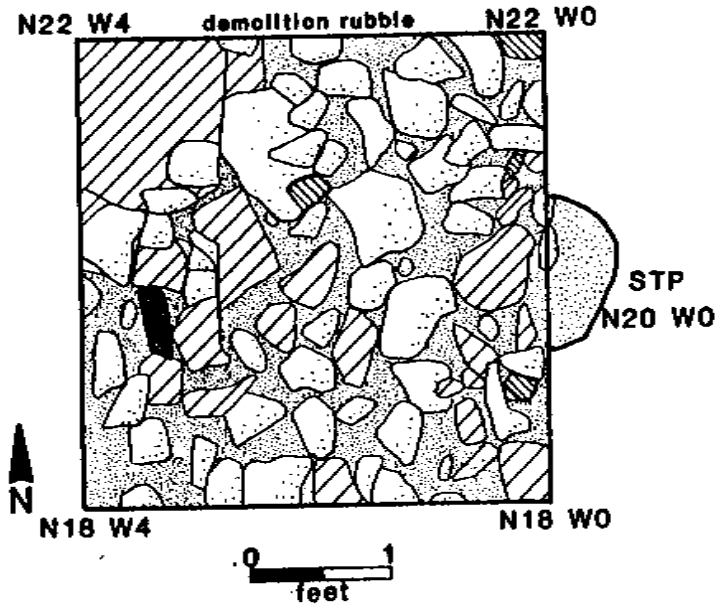
Forty-nine shovel test pits were excavated during Phase II study of the site (Figure 44). Frequencies of cultural material were generally low, with somewhat higher counts to the east and south, reflecting at least in part heavy disturbance of the area during construction of Route 40. Shovel test pit soil profiles supported this conclusion, exhibiting in nearly all cases topsoils that were truncated or absent. South of Route 40, shovel testing encountered cinderblock immediately below surface at S140W20 (Figure 44). Sod stripping in surrounding units uncovered foundation remains of a recent structure composed of cinderblock and cement. The identity and function of this structure is unknown, but is clearly a recent twentieth century manifestation.

Many of the materials derived from Phase II testing, including square-cut nails, whiteware, redware, procelain, and brick fragments, reflect the original nineteenth century occupation of this site. However, other artifacts, such as asphalt chunks, items of plastic, and clear and brown bottle glass, indicate more recent deposition and disturbance.

Phase II testing located buried remnants of the John Scott House foundation and derived materials reflecting nineteenth century and later occupation of this site. The Site has been severely impacted, however. Northern portions were disturbed by construction of Route 40, while to the south, installation of a produce market, associated parking facilities, subsurface

FIGURE 45

John Scott Site Test Unit N18W0, Plan View, Level 4

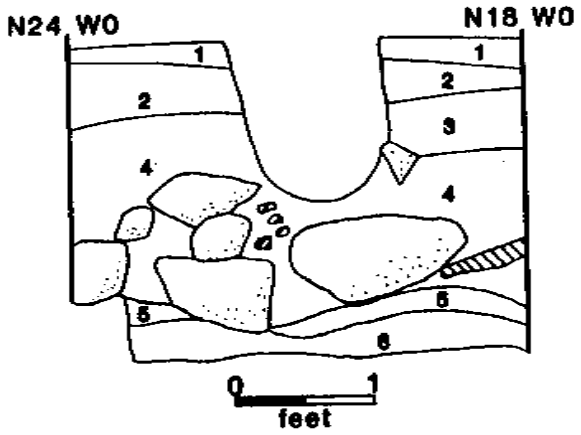


soil- level 4 | rock | glazed brick

1. dark brown fine sandy silt
2. dark yellow-brown fine sandy clayey silt
3. dark yellow-brown sandy clayey silt

FIGURE 46

John Scott Site Test Unit N18W0, Profile, East Wall



mortar/cement | brick

4. dark yellow-brown coarse sandy clay
5. light olive-brown sandy clay
6. yellow-brown sandy clay

FIGURE 47

John Scott Site Test Unit Trench, N18W12, N20W16 Plan

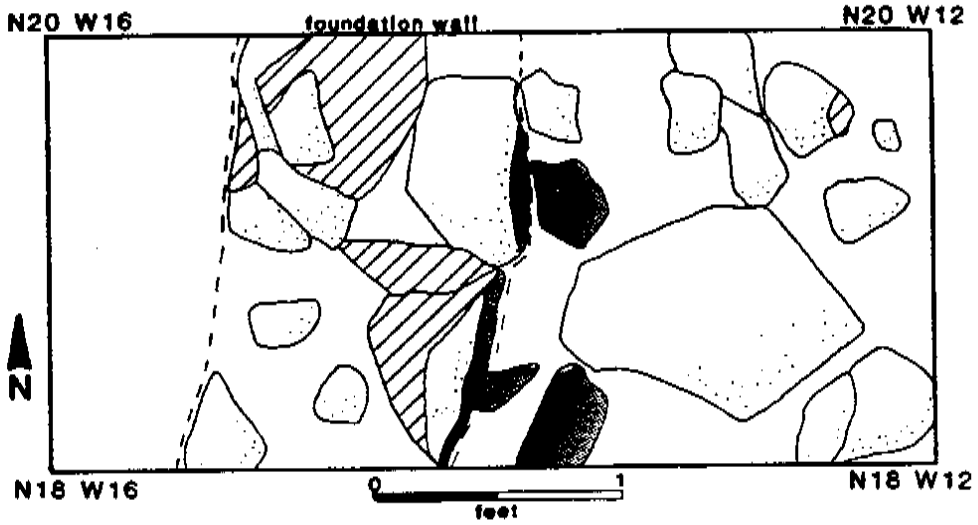
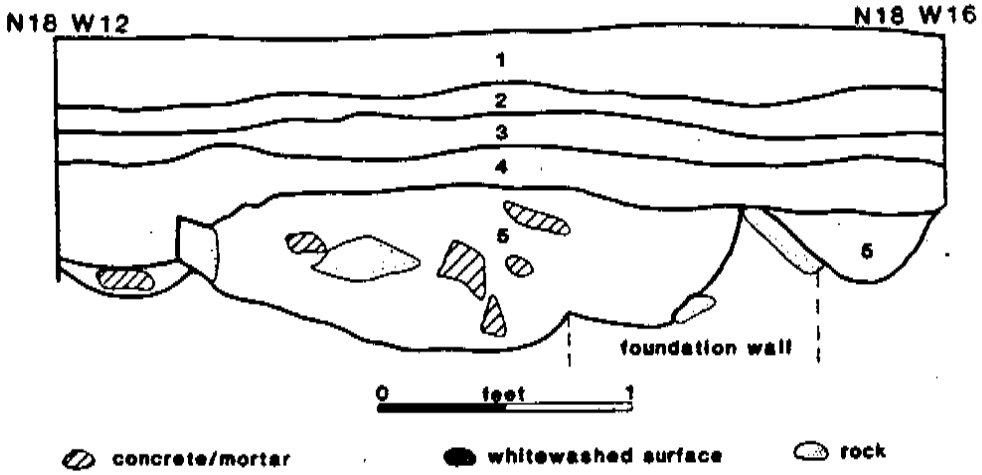


FIGURE 48

John Scott Site Test Unit Trench, N18W12, N20W16, Profile, South Wall



1. brown–dark brown sandy silt with roots
2. dark brown–yellow brown sandy silt
3. yellow-brown silty sand
4. strong brown sand with dark brown organic stains and some pebbles
5. matrix around rock fill. dark yellow-brown sandy clay

electrical lines, and a recent twentieth century structure of undetermined identity, have all taken their toll on the resource. The consequences have been partial removal of the nineteenth century structure by demolition, and disturbance of associated cultural materials through topsoil removal. The Site is considered not eligible for inclusion to the National Register under any criterion, due to severe disturbance from several sources which have compromised its integrity as a cultural resource. It lies within the zone of direct impact and will be destroyed by proposed construction.

Thomas Williams Site (7NC-D-130, N-10900)

Surface reconnaissance of plowed ground between Route 40 and Muddy Run encountered both prehistoric and historic resources, the latter comprising the nineteenth to early twentieth century component of the Thomas Williams Site (Figure 49). Prehistoric lithic remains were encountered in seven separate areas over the proposed ROW in this area, for convenience designated as numbered "locations." Five concentrations of material (Loci 1, 3, 4, 6, and 7) situated in proximity to the historic occupation were subsequently included in that site designation. Of these, locations 4, 6, and 7 consisted of small amounts of lithic material scattered about the periphery of the historic occupation and appeared to represent remnants of a prehistoric site subsequently impacted by the nineteenth century occupation, designated Area "A". Only locations #3 and #1, which lie to the southeast, yielded sufficient material to be designated as Areas "B" and "C", respectively, of the Thomas Williams site.

Area "B" of the Thomas Williams Site, Location #3, was the most productive of these surface scatters, and a test unit in the center of this locus yielded additional lithics from the plowzone including a Woodland I contracting-stemmed point of argillite, modest amounts of chert and jasper debitage and fire-cracked rock. Excavation below the plowzone yielded no prehistoric material. Due to small size, plowed context, and low likelihood of intact sub-plowzone remains, no Phase II investigations were conducted on any of the seven prehistoric lithic scatters locations.

The historic component of the Thomas Williams Site is situated 350 feet east of Route 896 and 200 feet south of Muddy Run (Plate 8). It is restricted to high ground overlooking a small, north-flowing tributary of Muddy Run, 200 feet to the west. Immediately north is a farm service road, running east from Route 896. Two mature black walnut trees mark the southern limit of the historic occupation (Figure 49). As noted, the historic component and the prehistoric materials of locations 4, 6 and 7 distributed around its periphery were designated Area "A". Prehistoric location #3, (Area "B"), lies on level ground 100 feet to the southeast with locations #1 (Area "C") lying 800 feet southeast of Area "B". Background research indicated the potential for remains of at least one historic structure within the ROW south of Muddy Run. Both historic and prehistoric components of the site were discovered during surface reconnaissance of the recently plowed fields. Prehistoric materials encountered on the fringes of the historic component lacked any spatial concentration and clearly represented the

PLATE 8

THOMAS WILLIAMS SITE, AREA "A", LOOKING SOUTH

disturbed remnants of the original prehistoric occupation.

Following discovery, Phase I field study of the historic component entailed determining site limits. Whiteware, redware, brick, flat and vessel glass, and coal were observed, extending 150 feet south from the bluff edge to the black walnut trees, with east-west dimensions of 120 feet (Figure 50). The spatially discrete nature of the historic scatter at Area "A" documented by Phase I research indicated the presence of an intact historic occupation. On this basis, Phase II investigation of the site was deemed necessary.

