Road) reduced the tillable acreage to a non-productive level. Finally in 1960, after over 200 years of continuous occupation, the Hawthorn farm was abandoned.

CURRENT RESEARCH

Introduction

To satisfy the project's research design and methodology, archaeological data recovery was accomplished through 1) a stratified sampling scheme utilizing shovel/postholer units. This extensive excavation of areas outside the main activity area was accomplished in conjunction with the preliminary testing of prehistoric site 7NC-E-46 (O'Connor et al. 1983; Custer and Bachman 1984); 2) a purposeful, non-random excavation of site areas separated from the main activity area utilizing measured excavation units and shovel/postholer units; and 3) an intensive sampling of the main activity area, utilizing measured excavation units. Intensive exavation within the main house foundation with a backhoe accomplished the final stages of data recovery (Figure 15).

This section of the report will detail the findings of the archaeological excavations at the William M. Hawthorn site. Prior to the presentation of these results and interpretations, general comments will be made in regards to areas of the site with no relevant cultural material, to site description and site structure as related to the project area, and to methods of artifact description and analysis.

Areas with no Relevant Cultural Material

The final data recovery concentrated on areas known from the

Phase I/II research to contain high artifact density and/or an abundance of sub-surface features. The project limits were restricted by the proposed ROW, an area which was found to coincide with the main activity area of the site. Thus, while the areal extent of sampling the site was limited, the area most informative concerning artifact patterning and activity areas was intensively excavated. The sample obtained is thus assumed to represent the range of disposal areas and structural features present at the site. Generally, the Phase III research did not excavate further in areas defined as culturally sterile by the Phase I/II research (O'Connor et al. 1983). However, the Phase III non-randomly excavated shovel/postholer units did more effectively redefine the distribution of both historic and prehistoric cultural material (Figure 16). This map provides an objective delineation of the main activity area of the historic component from the other areas of the site which were found to contain low historic artifact densities generally in a disturbed context, as a result of slopewash and/or plowing. The fact that no completely sterile areas were found in the downslope eastern one-half of the site highlights the significant effect of this artifact movement onto otherwise "sterile" areas. The distribution map also identifies areas north and west of the main activity areas as containing low artifact densities, representing spots of reduced artifact deposition through time.

The limits of completely disturbed materials were defined through the preliminary testing and these areas were also generally avoided by the Phase III data recovery. An extensive amount of disturbance was found to have occurred in and around

the main house foundation through the demolition of the structure by mechanical equipment. East of the main house area, the presence of both surficial and buried plowzones containing both historic and prehistoric artifacts was noted. The buried plowzone stratigraphically became apparent approximately midway up the slope, in the vicinity of Square 40, and the depth of burial increased downslope to the eastern limits of testing (Figure 15). The disturbed context added to the low historic artifact densities revealed by the shovel/postholer excavations, eliminated this area from intensive excavation as part of the historic data recovery research project. For a detailed report on the excavations of the prehistoric component of the Hawthorn site, see accompanying text (Custer and Bachman 1984).

Site Description

The boundaries of the Hawthorn farmstead were defined by the Phase I & II research in the preparation of the National Register nomination form (Appendix II). The site was located on both the north and south sides of New Churchmans Road (County Road 339), approximately 1350 feet west of Delaware Route 7 (Figure 2 and Plate 1). The total area within the National Register site was 187,275 square feet, or 8.5 acres.

Previous preliminary historic research has shown that the 1955 construction of New Churchman's Road bisected and destroyed the north and northeastern areas of the site, including an extant chickenhouse and privy and artificially separated the springhouse and several agricultural fields from the main occupation area. The effect of this action was the disturbance of approximately

37.4% of the National Register site. No archaeological testing was carried out in the area north of New Churchman's Road as the project area/DelDOT right-of-way was confined to that part of the site south of New Churchman's Road. As part of the Phase I/II research, an architectural recordation of the springhouse was performed (O'Connor et al. 1983).

Approximately 16.5% of the National Register site south of New Churchman's Road was directly impacted by the present road widening project. Within this area the site's content was intensively excavated by fifty-five excavation units and 108 shovel/postholer units. The eastern extent of the site within the ROW was completely identified by this Phase III project and related excavation of the prehistoric component. The western extent of the site within the ROW was sufficiently tested and the limits identified on the basis of stratigraphy combined with the relatively low artifact counts encountered in shovel/postholer units. The southern one-third of the site, based on the National Register boundaries was not within the project ROW. Historic research indicates the existence of an extensive agricultural outbuilding complex in this area, including a barn, granary, wells, and other miscellaneous support buildings. The below ground remains of these structures are undisturbed and were not affected by the present project.

Site Structure

Prior to beginning the Phase III unit excavation, the project area of the site within the National Register boundary was divided into two areas based on the results of the artifact

distribution revealed by the shovel/postholer excavations. Each was studied by a different sampling strategy. The most intensive excavations were conducted in what was known to be the backyard area of the disturbed main house foundation (Figure 15). Within an area approximately fifty feet square, a toal of twenty-one 5 feet by 5 feet, 3 feet by 3 feet, 2 feet by 10 feet, 3 feet by 4 feet, and 2 feet by 5 feet units were excavated. This provided a 15% non-random sampling of this intensively occupied area. The statistically reliable sample obtained was determined to be necessary in order to effectively test South's (1977) refuse disposal patterning, and to address chronological concerns i.e., the dating of features and occupation levels stated in the research design. In distinct contrast to this intensive investigation of a limited area, the downslope areas of the site were non-randomly excavated solely in order to locate suspected archaeological features. Both measured 2 feet by 2 feet and 5 feet by 5 feet units to delineate the extent of the identified features.

Stratigraphy

The examination of the complex stratigraphy of the site was obtained from the total of 108 shovel/postholer units and 55 excavation units. To better interpret the stratigraphic results of the research, two north-south profiles and one east-west profile were prepared (Figures 17, 18, and 19). From these, plus other stratigraphic information derived from measured excavation units, a composite southeast-northwest profile was developed (Figure 20). The 10E profile (Figure 17) shows a north-south transect which identifies a progressive deepening southward of

the artifact bearing levels down to four feet below surface, creating a buried depositional level extending approximately sixty feet north-south between the 20S and 80S lines. The 40W profile, located fifty feet to the west, shows a much less deeply buried situation, with a normal accumulation of artifacts in the upper one and one-half feet of soil, with no evidence of a buried occupation surface (Figure 19). The 20S profile line is the most informative stratigraphically, providing a good explanation of the sequence of site formation in the main activity area (Figure 18). The shovel/postholer units from 60E to 160E show the presence of buried artifact bearing levels. The soils above the buried artifact bearing levels are silty clays indicative of colluvial deposition. The artifacts contained within these levels were thus also derived from an upslope source area i.e., the main activity area. The identification of this disturbed context was a primary consideration in the elimination of this area from further intensive investigation. On the western side of the 20S line, between the 0E and 90W units, an east-west cross-section of the trough-shaped, deeply buried horizon approximately 100 feet in horizontal extent, was clearly determined.

The composite profile, Figure 20, thus gives an excellent view of the general site stratigraphy, illustrating the upslope part of the site composed of a trough-shaped area of deeply buried deposits, dense artifact concentrations adjacent to the cobble foundation (Feature 4) located in the Phase I/II research (O'Connor et al. 1983), and a ridge top main house area covered by a yellow/gray mottled gray fill exhibiting much local

variation in stratigraphy. This variation in stratigraphy, caused by the intensive occupation and its associated disturbances, will be examined in more detail through examination of the excavation units. The downslope areas of the site seen in Figure 20 show the three downslope historic anomalies and, in the eastern section of the site, the presence of the buried plowzone levels. Generally the stratigraphy was found to be consistent in this downslope one-half of the site with the development of four soil horizons. Horizon I is a dark brown loam representative of very recent slope wash along the toe of the slope. Horizon II is a brown sandy loam formed through a mixture of recent plow-disturbed soils and sediments derived from numerous episodes of slopewash that occurred prior to the episodes that deposited Horizon I. Horizon III, a dark brown loamy sand, is representative of a buried plowzone that includes both historic and prehistoric artifacts in a disturbed context. Finally, Horizon IV is a reddish brown sandy loam and indicates a buried B horizon that has been intact for up to 5,000 years (Wagner 1982).

In sum, the late eighteenth and early nineteenth century topography on the Hawthorn site suggests a house site situated on a hillock, sloping sharply to the west and east. From the onset of occupation, considerable erosion occurred, which rapidly filled in an existing trough-shaped basin to the west. Erosion also caused considerable amounts of soils to be deposited as slopewash to the east of the hillock. The lack of any depositional basin allowed these soils to spread out over a very large area. Through time, continued movement of slopewash to the east buried an earlier plowzone and created a new soil horizon

(II) which was subjected to plowing in the late nineteenth and early twentieth centuries.

Artifact Descriptions and Analysis

All excavated artifacts were washed and cataloged in accordance with procedures developed by the State of Delaware's Bureau of Archaeology and Historic Preservation and the staff of the Island Field Museum. The description of the artifacts during cataloging provided information designed to categorize the artifacts through the type and class concepts outlined by South (1977). Primary consideration was given to the classification of artifacts within the class level, for example ceramics, glass, and metal, and artifact group level, for example kitchen and architecture. Plates 7 through 13 illustrate the range of artifacts within these classes and groups that were found at the site. More specific artifact description and analysis determined the ware type and decoration of ceramics, and the function of metals and glass. The main goal of the artifact analysis was the quantification of the recovered artifacts into data units comparable on both an intra-site and inter-site level. Additionally, chronological information was provided by artifacts with temporally diagnostic decoration or manufacturers' marks. These were researched to determine the date or date range of manufacture.

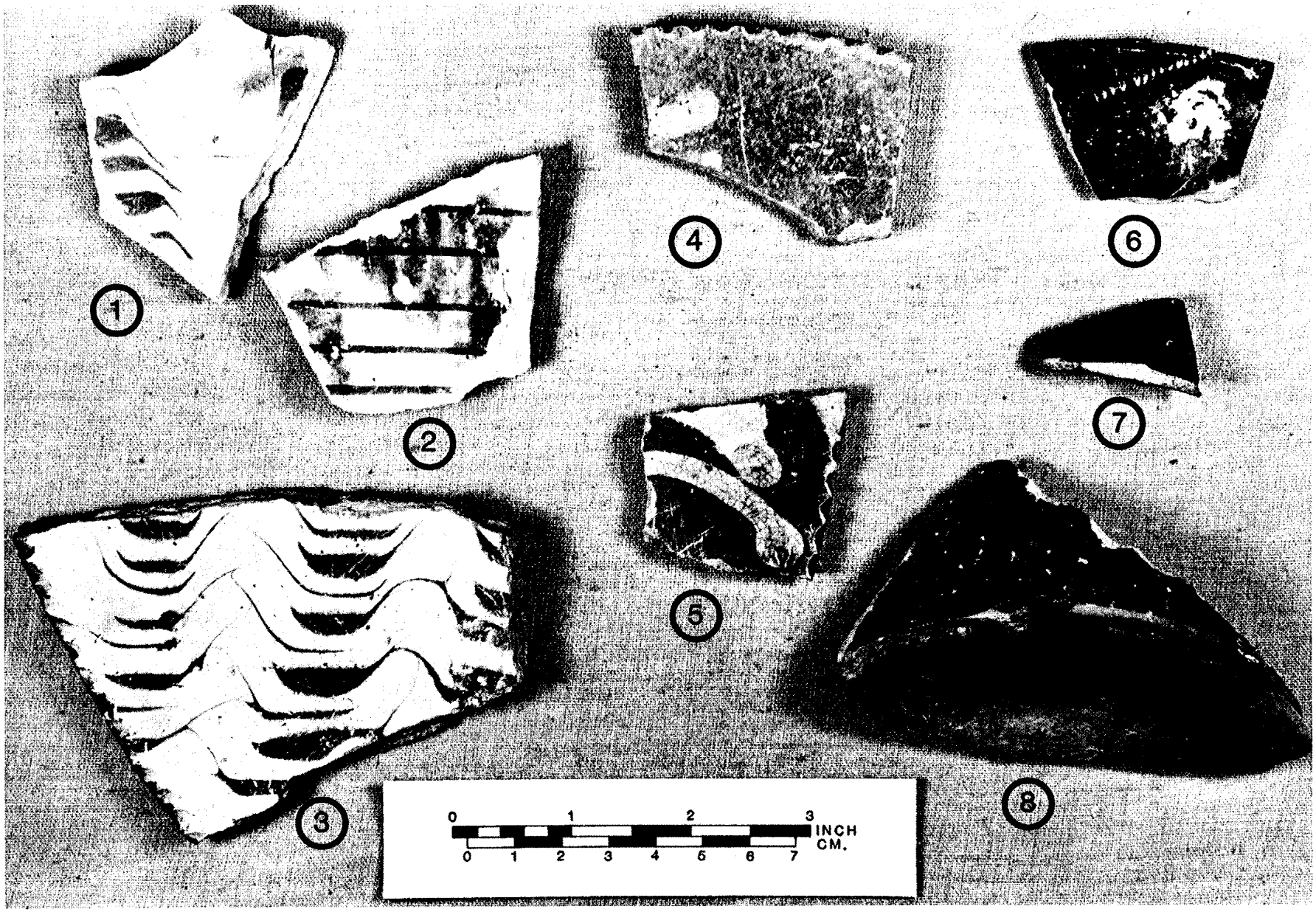
Because of the fragmentary nature of the ceramics and glass, extensive vessel reconstruction was not attempted and all analyses were confined to the sherd level. As a result, certain ceramic analyses developed by G. Miller (1980) were not possible.

