RICHARD WHITEHART PLANTATION (7K-C-203C) - RESULTS OF FIELD INVESTIGATIONS AND ARTIFACT ANALYSES

The limits of the Richard Whitehart Site and the location of all Phase II and Phase III plow zone test units are shown in Figure 18. The limits of the historical component of Area C of the Pollack Site were determined by Phase II testing completed in March 1991 (Grettler, Seidel, and Kraft 1994). Field investigations began with the excavation of 210 1- x 1-meter plow zone test units over the 8,118 square feet (99- x 82-foot) core area of the site. Plow zone and subsoil soil chemical samples were then taken over the core area and a surrounding 60- x 120-meter (196- x 393-foot) area. The plow zone was then mechanically removed from the entire site and a total of 199 historical features were identified. An additional 95 unrelated prehistoric cultural features were also identified.

The plow zone at the site was a consistent dark brown, moderately organic sandy loam approximately 1.0-foot thick. The underlying subsoil was a medium yellow- to red-brown sand and sandy clay. Abundant gravels were encountered in the both the plow zone and subsoil in areas of slight to moderate erosion.

An aerial view of the Whitehart house and sheet midden near the end of feature excavation is shown in Plate 10. Of the 199 total historical features, 163 features proved to be cultural. These cultural features dated primarily to the ca. 1681-1701 occupation of the site by the Whitehart family. The remaining 36 features were rodent burrows or non-cultural in origin. A summary of all the historical

FIGURE 18

Limits of the Richard Whitehart Plantation (7K-C-203C) and the Location of All Phase II and Phase III Test Units

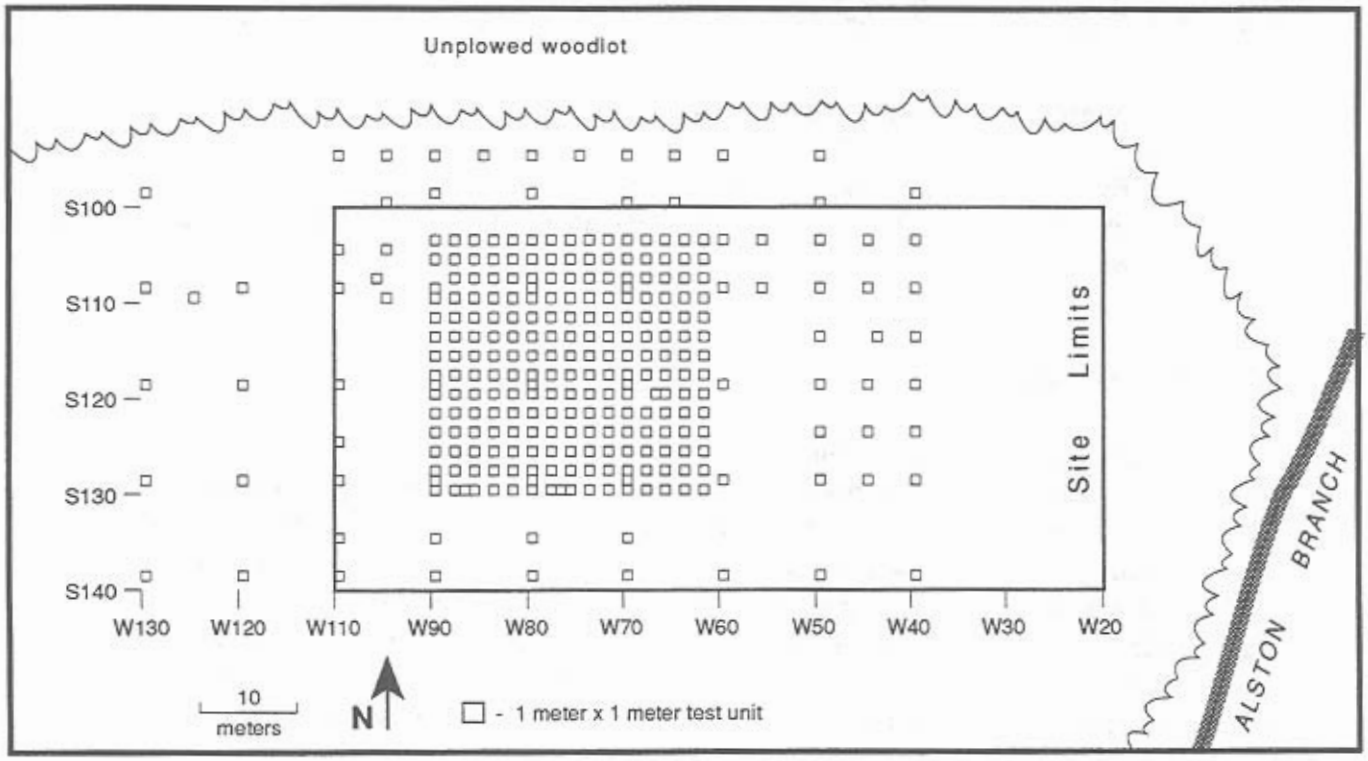


PLATE 11

Plan View of Feature C651 (Post Hole and Post Mold), Richard Whitehart Plantation

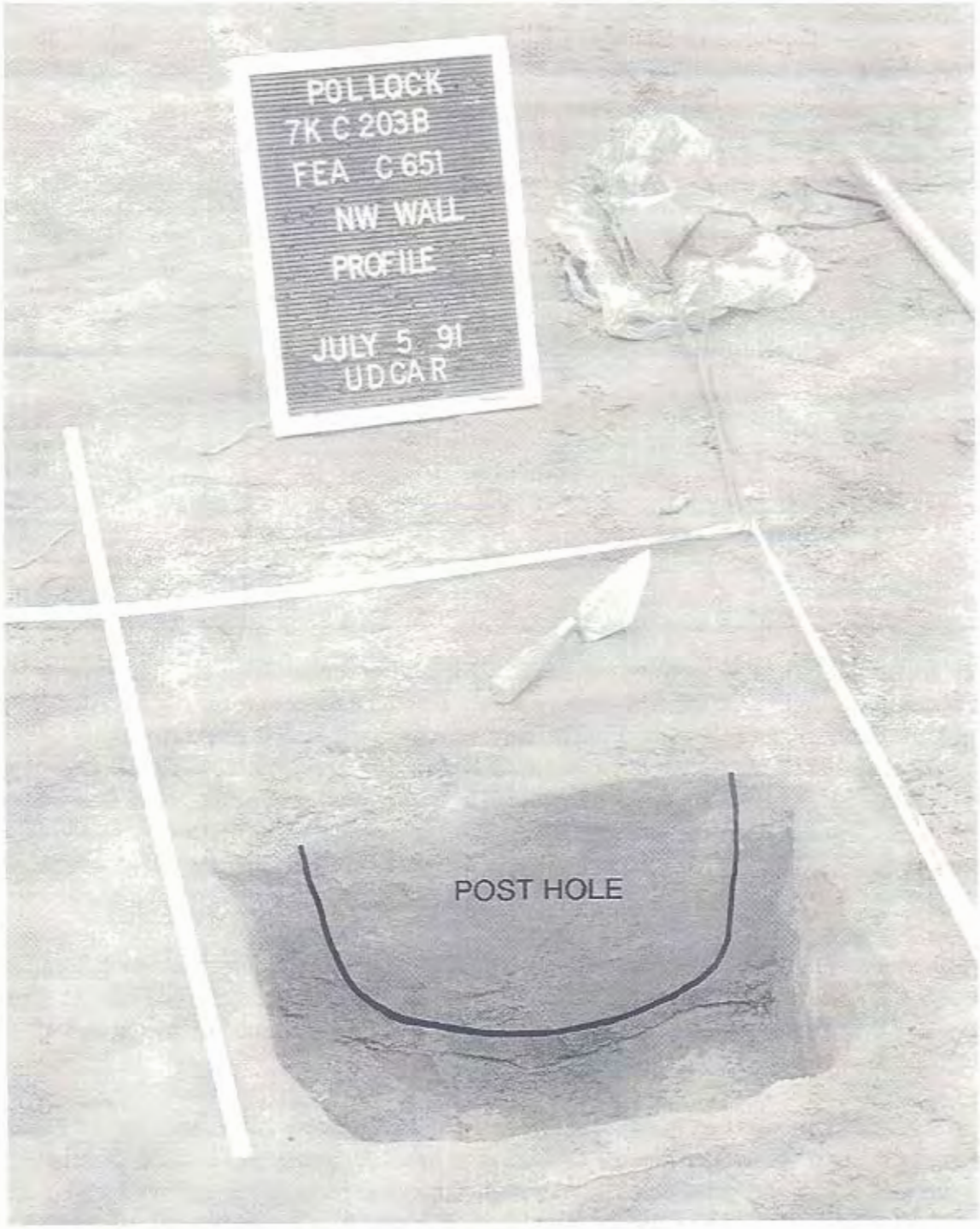
features tested during Phase III operations at the Whitehart Plantation is given in Appendix I. The Whitehart Plantation consisted of a 15- x 30-foot earthfast dwelling, four earthfast outbuildings, a well, sheet midden, five trash deposits, and three fencelines. The location of all the historical features and structures is shown in Attachment I. A discussion of the archaeological evidence of the major elements of the site follows.

Whitehart Plantation House

The primary archaeological evidence of the Whitehart house were the remains of a large hearth/ chimney and features associated with eight paired structural posts. All that remained of these structural posts, which were set directly in the ground, were stains from large, carefully dug post holes and the stains left by the rotted vertical wooden posts used to support the house's side walls (Plates 11 and 12). The Whitehart Plantation House is an example of an "earthfast" building. The term "earthfast" refers to the fact that the upright support posts of the building were placed directly into excavated holes in the ground, with no stone, brick, or mortar foundation elements (Figure 19). Soil tamped around the post in the hole secured it, hence the term "earthfast." Clapboards were then secured to the upright posts to