Additional background research revealed that the site was contained within a parcel owned by Samual H. Black at the time of his death. Black's own residence was the La Grange house (N-576) to the southwest in Glasgow. An Orphans Court return (P-362) filed on 25 February 1835 following his death intestate reveals that he owned several other properties as well, one "being the house and lot situtated at the north end of Glasgow... containing one acre and two roods of land, appraised at the sum of $50.00." This property, designated lot #1 in the return, was assigned to Charles H. Black, one of Samuel's sons (Figure 51). While owned by Samuel Black, it had probably functioned as a tenant residence.

The land was conveyed to David Ball in 1844 and subsequently to Cantwell Clark in 1845, who sold it to Thomas Williams, "stone mason and plasterer," in 1846, along with a narrow one-half acre strip adjacent to the first lot. This second parcel encompassed the farm lane, beginning at Route 896 and extending 480 feet east, and included a provision for Clark's continued right-of-way

along it (Table 8). Reconstruction of metes and bounds for these two parcels placed the historic scatter and associated black walnut trees within the more southerly Lot #1 (Figure 52).

It appears that Thomas Williams died in approximately 1860: on Beers (1868) Map of Pencader Hundred, the property is listed under "Mrs. Williams," his assumed widow (Figure 12). In 1875, Sidney J. Stump purchased the property from the "heirs of Thomas Williams," Andrew J. Williams and other individuals, who may have been his son and several other relations. Stump owned the property until his death in 1922, when it was devised to his wife, Laura Brown, who sold it in the same year to John Wirt Willis (Table 9).

Soon thereafter, the residence was torn down, as it does not appear in 1937 aerial photos of the location. It is notable that during Phase II field investigations of the site, a local Glasgow resident, Mr. Charles Thompson, reported to us his boyhood recollection that in the early 1900's the residence had been occupied by an elderly black couple. This may have been when Sidney Stump owned the property. Robert and Kay Zeitler, who presently rent the land and the nearby Hermitage (N-3990) from Dupont, have no knowledge of a structure ever having stood at the site's location.

Phase II field investigations were conducted to determine if cultural features relating to the historic component were present below the plowzone. In the northern portion of the scatter where historic material was clearly more numerous, field personnel excavated thirty-six shovel test pits at systematic 20 foot intervals to detect areas of high artifact density in the

TABLE 8

FEATURES ENCOUNTERED IN PHASE I AND II INVESTIGATIONS OF THE THOMAS WILLIAMS SITE (7NC-D-130)
(Descriptions are plan view unless otherwise noted)

Fea.#	Prov.	Description	Interpretation
1	S25W20	Portion of dark stain in NE corner of unit, with circular edge where exposed.	Trash Pit
2	S15W20	Darkly-stained deposit with limits extending beyond test unit; augering indicated maximum diameter of less than 10 feet.	Trash Pit
3	N5W60	Light, square-shaped stain containing darker, circular discoloration; cross-sectioning revealed feature tapers downward from 1.2 to 2.3 feet below surface.	Post Mold/ Post Hole of fence post
4	S5W20 S4W23	Linear scar in subsoil, trending east-west, with flat basin shape in transverse cross-section.	Possibly Non-cultural
5	N5W20	Linear ridge in subsoil, trending east-west.	Possibly Non-cultural
6	S21W54 S24W60	Field stone walls with mortar and internal stratified deposits to three feet below surface.	Foundation remnant
7	S19W60	Small circular stain north of northwest corner of foundation.	Post mold
8	S5W60	Stain encountered in northeast corner of unit, with circular outline where exposed.	Trash pit
9	N5W50	Sub-circular dark stain; cross-sectioning revealed basin-shaped profile.	Trash pit
10	N5W70	Portion of wooden post, embedded in west wall of unit and overlain by disturbed deposits.	Fence post, basal remnant

Key

Prov. - Provience
Fea. - Feature
N - North
E - East
W - West
S - South

TABLE 9

DEED CHAIN - THOMAS WILLIAMS HOUSE SITE

Seller	Buyer	Deed	Date	Acreage	Price/Value
S.H. Black dies intestate. Court return assigns house and lot #1 to son Charles H. Black.		(OCR)P-362	2-25-1835	1 Ac.	$50.00
"House and Lot of Land" conveyed from Charles H. Black M.D., and Ann R. Black	David Ball	(D)M-5-456	3-23-1844	1 Ac.	$100.00
"Land and Premises" conveyed from David and Margaret Ball	Cantwell Clark	(D)unknown	12-30-1845		
Lots #1 and #2 conveyed from Cantwell and Elizabeth B Clark	Thomas Williams	(D)U-5-449	8-24-1846	1 Ac. 1/2 Ac.	$250.00
Andrew J. Williams et al., "heirs of Thomas Williams", inherit property.					
Parcels #1 and #2 conveyed from Andrew J. and Louisa Williams et al.	Sidney J. Stump	(D)G-11-197	10-18-1875	1 Ac. 1/2 Ac.	$250.00
Sidney Stump dies February; 1922. Devises property to wife Laura Brown Stump		(WR)R-4-178	2-1922		
Parcels #1 and #2 conveyed from Laura Brown Stump	John Wirt Willis	(D)W-30-522	3-31-1922	1 Ac. 1/2 Ac.	$350.00

Key
(D) = New Castle County Deed Record
(OCR) = New Castle County Orphans Court Record
(WR) = New Castle County Will Record

plowzone potentially indicating sub-plowzone features. Shovel testing was restricted to the northern two-thirds of the site, where surface material frequencies were clearly higher (Figure 50). One feature was encountered during shovel testing at S20W60; cultural deposits there were observed in sub-plowzone strata to a depth of three feet below surface (Feature 6).

Plotting of shovel test artifact frequencies indicated highest densities in northern portions of the site, at the west 20 and 60 lines (Figures 53-56). Subsequent testing with 3 x 3 foot units was conducted in these areas. Bucket augering provided additional dimensional and stratigraphic information on some large features encountered. All twelve test units excavated uncovered features or possible features (Figure 50). The provenience, description and interpretation of these ten features is summarized in Table 8.

Remains of a fence line along the northern boundary of the site are indicated by a post mold in unit N5W60 (Feature 3) (Figure 57), and a buried post remnant in unit N5W70 (Feature 10). Feature 3 appeared in plan view at the base of level 2, consisting of a circular post mold with dark brown, slightly clayey fine-grained sand, within a roughly square post hole whose fill of yellowish-tan and brown silty-sand matched that of underlying subsoils. Sectioning revealed the feature extending from 1.2 to 2.3 feet below surface (Figure 58). Artifacts recovered from its fill included whiteware, stoneware, window and bottle glass, brick and cut nails.

Encountered in N5W70, Feature 10 consisted of the basal remnant of a wood fence post (Figure 59), embedded in the test

FIGURE 57

Thomas Williams Site Test Unit N5W60,
Feature 3, Plan View

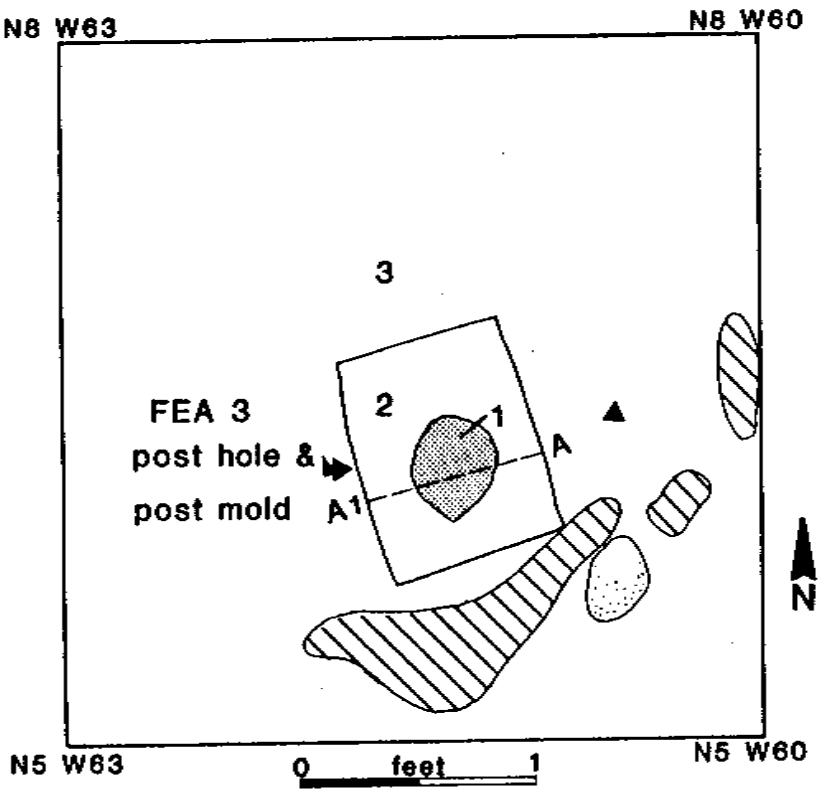
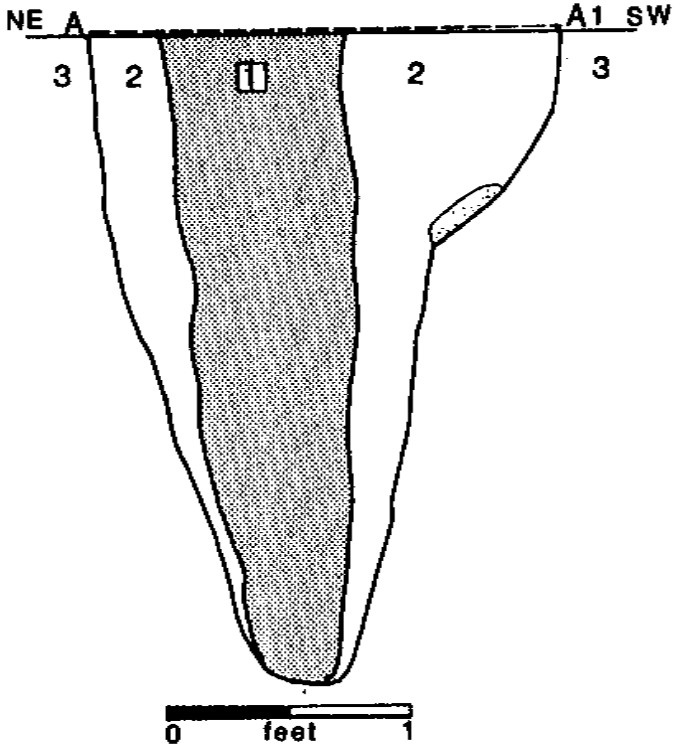