KEY FOR PLATE 7

1,2,3 - Redware-yellow combed slipware
4,5 - Redware-slipware
6,7 - Redware-Jackfield type
8 - Redware-mottled decoration

PLATE 7

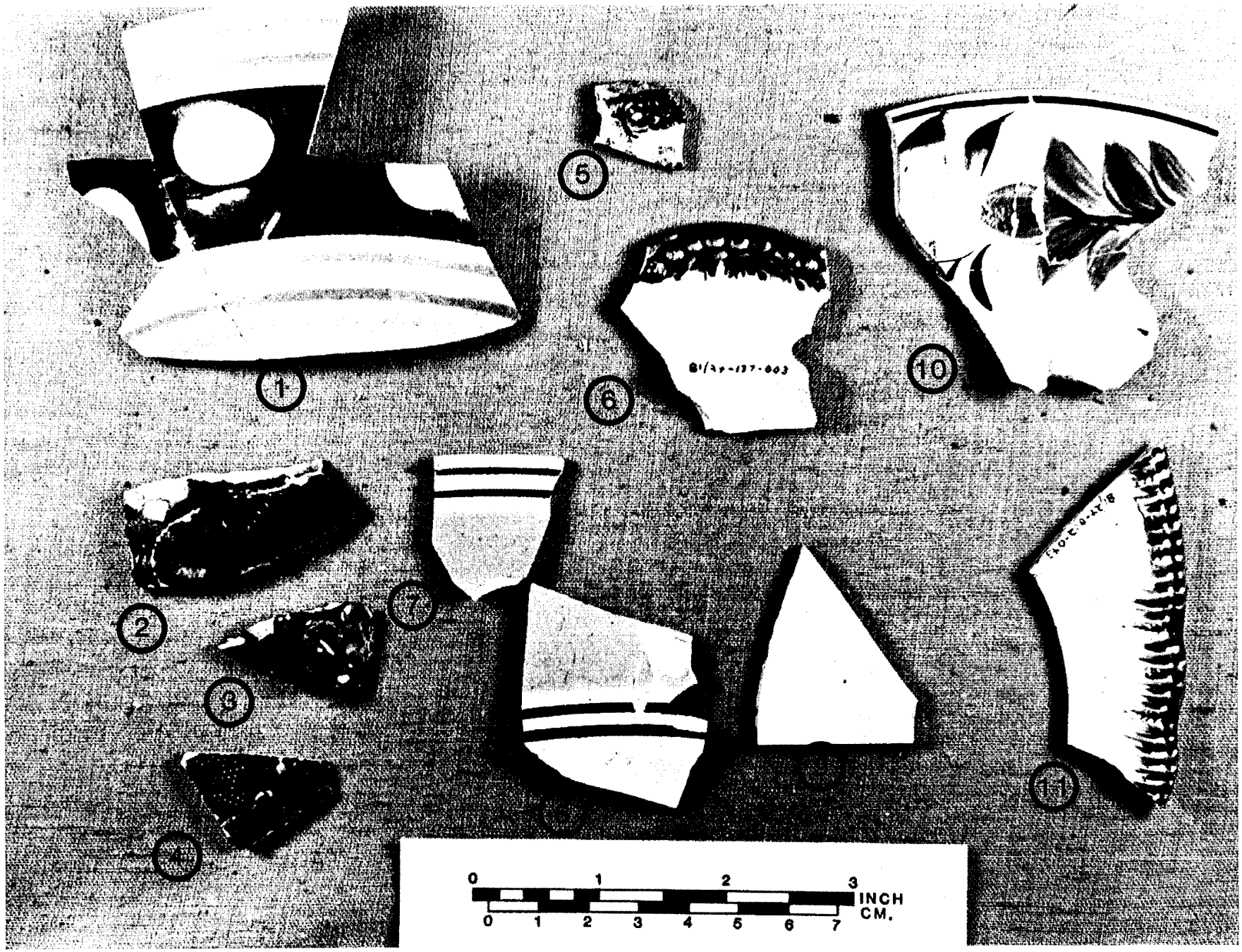
CERAMIC ASSEMBLAGE REPRESENTATIVE OF MID-TO-LATE 18TH CENTURY OCCUPATION



KEY FOR PLATE 8

1	- Pearlware-annular decoration
2,3,4	- Pearlware-blue transfer print
5,6	- Pearlware-blue edge decorated
7,8	- Whiteware-annular decoration
9	- Whiteware-manufacturer's mark
10	- Whiteware-hand-painted polychrome
11	- Whiteware-blue edge decorated

PLATE 8
CERAMIC ASSEMBLAGE REPRESENTATIVE OF EARLY-TO-MID 19TH CENTURY OCCUPATION

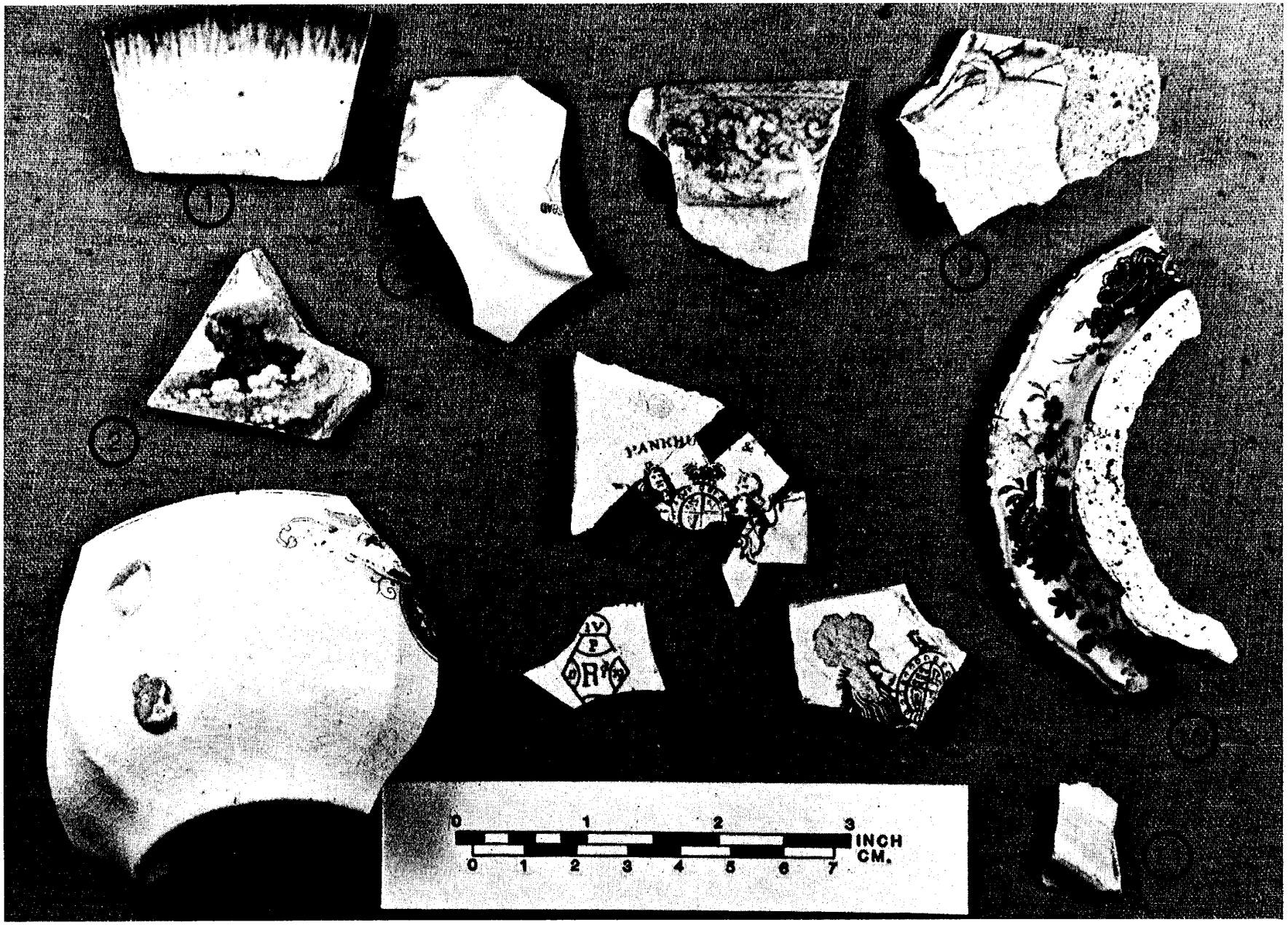


KEY FOR PLATE 9

1	- Whiteware-green edge decorated
2	- Whiteware-rose transfer print
3	- Whiteware-black transfer print
4	- Porcelain-hand-painted under glaze
5,6,7	- Ironstone-manufacturer's marks
8,9,10	- Whiteware-transfer print decoration
11	- Ironstone-undecorated