PLATE 12

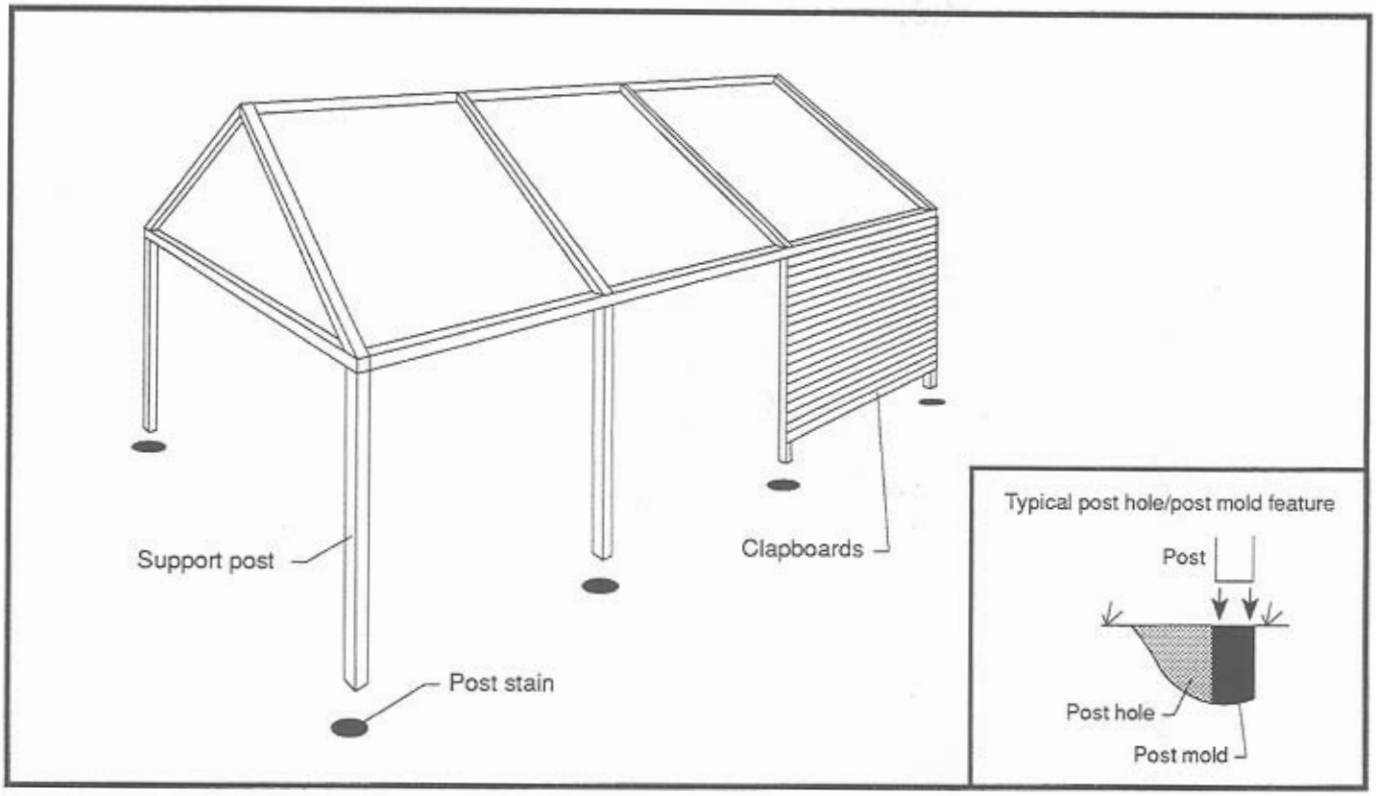
Profile of Feature C651 (Post Hole and Post Mold), Richard Whitehart Plantation



form the outer walls of the house. Archaeological evidence of this kind of construction consists of the stains from the holes dug to set the post (post hole feature) and the organic stain from the rotted wooden post (post mold feature). Usually the post hole was dug with a straight side, against which the post could be braced, and a sloped side, down which the heavy post could be slid for placement. Figure 19 also shows a typical post hole/post mold feature. Post holes from earthfast structures are also placed at

FIGURE 19

Diagram of Earthfast House Construction and Post Features



regular intervals of 8, 10, or 12 feet, and can be readily identified archaeologically. However, placement of the wooden posts in direct contact with the ground caused the posts to rot easily and posts often had to be replaced. Earthfast dwellings are common on seventeenth and early eighteenth century Chesapeake sites (Carson et al. 1981), but only five other sites in Delaware had earthfast dwellings. One of the five sites was the nearby Powell Plantation. The other four sites are the Whitten Road Site in northern Delaware (Shaffer et al. 1988), the Strickland Plantation in central Delaware (Catts et al. 1994), and the Thompson's Loss and Gain and Marsh Grass sites in southern Delaware (Guerrant 1988a, 1988b; Thomas 1983).

A summary of all the structural features associated with the Whitehart Plantation house is given in Appendix I. The location of all associated features is shown in Attachment I and Plate 10. The house was located in the northeast corner of the Pollack field near the confluence of Alston Branch and the Leipsic River.

The hearth/chimney, Feature 465, was located along the south gable end. Part of Feature 465 abutted one of the east wall posts, Feature C465C. The hearth/chimney was located slightly off-center towards the east side of the building. The four main structural posts of the east wall were marked by Features C651, C650, C649, and C465C (Attachment I, Plate 10). One additional structural post hole and mold near the north gable end, Feature C654, was part of a doorway into one of the two rooms of the Whitehart dwelling. Evidence of a second doorway was found along the west wall of the house. This west doorway was supported by Features C655 and C652 (Attachment I, Plate 10). The associated four main structural posts of the west wall were Features C526, C524, C464, and C652. Evidence of a single interior wall near the center of the house (Features C461, C462, and C653) indicates that the

Whitehart Plantation dwelling consisted of a simple, two room plan. This plan is the most common earthfast dwelling plan and is characterized by a single unheated parlor and an identical, but heated, kitchen/hall containing the hearth/chimney. Entrance to the northern, unheated room was through the east wall at the doorway marked by Features C654 and C650. Entrance to the southern, heated kitchen/ hall was through a doorway through the west wall between Features C655 and C652. An additional interior doorway anchored by a large post mold near the center of the dwelling (Feature C461) probably connected the two rooms.

Only slight variation in the orientation and depth of the structural posts of both walls was found (Appendix I). As expected, the post features of the individual walls were consistent in size and depth. Variation was greatest between the features of the two walls. This pattern is consistent with the known techniques of hole-set construction. In hole-set construction, each completed wall is raised separately. The prepared holes for the posts of each wall must thus match the location of the posts along the wall. Each hole must also be the same depth to ensure the raised wall is plumb. Thus, the construction and depth of post features from one wall are usually similar. While the prepared holes of the second wall have to be internally consistent, the two walls do not have to match one another.

Posts of the east wall extended from 1.2 to 3.1 feet below subsoil (Appendix I). In plan view, the east wall post holes measured approximately 1.6 x 1.8 feet to 3.3 x 2.6 feet in size. One of these post holes, Feature C651, appears in plan view and profile in Plates 11 and 12 respectively. Preservation was better along the east wall and evidence of post molds was found in four features, Features C649, C650, C651, and C465C. The two deepest post holes, Features C654 and C465C, extended to 3.1 to 2.8 feet below subsoil, respectively. The greater depth of Feature C654 provides additional evidence of a doorway. Feature C465C was located near the hearth/chimney.

The west wall structural features (Appendix I, Plate 10) were similar in size and shape to those of the east wall. The posts varied from 1.4 x 1.1 feet (Feature C655) to 2.0 x 2.5 feet (Feature C524) in size. The depth of the post molds and post holes of the west wall were between 1.2 and 2.0 feet below subsoil and were slightly shallower than the east wall. Evidence of post molds were identified in only two of the five west wall post features. The post mold of Feature C464 measured 0.8 feet in diameter and extended to the bottom of the post hole at 2.0 feet below subsoil. The position of the post mold indicates that the post rested directly on the bottom of the post hole. Posts were certainly once present in the other three wall features, but no evidence of them could be seen in the very sandy matrix of these features. The feature fill of the post mold in Feature C464 was a medium brown silty sand. The fill of the surrounding post hole was a mottled brown and gray-brown silty sand. Both of these feature fills were distinguished from the surrounding coarse yellow-brown and red-brown sand subsoil found consistently over the entire Whitehart Site.

All of the east and west wall post features were rectangular in shape. The long axis of the rectangular post holes was generally parallel to the structure. This orientation is unusual as the post holes of typical Chesapeake post-in-ground dwellings are oriented perpendicular to the walls they supported (Figure 19, Carson et al. 1981; Pogue 1990). The only two structural post features oriented this way at the Whitehart Plantation were two of the door posts, Features C650 and C652.

PLATE 13

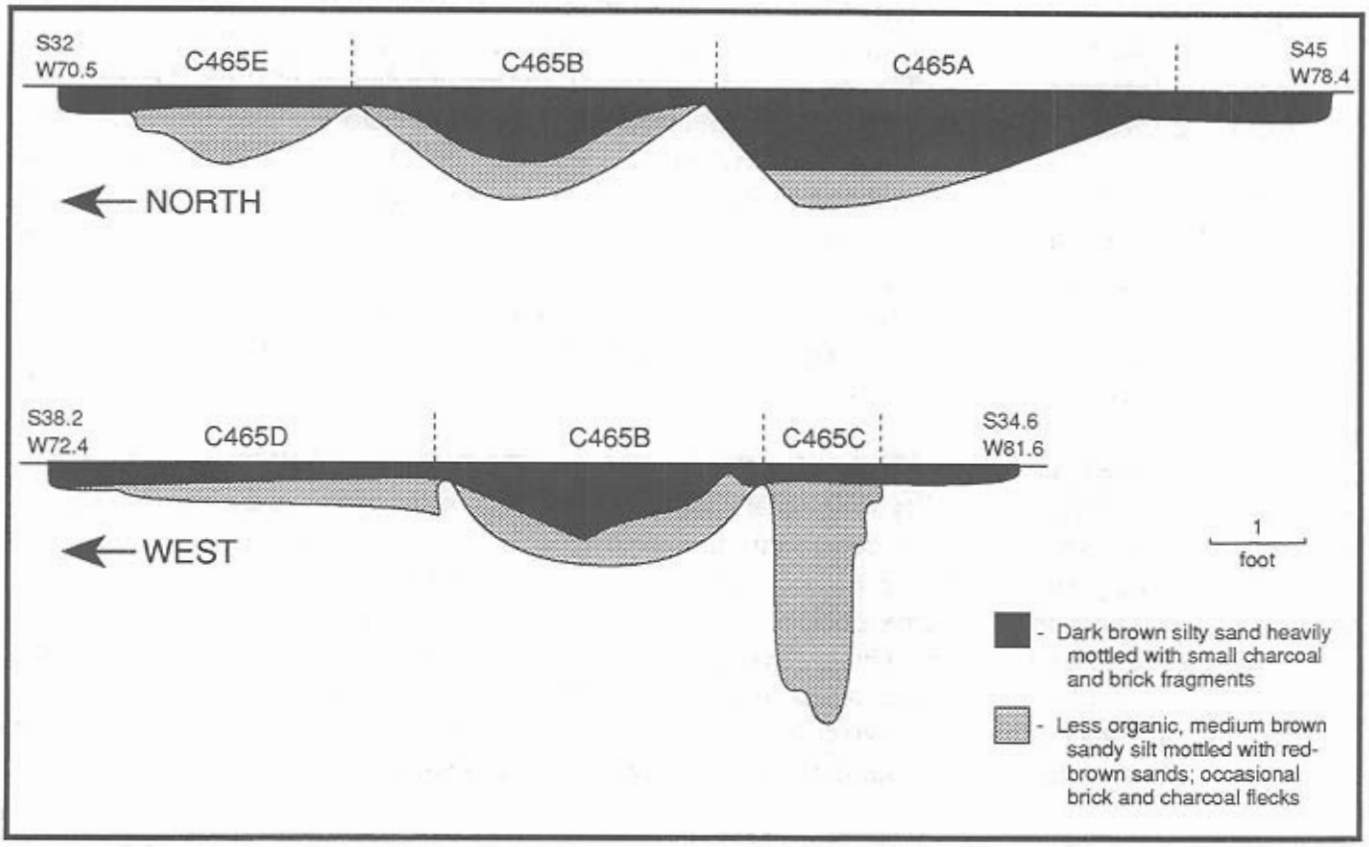
Features C465A-F (Chimney/Hearth), Richard Whitehart Plantation

No historical artifacts were found in any of the wall or interior structural features of the Whitehart house. A small number of unrelated prehistoric artifacts, flakes, and fire-cracked rocks were found, but these artifacts probably came from nearby prehistoric features disturbed during construction of the Whitehart dwelling. The consistent lack of historical artifacts indicates that the dwelling was probably the first structure built at the site. As the first structure, few artifacts were available for deposition into the features.