FIGURE 58

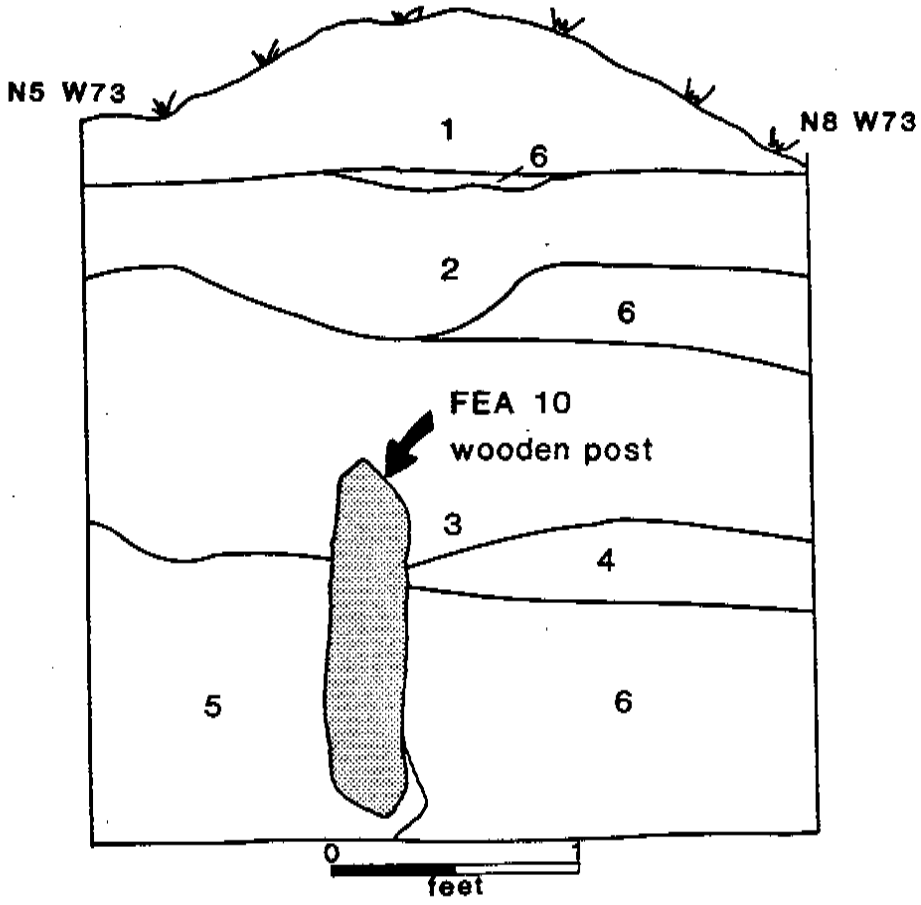
Thomas Williams Site Test Unit N5W60
Cross-section of Feature 3 Looking South



1. postmold fill- dark brown clayey fine-grained sand
2. posthole fill- mottled yellow-tan and medium brown silty sand
3. surrounding soil, base of level 2- medium brown silty sand with some pea gravel

FIGURE 59

Thomas Williams Site West Wall Profile of Test Unit N5W70, Showing Feature 10



1. medium brown sandy loam fill
2. mixed light and dark sandy loam fill
3. plowzone- dark brown sandy loam
4. orange sand with brown loam and gravel
5. light brown silty sand
6. orange silty sand

unit's west wall, 1.5 feet below surface. No post hole outline was noted around it, probably because only the lowest portion of the original post was still present; overlying the post remnant were several disturbed strata (Figure 60). Driving a fence post into the ground, below the limit of the hole dug for it, and followed years later by disturbance of the upper soil horizons would produce this phenomenon.

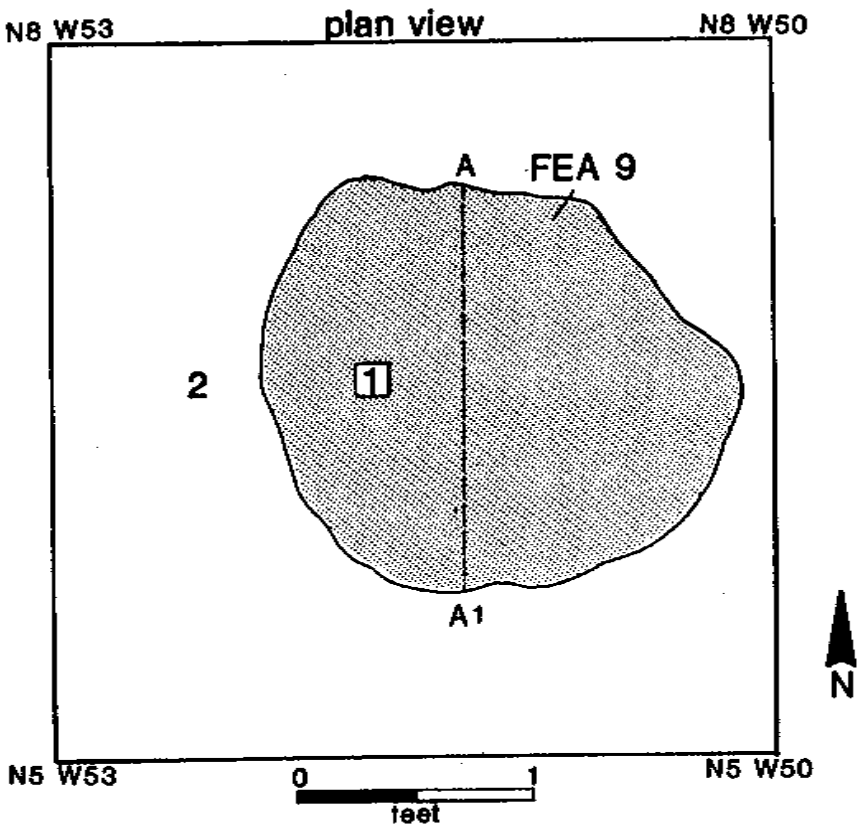
Taken together, these two features indicate that an east-west fence line stood at the edge of the bluff above the farm lane during the historic occupation. Presence of both a post mold feature and an intact, buried post remnant suggests maintence of the fence-line over a period of time.

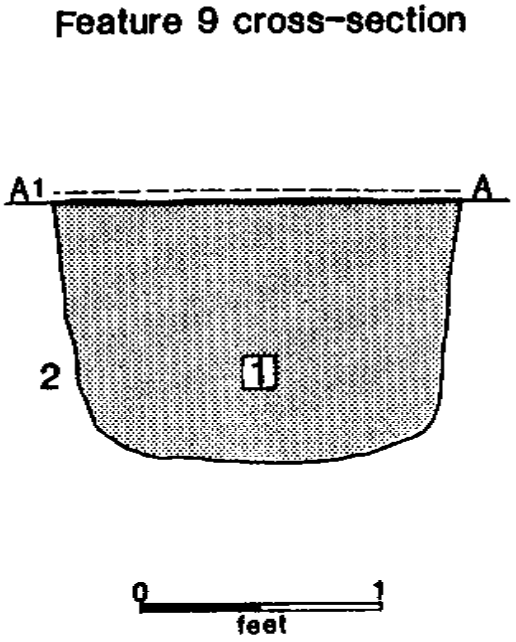
Historic trash pit features were observed in units N5W50 (Feature 9), S5W60 (Feature 8), S15W20 (Feature 2), and S25W20 (Feature 1). Feature 9 was roughly circular in plan view, and sectioning revealed a basin-shaped profile (Figure 60). Screening of the dark-brown sandy silt fill yielded redware, whiteware, pearlware, ironstone, and yellowware, as well as window, bottle glass and brick fragments.

As noted, STP S20W60 encountered cultural deposits to a depth of three feet below surface. Underlying the plowzone were three successive strata: a dark brown silty sand, a tan-brown mottled clayey sand, and finally a decomposed, fragmented brick plaster deposit. The latter suggested either a very large trash pit with building rubble as a basal deposit, or the interior of a structure foundation. Excavation of test units S21W54 and S24W60 around this shovel test revealed north and west walls of a fieldstone house foundation below the plowzone with white-wash

FIGURE 60

Thomas Williams Site Test Unit N5W50, Plan View and Cross-section of Feature 9





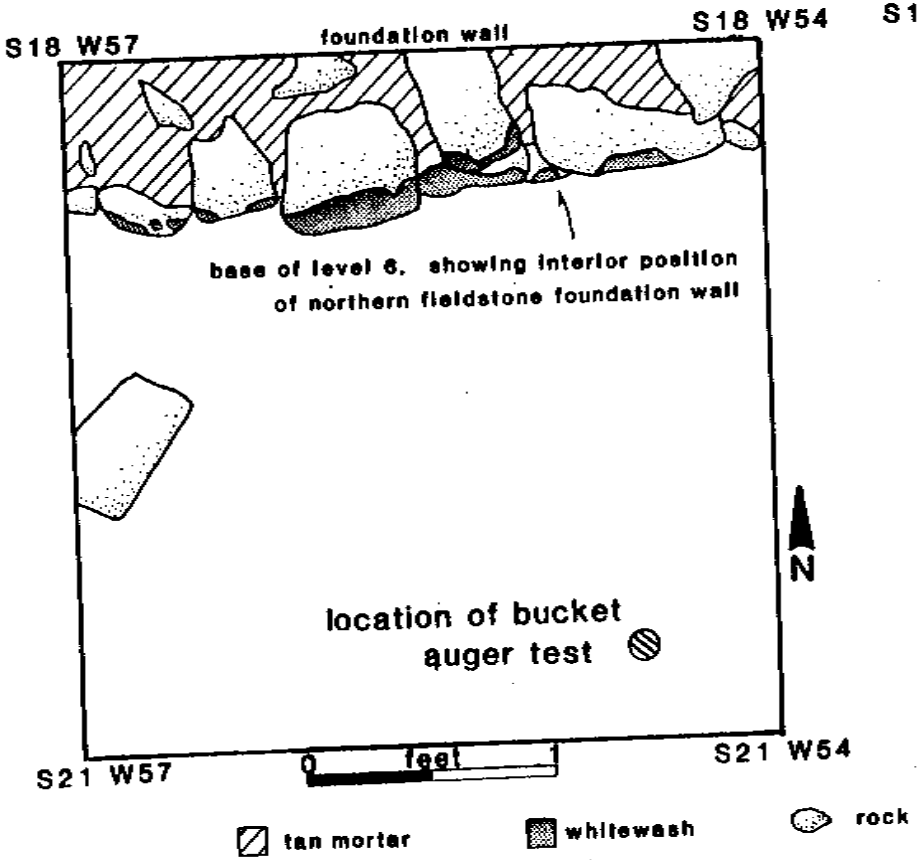
1. feature fill- dark brown silty sand
2. surrounding soil- medium brown silty sand

adhering to wall interiors (Figures 61-64). Adjacent to the north foundation wall, test unit S19W60 uncovered a small, dark brown circular stain interpreted as a postmold related to the residential structure. In both S21W54 and S24W60, the sequence of sub-plowzone deposits inside the foundation proved somewhat more complex than that observed in STP S20W60. Test Unit S24W60 encountered four cultural deposits inside the foundation extending 1.5 feet below plowzone. In test unit S21W54, six strata were excavated below plowzone; below this lay the fragmented brick plaster and whitewash deposit. Coring of this last stratum indicated a thickness of 0.8 feet. It was in turn underlain by a sandy black, possibly burned layer 0.1 feet thick, below which undisturbed sands were noted. Additional bucket augering to the south and east indicated dimensions of the structure to be 15 by 10 feet. Test excavations did not reveal a builder's trench feature associated with the foundation.