PLATE 9

CERAMIC ASSEMBLAGE REPRESENTATIVE OF LATE 19TH-TO-EARLY 20TH CENTURY OCCUPATION

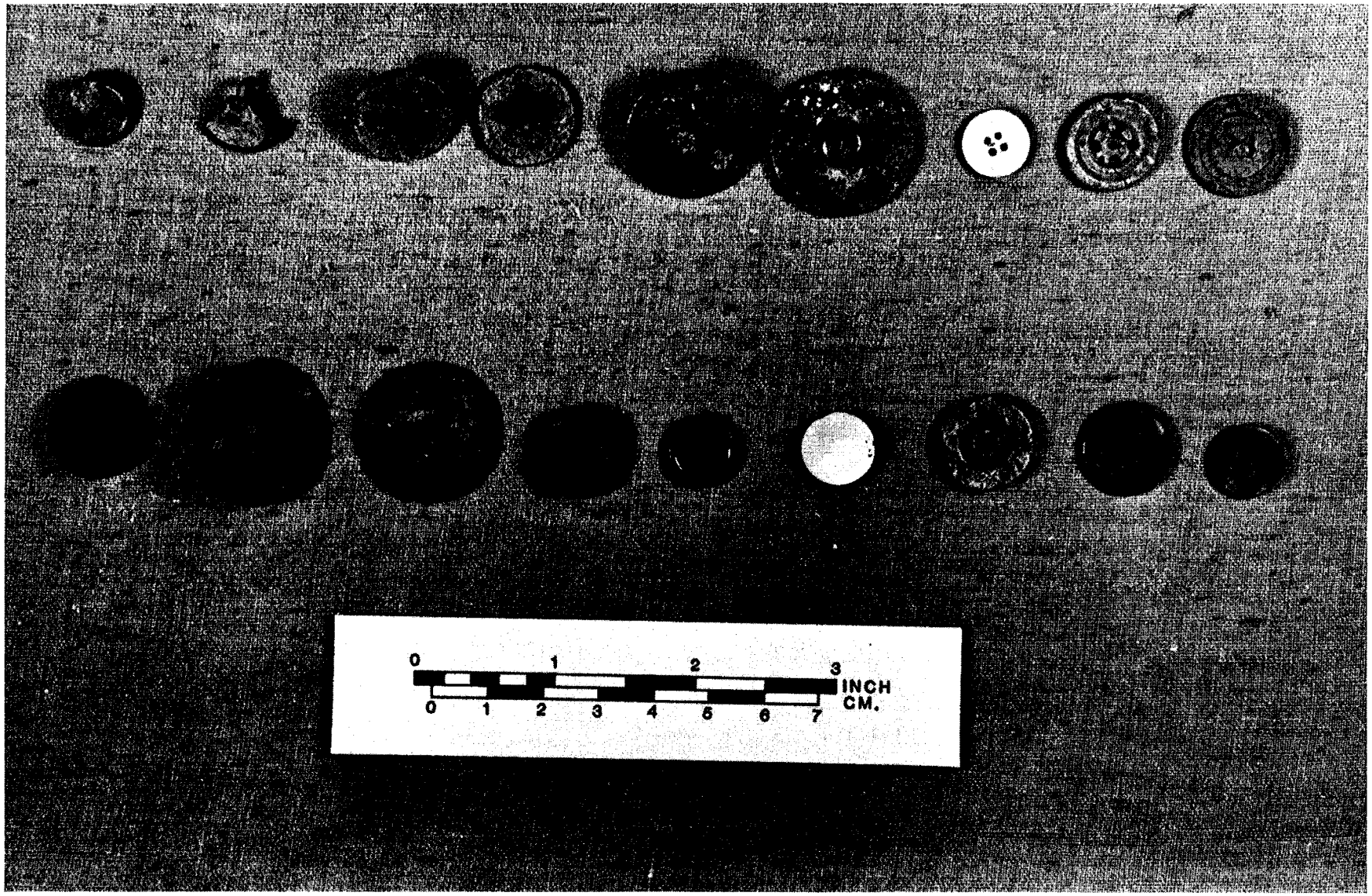


KEY FOR PLATE 10

Mid-19th to early 20th century manufacture

PLATE 10

BUTTON TYPES

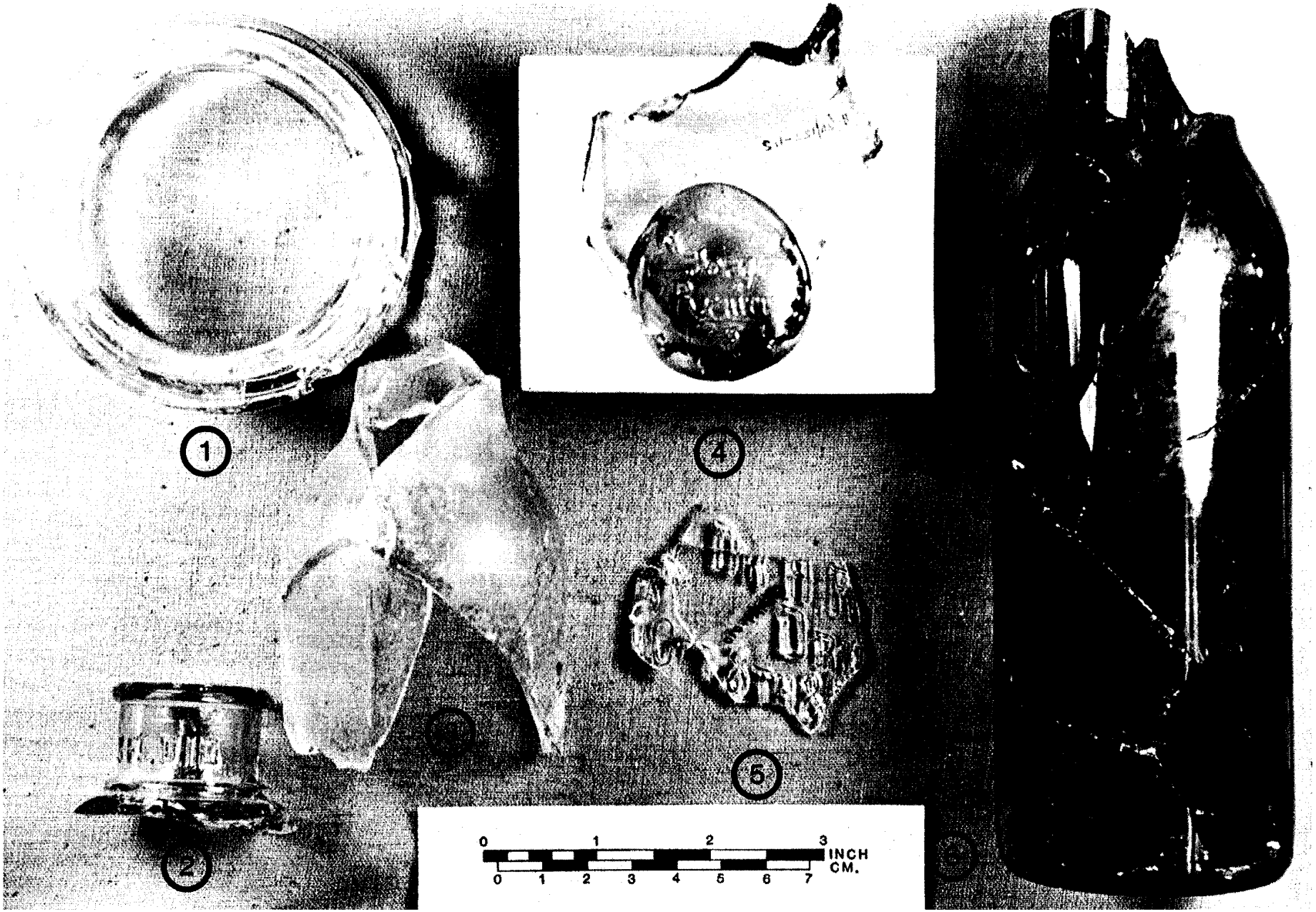


KEY FOR PLATE 11

1 - Mason Jar rim fragment
2 - Embossed advertising bottle fragment
3 - Soda water bottle fragment
4 - Wine bottle seal "George Remer 1754"
5 - Embossed advertising bottle fragment
6 - Olive-green mold-blown wine bottle

PLATE 11

EXAMPLES OF GLASSWARE

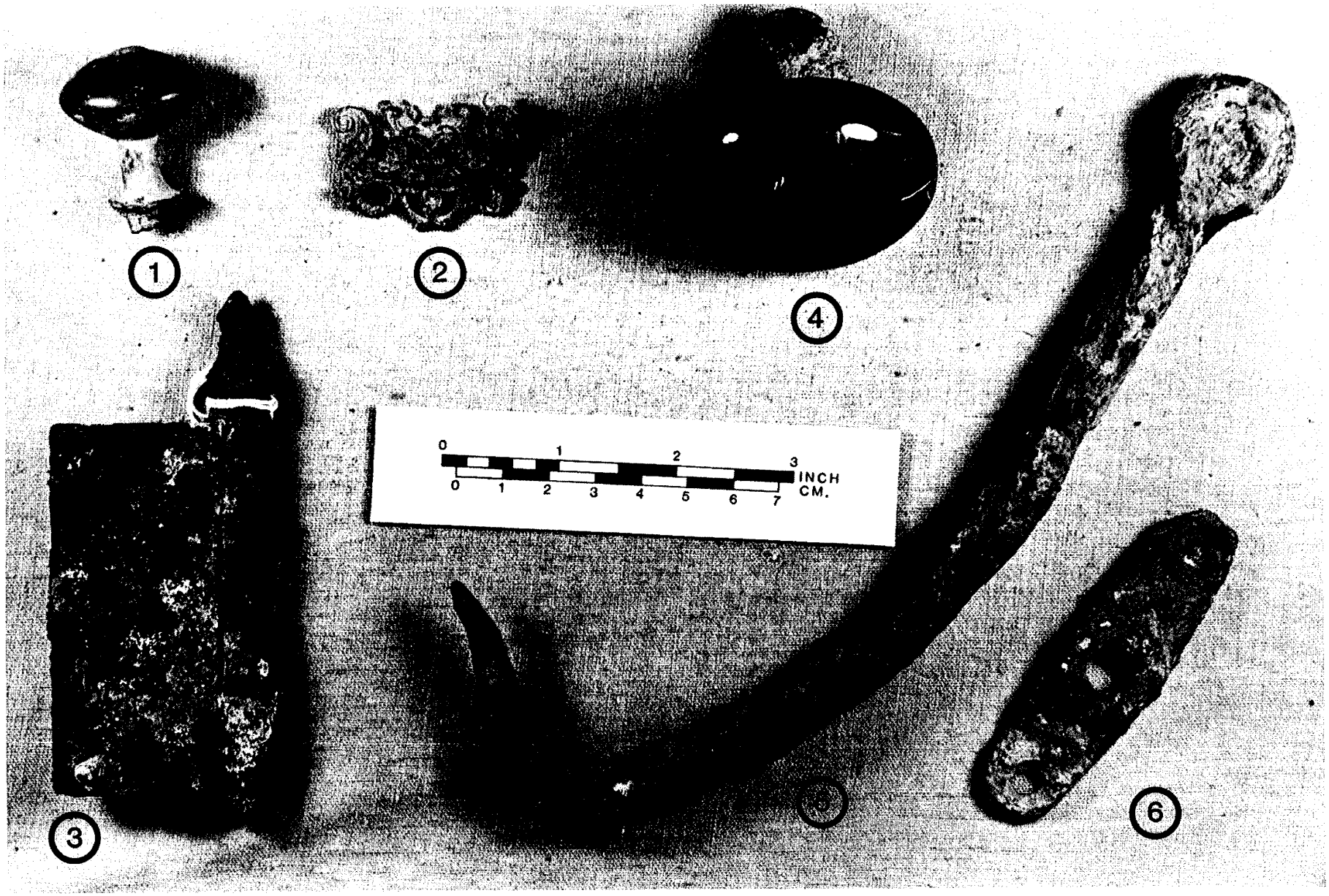


KEY FOR PLATE 12

1 - Furniture drawer pull
2 - Furniture decorative plate
3 - Shutter hinges
4 - Ceramic door knob
5 - Large door latchpiece
6 - Shutter rod attachment