The hearth/chimney, Feature C465 (Attachment I, Plate 10), was located along the south gable end of the Whitehart dwelling. The hearth/chimney was located slightly off-center of the building. Feature C465 was first identified as a large, 7.0- x 6.0-foot oval stain containing large amounts of charcoal, brick, and decayed mortar/daub stains. All of the artifacts were very poorly preserved and the matrix of the features was a dark, highly organic silty sand. The first 0.25-foot level of Features C465 was removed to better define the limits of the feature and to identify any discrete structural elements. Six distinct sub-features, C465A, B, C, D, E, and F were found (Plate 13). All six sub-features were unstratified and excavated in arbitrary 0.25-foot levels. The remainder of Feature C465 was then excavated in identical arbitrary levels. The south halves of all the features were excavated first to expose feature profiles. No internal stratigraphy was identified in any part of Feature C465. No intact portions of a chimney or hearth were found in Feature C465. The relatively large amounts of very decayed brick and

FIGURE 20

Closing Profiles of Feature C465 (Chimney/Hearth), Richard Whitehart Plantation



gray sandy mortar/daub stains in the feature fill indicates that at least part of the hearth and chimney were constructed of brick. None of the brick or mortar/daub stains showed evidence of intense heat, but this was probably due to the extremely poor preservation of these artifacts. Indeed, these small brick and mortar stains were so fragmentary that none could be recovered.

Four of the sub-features, C465A, C465B, C465D, and C465E were the remains of shallow storage areas under the hearth. Feature C465F was the remains of a later rodent burrow. Feature C465C was the remains of one of the east wall structural posts and was covered by less than 0.25 feet of the Feature C465 fill. This thin layer of fill was probably deposited over the post hole and mold by subsequent plowing. Both the hearth and structural post were probably constructed at the same time as neither feature penetrated the other.

The two largest shallow storage areas associated with the hearth were Features C465A and C465B. Features C465A, C465B, and C465E appear in the closing north-south profile of Feature C465 shown in Figure 20. Feature C465A measured 5.0 x 4.6 feet in dimension and extended to 1.15 feet below subsoil. Feature C465B measured 3.2 x 4.0 feet in size and was 1.05 feet deep. Feature C465C measured 2.0 x 1.8 feet and extended 2.8 feet into subsoil. Feature C465D was 2.8 x 3.2 feet in dimension and 0.6 feet deep. Feature C465E was 1.6 feet and extended 0.8 feet into the subsoil.

The feature fill of Features C465A and C465B consisted of two layers of mottled dark brown silty sands containing varying amounts of organics, charcoal, and artifacts. The uppermost layer of both features (Level I, Figure 20) was heavily mottled with large chunks of charcoal and dark, highly organic silty sand. This layer was approximately 0.4 feet thick in both features and also contained significantly more historical artifacts (primarily very small brick, charcoal, and wrought nail fragments) than the underlying 0.4- to 0.5-foot deposit of less organic, mottled brown and red-brown sandy silt (Level II, Figure 20). The two smaller and shallower storage pits, Features C465D and C465E, did not contain any of these less organic soils. The lower artifact, charcoal, and organic density of Level II of Features C465A and C465B suggest that this soil accumulated gradually as both storage pits were used. The darker, artifact and charcoal laden soil above it was deposited after the hearth/chimney was abandoned and the site razed. Indeed, identical dark brown, highly organic feature fills containing high densities of structural artifacts were found in the other house and deep features at the site. Fourteen early historical artifacts were recovered from the hearth/chimney. The artifacts consisted of nine brick and wrought nail fragments, two white clay pipe stems, an oyster shell fragment, a small piece of an iron table knife blade, and one intrusive creamware sherd. The creamware sherd came from the top of the feature along the plow zone interface.

The three features from the interior division, Features C461, C462, and C653, were filled with the same highly organic dark silty sand feature fill as the other structural features of the house. Features C461 and C653 were post holes containing no evidence of post molds. Both posts were relatively shallow and supported an interior wall marked by Feature C462. Feature C462 was the remains of a 4.9-foot long wooden sill approximately 1.7 feet wide (Appendix I). The sill was rectangular and extended 0.5 feet into the subsoil. Unlike the two post holes that contained only two small brick fragments, Feature C462 contained significantly more artifacts. More specifically, Feature C462 contained 16 charcoal/burnt wood fragments, two bricks, two wrought nails, one redware sherd, and one small mortar fragment. Two of the pieces of burnt wood were fragments of a hewn board.

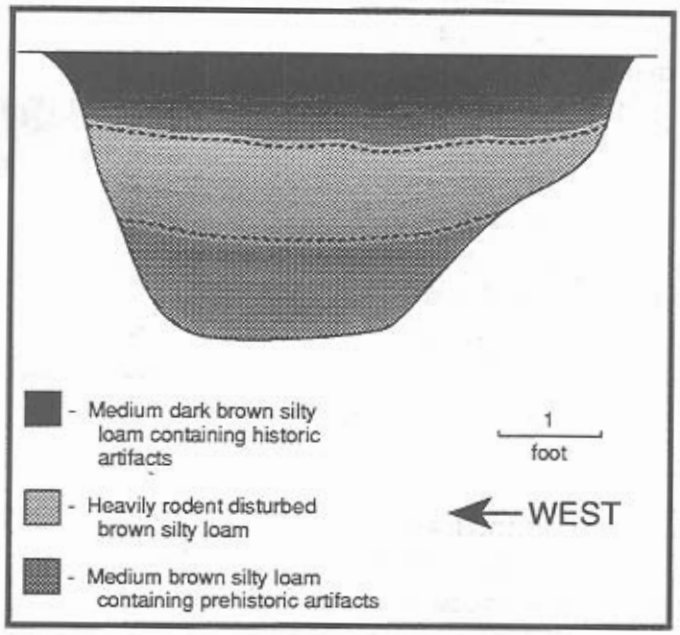
Three 5- x 5-foot test units were excavated inside the two interior rooms of the plantation house to locate any further evidence of activity areas. One arbitrary 0.25-foot level was excavated from these units to determine if any artifacts were pressed into the subsoil. No activity areas, however, could be identified because only one small iron nail fragment and one redware sherd were recovered from all three units.

One additional possible structural feature was also identified and tested during data recovery operations. The feature was C460, a large, heavily disturbed deposit of historical and early prehistoric artifacts. Feature C460 was located along the east wall of the house and the north edge of the hearth/ chimney (Attachment I). Feature C460 was a Woodland I prehistoric feature disturbed by the later seventeenth century occupation. The historical disturbance of the feature visible in the profile shown in Figure 21 probably occurred when the hearth/chimney was constructed. Severe rodent disturbance through the entire 2.9-foot depth of Feature C460, however, obscured the stratigraphic relationship between the prehistoric and later historical components. Feature C460 contained 13 prehistoric flakes, but no diagnostic artifacts. No evidence of Late Woodland or Contact Period prehistoric occupations were identified in Feature C460. The historical function of Feature C460 is unclear as only brick, mortar/daub, and two other historical artifacts were found in it. The two other historical artifacts were one white clay pipe stem fragment and one heavily worn English gunflint. These two artifacts and 99 small brick and mortar/daub fragments were found in the uppermost 1.0-foot thick deposit of medium to dark brown silty loam feature fill (Figure 21). The presence of both domestic and architectural artifacts suggest that at least part of Feature C460 was filled in after the site was abandoned.

FIGURE 21

Profile of Feature C460,

Richard Whitehart Plantation



Outbuildings

The remains of four earthfast outbuildings were identified at the Richard Whitehart Plantation. Few artifacts were found near these buildings and the primary archaeological evidence for all four structures were the remains of shallow cellar holes and occasional structural posts. The locations of all four structures, Outbuildings I-IV, are shown in Attachment I. A summary of the archaeological features associated with each outbuilding is given in Appendix I.

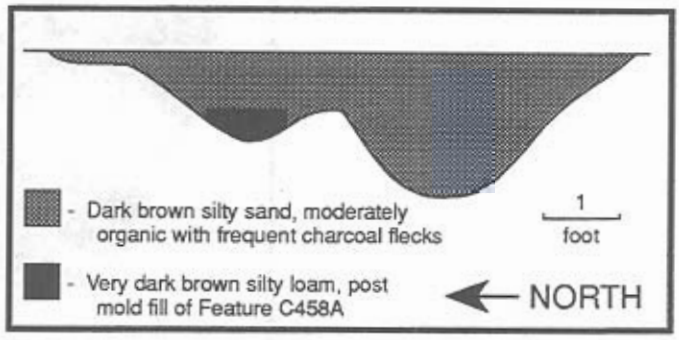
Outbuilding I was the closest structure to the Whitehart House. Outbuilding I was oriented east-west, fifteen feet from the northeast corner of the house, and was the only outbuilding north of the Whitehart house. Artifact and soil chemical densities indicate that Outbuilding I was located along the northern edge of the site. The primary archaeological evidence of Outbuilding I was a 6.0- x 8.0-foot oval cellar hole, Feature C458, and associated post mold, Feature C458A (Appendix I). Two additional features (Features C456 and C457), both structural posts, were also identified. Two of the three total post-related features contained clear evidence of prepared post holes indicating that Outbuilding I was supported by hole-set posts. No other structural features were found.