Two other designated features were encountered during Phase II investigations. Both are difficult to interpret and probably do not relate to the historic occupation. Feature 4 is an east-west trending linear scar in the subsoil noted in test units S5W20 and S4W23. It was observed at the plowzone/subsoil interface, but does not appear to be a plowscar, since in transverse cross-section it exhibited a flat basin shape with square corners. Feature 5 lies just to the north, encountered in test unit N5W20. It is also a linear feature, oriented parallel to Feature 4. It is a ridge, rather than a scar in the subsoil, however, lying at the interface with the plowzone. It is conceiveable that both features are plow-induced, but this seems

FIGURE 61

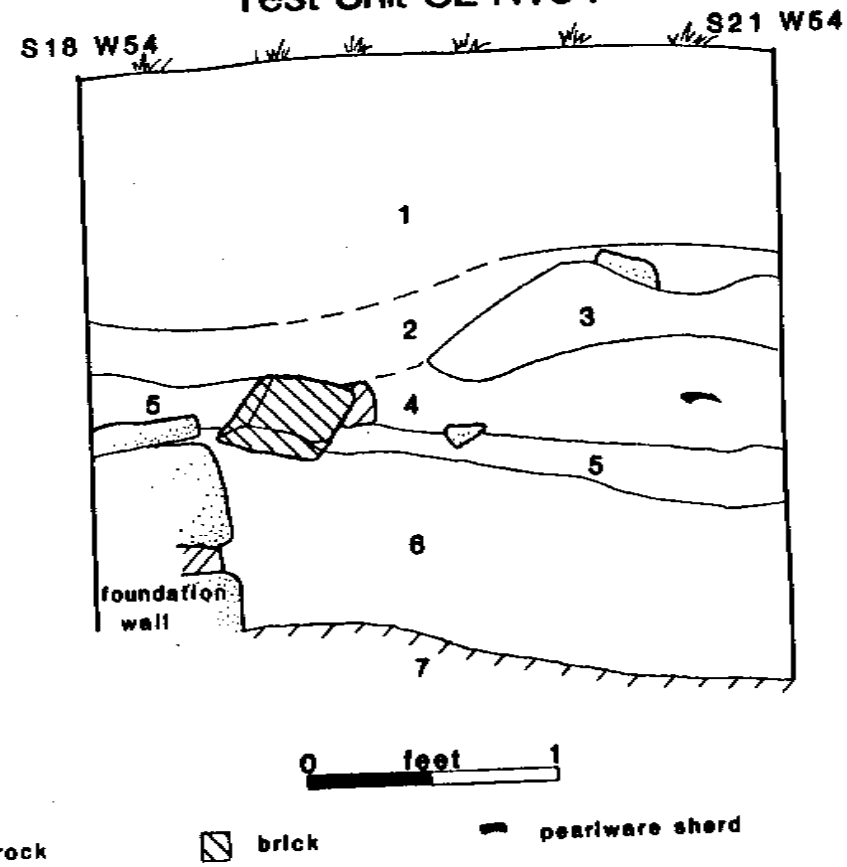
Thomas Williams Site Test Unit S21W54, Plan View of Feature 6



1. plowzone- medium brown silty sand or sandy loam
2. mottled tan and brown silty sand
3. yellow-tan sand
4. light brown silty sand

FIGURE 62

Thomas Williams Site East Wall Profile of Test Unit S21W54



5. dark brown to olive-brown silty sand
6. mottled tan and brown sandy silt with tan mortar fragments
7. unexcavated- fragmented brick, plaster and whitewash

FIGURE 63

Thomas Williams Site Test Unit S24W60, Feature 6

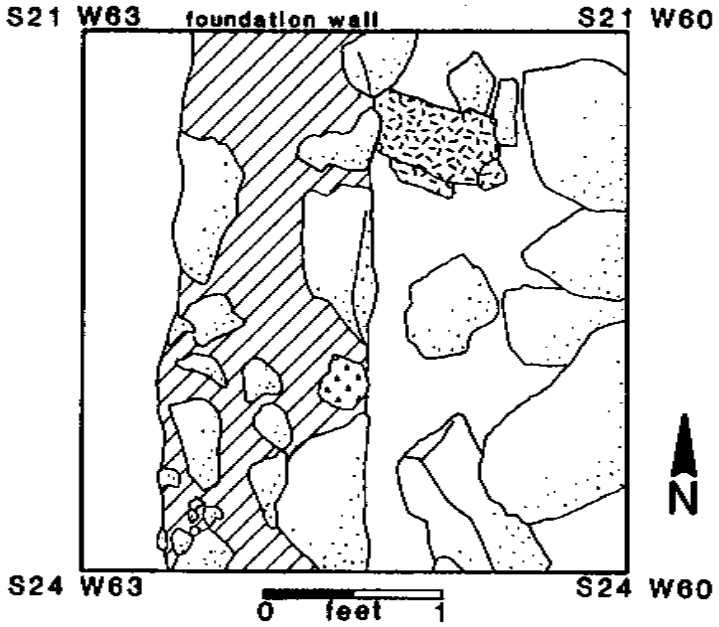
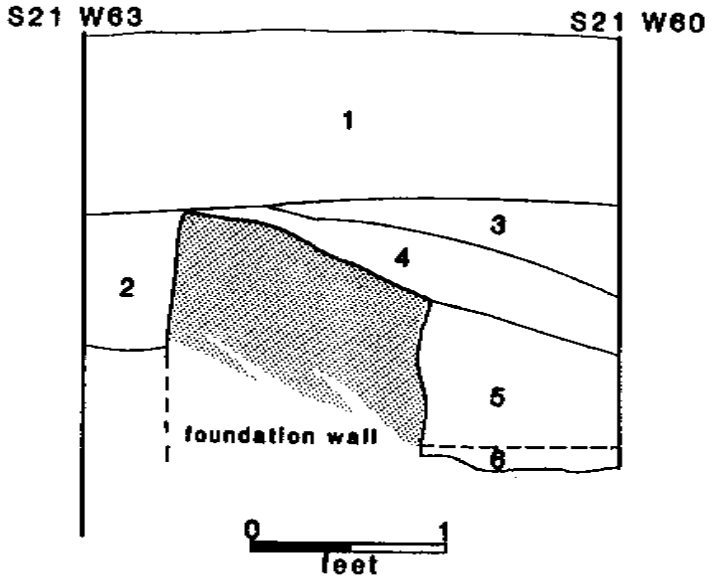


FIGURE 64

Thomas Williams Site North Wall Profile Of Test Unit S24W60

Showing Section of Western Fieldstone Foundation Wall And Deposits Encountered



tan mortar white mortar rock whitewashed brick plaster

1. plow zone- medium brown sandy loam
2. sterile subsoil- tan-brown silty sand with large amounts of gravel
3. level 1 of feature 6- mottled dark brown and tan silty sand with no mortar or gravel
4. level 2 of feature 6- tan-brown silty sand with large amounts of white mortar and some tan mortar and gravel
5. level 3 of feature 6- unconsolidated tan mortar in sand matrix with small to medium fieldstones and some gravel
6. unconsolidated tan mortar, brick and large fieldstones

foundation wall- medium to large fieldstones and consolidated tan mortar

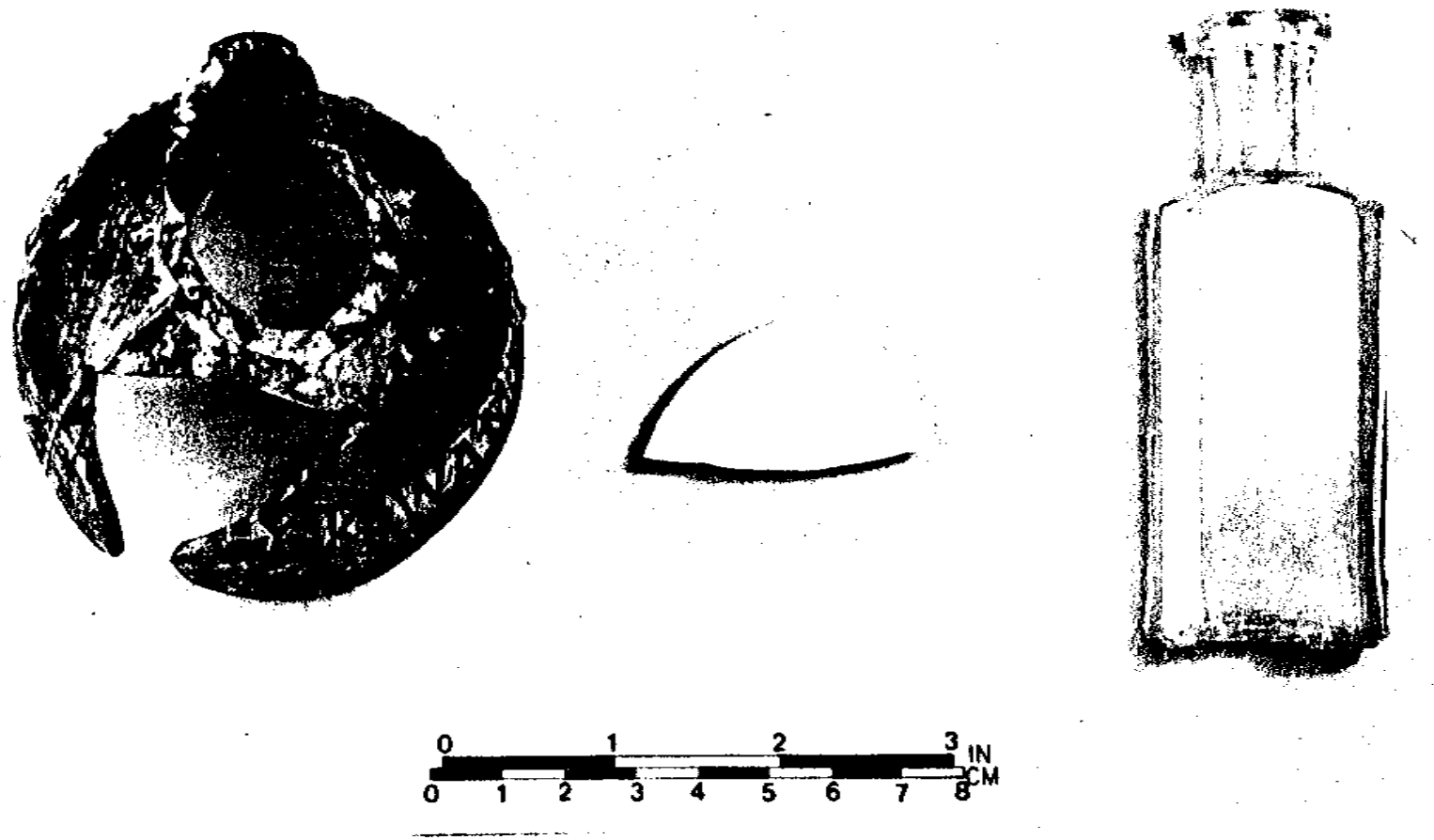
unlikely, as neither bear the classic flat V-shaped profile of normal plow scars.