PLATE 12

ARCHITECTURAL GROUP ARTIFACTS

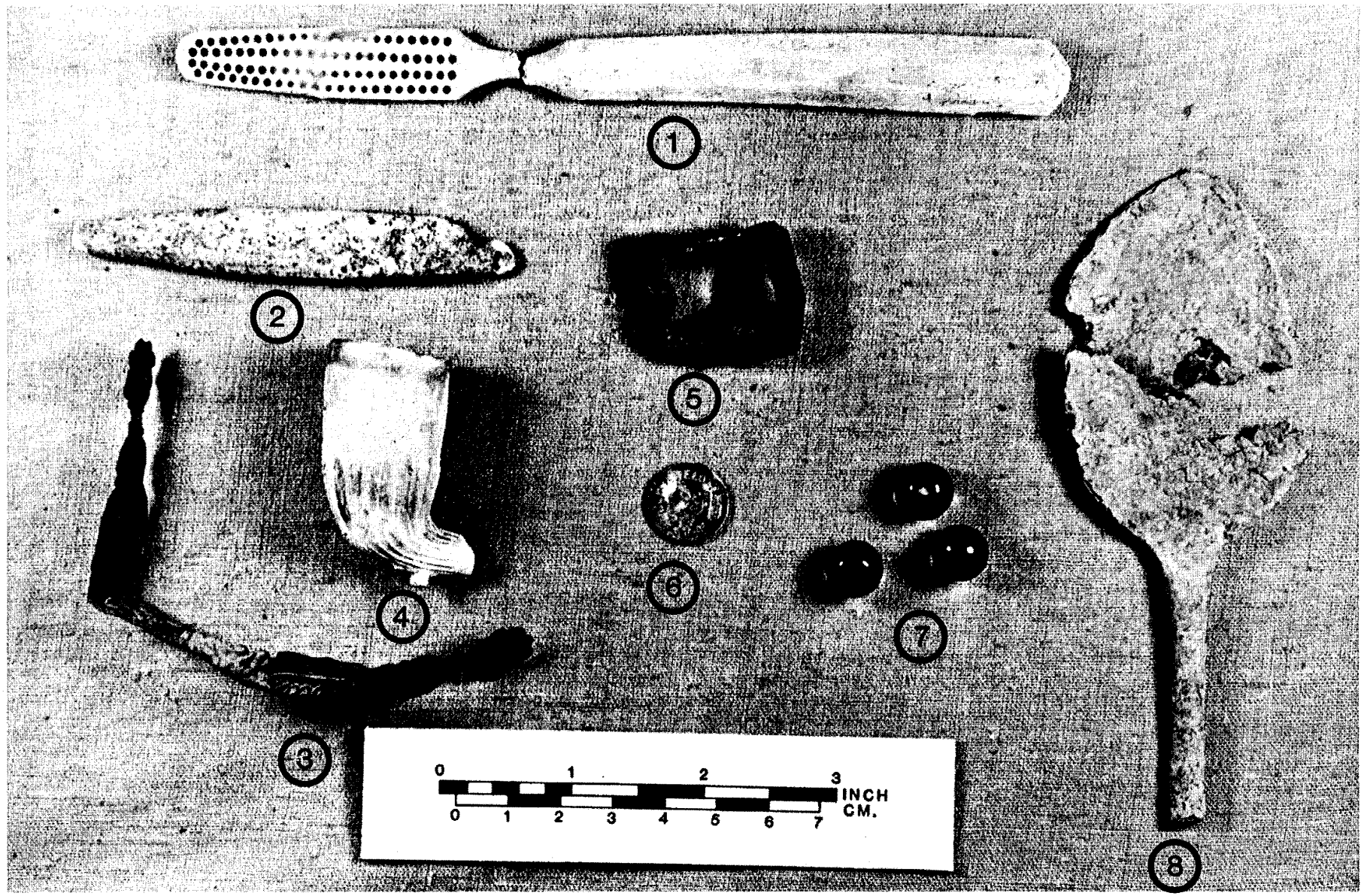


KEY FOR PLATE 13

1,2	- Bone-handled toothbrushes
3	- Jewelry
4	- Ceramic tobacco pipe
5	- Buckle
6	- Toy coin money
7	- Glass marbles
8	- Pewter spoon

PLATE 13

PERSONAL AND MISCELLANEOUS ARTIFACTS



The results of the present artifact analysis are presented in Appendix IX, which lists the provenience numbers for the excavated levels and features, and by Appendix X, which gives complete artifact counts with provenience for the site.

To facilitate the intra-site comparison of archaeological levels and features, a mean ceramic date was calculated for each provenience number using the formula in South (1977) (Appendix XI). The results of this computation y_1, provides useful but biased median dates when analyzing small samples of ceramics with wide-ranging manufaturing dates. To correct this bias, a modified version of South's formula was used which incorporates the variance in the date range of manufacture between different ceramic types (Kalb, et al. 1982) (Appendix XI). The resultant mean ceramic dates, y_2, better represent a true median date when analyses involve small samples of less than twenty ceramic sherds.

The cataloged artifact types were employed in a separate intra-site artifact analysis in order to determine their specific distributional characteristics. This was accomplished through the use of density distribution maps rather than with percentages and ratios as used by South (1977:169).

The primary inter-site analysis employed data categories that necessitated a re-categorizing of the previously cataloged artifact types into various artifact classes and groups. These groups were formed by combining artifact class frequencies present in the Hawthorn artifacts (Appendix XII). Because South's typology was developed primarily for eighteenth century data, adjustments to the inventory of the artifact classes and

groups were needed. The most significant modification was the treatment of glassware within the Kitchen group. Due to the fragmentary nature of the glass recovered and the subsequent lack of vessel reconstruction, the glassware classes were lumped together in the determination of the Kitchen group percentage. This had no detrimental effect on the percentage results. Additionally, types of building materials and architectural metal were also placed within the Architecture group to project the inventory into the nineteenth and twentieth centuries. The artifact groups created are the building blocks for the elucidation of artifact patterning. Using these we were able to determine and compare the archaeological correlates of the function of the site and the behavior carried out at the site known through historical documentation.

During the analysis of the ceramic artifacts, particularly in the calculation of the mean ceramic dates, two problems recurrent in historical archaeology were encountered. Fortunately both of these are the focus of present research in both historic archaeology and eighteenth and nineteenth century material culture studies. The first, that of the description and dating of mid to late nineteenth century whitewares, has been addressed by Garrow (1982). He was able to devise a classification dating scheme based on the decorative motif of the whiteware. The second problem concerned the current assumption that the presence on archaeological sites of slip decorated and other undecorated coarse earthenwares is indicative of a late eighteenth to early nineteenth century occupation. This problem

has ramifications not only for this particular project, but also for other historic sites in the Mid-Atlantic Region. The predominance of redwares in eighteenth and nineteenth century ceramic assemblages has been frequently noted in site reports. The Hawthorn total ceramic count consists of approximately 50% redware. Difficulties have arisen in the dating of levels and sites that employ unadjusted mean ceramic dating formulas. The addition of the variance factor discussed previously partly reduces the dating bias, but it is not an entirely satisfactory solution. The main problems are: 1) insufficient historical information on redware manufacturing beginning and end dates; (2) the lack of research pertaining to the "use life" of redware vessels; and 3) the closely related problems of the actual date of deposition into the archaeological record. It seems that due to extended curation by lower economic classes, more substantial construction (heavier and thicker than most ware types), and function (use in food preparation and storage verus everyday use as tableware) there is a considerable time range when redware was used, broken, and deposited in the ground. Thus even though redware may have been manufactured circa 1790, because of extended use it may not have been deposited until 1880. Archaeological research at the Robert Ferguson Tenant House (Coleman et al. 1983) identified redware in several features dating to the mid-nineteenth century. These findings contrast with the assumptions behind the dating of other ceramic types; i.e., the horizon concept of South (1972). This assumes a beginning appearance of use, evidenced by the broad and rapid spread of a certain type throughout an area, and a just as rapid

diminution in the presence of the type as other types replace it. Until further research is completed, the results obtained through the use of redware as a chronological indicator will be weighed against those results gathered through separate and unrelated determinatives, such as pipestem dates, button manufacturing dates, and ceramic makers' marks.

Excavation Units and Feature Descriptions

To facilitate this description, the Hawthorn site area was divided into two areas. This division has been previously informally identified in the report through stratigraphy and artifact density differences. The first area, (A), the main activity area, consists of units located within the main occupation area as identified by the Phase I/II research (O'Connor, et al. 1983). Within this, groupings were made of excavation units containing similarly dated or functionally related features or artifact assemblages with good contextual integrity. Based on these attributes five groups were selected for discussion (Figure 21). The second area, (B), was defined by the excavation units located below the 70 foot contour line, downslope and peripheral to Area A. The following discussion will remain brief, yet informative through the extensive use of graphic and photographic representations of profiles and plan views of the excavation units. Descriptive emphasis in this section is placed on: 1) outlining the evidence used in the determination of soils disturbance through the construction of distribution maps of the main activity area; 2) providing specific temporal and functional information for all features; 3)

developing a culturally relevant summary of site depositional processes operating at the site through time; and 4) assessing the reliability of the Mean Ceramic Date for levels and features based on other independent information. To provide a comprehensive study of the site, all Phase I/II data was combined with that from Phase III excavations.

Features

A total of 19 features were exposed during the DelDOT Phase I/II test excavations and the Phase III data recovery program. Each feature is described below in Table 1 and Figure 15 shows their locations.

Table 1
Feature Description

No.	Location	Dimensions	Description	Terminus Post Quem	Mean Ceramic Date (y_1, y_2)	Interpretation
1	3S, 80E	38" diameter 42" depth	Circular, brick-lined. Asbestos tile drainage pipe protrudes through SW wall, 12" b.s. Excavation revealed sterile sand at 42" b.s.	Level 7 - 1900	1812-1855	French drain
2	TP 15	West foundation wall, 6" wide; North interior wall, 24" wide	Two walls composed of mortared bricks intersecting at right angles. Within walls to south, 35" accumulation of demolition rubble. Archaeological deposit mixed throughout.	1943	N/A	Brick foundation walls forming the north corner of an outside basement entrance. Filled with 20th c. demolition rubble. Entrance closed by addition of interior brick wall ca. 1902.
3	TP 17/18	3' in length, 1½' in width	Buried wall composed of large uncut cobbles set in a mortar matrix. Resting on sterile soil at depth of 58" below surface. South of wall, artifact deposition of demolition rubble mixed with 18th & 19th c. artifacts		N/A	Part of north foundation wall used for both original and rebuilt structures. Area south of feature is within basement

No.	Location	Dimensions	Description	Terminus Post Quem	Mean Ceramic Date (y_1, y_2)	Interpretation
4	TP 16 & 19, SQ 58, TR 51	L-shaped wall, 20' N-S, 13' E-W	Buried wall composed small uncut cobbles set in a mortar matrix. Resting on sterile soil at a depth of 18" b.s. Low artifact counts.		N/A	Foundation wall for wing or lean-to added to original structure
5	TP 19, SQ. 58 & 59	12' E-W, 11' N-S, approx. 3' in thickness	Horizontally laid slab composed of soft mortar		N/A	Floor of wing or lean-to addition to original structure
6	SQ 58	Posthole - 1.0' in diam. Postmold - 0.3' x 0.8'	Posthole containing distinct postmold in matrix of mortar and ash		N/A	Support post related to original structure
7	SQ 58	Posthole, 1.2' x 0.6', 1.2' in depth	Posthole containing wooden post <u>in situ</u>	whiteware, ca. 1820	N/A	Part of 20th century fence enclosure system shown on 1955 DelDOT map
8	SQ 59	posthole, 1.2' N-S x 0.85' E-W, depth 1.4'; postmold, 0.5' in diameter	rectangular shaped posthole	ca. 1820	fill = 1812	Major structural support post related to original structure
9	SQ 59	Posthole dimensions same as Fea. 8	Rectangular shaped posthole	ca. 1820	fill= 1794	Major structural support post related to original structure
10	SQ 37	5' E-W, 0.9' N-S, 0.55' in depth (top of feature 2.0' below original ground surface)	Irregularly delineated trench-shaped concentration of artifacts in dark brown soil matrix	ca. 1820	1820	Drainage or disturbed area related to features 4 & 5

No.	Location	Dimensions	Description	Terminus Post Quem	Mean Ceramic Date (y_1, y_2)	Interpretation
11	SQ 37	1.7' E-W, 1.1' N-S, 2.25' deep	Large, flat-bottomed posthole intruding into sterile soil. Fill composed of mortar, cobbles, & brick in a sterile soil matrix	N/A	N/A	Major structural support post related to original house structure
12	SQ 30 & 35 TR 61	9.0' N-S, 9.0' E-W, approx. 0.35-0.60' thick	Dense pavement of uncut rocks, brick frags., mortar frags., containing charcoal, window glass, cut nails, and melted glass			Flooring for support structure
13	SQ 30	posthole: 1.1' E-W, 0.7' N-S; postmold: 0.4' in diameter, 0.9' in depth	Posthole and mold originating 2.6' below ground surf.	1903 (dated ceramic makers mark from posthole)	1841	Post support for structure covering area of Fea. 12
14	SQ 22	0.65' in diam. 0.50' in depth	Posthole stain containing charcoal flecks intermixed with topsoil			Part of fence enclosure system
15	TR 39	Posthole: 1.2' in diameter; Postmold: 0.9' tapering to 0.3' square			1874	
16	SQ 31	Posthole: 2.0' N-S, 1.7' E-W; Postmold: 0.55' square, 1.0' in depth	Originates at 2.25' below surface and extends to 3.50' below surf. Located 2.0' due north of Fea. 17		1808	This feature and #17 are part of same fence enclosure. Close distance between #16 and #17 suggests gate post

No.	Location	Dimensions	Description	Terminus Post Quem	Mean Ceramic Date ($y1$, y_2)	Interpretation
17	SQ 31	Posthole: approx. 1.2' in diameter; Postmold: 0.4' in diameter, 1.3' in depth	Posthole filled with loosely consolidated organic debris	ca. 1860	1821	See #16 interpretation
18	SQ 34	Posthole: 0.7' in diameter, 1.6' in depth	Posthole filled with topsoil	ca. 1820	1845	Part of fence enclosure system
19	TR/SQ 38	7.5' wide, approx. 1.0' deep	Horizontal deposit of medium-sized cobbles intermixed with topsoil beneath a cobble fill			Driveway for farmstead in use before 1955

AREA A

Phase I & II Excavations - Test Unit Numbers 12 Through 19 and Feature 1

For stratigraphic profiles and plan views of these units, see O'Connor, et al. (1983). Test Pits 11, 12, 15, 17, and 18 were located to test what was thought to be the main foundation of the house. At the time of excavation, there were definite surficial signs of ground disturbance combined with the deposition of building debris. Test Pits 11 and 12 encountered building rubble eight inches below the surface of sufficient density to terminate the excavation before sterile soil was reached. Subsequent mechanical excavations within the house foundation indicated that these units were located in what was the basement of the house foundation.