Outbuilding I measured approximately 9 x 18 feet and was oriented at approximately a 45 degree angle to the house. The cellar hole, Feature C458, was excavated in arbitrary 0.25-foot levels to the bottom of the feature at 2.0 feet below subsoil. A profile of Feature C458 is shown in Figure 22. As can be seen in Figure 22, the remains of a single 1.0-foot square post mold, Feature C458A, was found in the northern half of the cellar hole. No evidence of this post mold was seen until 0.8 feet of the cellar hole

had been excavated. Feature C458A was excavated separately from the rest of the cellar hole. This post mold was defined by a very dark brown silty loam feature fill that was significantly darker and more organic than the medium brown silty sand fill of the rest of the cellar hole. Feature C458A contained a single artifact, a small, heavily worn redware fragment. Feature C458 also contained significantly fewer charcoal flecks than the heavily charcoal flecked feature fill of Feature C458. The remaining south half of the cellar hole was excavated to its bottom at 2.0 feet below subsoil (Figure 22). The deepest part of the cellar hole was in the southern half. No other post molds were found and no internal stratigraphy was identified in either half of Feature C458. The sides and bottom of both halves of the cellar hole were fairly regular.

FIGURE 22

Profile of Features C458 (Cellar Hole) and C458A (Post Mold), Outbuilding I, Richard Whitehart Plantation



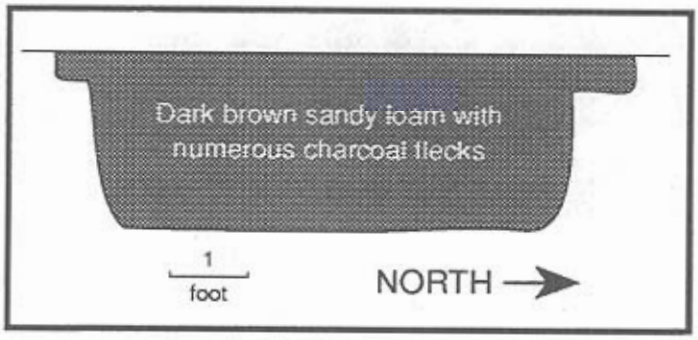
Only three historical artifacts were recovered from the cellar hole of Outbuilding I. All three artifacts were small, poorly-preserved wrought iron nail fragments. No historical ceramics, bone, or other domestic debris indicating intentional trash deposition were found. The stratigraphic evidence of the buried post mold, Feature C458A, and the presence of nails and charcoal fragments throughout the fill of Feature C458 indicates that this cellar hole was filled-in after the site was abandoned ca. 1701.

The two other structural features associated with Outbuilding I were the remains of two structural posts. Both posts, Features C456 and C457, were located north of the cellar hole (Attachment I). Features C456 and 457 were located in the northeast and northwest corners respectively of Outbuilding I. Both structural features contained approximately 1.0-foot square post molds similar to Feature C458A. Only one post hole, however, was found in Feature C456. Feature C457 was heavily disturbed by rodent activity. The post hole of Feature C456 measured 3.7 x 2.0 feet and was rectangular in shape. The post mold, Feature C456A, was located in the northern half of the post hole. Both the post mold and hole of Feature C456 were excavated separately. The post hole extended to 0.5 feet below subsoil and the post mold extended to 1.7 feet below subsoil. Four small brick fragments were recovered from the dark brown silty loam fill of the post mold. No artifacts were found in the mottled red-brown sand and sandy loam fill of the post hole. The presence of artifacts in the post mold, but not the post hole of Feature C456, suggests that this outbuilding was constructed early in the occupation of the site when few artifacts were available for deposition. The lack of artifacts in the post hole, however, may also simply reflect the very low artifact densities found over the entire Whitehart Plantation.

The remains of a second small outbuilding, Outbuilding II, were located approximately 35 feet south of the Whitehart house (Attachment I). Outbuilding II measured approximately 8 x 10 feet and was not aligned to the house. The two outbuildings, Outbuildings II and IV, were also located south of the house. The sheet midden, Feature C648, was located between the house and Outbuildings II-IV. Together with Fenceline B, Outbuildings II, III, and IV formed the southern edge of the house lot (Attachment I).

FIGURE 23

Profile of Feature C482 (Cellar Hole), Outbuilding II, Richard Whitehart Plantation



The primary archaeological evidence of Outbuilding II was a round 5.0- x 5.5-foot cellar hole. The cellar hole, Feature C482, extended 2.7 feet into subsoil making it one of the deepest features at the Whitehart Site. One other structural feature, Feature C483, was identified. Feature C483 was a heavily rodent disturbed post hole. No evidence of a post mold was found in Feature C483 and most of the profile of the feature was destroyed by rodent activity. A profile of the cellar hole of Outbuilding II is shown in Figure 23. Feature C482 was excavated in arbitrary 0.25-foot levels. The relatively flat and carefully constructed bottom of the cellar hole was encountered at 2.7 feet below subsoil. The northern edge of the cellar hole extended to only 0.5 feet below subsoil (Figure 23).

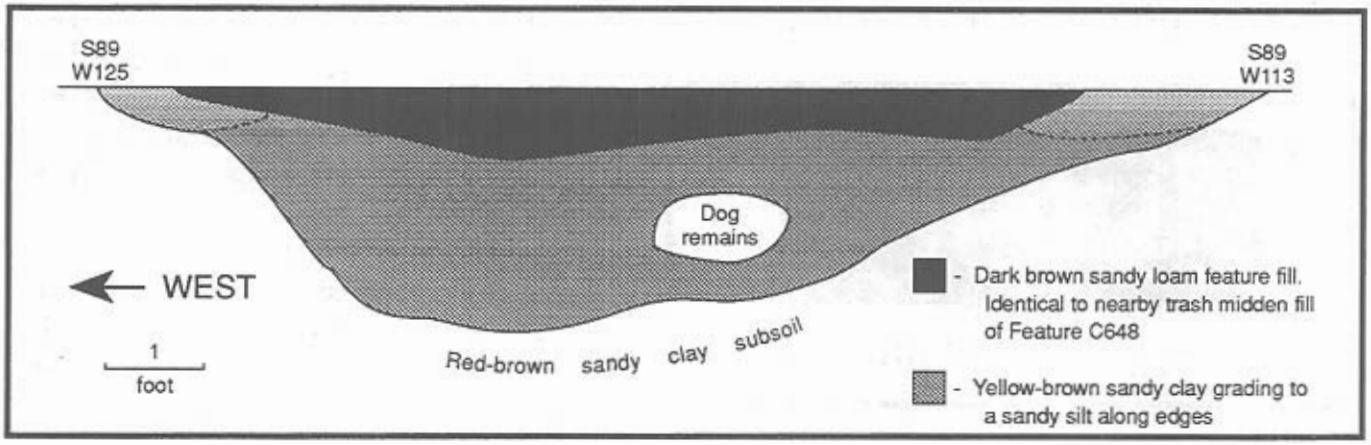
Feature C482 was filled with the same dark brown sandy loam feature fill as the other deep features at the site. The feature was not stratified and contained a relatively high amount of artifacts. The carefully excavated sides and bottom of the features, however, suggested that it was not intended as a trash pit, but merely received large amounts of domestic debris from the nearby sheet midden when the site was abandoned. Thirteen historical artifacts were found in Feature C482. The artifacts consisted of 10 nails fragments, two white clay pipe fragments, and a gunflint. Four small, unrelated prehistoric flakes were also found in Feature C482. No ceramic sherds, glass artifacts, bone, or other historical artifacts were found in Feature C482.

Outbuilding III was located 50 feet southwest of the Whitehart house along the south side of the sheet trash midden (Attachment I). Outbuilding III was also 15 feet west of Outbuilding II and along with Fenceline B, formed the southern limit of the house yard. Outbuilding III measured approximately 10 x 12 feet and was constructed in the same post-in-ground tradition as the house and other outbuildings. The building was oriented east to west, perpendicular to the Outbuildings II and IV and parallel to Outbuilding I. The structural features of Outbuilding III, however, were equally poorly preserved. Only the remains of a cellar hole, Feature C497 and two large post holes (Features C497A and C498), were found (Appendix I).

A profile of the cellar hole of Outbuilding III is shown in Figure 24. This oval cellar hole, Feature C497, measured 10 x 7.5 feet in size. The south and north halves of the feature were dug in arbitrary 0.25-foot levels. Feature C497 was found to be stratified and two distinct layers were identified. The uppermost layer of the cellar hole was a 0.6-foot thick layer of the same highly organic, dark brown sandy loam feature fill (Soil I - Figure 24) found over the nearby trash midden and all of the other deep features at the site. Underlying Soil I was a 2.0-foot thick deposit of yellow-brown sandy clay (Soil II - Figure 24). The remains of two dogs were found buried in Soil II between 1.0 and 1.8 feet below subsoil. The yellow-brown sandy clay of Soil II was deposited to bury the dogs sometime before the site was abandoned and the dark brown sandy loam feature fill of the nearby trash midden deposited atop the cellar hole.

FIGURE 24

Profile of Feature C497 (Cellar Hole), Outbuilding III, Richard Whitehart Plantation



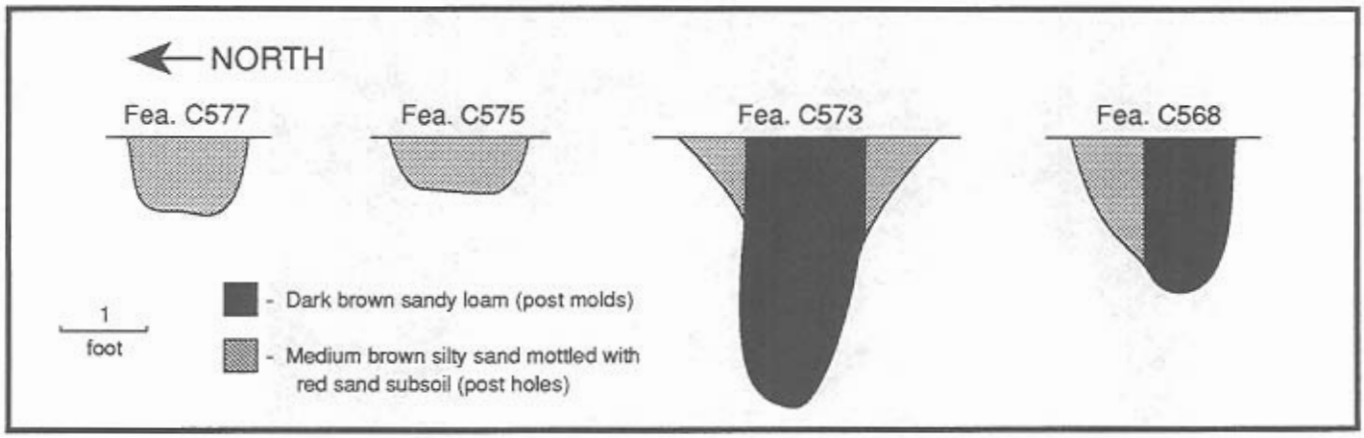
Twelve historical artifacts and dog remains (125 bones) were found in Feature C497. The 12 historical artifacts consisted of eight brick and nail fragments, one white clay pipe stem, two olive bottle glass sherds, and one oyster shell fragment. No ceramic artifacts or other temporally diagnostic historical artifacts were found. The 125 dog bones were the remains of two young adult dogs. One dog was approximately the size of a German Shepherd. The other was terrier-sized, about 15 to 20 pounds. The dentition of both animals was fully erupted, but not worn. No evidence of trauma or butchering was evident on either dog. The two structural post holes of Outbuilding III, Features C497A and C498, did not contain any artifacts. Both features measured between 1.3 feet and 1.4 feet square. No evidence of post molds were found. Features C497A and C498 extended 0.5 feet and 1.1 feet into subsoil respectively. In profile, both post holes were shovel-cut with straight sides and flat bottoms.