It should be noted that several Phase II test units on the site yielded small amounts of prehistoric lithic material. This came as no surprise, since initial Phase I reconnaissance had produced prehistoric artifacts as well. Invariably, however, excavated prehistoric material was either recovered in plowzone deposits or in disturbed strata overlying intact subsoils. The largest amount of material was recovered from N5W60, which yielded a Woodland I side-notched point of jasper (Figure 57), seven flakes of various raw materials, and several fragments of heat-fractured rock. All of this material derived from the three disturbed strata in the unit which overlay intact deposits where the top of Feature 3 was encountered. These items and the small amount of prehistoric lithics recovered in other Phase II test units on the site are interpreted as the disturbed remnants of limited prehistoric occupation debris present at the site.

Historic remains produced by Phase II testing included large amounts of bone, brick and brick plaster, coal, green, blue and milk-colored glass, square-cut nails, kaolin pipe fragments, gray salt-glazed stoneware, transitional pearlware/whiteware, porcelain, annular wares, redwares (including some slip-trailed specimens), and both plain and transfer-printed whiteware (Plates 9, 10, and 11). Of the ceramic whitewares, redwares and pearlwares were the dominant types (Plate 10). These artifacts agree with archival sources in indicating a domestic occupation of the site from the second quarter of the nineteenth century into the early twentieth century. Phase II testing reveals that

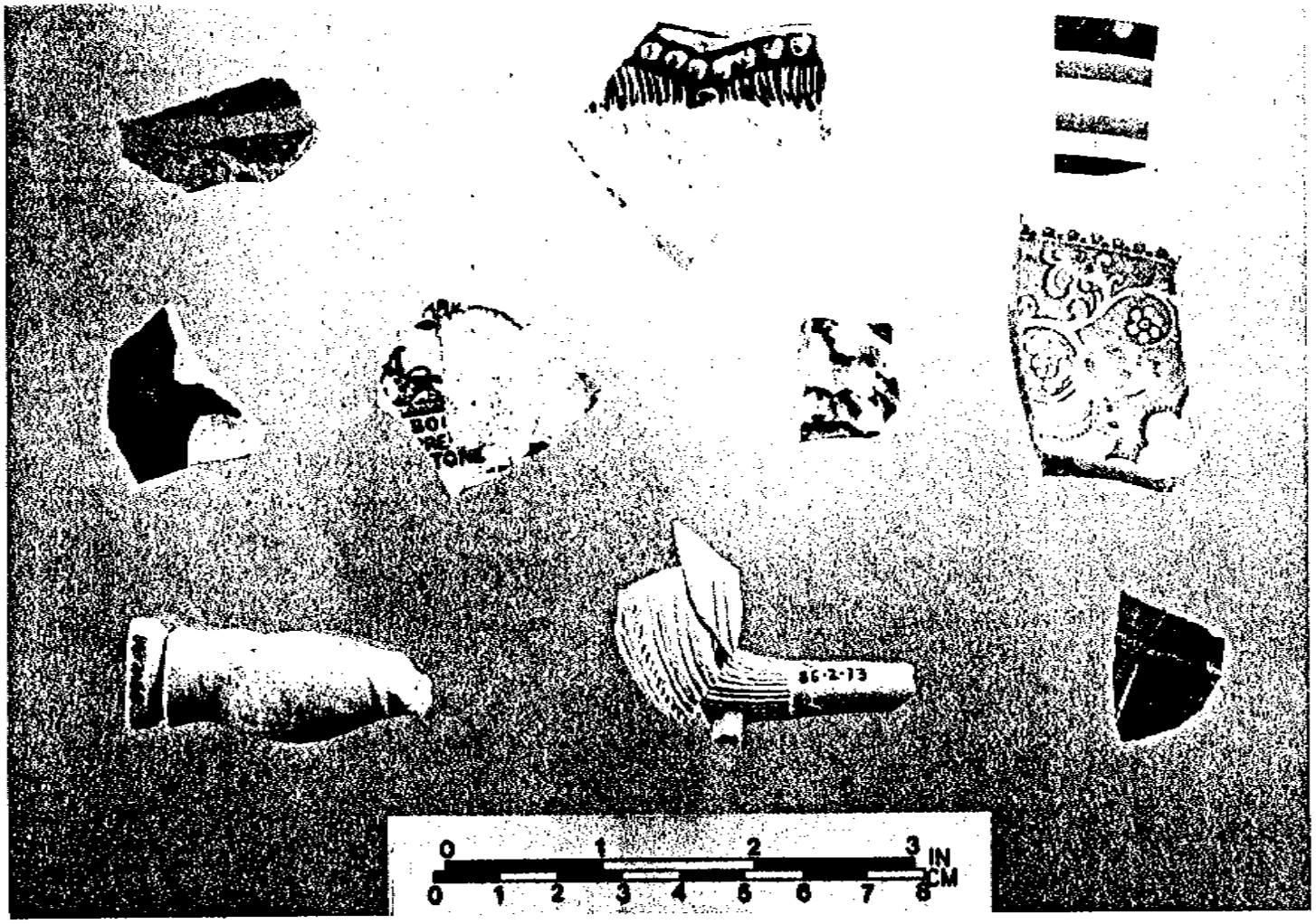
PLATE 9

GLASS ARTIFACTS RECOVERED IN PHASE II INVESTIGATIONS AT THE THOMAS WILLIAMS SITE



(left to right): shoulder and neck of amber beer or soda bottle, embossed "...YK WANPOLE & CO PHILDA" (C.N. 86/2/32), milk glass mason jar lid liner fragment (C.N. 86/2/10), clear extract or pharmaceutical bottle (C.N. 86/2/60).

PLATE 10
CERAMICS RECOVERED IN PHASE II INVESTIGATIONS AT THE THOMAS WILLIAMS SITE



TOP ROW (left to right): Slip-decorated redware (C.N. 86/2/76), elaborate shell-edge pearlware (C.N. 86/2/69), annular whiteware (C.N. 86/2/60). MIDDLE ROW (left to right): "Flow Blue" whiteware (C.N. 86/2/69), maker's mark whiteware (C.N. 86/2/96), sponge decorated whiteware (C.N. 86/2/11), transfer-printed whiteware (C.N. 86/2/60). BOTTOM ROW (left to right): Porcelain doll's leg (C.N. 86/2/69), white clay pipe and bowl fragments (C.N. 86/2/78), stoneware pipe bowl fragment (C.N. 86/2/6).

PLATE 11
MISCELLANEOUS ARTIFACTS RECOVERED IN PHASE II INVESTIGATIONS AT THE THOMAS WILLIAMS SITE

TOP ROW (left to right): iron buckle (C.N, 86/2/25), spoon bowl fragment (C.N. 95/2/78), both parts of 'hose supporter' devices, with patent date 1895 (C.N. 86/2/30). BOTTOM ROW (left to right): Mother-of-pearl button (C.N. 86/2/27), brass thimble (C.N. 86/2/26), 1913 Indian-head nickel (C.N. 86/2/28)

despite plowing, the house foundation and numerous associated cultural features are present in underlying subsoils.

Area "A" of the Thomas Williams Site is considered eligible for inclusion in the National Register under Criterion "D". Although originally a tenant structure, the house appears to have been an independantly-owned residence, at least when occupied by the tradesman Thomas Williams. It can therefore provide archaeological data on the domestic life of an independant, lower-class property owner. Given the dichotomy between upper class gentlemen farmers and lower class tenant farmers which predominated in rural nineteenth century Delaware, this site provides an unusual research opportunity to examine archaeological remains of individuals not involved in agricultural pursuits. In addition, it may also have been the residence of a black couple in the early 1900's and could therefore provide the occasion for archaeological study of this ethnic group.

The majority of the site lies within the western portion of the proposed ROW; proposed construction will impact this major eastern portion of the site. Avoidance is the recommended mitigation alternative. Should this not be feasible, then data recovery should be considered as a second alternative, due to location of the site within direct and secondary impact zones of proposed construction. A determination-of-eligibility form has been completed and is included in Appendix II.

Koval Site (7NC-D-92, N-6321)

This site is located 50 to 75 meters east of Route 896 and 30-100 meters north of Muddy Run. Its setting is on a modest rise

and gentle south-facing slope overlooking Muddy Run. Surface collection of this site in 1981 by BAHP personnel indicated two concentrations of prehistoric lithic material (Areas A and B) with no diagnostics on the high ground overlooking Muddy Run. Phase I reexamination of the site vicinity in 1985 yielded a small, late-stage jasper biface within the bounds of Area A. Surface examination south and downslope revealed a third concentration of material, designated Area C, which yielded two flakes of quartz, a late-stage quartz biface, and the midsection of a finished jasper projectile point of indeterminate type. All three concentrations of surface material are situated east of the ROW limits. Portions of the ROW adjacent to these concentrations were subject to shovel test pitting to determine if related prehistoric materials, perhaps buried by slope wash, were present. None were encountered in testing, making further investigation unwarranted. It was determined that present design plans for proposed construction will not impact this prehistoric site (Figure 65).

Segment 3 - Background Research

The high quality cryptocrystalline lithic material outcrops of Iron Hill and its vicinity made it an important resource that was exploited in all the prehistoric time periods, with special significance during the Paleo-Indian Period. The substantial disturbance from the I-95 construction and commercial and residential development in this area may well have impacted such potential resources, however this segment also exhibits a high potential for the presence of micro-band base camps and procurement sites from the Archaic through Woodland II periods in

well-drained areas along the streams flowing into Silver Lake and along the floodplain of the Christina River (Figure 4) (Custer 1986, Custer and DeSantis 1986). There is a high potential along the southern half of this segment, for encountering sites dating to the nineteenth and twentieth centuries where existing Route 896 follows the original bed of Old Glasgow Road north of Glasgow. The northern half of the segment is relatively new, built in 1937-38, thus exhibits a low probability for historic sites prior to its date of construction.