The excavation of the well/drain (Feature 1) (Table 1 & Figure 15) revealed a brick-lined cylinder filled with a mixture of artifacts existing on the ground surface at the time of demolition. The ceramic assemblages recovered were too small to provide accurate mean ceramic dates. The interpretation of the feature as a french drain was based on its relatively shallow depth and the presence of a drain field pipe protruding into the southwest wall. Informant interviews established that this interpretation was correct, the drain having been constructed after the 1955 building of New Churchman's Road.

Test Pits 13 and 14 were designed to test for artifact content and levels of disturbance outside of the obviously disturbed foundation. Two strikingly different soil stratigraphies and artifact densities were identified. A total

of 189 artifacts were found within the top fifteen inches of Unit 13. This deposit was given an extremely broad date of deposition based on the common occurrence of pearlware and wire nails in the same level. Further interpretation based on Phase III excavation relate this to other units adjacent to Feature 4 (Table 1). Test Pit 14, located approximately thirty feet to the northwest yielded a total of only eight artifacts within the top fifteen inches.

Test Pits 15, 16, 17, 18, and 19 all encountered some form of foundation wall. Test Pit 15 located Feature 2 (Table 1 & Figure 15) and approximately three feet of demolition fill deposited within the interior house foundation during the circa 1961 demolition. Test Pits 17 & 18 located Feature 3 (Table 1 & Figure 15), a mortared, unfaced cobble foundation oriented in an east-west direction. Deposits on either side of the foundation defined disturbed contexts of two distinctly different depths. Sterile soil was not reached until fifty-eight inches below ground surface on the south side, but was located within thirty inches on the north side. Interpretation of these south side deposits as fill deposited in an existing basement was certain. Unfortunately, the lack of diagnostic artifacts precluded a determination of the time of construction of this foundation wall. Test Trench 16 intersected Feature 4 (Table 1 & Figure 15), a less substantially constructed cobble foundation wall with no evidence of a cellar hole on either side. Neither artifact density differences nor stratigraphic evidence provided conclusive information on the interior/exterior orientation of

the structure. In addition, chronological indicators were not available to date the time of construction.

Test Unit 19 was placed in order to further investigate a three-inch thick mortar layer, Feature 5 (Table 1 & Figure 15) discovered through the shovel/postholer excavation. Excavation underneath and surrounding the mortar slab encountered a complex stratigraphy. The artifact densities for the unit were the highest encountered in either the Phase I/II or the Phase III research. Profile views clearly reveal the significant disturbance which occurred within this unit. A plan view and profile of the south wall indicates the presence of a disturbed foundation wall, Feature 4 (Table 1), in the southern end of the unit. Mean ceramic dates obtained for the deposits, all with statistically valid samples, yield consistent dates between 1808 and 1827.

In sum, the Phase I/II excavations were very successful in locating buried architectural features. Unfortunately, the archaeological and stratigraphic context was found to be almost uniformly disturbed. Areas of high artifact density though also disturbed were identified, and are most likely interpreted as midden deposits related to Feature 4.

Phase III Excavations

Area A

Intensive Phase III excavations were directed to the further delineation of Feature 4, located in the Phase I/II research. To this goal Trench 51, Square 58, Square 59, Square 28, Square 33, and Square 37 were placed to intersect Feature 4. Only Square 58 proved totally successful in this attempt. All units did,

however, locate archaeological features.

Trench 51, located adjacent to and west of Test Pit 19, uncovered only fragmentary remains of Feature 4 (Table 1 & Figure 15). Artifacts were recovered from the upper two levels (approximately two feet below ground surface). A high density of artifacts, similar to those of Test Pit 19, were found. The artifacts consisted of nineteenth century ceramic types mixed with asbestos tile as a result of demolition activity. While the entire sample can provide no detailed stratigraphic dating, the total sample yielded a mean ceramic date of 1821 for level II, consistent with that found in Test Pit 19.

Square 58 located a corner of Feature 4 (Table 1). Also encountered in this unit were two post holes, Features 6 and 7 (Figure 15). The stratigraphic context of these features showed Feature 6 to intrude through from the present ground surface, thus dating its placement to the twentieth century. A mean ceramic date determination for Feature 6 was inconclusive. Feature 7 repeated stratigraphically at a lower level with a terminus post quem of circa 1820. This date, combined with the mortar and ash matrix of the feature, suggest that the post holes were removed and the feature filled during a mid-to-late nineteenth century rebuilding stage.

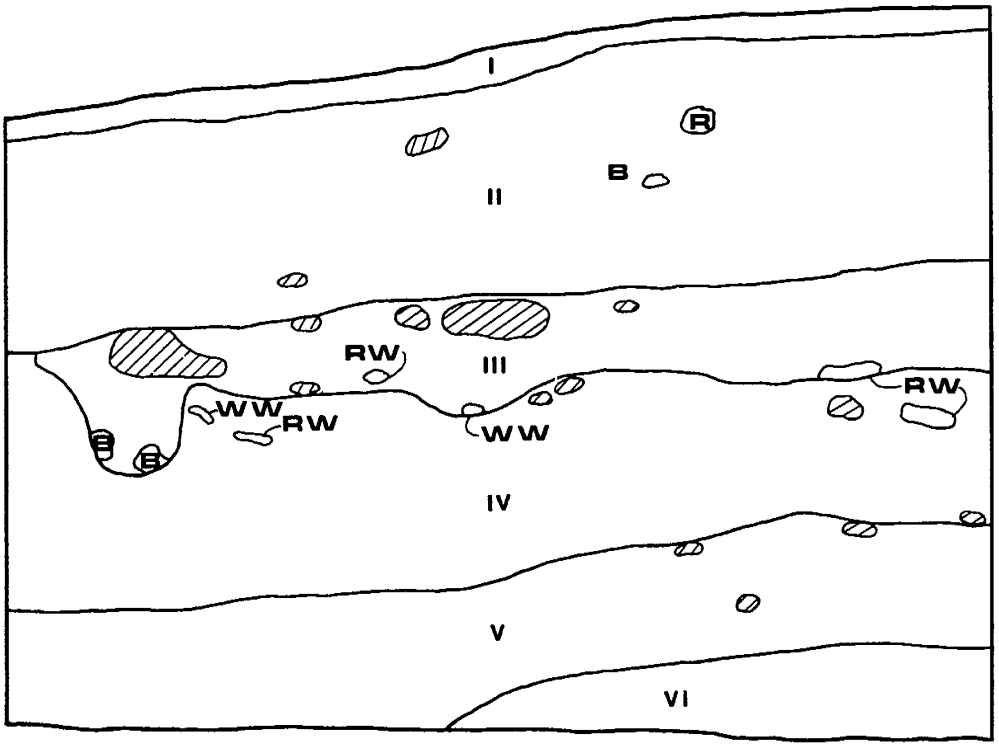
Square 59, located to further intersect a northward extension of Feature 4, also contained Feature 5 in its southwestern corner. At approximately one foot below ground surface (top of level II) Features 8 and 9 were identified (Table 1) (Figure 15). The dimensions of these were very substantial

and intruded deeply into the sterile subsoil, suggesting a function as part of the architectural framing system for the original log house. The artifact content suggested a filling date of post 1820, but the lack of late nineteenth century ceramics restricts this to a mid-nineteenth century event. It is probable that these posts were removed during or after the implacement of Feature 5. As in all the previously discussed units, twentieth century disturbance had well-mixed the upper one and one-half feet below ground surface.

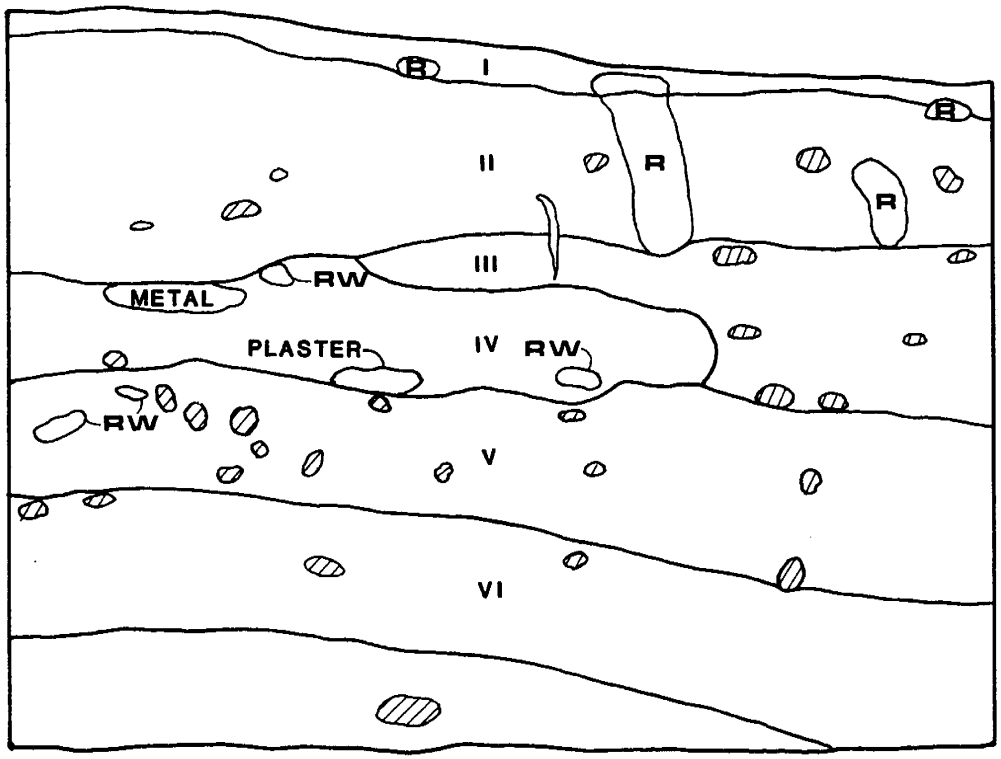
Excavation units 33 and 37 were laid out west of Trench 51 to further attempt to locate the remains of Feature 4, and also to provide additional samples from the high artifact density area. Both of these units contained artifact densities in the middle ranges for the site (Table 2). Unit 33 revealed a one and one half foot thick accumulation of mixed nineteenth and twentieth century artifacts, underlain by a two foot thick deposit of relatively unmixed nineteenth century materials (levels III and IV). (Figure 22). The mean ceramic dates of these levels of 1831 and 1798, respectively, support a normal stratigraphic development. No features were located in this unit. Square 37 encountered significant disturbance in levels I through IV, as shown by creamware intermixed with wire nails in all levels. Plate 14 shows evidence of this disturbance identified by rapidly changing and variable soil types. Below this, the artifact content of levels X through XV was much less indicative of disturbance and the mean ceramic dates show downward chronological succession. Feature 11 (Table 1 & Figure 15) was also identified, and deeply intruded into and through

FIGURE 22

SQUARE 33-EAST AND SOUTH WALL PROFILES



EAST



SOUTH

KEY

I –10 yr. 4/2 DARK GRAYISH-BROWN SANDY LOAM
II –10 yr. 5/3 DARK BROWN SILTY LOAM
III–10 yr. 4/2 DARK GRAYISH-BROWN SILTY LOAM
IV–10 yr. 4/4 YELLOWISH-BROWN SILTY LOAM
V –10 yr. 5/8 YELLOWISH-BROWN CLAY
VI–7.5 yr. 5/8 DARK BROWN SANDY CLAY

–ROCK
B –BRICK
R –ROOT
RW–REDWARE
WW–WHITEWARE

1 0 1 2
SCALE IN FEET

PLATE 14

SQUARE 37-WEST WALL PROFILE

levels VII through XVI. Unfortunately, the fill within this feature contained non-diagnostic artifacts. Its stratigraphic context indicates that its use and abandonment dates to the nineteenth century. One additional unit, Square 28, also was successful in locating the remains of Feature 4. No builders trench was detected, and no diagnostic artifacts were found positively associated with the foundation wall.