The largest of the four outbuildings at the Whitehart Plantation was Outbuilding IV, a tobacco house. Outbuilding IV was also located the farthest from the house, 85 feet, and was the only outbuilding without a cellar hole. Between these two structures was the most intensively utilized part of the workyard and sheet midden, Feature C648. Outbuilding IV measured 18 x 36 feet in size and was oriented north-south at approximately a 30 degree angle to the Whitehart house. The primary archaeological evidence for Outbuilding IV was the remains of four paired post holes along the east and west walls (Attachment I, Appendix I). These four main pairs were C594-C577, C576-C575, C598-C573, and C600-C568. The size and shape of these post holes varied considerably. Most of this variation, however, was due to uneven preservation. A total of 11 post-related features and one rodent burrow (Feature C570) defined Outbuilding IV.

The four paired posts were set at 10-foot intervals (Attachment I). No evidence of additional doorway posts were found. The size and location of the Feature C573 in the center of the east wall indicates the presence of a doorway. This doorway would have provided access to the yard area shared by the house and Outbuildings II and III. Feature C573 was also the most substantial structural feature, and one of only two post holes with evidence of a post mold. The post hole of Feature C573 was rectangular and measured 1.4 x 1.3 feet in size. The post hole extended 1.2 feet below subsoil and the

FIGURE 25

Profiles of the East Wall Posts, Outbuilding IV, Richard Whitehart Plantation



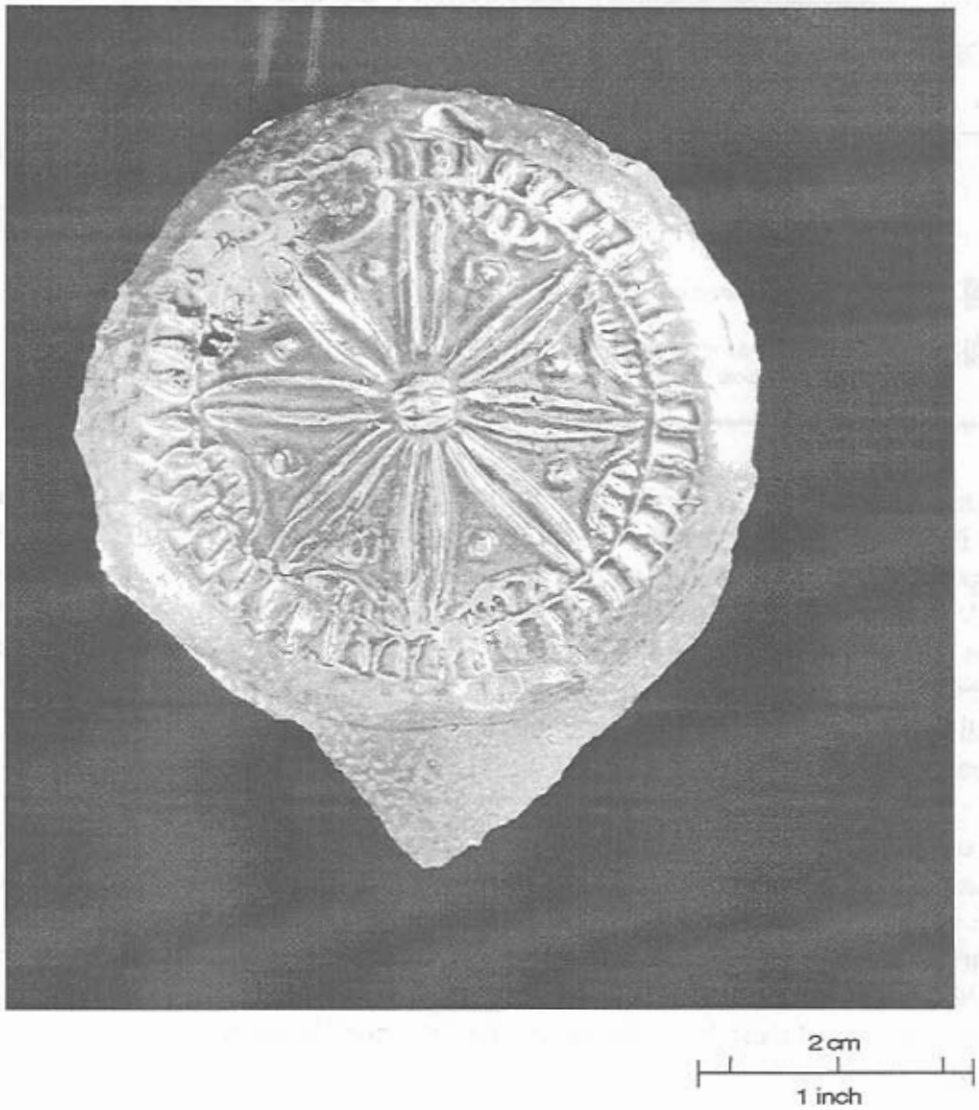
post mold extended an additional 2.1 feet below subsoil. The post mold was round and measured 1.4 feet in diameter. Profiles of the four post features of the east wall, including Feature C573, are shown in Figure 25. Except for Feature C573 and Feature C568 in the southeast corner, all of the other post holes of Outbuilding IV extended less than 1.0 feet into subsoil. Feature C568 contained both the remains of a 1.6- x 1.2-foot rectangular post hole and a 1.2-foot diameter round post mold. None of the 11 structural features of Outbuilding IV contained any historical artifacts. This lack of artifacts suggests that this outbuilding was constructed early in the initial occupation of the site when few artifacts were available for deposition.

The size of Outbuilding IV identifies it as a tobacco house or barn. With measurements of 18 x 36 feet (648 square feet), Outbuilding IV is substantially larger than the 15 x 30 feet (450 square feet) Whitehart house. Tobacco houses typically measure between 650 and 880 square feet in size and have no hearths, cellar holes, or other typical house features. Flotation samples taken from the vicinity of Outbuilding IV, however, failed to identify any tobacco pollen or other diagnostic remains. This lack of floral evidence, however, could also be due to the small size, typically poor preservation, and difficulty of identifying tobacco remains.

The function of the other three outbuildings is unknown. Soil chemical analyses from both plow zone and subsoil contexts indicated that none of the structures housed animals for significant periods of time. The regular sides and bottoms of the cellar holes of Outbuildings I-III also suggest that they never housed animals, particularly hogs and other rooting livestock. Plow zone artifact distributions also yielded little data on the possible function of Outbuildings I-IV. None of the outbuildings were associated with any significant concentrations of domestic artifacts. This lack of domestic, and indeed, any artifacts confirms that these structures were agricultural outbuildings and not loci of concentrated domestic or trash disposal activity.

PLATE 14

Bellarmine Rosette from Feature C495 (Well), Richard Whitehart Plantation

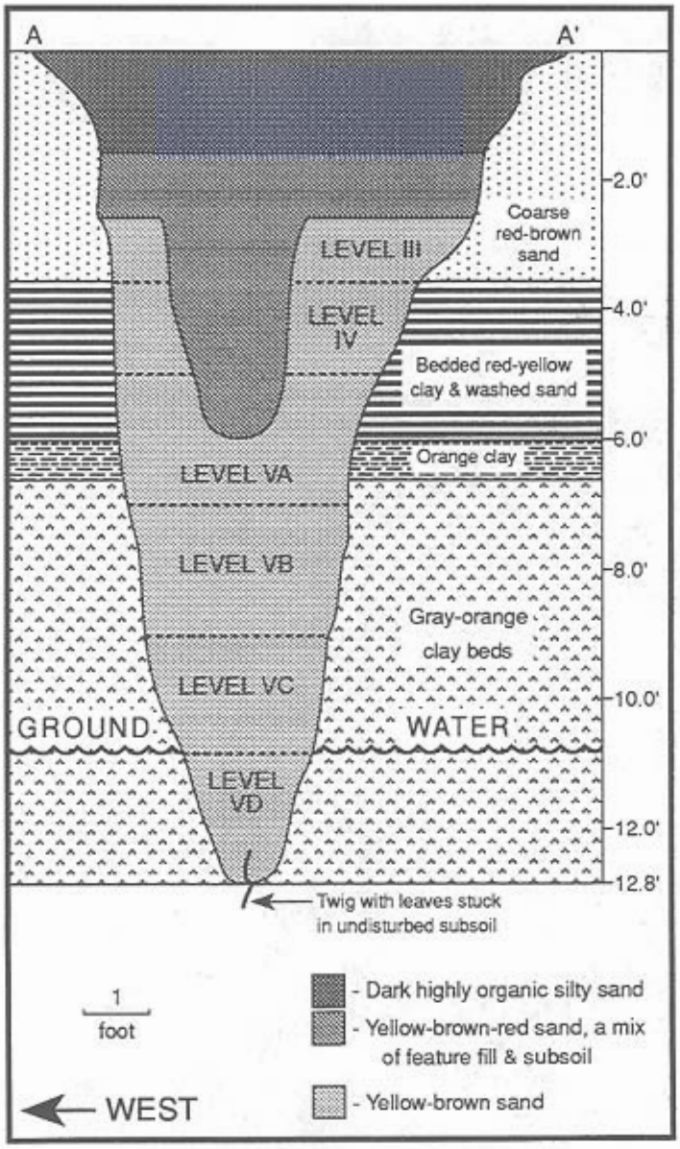


Well

One well, Feature C495, was found at the Whitehart Plantation. The well was located 50 feet southwest of the house (Attachment I). The well was first identified as a large 8.0- x 8.4-foot diameter stain of dark brown, highly organic silty sand containing occasional small brick fragments. A large fragment of a Bellarmine vessel decorated with a large incised rosette (Plate 14) was found on the surface of the well. Seven other historical artifacts came from the very top of the well: one metal tableware fragment, four unidentified metal fragments, and two white clay pipe stems.

FIGURE 26

Profile of Feature C495 (Well), Richard Whitehart Plantation



The south half of the well was excavated in natural and 1.0-foot arbitrary levels. After profiling, the north half of the well was excavated in identical levels. Hand excavation of both halves halted at five feet below subsoil because of the danger of collapse. A grade-all mechanically removed an additional 7.8 feet of feature fill in arbitrary 2.0-foot thick strata and the bottom of the well was encountered at 12.8 feet below subsoil. The lower strata were screened separately, but no historical artifacts, except for an 18-inch preserved tree branch, were recovered from below 5.0 feet. The branch was found at the bottom of the well between 12.5 feet and 12.8 feet below subsoil.