Segment 3 consists of that portion of Route 896 from immediately north of Muddy Run to the I-95 interchange (Figure 66 and Table 10). All historic resources in this segment, save two, are related to the Clarks, another important family in local history of the project area, that was particularly dominant in the nineteenth century. The Clark family established their presence in the area in 1831 when Cantwell Clark purchased 944 acres north of Glasgow from the Farmers Bank of Delaware (D.R. Q-4-92). The agricultural works which he established there in succeeding years were of sufficient size and success to be designated "Clarksdale" on the Beers map of 1868 (Figure 12) and included five separate residences under his name. Deed research and informant interviews revealed that at its peak, the Clark estate included a brick mansion house, five smaller residences for both tenant farmers and several of his children, and a number of agricultural facilities.

Cantwell Clark's own residence, the brick mansion, was situated east of 896 where the main Dupont Glasgow facility

TABLE 10

ROUTE 896 CULTURAL RESOURCES IDENTIFIED BY BACKGROUND RESEARCH IN SEGMENTS 3 AND 4

Resource	CRS#	Comments
30) Clarksdale Mansion	*	out of ROW
31) Clarksdale Tenancy #2	N-10616	in ROW; not eligible
32) Clarksdale Tenancy #3	*	out of ROW
33) Clarksdale Tenancy #4	*	out of ROW
34) Clarksdale Tenancy #1	N-10608	in ROW; not eligible
35) Coleman Hse./Gas Station	*	in ROW; not eligible
36) J. Nicholson House	*	out of ROW
37) Cooch's Bridge H. Dist.	N-190	out of ROW
38) J.H. Clendinin House	*	in ROW; pres. destroyed

Key
* - No CRS number exits

SEE FIGURE 66 FOR SEGMENT 3 AND 4 SITE LOCATIONS

building now stands. Still visible today in that vicinity are the remains of several agricultural outbuildings, including portions of what was a large bank barn fashioned entirely of brick. Research indicated that three of the smaller Clarksdale residences stood in or adjacent to the proposed right-of-way. Two of these lay immediately west of the Old Glasgow Road, bracketing the north and south sides of an unnamed stream feeding Silver Lake. Both structures are depicted on the 1906 USGS Wilmington Quadrangle, Topographic Map (Figure 10) although 1936 DelDOT design maps for Route 896 reveal only the more southerly

of the two (Figure 67). It appears that when Route 896 was subsequently constructed, it ran between these two structures.

As noted, north of its junction with County Road 408, Route 896 follows a road bed constructed in 1937-38, taking a more direct route north to Newark than the original Glasgow Road (Plate 12). Now designated County Road 408, "Old Glasgow Road" swings in a wide arc to the east, crossing the Christina at Cooch's Bridge before veering northwest to Newark. A petition for straightening and improvement in the road between Glasgow and Newark had been first submitted in 1826 (N.C.C. Road Papers Return 3 June 1826, P.119).

North of the Route 896/County Road 408 junction, few potential historic resources are noted, primarily due to absence of roads in this area prior to 1938. The road from Christiana Bridge to Elkton was constructed in 1723 and passed through the project corridor, but no historic resources were built in the proposed ROW until after construction of existing Route 896. The intersection of these two routes existed at Cooch's Bridge since the mid 1700's, but this crossroads never consisted of more than the location for a post office (Scharf 1888:958).

The final potential historic resource for Segment 3 is the possible archaeological evidence for the Battle of Cooch's Bridge. The Cooch's Bridge Historic District (N-190) lies east of the I-95/Route 896 intersection, extending southeast to encompass the Cooch's Bridge vicinity. Within the boundaries of this National Register District are contained the eighteenth century Cooch House (N-1469) and the nineteenth century Dayett

PLATE 12
ROUTE 896, CIRCA 1937

showing the original road bed, now County Road 408
on the right, and the present day route of 896, built in 1937–38 by DELDOT

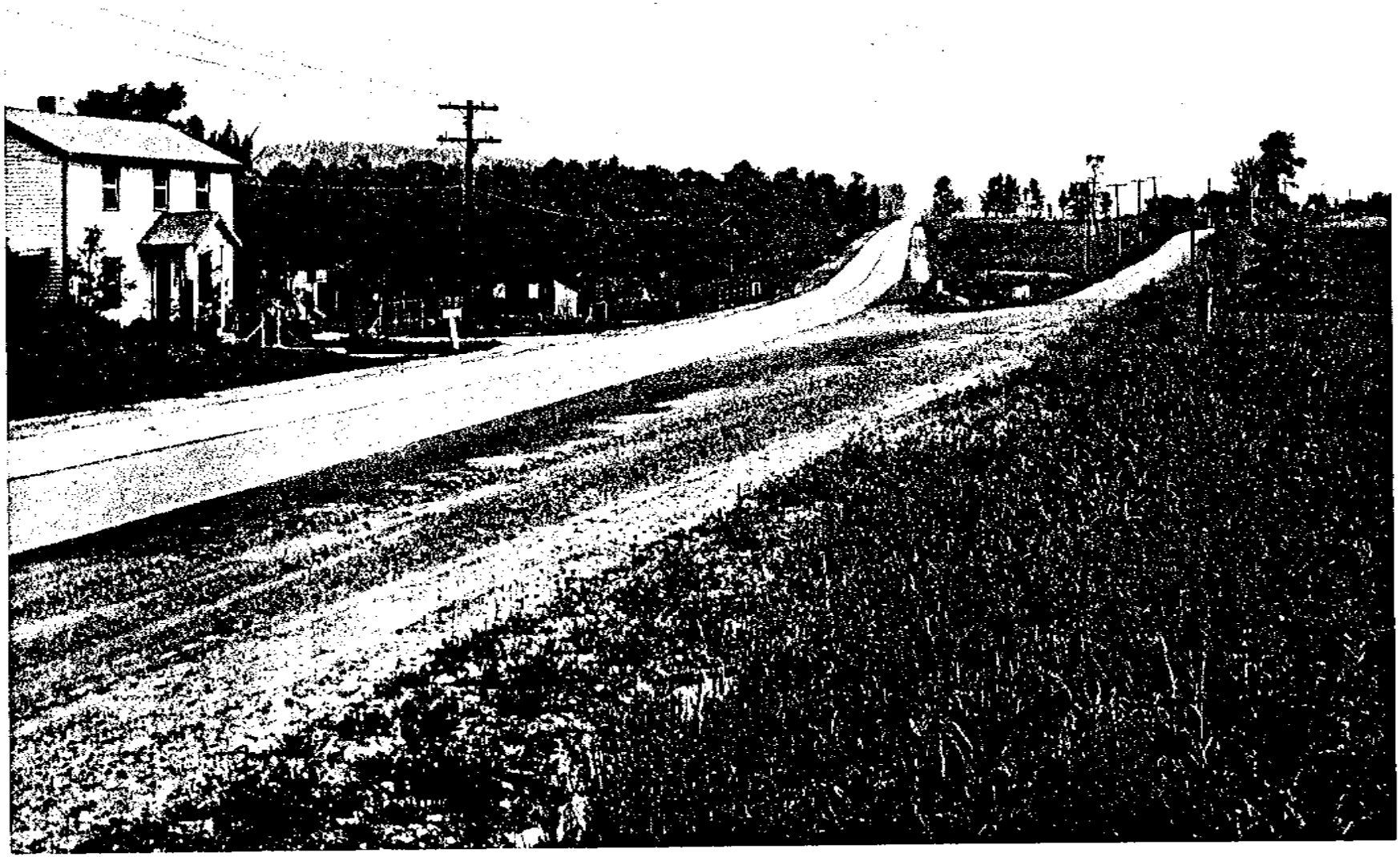


photo credit: Delaware State Archives

(N-1470) and Armstrong houses, Dayett's Mill (N-1468) and the former sites of the Thomas and William Cooch Mills. In addition, the District is purported to include where the major actions of the revolutionary Battle of Cooch's Bridge took place (September 3, 1777). In this engagement, a select brigade of light infantry drawn from 70 colonial regiments commanded by William Maxwell briefly engaged the vanguard of Howe's advancing British army in what was intended by Washington as an harassment and delaying action. Limits for the Cooch's Bridge Historic District drawn by Heite et al. (1972) reflect the traditional interpretation of the Battle's dynamics which Cooch (1940) and Munroe (1978b) also espouse. Munroe, for example, relies on narratives such as those of von Muenchhausen, aide of General Howe (Kipping and Smith 1974).

According to von Muenchhausen, the vanguard of the British column, Hessian Jaegers, were attacked by American Forces north of Glasgow and east of Iron Hill. Howe subsequently ordered a Battalian of English light infantry to support the Jaegers on each flank; to the east, this movement was impeded by Purgatory Swamp, while English infantry to the west moved laterally further than intended and encountered an American militia force. According to this source, the affair was soon ended:

> "Before General Howe arrived at the front with the two grenadier battalions, the jaegers had already finished the whole affair themselves, chasing the rebels through the thick woods, then across the barren hill and the Christiana Creek bridge, which led them across a second creek and a deep ravine. The rebels stopped at this second creek and made music with half-moons and other (wind) instruments."

Other sources exist however which suggest that the main action was not in the vicinity of Cooch's Bridge, but that the engagement was centered more on Iron Hill itself. Johann Ewald, a Hessian Captain involved in the actual combat recounts the chain of events thus:

> "The army marched past Amborn to Aiken's Tavern in the Welsh district of Pennsylvania. At daybreak the army halted here momentarily. The Quartermaster General gave me six dragoons and ordered me to march at once to the left, where I should follow for five to six hundred paces a road which led to Iron Hill and Christiana Bridge. I took the dragoons with me to find the road that I had to take, and had not gone a hundred paces from the advanced guard when I received fire from a hedge, through which these six men were all either killed or wounded. My horse, which normally was well used to fire, reared so high several times that I expected it would throw me. I cried out,"Foot jagers forward!" and advanced with them to the area from which the fire was coming. My horse followed the men, but I did not observe that the good animal, which had carried me the whole day, was wounded in the belly; it died in the evening. At this moment I ran into another enemy party, with which I became heavily engaged. Lieutenant Colonel von Wurmb, who came up with the entire Corps assisted by the light infantry, ordered the advanced guard to be supported.
>
> By this time it was broad daylight and we saw the mountain, which was overgrown with woods, rising up like an amphitheater and occupied by enemy troops. The Commander in Chief himself appeared and ordered Lieutenant Colonel Wurmb to drive the enemy off the mountain. The charge was sounded, and the enemy was attacked so severely and with such spirit by the jagers that we became masters of the mountain after a seven-hourengagement"(Tustin 1978:77-78).