TABLE 2

Main Activity Area Excavation Unit Artifact Densities

(In Artifacts Per Cubic Inch)

Test Unit	Total Density	CN & WR	WN	C Plus	P Plus	IS+WN	Bld. Mat.	AR CH	Kitchen
13	24.16	1.42	.35	4.28	2.38	2.61	.47	7.73	13.80
16	3.9	1.5	0.2	0.1	1.8	0	0.15	1.9	1.95
19	70.29	11.09	.44	21.57	10.25	6.29	.63	25.97	58.84
20	35.41	3.19	1.04	4.44	2.15	3.26	1.45	11.94	19.16
27	49.85	.81	.22	5.18	1.40	2.81	3.11	10.96	28.66
28	3.85	0	.07	0	0	0	1.11	.29	1.40
29	16.76	.01	.01	4.26	0.88	1.36	.57	5.01	9.64
30	31.32	1.05	.22	5.25	1.68	1.44	3.96	7.64	13.16
31	13.86	.24	.08	3.25	.25	1.16	1.42	2.56	7.22
32	10.98	0	.02	1.53	.26	.57	2.29	1.71	4.16
33	19.1	.17	.16	5.26	1.61	2.3	1.12	4.35	11.81
34	19.68	.26	.11	4.25	.78	.66	5.10	4.18	8.25
35	28.86	1.51	.49	8.4	1.69	3.86	1.07	7.73	16.24
36	5.55	0	0	.62	.37	.27	.80	1.63	2.36
37	21.64	1.37	.08	5.40	3.64	2.06	2.25	3.95	13.17
39	12.58	.65	.01	1.28	.31	.58	3.02	1.92	5.24
46	1.63	0	0	.10	.01	.08	.56	.10	.43
51	24.01	1.81	.10	3.79	5.65	2.41	2.08	5.10	14.28
58	11.5	1.63	.23	2.9	.86	.23	1.36	2.8	5.1
59	20.52	1.69	.06	6.18	.33	.55	2.55	5.96	8.95
61	12	0.6	.13	.53	.06	.06	1.93	2.26	5

Excavation units and trenches 20, 27, 30, 35, and 61 were directed to expose a large horizontal area for identification and interpretation. Square 20 yielded the third highest density of artifacts within the main activity area. A normal undisturbed accumulation of artifacts within one foot, six inches of the ground surface was noted with a level I mean ceramic date of 1845, level II of 1822, and level III of 1811. Square 27 revealed the same type of dense artifact concentration (the second highest) contained in normal stratigraphy. No features or soil anomalies were located within this unit. The artifact bearing levels, 1.4 feet contained within levels I and II, yielded mean ceramic dates of 1846 and 1835, respectively. Trench 61 uncovered Feature 12 (Figure 15 & 23 and Table 1) approximately .5 feet below the ground surface. Excavations were terminated at this point, making dating of the placement of the floor difficult. Level I from above the feature yielded a mean ceramic date of 1859, and combined with a distinct lack of nineteenth century ceramic types, tentatively dated the construction to the mid-to-late nineteenth century. Square 35 encountered Feature 12 approximately one foot below ground surface (Figure 15 & 24 and Table 1). The vertical extent of this feature was well-defined by the excavation. Levels II through VI (bottom at three feet below surface) were excavated below this feature and mean ceramic dates for the levels range from 1796 to 1830, and for level I and the feature, 1853. Another soil anomaly was identified in level V, where soil types identified it as a buried topsoil layer. Square 30 encountered Feature 12 at .75 feet below the surface (Table 1 & Figure 15).

FIGURE 23

TRENCH 61-PLAN VIEW OF FEATURE 12

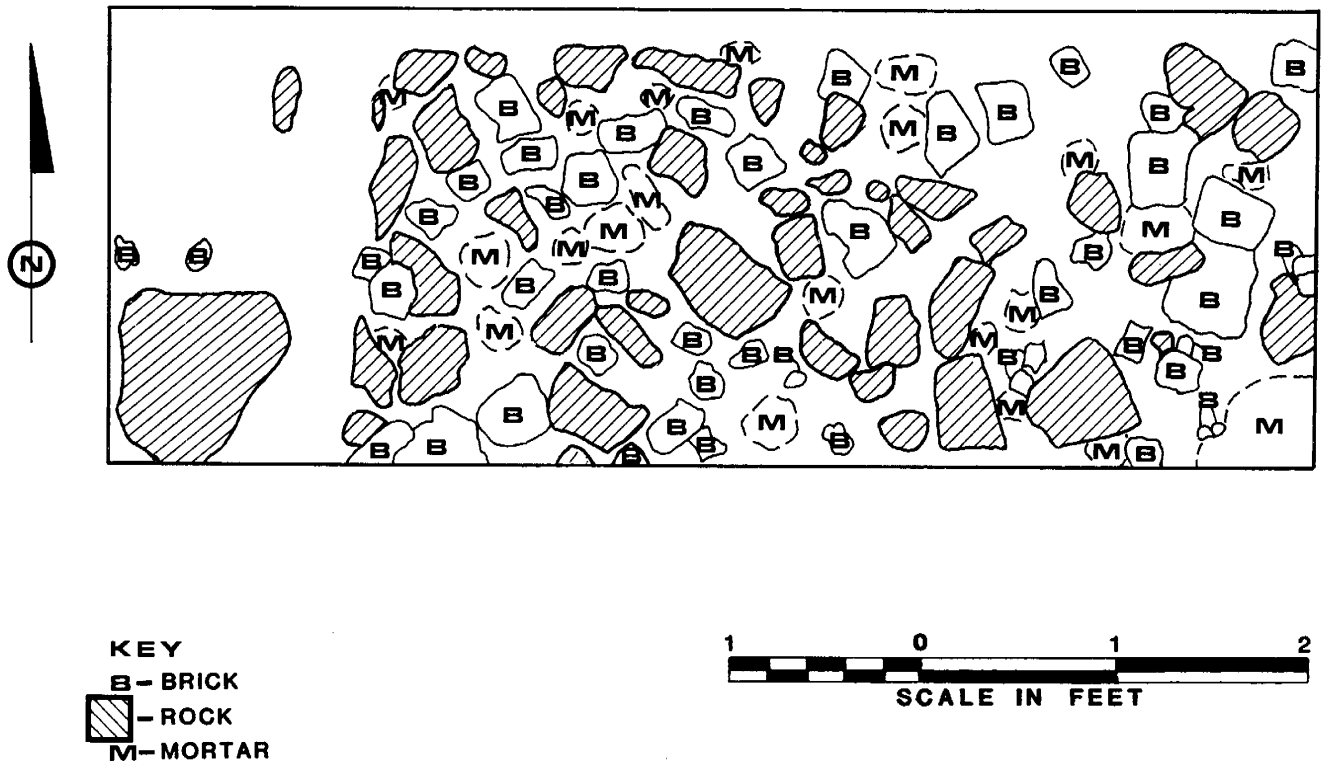
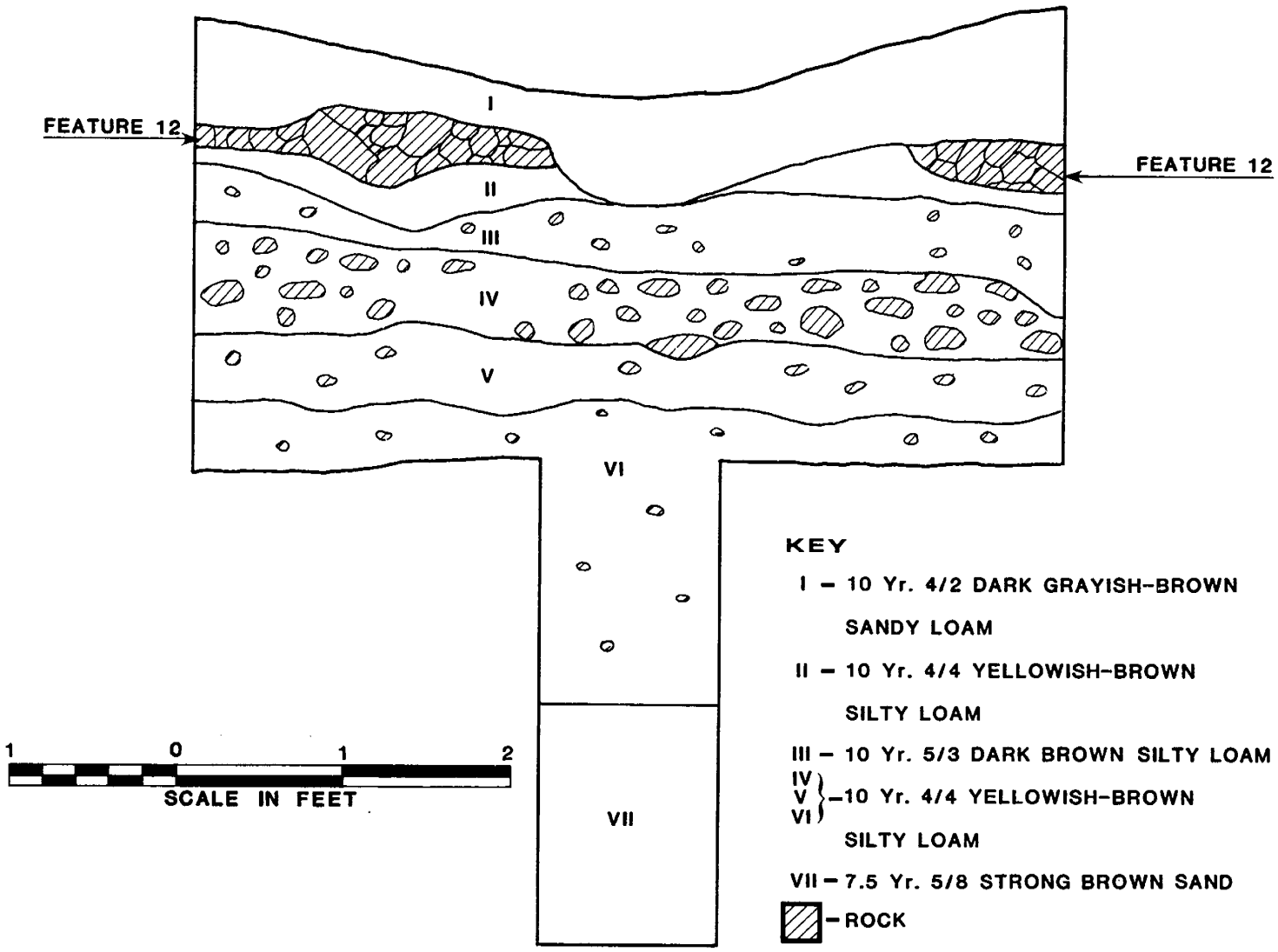
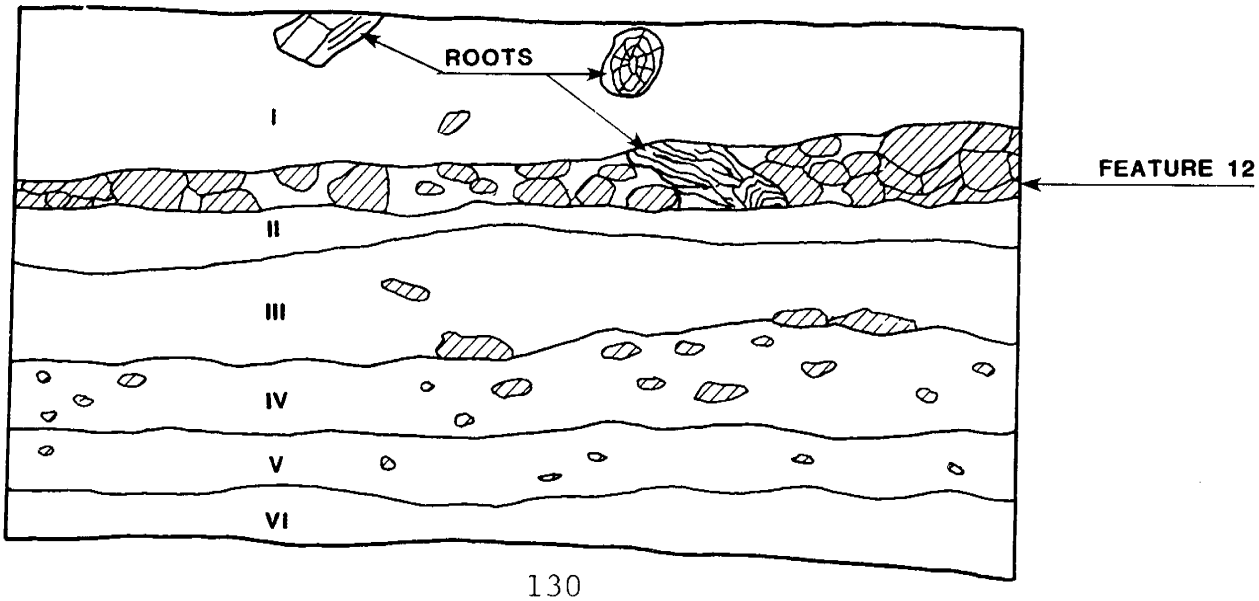