As can be seen in the profile (Figure 26, Plate 15) the well shaft of Feature C495 was composed of three distinct strata. No evidence of a builder's trench was found. The two uppermost layers of the well shaft, Soils I and II, contained all 10 historical artifacts found in the well. Soil I consisted of dark brown, highly organic silty sands, contained occasional historical artifacts, and extended to 1.6 feet below subsoil. Soil II consisted of dark brown, moderately organic silty sand heavily mottled with yellow, brown, and red coarse sand subsoil, and extended from 1.6 feet to 6.0 feet below subsoil. Both Soil I and II contained varying amounts of small charcoal and burnt wood fragments. These fragments decreased with depth and were largely absent below 2.6 feet below subsoil. The only other diagnostic seventeenth century artifact found in the well was a large 7/64ths-inch diameter white clay pipe stem found in Soil II between 2.6 feet and 3.6 feet below subsoil. Underlying Soil II was Soil III, a single, unstratified deposit of slightly organic, yellow-brown sands (Figure 26). Soil III surrounded the deepest portion of Soil II and extended from the bottom of the well at 12.8 feet below subsoil. No charcoal, burnt wood, floral remains, or other historical artifacts were found in Soil III.

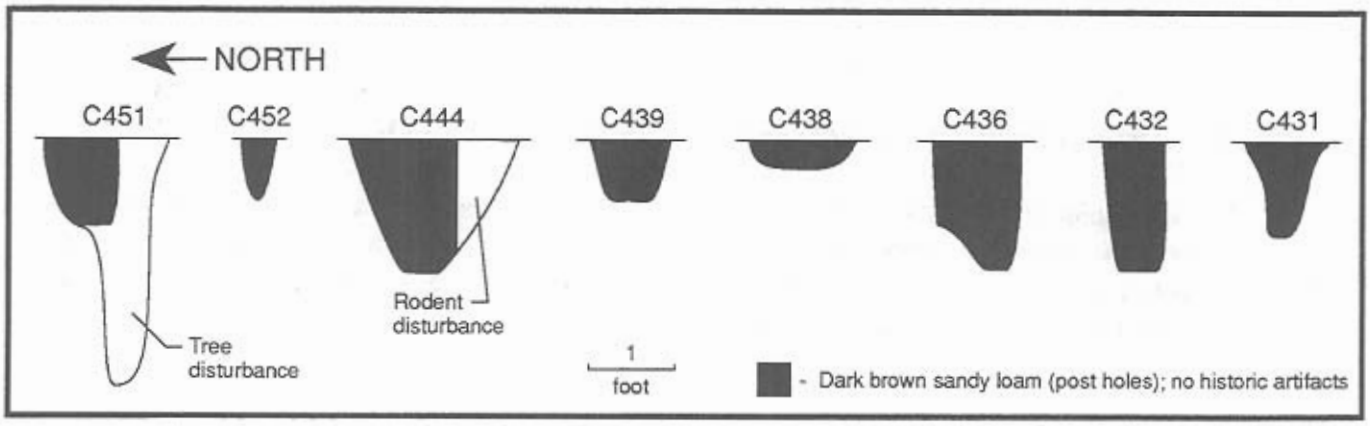
The stratigraphic record of the well indicates that it was filled-in over a relatively short period of time at the end of occupation ca. 1701. The presence of charcoal, burnt wood, and occasional small brick fragments in the upper layers of the well shaft probably came from the destroyed structures. The date of construction, however, cannot be determined because no builder's trench was found. The very low amount of artifacts in the well, particularly in the first soils used to fill it in (Soil III), indicates that it did not receive household debris until after it was abandoned at the end of occupation.

PLATE 15

Profile of Feature C495 (Well), Richard Whitehart Plantation

FIGURE 27

Profiles of Posts from Fenceline A, Richard Whitehart Plantation



Fencelines

The remains of three seventeenth and early eighteenth century fencelines were identified at the Whitehart Plantation. The locations of these fencelines, Fencelines A-C, are shown in Attachment I. Fenceline A was located 35 feet east of the house and marked the eastern edge of the house lot. Fenceline B was oriented east-west and extended from Fenceline A west to Outbuilding IV. Fenceline C ran from the northeast corner of Outbuilding IV to the eastern edge of the sheet midden, Feature C648. Together, these three fencelines marked the boundaries of the side and rear yards of the Whitehart Plantation (Attachment I). A summary of the 22 features associated with Fencelines A-C is given in Appendix I. All three fences were worm or Virginia rail fences. Worm fences were made of interlocking panels of four to six wooden rails laid horizontally in a zig-zag pattern. The ends of the rails of each panel interlocked with those of the next panel. The primary evidence of these ephemeral fences are the post holes of the "stakes" used to support the fences at the corners. Additional rails called "riders" were laid on the intersecting stakes to add rigidity.

Eight fence-related features were found along Fenceline A (Features C431, C432, C436, C438, C439, C444, C451, and C452). Fenceline A extended 85 feet from east of Outbuilding I south to Fenceline B (Attachment I). As can be seen in the profiles of Fenceline A shown in Figure 27, all of the post-related features were round and square post holes. Preservation of these features, however, varied considerably. The two largest post features, Features C451 and C444, extended 1.5 feet and 2.8 feet into subsoil respectively, but were also disturbed by tree and rodent activity disturbance. All of the undisturbed post holes of Fenceline A extended from 0.6 feet to 1.5 feet into subsoil.

Eleven post holes were identified in Fenceline B (Features C426, C430, C431, C484-87, C556-58, and C571). Fenceline B marked the southern boundary of the house lot, was 140 feet long, and extended from its junction with Fenceline A west to Outbuilding IV (Attachment I). One small southern extension of Fenceline B near Outbuilding II may have also enclosed the nearby well, Feature C495. The post holes of Fenceline B were identical in dimension and profile to those of Fenceline A.

Fenceline C marked the northern boundary of the workyard, was 50 feet long, and extended from the northeast corner of Outbuilding IV to the eastern edge of the sheet midden, Feature C648 (Attachment I). Archaeological evidence of Fenceline C ended 30 feet from the Whitehart dwelling and it is possible that this fenceline once extended to the house. A total of six post-related features defined Fenceline C. All of the features were square or round post holes approximately 1.2 x 1.4 feet in dimension. All of the features, except one, were shallow, poorly preserved, and less than 1.8 feet deep. The single exception was Feature C539, a 1.5- x 1.4-foot square post hole extending 3.3 feet into subsoil. The profiles and soils of the features of Fenceline C were identical to those of Fencelines B and A.

No post molds or artifacts were found in any of the fenceline features. All 22 of the post holes were filled with the same dark brown sandy loam feature fill found in the other deep features at the site. The lack of artifacts in any of these post holes suggests that they were constructed early in the occupation of the site when few artifacts were available for deposition.

Trash Midden

The remains of a large sheet trash midden were identified immediately behind the Whitehart house (Attachment I, Plate 10). This trash midden measured 55 feet long by 35 feet wide and roughly paralleled the house. It was located in the rear yard of the plantation and was the primary work area and locus of casual trash disposal at the site. Plow zone artifact densities were highest over the midden and the majority of the historical artifacts found at the Whitehart Plantation came from the plow zone above it.

Feature C648 was first identified as a large, amorphous stain of highly organic dark brown silty sand. A total of 45 small features, mostly rodent holes, were identified within Feature C648. All of these smaller features were excavated separately. The remainder of Feature C648 was then excavated in 43 contiguous 5- x 5-foot test units (Plate 16). These units were excavated in 0.25-foot levels; however, very little of this sheet midden was preserved below the plow zone.

A summary of the 45 features associated with Feature C648 is given in Appendix I. Feature C648 itself varied between 0.2 feet and 0.4 feet thick (Figure 28). Occasional areas of deeper, more concentrated deposits such as Features C477, C479, C521, and C540 were found along the northern edge of the trash midden. These four features extended from 0.25 feet to 1.6 feet below surface and probably represent areas of repeated trash disposal. The two deepest deposits, Features C477 and C479, may have been intentionally deepened as discrete trash pits to receive even more debris. Evidence of conscious excavation was visible in the relatively straight walls and bottom of Feature C477 compared to the highly irregular profile of C521 shown in Figure 29. Due to their proximity to the chimney/hearth, Features C477 and C479 may also have been first excavated to mine clay and mud for construction and then filled with household debris. All four of the areas of concentrated debris contained the same dark brown, highly organic silty sand fill as the rest of the sheet midden. No internal stratigraphy was seen in the two deepest deposits, Feature C477 (Figure 29) and C479. Likewise, no evidence of internal stratigraphy was found in the other two substantial deposits, Features C521 and C540.

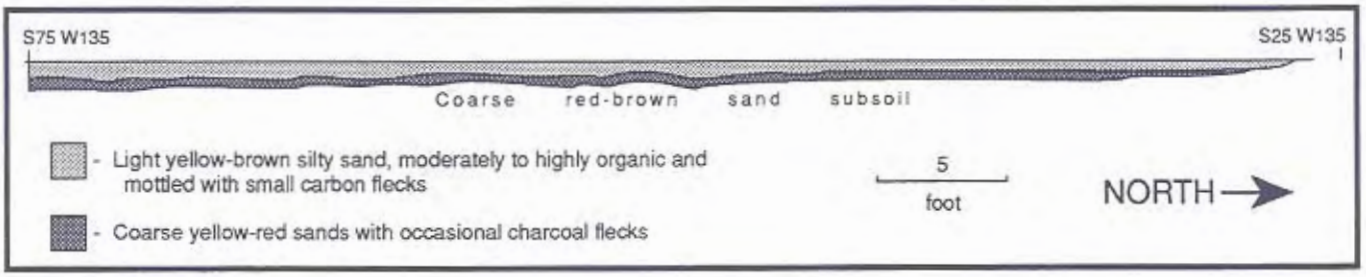
A summary of the 195 artifacts recovered from the sheet midden and associated major features (Features C477, C479, C521 and C540) is given in Table 4. Faunal remains were the most common artifacts; 81 percent of all the artifacts recovered were the remains of a wide variety of wild and domestic

PLATE 16

Excavating Test Units in Feature C648 (Trash Midden), Richard Whitehart Plantation

FIGURE 28

Profile of Feature C648 (Sheet Midden), Richard Whitehart Plantation



species. Only five historical ceramic artifacts were recovered: one English brown salt-glazed stoneware debased Bellarmine sherd, two redware sherds, and two unidentifiable fragments. All three diagnostic wares are typical of the late seventeenth century and cannot be dated more precisely. Seventeen white clay pipe fragments, none marked and only four with measurable stems were found. The bore diameter of three of the stems was 7/64ths of an inch and the diameter of the fourth was 8/64ths. The single 8/64th-diameter pipe was the largest diameter, and hence probably oldest pipe found at both the Whitehart and Powell plantations. A diameter of 8/64ths suggests a date of 1620-1650 according to Harrington (1954). The only other artifacts found in the sheet midden and associated features were small amounts of brick (8 total grams) and occasional wrought nail fragments.