If one considers that over 2,000 troops from opposing sides were probably involved in this engagement, review of conflicting battle accounts suggests that the action was not centered in any specific location. Rather, a more plausible reconstruction is that opposing forces were distributed more broadly, and that skirmishing actually occurred over an area stretching from

Cooch's Bridge itself west to Iron Hill (W.P. Catts, personal communication 1986).

After the battle, British forces remained in the area until orders to march were given on September 7th. Von Muenchhausen reports that

> "..General Howe encamped on this (west) side of the small Christiana Creek....Only the Jaegers and English light infantry are on the other (east) side of the creek, yet very close to it. We have Iron Hill on our left flank and the nearest slope of this hill is occupied by English Grenadiers" (Kipping and Smith 1974:28).

Johann Ewald relates that:

> "In the afternoon, the army encamped behind (west) Cooch's Creek. General Knyphausen.... took his position to the right (south) of the army at Aiken's Tavern. The Jager Corps received its post in a wood on the highway to Newark, between Cooch's and Fisher's Mills, to the left (north) of the army" (Tustin 1978:78).

These accounts of British encampments are in fundamental agreement with the map of Major John Andre, a British engineer, detailing the location of specific British forces (Figure 68). A review of sources recounting the battle indicates that while the bulk of the action may have occurred in the Cooch's Bridge vicinity, at least a portion of the engagement may have occurred further west on the eastern flank of Iron Hill, within the project area. In addition, there is some possibility that portions of the British encampments were within the project area north of Glasgow. The presumed British encampment earthworks (N-6318) located 3000 feet west of Glasgow are clearly outside of the project ROW; it should further be noted that these may not represent English encampments in the first place as their

location west of Glasgow does not concur with Andre's Map.

The potential for actual cultural resources in the ROW relating to the battle is low, due to the fact that military engagements usually produce low density, discontinuous distributions of material. There is somewhat greater potential for encountering archaeological evidence of British encampments in the form of features near Cooch's Bridge, although it is still unlikely due to the brevity of the British encampment after the Battle.

Segment 3 - Survey Results (Figure 69)

Current land use in this Segment is dominated by industrial/commercial development immediately north of Muddy Run, and residential development north of the 896/408 junction. Landscaping associated with construction of the Dupont Plant east of 896 and development of an industrial park to the west have substatially impacted areas adjoining Route 896 in this vicinity. Post World War II residential construction, sewer line installation, and topsoil stripping have severely impacted lands along 896 between the 896/408 junction and the I-95 Interchange. This project segment with ground cover was not subject to Phase I testing due to these disturbances (Figure 69).

Two historic archaeological sites, Clarksdale Tenancy #1 and Clarksdale Tenancy #2, and two prehistoric sites, the Martucelli Site and the Iron Hill East Site, were identified during Phase I survey of the proposed ROW in Segment 3 (Figure 70). No cultural resources relating to the Battle of Cooch's Bridge were encountered by either surface reconnaissance or subsurface testing.

Clarksdale Tenancy Site #2 (7NC-D-115, N-10903)

The Clarksdale Tenancy Site #2 is located immediately east of Route 896, 1000 feet south of the Route 896/County Road 408 junction. Background research indicated this site as the location of another tenant structure of the Clark family, first appearing on the 1906 Wilmington Quadrangle Topographic Map (Figure 10). Phase I walkover of this area revealed that the original tenant structure was still standing, although it had been substantially modified (Figure 71). The present occupants, George and Elizabeth Haenlein, provided details on recent building episodes and also reported the recovery of a bifurcate projectile point (mid-Archaic), a stemmed projectile point base, and an undistinguished biface, all of quartz, while recently gardening along the west edge of their property.

The Phase I shovel test pit transect in this portion of the ROW tested areas north and south of the existing structure (Figure 71). Materials produced included brick, wire and square-cut nails, coal, glass, bone, and both polychrome and undecorated whiteware. Phase I testing also included excavation of two 1 x 1 meter test units southwest of the structure, adjacent to the location where Mr. Haenlein reported discovering the prehistoric materials. These tests failed to produce any prehistoric artifacts, although historic materials similar to those derived from the shovel test pits were obtained from soils to a depth of 35-40 centimeters (Figure 71).

Goals of Phase II research were to obtain additional spatial and stratigraphic information on the historic archaeological deposits around the tenant structure (Figure 71).

Excavation of 45 shovel test pits at systematic ten meter intervals revealed a low density distribution of historic materials, with a small peak for most classes ten meters south of the structure. Frequencies for brick alone were higher north of the structure. Two 1 X 1 meter tests were excavated, one in the higher density artifact zone, and a second adjacent to the north wall of the original tenant structure. The latter unit uncovered a truncated builder's trench containing brick rubble; the N49E15 unit south of the structure yielded historic materials from a plowzone to a depth of 30 centimeters. Material recovered from Phase II testing included wire and occasional square-cut nails, brick, mortar, coal, plastic and metal objects, clear, colored, and milk-white glass, whiteware, and redware (Figures 72-75). Shovel test pit N120E20 produced a single flake of jasper; bracketing this unit with 4 additional shovel tests failed to produce additional prehistoric material (Figure 71).

Field studies documented the presence of historic archaeological materials in low densities associated with the tenant structure. Excavation of measured test units revealed the presence of a truncated builder's trench feature. Away from the house, materials were derived from an old plowzone but not in underlying subsoils.

Ceramics and other items recovered indicate occupation from the very late nineteenth or very early twentieth century to the present. Background research corroborates these findings, with 1906 as the earliest documentation of the structure's existence. At least three building episodes subsequent to its original construction have substantially altered the original tenant

structure and have destroyed much of the archaeological site associated with it. Other recent alterations to the location, including construction of farm outbuildings, a fish pond, an outdoor grill area, excavation of a compost pit, and planting of orchard trees, have also impacted historic archaeological deposits. Because of these distrubances the archaeological site is determined not eligible for the National Register. It lies within direct and secondary impact zones of proposed construction and will be heavily impacted.

Clarksdale Tenancy Site #1 (7NC-D-111, N-10288)

The Clarksdale Tenancy Site #1 is located 650 feet north of the junction of Routes 896 and County Road 408, on a wedge-shaped strip of median separating these two routes. Background research indicated the presence of a tenant structure at this location by 1868. It was assumed that the site vicinity had undergone a certain amount of disturbance from the construction of Route 896 in 1938. In addition, local residents informed us of the presence of a gas station and residence on this median wedge from the 1930's to the 1960's. Phase I shovel test pits excavated at a twenty meter interval along a transect through this area encountered a concrete foundation within a cross-over lane of the median, and a cinderblock foundation 20 meters further north (Figure 76). North of these foundations, Phase I shovel test pits produced an assortment of both historic and recent cultural material, including whiteware, redware, cinderblock, coal, glass, plastic, metal, and rubber. It was assumed that historic materials recovered reflected the tenant house occupation in this area.

Goals of Phase II studies were to determine the status and location of archaeological features relating to the tenant house occupation, and to define the site's northern boundary. By default, Route 408 constituted the eastern limits of the occupation, as the tenant house had been situated with reference to this road. Construction of Route 896, the twentieth century residence, gas station, and median crossover were believed to have truncated site boundaries to the west and south (Figure 76).

Two areas exhibiting vegetational anomalies, one immediately north of the cinderblock foundation and another 20 meters to the northeast, were believed possible indicators of intact foundation remains. To reveal underlying features, 39 one meter test units were stripped of surface vegetation, resulting in discovery of a fieldstone and mortar foundation immediately north of the cinder block foundation. Stripping of twenty-four additional units on the fieldstone foundation uncovered remnants of a brick chimney base adjoining the east wall (Figure 77). Bucket augering within the foundation walls indicated cultural deposits to 30 centimeters below present ground surface. Additional Phase II work included excavation of 18 shovel test pits, most at 10 meter intervals, north and south of the foundation (Figure 76).

Cultural materials derived from Phase II testing included glazed and unglazed brick, mortar, coal, square-cut and wire nails, clear, brown, green and milk-white glass, plastic, rubber and metal items of twentieth century origin, creamware, redware, and plain and transfer-printed whiteware.

In sum, Phase II testing of the Clarksdale Tenancy Site #1 revealed portions of the truncated nineteenth century structure

foundation. Cultural materials derived from testing included items which relate to this nineteenth and early twentieth century occupation, as well as more recent materials. Construction of Route 896, and subsequent location of a residence, gas station, and median cross-over to the west and south have impacted these areas of the site. Most important is the orientation of the original tenant structure to County Road 408 ("Old Glasgow Road"), meaning that most domestic activities and consequent archaeological deposits would have been located behind the house, to the west, where disturbance from construction of Route 896 was pronounced. Thus, while cultural materials and perhaps additional features pertaining to the tenant house occupation exist to the north and east, it is but a small fraction of the original archaeological site. Because the disturbances have compromised the site's potential to yield additional significant data, it is considered not eligible for the National Register under any criteria. Most, if not all of the site lies within the zone of direct impact and will be destroyed by proposed construction.

Martucelli Site (7NC-D-112, N-10901)

The Martucelli Site lies adjacent to the western margin of existing Route 896, 210 meters north of the junction of Route 896 and County Road 408. It is situated on a low rise, 180 meters north of where two small streams join to flow eastward, draining into Silver Lake. The site was discovered during excavation of Phase I shovel test pits on a 20 meter transect interval west of Route 896. Shovel test pit H-24 produced two flakes of gray chert and one of tan quartzite. Excavation of four additional shovel

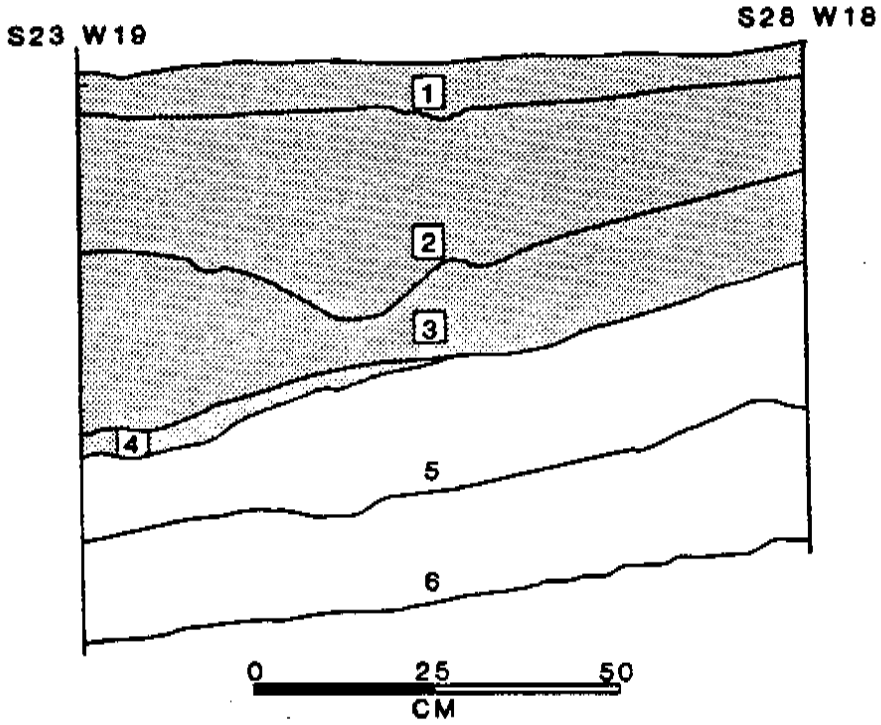
test pits bracketing this yielded six flakes of quartzite (Figure 78).