FIGURE 24

SQUARE 35-WEST WALL PROFILE



SQUARE 35-NORTH WALL PROFILE

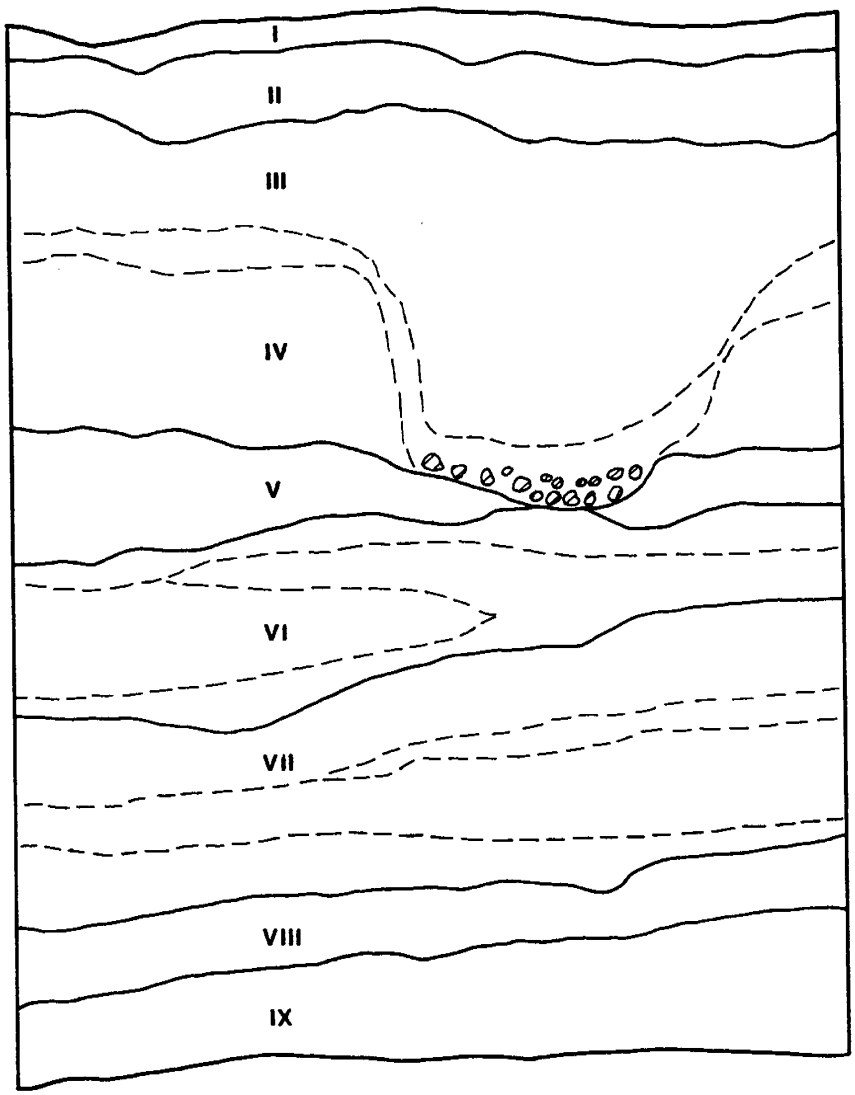


Adjacent to the north of this feature was located an area of dense artifact concentration intermixed with deposits of ash and charcoal. Additionally located was Feature 13, a posthole which originated in level II and extended into sterile soil in level IV (Table 1 & Figure 15).

Units 22, 31, 32, 34, 36, 39, 45, and 46 were located and excavated to determine the horizontal extent and to identify the possibility of features within the buried topsoil level. Unit 22 defined the western most limits of this layer. The artifact content of this unit was of such low density as to exclude it from consideration in the intrasite artifact distribution analysis. At a depth of approximately 4.5 feet below ground surface (Figure 25), level VIII was identified as the original ground surface, containing only several undiagnostic artifacts. Overlying this layer a 2.0 foot thick series of laminated, colluvial deposits were identified. These contained only undiagnostic metal and one redware sherd. Feature 14 (Table 1 & Figure 15) was located in level V at a depth of 2.59 feet below ground surface, and extended to 3.0 feet below ground surface, the upper horizon of the slope wash deposits. The excavation of Square 36 reached the buried topsoil identified here as level V at a depth ranging from 3.95 feet to 4.50 feet below ground surface. Within this soil horizon was present a concentration of medium sized cobbles, redware, and brick fragments. The stratigraphy above this consisted of an approximately 3.0 foot thick accumulation of slopewash and charcoal. Within this level III were contained a representative sampling of the ceramic

FIGURE 25

SQUARE 22-WEST WALL PROFILE



KEY

▨ -ROCKS

– – – – SOIL LENS BOUNDARIES

I -10 Yr. 4/4 YELLOWISH-BROWN SILTY LOAM

II -10 Yr. 5/3 DARK BROWN SILTY LOAM

III, IV -10 Yr. 4/4 YELLOWISH-BROWN CLAYEY LOAM

V -10 Yr. 4/6 YELLOWISH-BROWN LOAM

VI, VII -10 Yr. YELLOWISH-BROWN SILTY LOAM

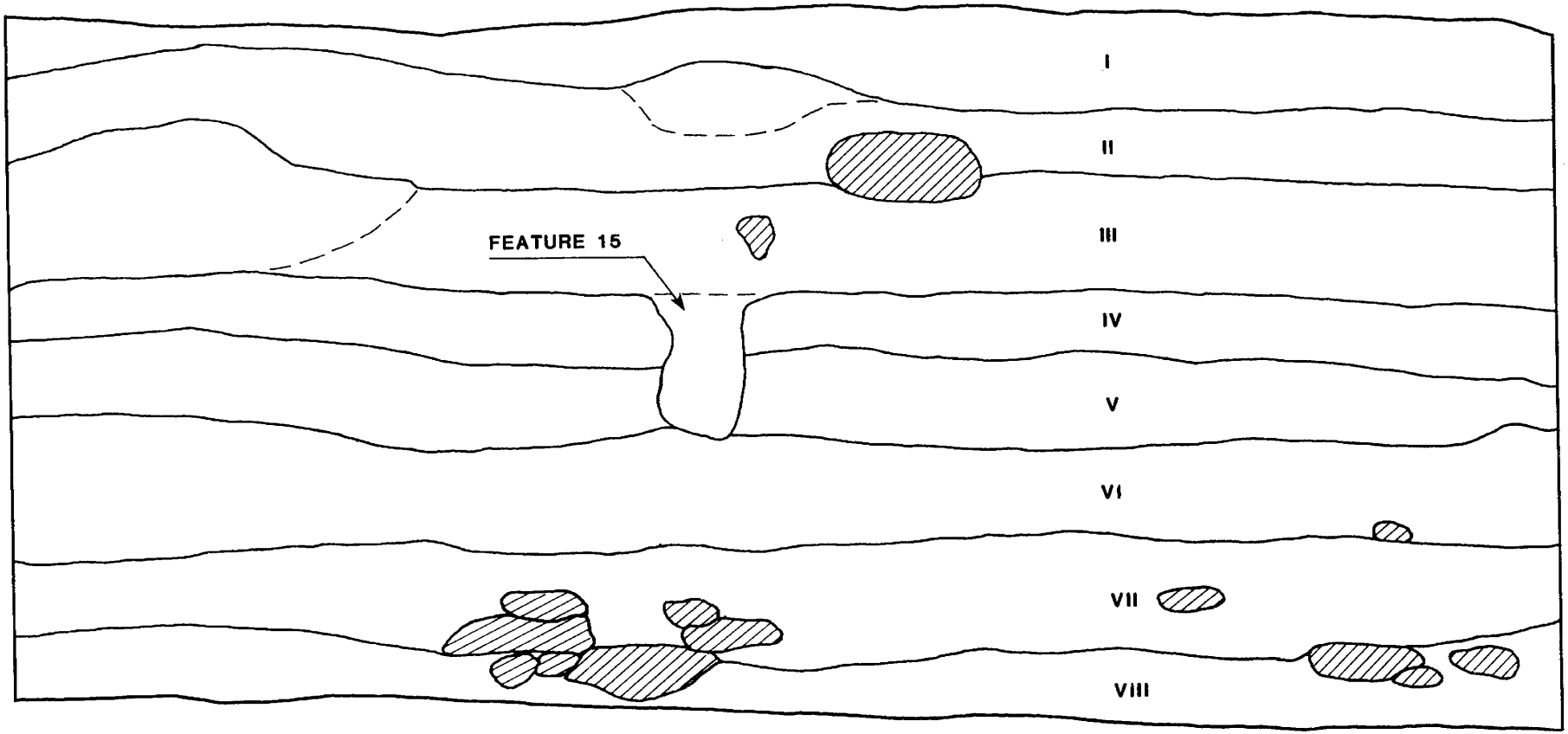
VIII -10 Yr. 5/3 DARK BROWN SILTY LOAM

IX -7.5 Yr. 5/6 STRONG BROWN SILTY CLAY LOAM

assemblages dating to the slopewash deposition. A mean ceramic date of 1812, combined with the presence of yellow-ware dated this deposition to the third quarter of the nineteenth century. No features were encountered in this excavation. The presence of a thick lense of charcoal at the top of level V, combined with nineteenth century artifacts in the overlying rubble and artifact concentration, suggests the deposition of this rubble near a previously burned structure. Trench 39 encountered an artifact concentration in level VII at a depth of 3.5 feet below ground surface almost identical in content to that found in Unit 36, level IV/V (Figure 26). This concentration also contained a large quantity of charcoal. Above these horizons, Feature 15 was located, and consisted of a posthole dug through slopewash (Table 1 & Figure 15). A mean ceramic date for the horizon of 1803 was based on a continuum of ceramics from scratch blue salt-glazed stoneware through ironstone and is thus representative of a much longer depositional period than the mean ceramic date would indicate at first glance. The rock concentration present in the center of the unit at the level VII/VIII interface suggests some sort of roughly-laid foundation pier support. The brick concentration would thus relate to the destruction or alteration of a previously existing structure. A band of clay, interpreted as a filled builders trench, was found adjacent to these rocks. Square 32 also revealed a stratigraphy very similar to that of Units 36 and 39. Normal soil development of levels I and II formed over a 2.3 foot thick accumulation of slopewash (level III). This colluvium was found to have buried an earlier topsoil (level IV) containing an artifact concentration,