FIGURE 29
Profiles of Features C477 and C521 (Trash Pits), Richard Whitehart Plantation

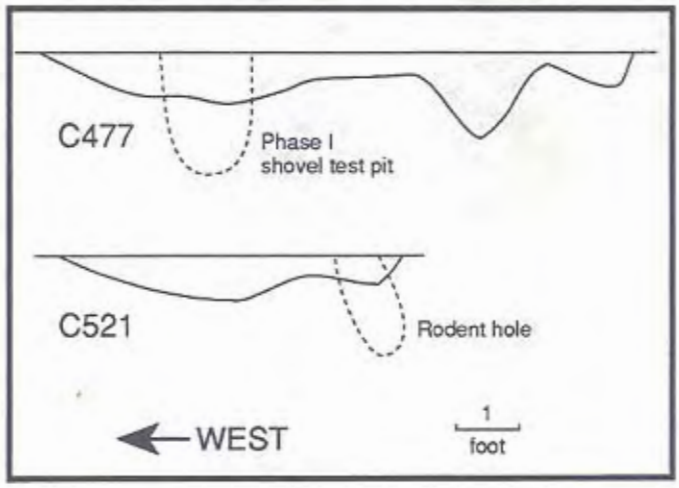


TABLE 4
Summary Catalog of All Artifacts from the Sheet Midden (Feature C648) and All Other Trash Pits, Richard Whitehart Plantation

Fea.	Domestic Artifacts							Architectural Artifacts				
	Ceramics	Faunal	Shell	Floral	Pipes	Glass	Other	Brick (wt.)	Nails	Other	Arms	Total
Sheet Midden												
C477	–	124	2	–	7	–	–	3 grams	–	6	–	139
C479	–	–	–	–	–	–	–	–	–	–	–	0
C521	2	18	–	–	2	–	–	1 gram	–	–	–	22
C540	–	–	–	–	–	–	–	–	–	–	–	0
C648	3	17	4	1	8	–	–	4 grams	–	1	–	34
TOTAL	5	159	6	1	17	0	0	8 grams	0	7	0	195
Other Trash Pits												
C360	–	18	–	–	5	–	–	2 grams	–	–	4	66
C391	7	2	–	–	2	43	1	–	–	2	–	56
C453	–	9	–	–	–	–	–	1 gram	1	–	–	10
C530	–	15	–	–	–	–	–	2 grams	–	–	1	16
C532	–	74	–	1	1	79	1	160 grams	7	–	–	163
TOTAL	7	118	0	1	8	122	2	165 grams	4	–	5	305
TOTAL	**12**	**277**	**6**	**2**	**25**	**122**	**2**	**173 grams**	**41**	**9**	**5**	**500**

TABLE 5

Summary of Faunal Remains from the Sheet Midden (Feature C648) and All Other Trash Pits, Richard Whitehart Plantation

Fea.	Domestic Species		Wild Species						Unidentified			
	Cow	Pig	Deer	Rabbit	Oppossum	Beaver	Turtle	Fish	Bird	Snails	Mammal	Total
Sheet Midden												
C477	3	--	1	--	3	--	--	--	10	--	107	124
C521	1	--	2	--	--	--	2	--	--	--	13	18
C648	--	--	--	--	--	1	3	1	--	2	10	17
TOTAL	4	0	3	0	3	1	5	1	10	2	130	159
Other Trash Pits												
C360	--	--	--	16	--	--	--	--	--	--	2	18
C391	--	--	--	--	--	--	--	--	--	--	2	2
C453	--	--	--	--	--	--	--	--	--	2	7	9
C530	--	--	--	--	--	--	--	--	--	--	15	15
C532	--	--	--	--	--	--	--	--	--	--	74	74
TOTAL	0	0	0	16	0	0	0	0	0	2	100	118
TOTAL	4	0	3	16	3	1	10	1	10	4	230	277

A summary of the number of faunal remains by species from the sheet midden and related features is given in Table 5. A total of 159 faunal artifacts were found. Eighty percent of the assemblage were unidentifiable mammal remains. A number of domestic and wild species, however, could be identified. Identifiable faunal remains included four cow, three deer, three opossum, five turtle, one fish, and 10 bird bones. No pig, sheep/goat, or other domestic species were identified. All of the remains were poorly preserved. No butchering marks or other identifying features of the faunal remains were identified. More detailed analysis of these ecofacts is presented later in this report.

Twenty-two identifiable charred floral remains were recovered from flotation samples taken throughout Feature C648 (Table 6). The trash midden contained nearly twice as many floral artifacts as any other feature at the site including deeper trash pits. Ten small, unidentifiable fish scales and 12.3 grams of charcoal were also recovered. Eighteen floral species were identified. All but three of the plant species were inedible, open farmland species. The only possibly edible species were pokeberry (Phytolaca), goosefoot (Chenopodium), and sunflower (Helianthus). No domestic plant species were identified.

TABLE 6

Floral Remains from the Richard Whitehart Plantation

SPECIES	C495	C532	C564	C648	TOTAL
Pigweed (*Amaranthus hitoides*)	-	-	1	-	1
Ragweed (*Ambrosia artemisiaefolia*)	-	-	-	1	1
Fiddleneck (*Amsinckia tessellata*)	-	-	-	1	1
Saltbush (*Atriplex patula*)	1	-	-	-	1
Bittersweet (*Celastrus scandens*)	1	-	-	-	1
Lamb' s-quarter (*Chenopodium album*)	-	-	1	-	1
Goosefoot (*Chenopodium hybridium*)	-	-	-	1	1
Crabgrass (*Digitaria sangvinalis*)	1	-	-	1	2
Goosegrass (*Eleusine indica*)	-	-	-	1	1
Wahoo (*Euonymous atropurpureus*)	-	1	-	-	1
Moleweed (*Euphorbia lathyrus*)	-	1	-	-	1
Milkpea (*Galactica regularis*)	-	1	-	-	1
Bedstraw (*Gallium sp.*)	-	-	-	2	2
Witch-hazel (*Hammamelis virginica*)	-	1	-	-	1
Sunflower (*Helianthus tuberosus*)	-	-	-	1	1
Velvetgrass (*Holcus lanatus*)	-	-	-	1	1
Peavine (*Lathyrus pusillus*)	-	-	-	1	1
Wild Lettuce (*Latuca canadensis*)	-	-	-	1	1
Gayfeather (*Liatris squarrosa*)	1	1	-	-	2
Sweetgum (*Liquidambar styraciflua*)	-	1	-	-	1
Oxalis (*Oxalis stricta*)	-	1	-	-	1
Witchgrass (*Panicum capillare*)	-	-	-	1	1
Groundcherry (*Physalis heterophylla*)	-	-	1	-	1
Pokeberry (*Phytolaca americana*)	1	1	-	1	3
Buckhorn (*Plantago lanceolata*)	-	-	1	-	1
Clammyweed (*Polansia graveolens*)	-	-	-	1	1
Solomon's-seal (*Polygonatum commutastum*)	-	-	1	-	1
Smartweed (*Polygonatum pensylvanicum*)	-	-	1	-	1
Pin Cherry (*Prunus pensylvanica*)	-	1	-	-	1
Staghorn Sumac (*Rhus typhina*)	-	1	-	-	1
Sage (*Salvia lyrata*)	1	-	-	-	1
Bulrush (*Scirpus americanus*)	-	-	-	2	2
Bristlegrass (*Setaria viridis*)	-	1	-	-	1
False Solomon's-seal (*Smilacina racemosa*)	-	-	-	2	2
Nightshade (*Solanum dlucmara*)	1	-	-	1	2
Sorghum (*Sorghum vulgare*)	-	1	-	-	1
Viburnum (*Viburnum acerifolium*)	-	-	-	1	1
Vetch (*Vicia slyvatica*)	1	-	-	2	3
Grape (*Vitis aestivalis*)	-	1	-	-	1
TOTAL	8	13	6	22	49
Unidentified Seeds	-	2	-	1	3
Charcoal	7.0g	6.6g	0.4g	12.3g	26.3g
Fish scales	-	-	-	10	10

Note: All seeds are charred unless otherwise noted. All measurements are below subsoil.

Additional Features

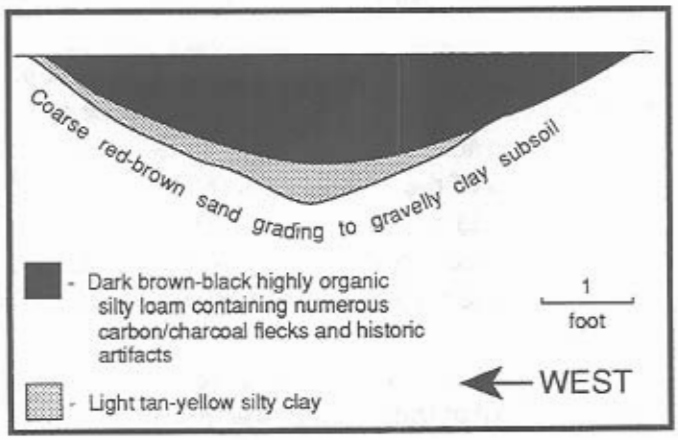
Five additional small trash pits were identified at the Richard Whitehart Site. The five trash pits are Features C360, C391, C453, C530, and C532. As with the trash midden and its associated deposits, the artifact densities found in these trash pits were low (Table 4). The primary identifying feature of these deposits was a dark brown, highly organic feature fill containing occasional seventeenth and early eighteenth century artifacts. Similar, though not nearly as organic, soils were found uniformly in the other historical features at the site. The dimensions of these five trash pits are summarized in Appendix I. The location of the five additional trash pits, Features C360, C391, C453, C530, and C532, are shown in Attachment I. The four largest trash deposits, Features C360, C391, C453, and C532, were located along the extreme northern and eastern edges of the site between 60 and 150 feet from the house. The remaining deposit, Feature C530, was located approximately 30 feet north of the house.

All five trash pits had similar profiles. None of the features were stratified. A profile of Feature C532, the deposit with the most artifacts and best organic preservation, is shown in Figure 30. Feature C532 consisted of a single artifact-bearing deposit of very dark brown silty loam extending to 1.25 feet into subsoil. Below this deposit was a thin 0.1- to 0.4-foot thick layer of light tan-yellow silty clay. This silty clay represents fine-grained soils deposited after the feature was excavated, but before it received domestic debris. This stratigraphy and the regular shape of Feature C532 suggests that it was first excavated as a daub pit and then filled with domestic debris.