Phase II study of the Martucelli Site was intended to define occupation limits, determine stratigraphic context, and derive a larger, excavated sample of prehistoric material. Twenty-eight additional shovel test pits were excavated at systematic five meter intervals (Figure 78). These produced 23 additional pieces of quartzite debitage, distributed over an area of approximately 20 x 20 meters. Shovel testing also indicated the possible disturbance of the site by fill deposition, as most of these tests also yielded an assortment of modern debris in upper soil horizons, including plastic, cinderblock, brick, wire nails, glass, ceramic tile, and mortar. Local residents reported filling of this area some years ago with material "from the Wilmington Dump."

Excavation of a 1 x 1 meter test at the western edge of the prehistoric material distribution encountered 50 centimeters of fill overburden, with sterile, possibly truncated soil horizons underneath. This indicated that prehistoric material produced by shovel test pits here came from artifact-bearing soils on easterly portions of the site that were redeposited further west during fill dumping episodes (Figure 79). A second one meter test unit at the eastern edge of the distribution encountered only small amounts of fill debris near the surface. This test unit yielded prehistoric material in levels from surface to a depth of 30 centimeters, including a jasper biface, 3 quartzite flakes, and 12 probable fire-cracked rock fragments. In the course of

FIGURE 79

Martucelli Site, North Wall Profile of Test Unit S24W18



disturbed fill

1. very dark grey-brown silty loam
2. brown sandy silt
3. grey-brown coarse sand and gravel
4. very dark grey-brown greasy sandy silt
5. dark grey-brown silty loam
6. brown-yellow clayey silt

excavations, cobbles of a quartzite identical to that of recovered prehistoric debitage were observed occurring throughout the soil matrix of the site. No prehistoric cultural features were encountered (Figure 80).

Phase II study suggests the Martucelli Site has been subject to disturbance from two sources. First, plotting of debitage frequencies for individual Phase II shovel test pits indicates that a substantial but undetermined eastern portion of the site was destroyed by construction of Route 896 in 1938. Second, at some later date, fill was deposited, primarily on western portions of the site; disturbance of artifact-bearing soils and their redeposition further west appear to have occurred at this time as well.

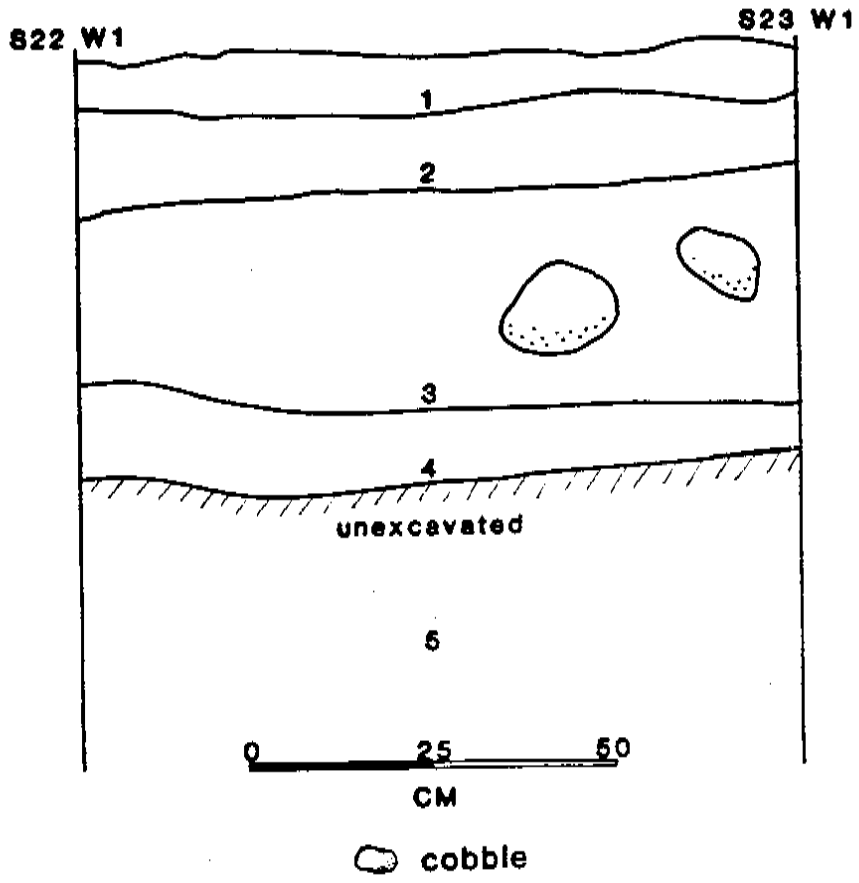
Prehistoric cultural material derived from testing indicates that the site functioned at least in part as a station for processing of locally-available quartzite cobble deposits. Its age and cultural affiliation remain unknown. Construction of Route 896 and fill dumping episodes have compromised the site's integrity and it is therefore determined to be not eligible for the National Register under any criteria. The site is within the zone of secondary impact and may be subject to further disturbance by proposed construction.

Iron Hill East Site (7NC-D-108, N-10905)

Prehistoric materials encountered in Phase I survey are present within the ROW along eastern and western margins of Route 896, on the eastern flank of Iron Hill. This face of Iron Hill is drained to the east by a small intermittent stream (Figure 70).

FIGURE 80

Martucelli Site, East Wall Profile of Test Unit S23W01



1. very dark grey-brown fine silty sand
2. brown-dark brown sandy silt
3. dark yellow-brown coarse silty sand with large amounts of pea gravel and round cobbles
4. yellow-brown silty sand with small amount of pea gravel
5. very dark brown ranging to dark yellow-brown coarse iron depleted sand with very small amount of pea gravel

Shovel test pit transects within the ROW east and west of Route 896 on the east flank of Iron Hill were excavated at 20 meter intervals. In addition, two 1 meter test units were excavated west of 896 bracketing the stream bed there. Difficulties with property access prevented testing south of this area (Figure 81).

Out of 35 shovel tests excavated, 25 produced a total of 56 cultural flakes or flake fragments of jasper, while the one meter tests west of 896 together yielded 23 flakes and one possible core fragment of this material. Artifact distribution was fairly ubiquitous over the shovel test transects, with moderate to low densities. Although surface visibility of the field east of Route 896 and north of the stream bed was very poor, surface reconnaissance was attempted. This yielded a single unifacially-worked artifact of jasper immediately northeast of the intersection of the stream with Route 896, three meters west of Shovel Test E-90.

Permission for Phase II investigation east of Route 896 was denied by the landowner. Phase II examination of site areas west of Route 896 was postponed until access could be gained for areas east of 896 as well to ensure an integrated study of prehistoric remains in this area.

Prehistoric artifacts of jasper recovered from east and west of Route 896 in the Iron Hill vicinity are interpreted as evidence of primary reduction of jasper deposits which occur there. Early stage reduction of quarried lithic materials generally produces large amounts of waste material; the proportion of items in the resulting debris bearing attributes of

direct percussion such as conchoidal fractures and striking platforms is a factor of the raw material being reduced.

In the case of Iron Hill, jaspers available there vary tremendously in quality; masses of good, flakeable stone usually occur as irregular nuclei surrounded by large amounts of much poorer quality siliceous stone. To successfully reduce this material for tool production requires the knapper to remove the low grade outer jasper from a lump or block in order to access the better quality nucleus. When subjected to percussion, these low grade materials often shatter or fracture non-conchoidally; subsequent exposure to the elements results in decomposition of fracture surfaces through weathering. Under these conditions, prehistoric jasper reduction at Iron Hill East would have resulted in archaeological materials approximating those encountered by Phase I testing: large amounts of amorphous, decomposed, low-grade debris, and much smaller frequencies of better quality jasper artifacts bearing striking platforms, conchoidal fractures, and other indicators of direct percussion activity. Investigators have noted similar situations at other quarry and primary reduction loci of the Delaware Chalcedony Complex (H.H. Ward, personal communication, 1985).

Date(s) for prehistoric exploitation of jasper at this specific locality are unknown, due to absence of diagnostics thus far. Research elsewhere on the Delaware Chalcedony Complex, however, indicates a potential exploitation from Paleo-Indian to Woodland II periods (Custer 1986). The presence of prehistoric materials reflecting jasper procurement at this location within the ROW dictates that Phase II study be conducted to determine

site limits, location of activity areas (if any) and achieve a fuller understanding of the stratigraphic context of materials. Statements regarding the National Register eligibility for this site and any mitigation recommendations must await Phase II investigations. Prehistoric archaeological materials are present, however, in both direct and secondary impact zones of the proposed ROW and will be impacted by proposed construction.

Segment 4 - Background Research

There is high potential for prehistoric site locations throughout the entire segment due to the close proximity of the project area to a branch of the Christina River which bisects Route 896 (Figure 4). Procurement and micro-band base camp sites dating from the Archaic through Woodland II periods are predicted to be the site types most likely to be located within this segment of the Project Area. The extensive amount of private and commercial development in recent years however, has negatively impacted such potential resources. As with Segment 3, the absence of transportation routes over most of this segment prior to construction of Route 896 in 1938 precludes the potential for substantial numbers of historic resources in this portion of the corridor (Figure 66 and Table 10).

Background research revealed the potential location of only one historic resource, the J.H. Clendenin property, depicted on Beers Atlas (1868) (Figure 12) as southeast of the Welsh Tract Baptist Church, and west of Christiana Creek. No subsequent map references illustrate this structure. Based on its location, it seems likely that I-95 construction (Gruber 1962) or recent strip