FIGURE 26

TRENCH 39-WEST WALL PROFILE



KEY

{I, II} – 10 Yr. 5/3 DARK BROWN SILTY LOAM

{III, IV, V, VI} – 10 Yr. 4/4 YELLOWISH-BROWN SILTY LOAM

VII – 10 Yr. 4/4 YELLOWISH-BROWN CLAYEY LOAM

VIII – 10 Yr. 5/3 DARK BROWN SILTY LOAM

– ROCK

– – – SOIL LENS BOUNDARIES

1 0 1 2

SCALE IN FEET

PLATE 15

SQUARE 32-WEST WALL PROFILE

including brick and charcoal (Plate 15). Again, the mean ceramic date for level III was early nineteenth century (1829), further supporting a mid-nineteenth century date for the slopewash deposition. No features were located in Unit 32. The excavation of Square 31 identified a similar accumulation of slopewash deposits. A buried topsoil layer (level VI) was located approximately 3.5 feet below ground surface. Within this level was found a wine bottle seal dated 1754. Two associated features, 16 and 17, were also located in the unit (Table 1 & Figure 15). The mean ceramic date for the buried topsoil of 1812, and for the slopewash of 1821 agrees well with the other determinations. Also to be noted was the large layer of burned wood approximately 3.3 feet below surface, providing further evidence of the contemporaneousness of the buried topsoil levels between these units.

In order to delineate the northern extent of the buried topsoil and the posthole line found in units 31 and 39, Trenches 45 and 46 and Square 29 were excavated (Figure 15). Trench 45 reached sterile soil 2.2 feet below ground surface, failing to intercept the buried topsoil, or any features. Trench 46 failed also to locate any features, and the excavation of the unit was terminated at 2.8 feet below ground surface on top of the buried topsoil horizon. In both units selective artifact recovery severely biased any analysis and Trench 45 was eliminated from further study. The excavation of Square 29 reached subsoil at 3.0 feet below ground surface, without encountering the buried soil horizon or any archaeological features. The stratigraphy

and artifact content were very similar to those of Test Pit 13, located three feet to the southeast, and consisted of a dense and unstratified late nineteenth to early twentieth century assemblage contained within the first 1.75 feet of the excavation.

The results of the excavation of Square 34 (Figure 15) showed a well-stratified deposit approximately 3.0 feet in thickness. Level III, the buried topsoil, received a mean ceramic date of 1806 based on significant frequencies of pearlware and creamware. Feature 18 (Table 1 and Figure 15), a late nineteenth to early twentieth century posthole intrusion, was also located.

Within the upslope area, but outside of the main activity area, Units 21, 24, 26-E, and 41 encountered a variety of surficial disturbance dated to the twentieth century. This consisted of building demolition rubble from a circa 1944 barn structure in Trench 26. Square 41 identified very low artifact densities contained within a plowzone context. Units 21 and 24 showed unstratified deposits, also with very low artifact densities, predominantly twentieth century in origin.

AREA B

The non-random excavation of units in areas thought to contain subsurface features met with limited success. The combined Phase III data recovery of the Hawthorn site prehistoric and historic components consisted of a total of twenty-one units. Of these, two foot by two foot square 44, 47, 48, 49, 50, 52, 53, 54, 55, 56, 60, 62, 63, 64, and 65 revealed a soil stratigraphy previously discussed. A stratigraphic profile of Unit 40 best

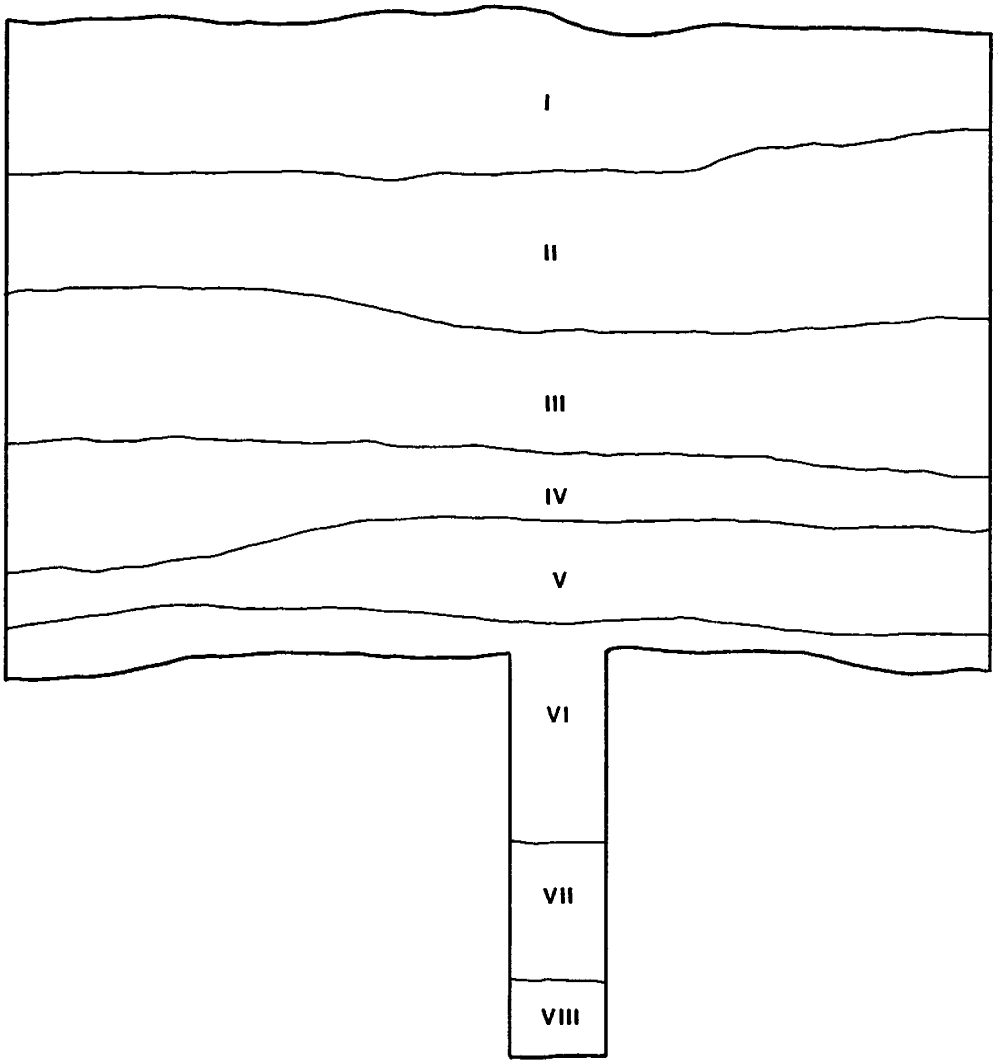
shows the typical stratigraphy of these units (Figure 27). Contained within the upper plowzone (Levels I and II) are late nineteenth and early twentieth century artifacts with a mean ceramic date of 1840. The buried plowzone (Level III and IV) contained only late eighteenth and early nineteenth century artifacts with a mean ceramic date of 1807.

In spite of the plowing disturbance, one subsurface feature was located. Trench/Square 38 located Feature 19 (Table 1 and Figure 15 & 28), a horizontally distributed cobble concentration only partially buried under the humus layer. The removal of the northern edge of the cobble concentration by the excavation of Square 38 located a small, .8 foot wide trench filled with ash and charcoal, running parallel to the trend of the cobble concentration. This anomaly was interpreted as a wagon wheel rut, later filled. The low density of artifacts recovered from the unit, including no diagnostic ceramics, prevented any temporal conclusions on the construction of Feature 19. Informant information indicated that cobbles were still actively added to the roadway during the mid-twentieth century. The road was at least present by 1868, for it is represented on Beers' Atlas of that year, and on all subsequent historic maps and aerial photographs (Figures 10, 11, 12, and 14).

Trench 42 and 43 (Figure 15) located a macadam driveway .35 feet below the ground surface that is known to have served as a replacement driveway after the construction of New Churchman's Road circa 1955. The only other anomaly located by the downslope units was in Unit 25, within the limits of which a concrete

FIGURE 27

SQUARE 40-NORTH WALL PROFILE



KEY

I – 10 Yr. 5/3 DARK BROWN SILTY LOAM

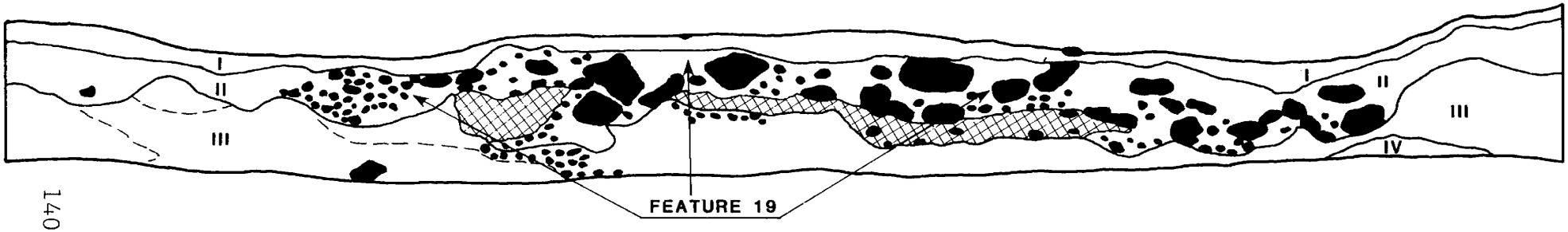
II – 10 Yr. 4/4 YELLOWISH-BROWN SILTY LOAM

{III IV V VI VII} – 10 Yr. 4/4 YELLOWISH-BROWN CLAYEY LOAM

VIII – 10 Yr. 6/4 LIGHT YELLOWISH-BROWN SILTY LOAM

FIGURE 28

TRENCH 38-WEST WALL PROFILE



KEY

- ⊠ –COAL ASH
- ■ –ROCK
- – – – SOIL LENS BOUNDARY
- I –10 Yr. 5/3 DARK BROWN SILTY LOAM
- II –10 Yr. 4/4 YELLOWISH-BROWN SILTY LOAM
- III –7.5 Yr. 5/6 STRONG BROWN SILTY CLAY LOAM
- IV –10 Yr. 5/8 YELLOWISH-BROWN CLAY

footing was visible above the ground surface. This is known to have functioned as a post support for a machine shop constructed circa 1955 (Figure 13 & 15).

INTERPRETATIONS

Introduction

This section of the report will analyze the results of the excavations and compare these results with the information derived from the historic documentation presented above. A study of the site on both the intra-site and inter-site levels will be considered, including artifact distributions, activity area determination, and artifact pattern analysis.

The artifacts recovered from the Phase III excavations ranged in date from the mid-eighteenth to mid-twentieth centuries. Based on these artifacts and their resultant mean ceramic dates, a median occupation date for the William M. Hawthorn site was derived. As stated in South (1977), the formula Z= 235.5 + 87Y (where Y is the sum of South's Mean Ceramic Date) developed by Richard Carrillo gives the best mathematical prediction of the median occupation date as represented by the ceramic sample. For the Hawthorn site, Z = 1851.55. Objectively determined occupation dates for the Hawthorn site can be summarized as follows:

Historic Dates	1738? - 1961
Historic Median Date	1849.5
Mean Ceramic Date	1857.5
Mean Occupation Date	1851.55

An approximation of the beginning bracket date of occupation can be determined based on the known end of occupation dated at