A wide range of late seventeenth century artifacts were recovered from Feature C532. The feature was located near the historical woodline and was less eroded and plow disturbed than the other trash pits at the Whitehart Plantation. Feature C532 contained 163 artifacts (Table 4). No ceramic artifacts and only one white clay pipe fragment were found. By far the most common artifacts were 79 olive bottle glass fragments, 74 faunal remains, and 160 grams of small brick fragments. Seven wrought nails and one unidentified nut hull were also found. The 79 olive bottle glass fragments came from at least two different minimum vessels (Appendix II). One of the vessels, Vessel 4, was a small, dark aqua wine bottle, possibly of French manufacture. The bottle was free-blown and had an applied string rim. The second minimum glass vessel, Vessel 9, was a large, dark olive English demijohn with a thick applied string rim. The vessel was free-blown and the sherds were highly patinated. Some of the sherds of both vessels had been burned.

FIGURE 30

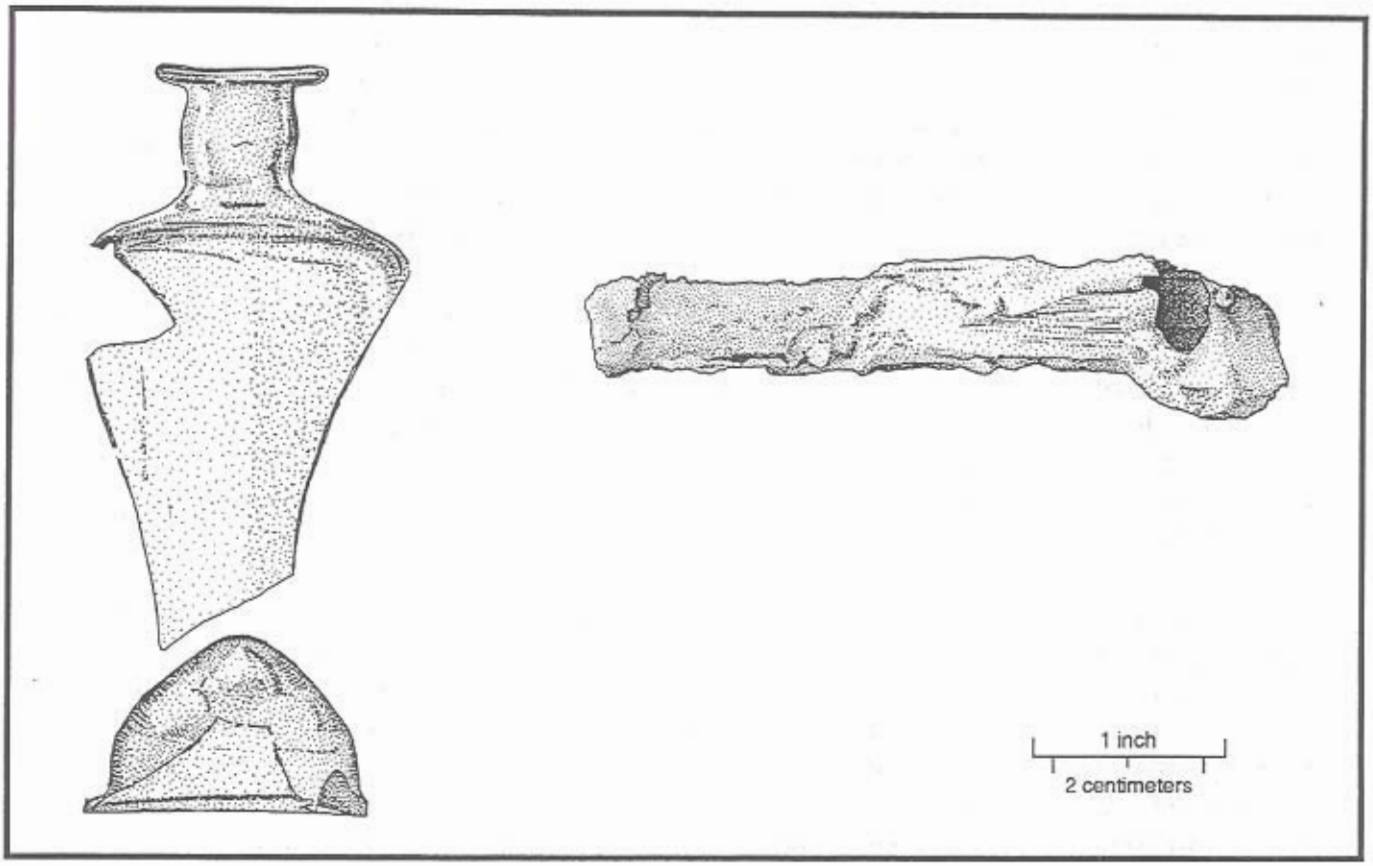
Profile of Feature C532 (Trash Pit), Richard Whitehart Plantation



One other trash pit, Feature C391, contained significant domestic artifacts. Feature C391 was also the only other trash pit to contain ceramic artifacts (Appendix III). The seven historical ceramics were four undecorated utilitarian redwares, two slip-decorated redwares, and one intrusive light yellow creamware sherd. The creamware sherd was found at the plow zone/feature interface and significantly post-dates the Whitehart occupation. Feature C391 was also the only other trash pit to contain bottle glass. A total of

FIGURE 31

Clear Glass Medicine Bottle and Clasp Knife from Feature C391 (Trash Pit), Richard Whitehart Plantation



43 clear bottle glass fragments came from a single lead glass medicine bottle (Vessel 5 - Figure 31). Vessel 5 is probably English because English glass manufacturers began to produce lead glass ca. 1670. The lack of crizziling on Vessel 5, however, suggest a date of ca. 1680 after refinements in glass formulas improved glass quality. Feature C391 contained one other significant domestic artifact, the remains of a bone handled clasp knife (Figure 31). The knife fragment was 3 and 1/2 inches long and 3/4 inches wide. Clasp knives were a common, everyday tool throughout the seventeenth, eighteenth and early nineteenth centuries. The clasp knife from Feature C391 is similar to a number of knives found at Fort Michilimackinac (Stone 1974:264, Specimens K and N).

Feature C391 and the other four trash deposits contained significant faunal assemblages. All five features consistently contained more bone and other faunal remains than any other kinds of artifacts, even architectural artifacts (Table 4). A total of 118 faunal remains were found in all five trash pits. Although 100 of the 118 remains (85%) were unidentifiable mammal bones, sixteen rabbit bones and two snails could be identified. The rabbit bones came from Feature C360. At least two adult rabbits were represented. No cow, pig, deer or other common animals were identified. The two snails are incidental to the feature and do not represent food remains.

A total of 100 additional historical and non-cultural features were found at the Whitehart Plantation. All of these features were completely excavated. More than three quarters of these features (82%) were the remains of late nineteenth and early twentieth century post molds and holes from various

later fencelines through the site. These fencelines were used as late as the 1930s to divide the Pollack field into a series of carefully-managed grazing units. Many of the later fence-related features were dug with power augers and could be distinguished by their uniform size and shape. The remaining 18 features at the site were trees, rodent holes, and other non-cultural features. These features were distributed randomly across the site and could not be associated with any known seventeenth century structure or activity area.

General Artifact Assemblage

A total of 3,571 historical artifacts were recovered from plow zone and feature contexts at the Richard Whitehart Plantation (Table 1). Less than half of all artifacts (1,381 or 39%) came from feature contexts. An additional 472 grams of very small brick and mortar fragments were recovered from the site. Other artifacts included local and imported ceramics, bottle glass, table glass, clay tobacco pipes, gunflints, nails, buttons, tools, bone, seeds, and nuts.

The majority of the artifacts recovered from feature excavations came from four deep features: the chimney/hearth (Feature C465) and three trash deposits (Features C360, C391, and C532). The most common artifacts from all contexts were bone fragments (1,009 or 28%); wrought, cut, and unidentified nails (615 or 17%); ceramics (481 or 14%); clay pipe fragments (470 or 13%); bottle glass (255 or 7%), and oyster and clam shell (85 or 2%). The remaining five percent of the 3,571 total artifacts included 37 gunflints, six buttons, five metal tableware fragments, and three tools.

Ceramic and Glass Assemblage Analysis

A total of 481 historical ceramic and 255 bottle glass sherds were recovered from plow zone and feature contexts. All of the ceramic and glass sherds were small and poorly preserved. Only 25 ceramic sherds came from features. Minimum vessel analyses were undertaken on all of the artifacts from plow zone and feature contexts because of the small size of the collection. Thirty minimum ceramic vessels and 11 minimum glass vessels were identified. The minimum ceramic vessels are summarized in Table 7 and listed in more detail in Appendix III.

Twenty-five of the 30 minimum ceramic vessels from the site date to the Whitehart family occupation. The five remaining vessels (Vessels 3-7) are later, post-occupation mid-eighteenth to late nineteenth century wares found in the plow zone. One creamware teacup, Vessel 8, intruded into Feature C391. This vessel represents a later ware not used by the Whitehart family. All 30 minimum vessels were less than five percent extant.

Richard Whitehart and his family used a narrow range of ceramic wares. Five different wares were identified: coarse undecorated redwares, slip-decorated redwares, Staffordshire earthenwares, English brown salt-glazed stonewares and German blue and gray salt-glazed stonewares. Undecorated redwares were by far the most common type. Nineteen of the 25 early minimum vessels (76%) were undecorated redwares of unknown manufacture (Table 7). The other three wares were represented by very few vessels: three slip-decorated redwares (12%) and one vessel each of Staffordshire, English brown salt-glazed stoneware, and Rhenish blue-and-gray salt-glazed stoneware. Noticeably absent

TABLE 7

Summary of Ceramic Minimum Vessels from the Richard Whitehart Plantation

WARE	TABLEWARE					KITCHEN/STORAGE				UNKNOWN	
	Cups	Mugs	Jugs	Bowls	Pitchers	Crocks	Milk Pans	Other Pans	Jars	Hollow-ware	TOTAL
Redware	1	--	2	--	1	2	7	2	2	2	19
Slip-decorated redware	--	--	--	1	--	--	--	2	--	--	3
Staffordshire	--	1	--	--	--	--	--	--	--	--	1
English brown salt-glazed stoneware	--	--	1	--	--	--	--	--	--	--	1
German blue and gray salt-glazed stoneware	--	1	--	--	--	--	--	--	--	--	1
TOTAL	1	2	3	1	1	2	7	4	2	2	25

Note : Five intrusive eighteenth and nineteenth century vessels (Vessels 3-7) are not included

from the site were diagnostic second quarter of the eighteenth century ceramics such as white salt-glazed stoneware, Buckley, and manganese-mottled redware. All three later wares were found on the nearby Strickland Plantation occupied less than a decade later from ca. 1726-1764 (Catts et al. 1994).

A distinctive lead glaze and/or temper was found on 12 of the 19 coarse, undecorated earthenwares. Vessels with either (or both) elements may be locally made. The distinctive glaze was a rough, dark brown lead glaze. The distinctive temper was a mix of small hematite, crushed quartz, and mica. The proportions of each element varied, but the hematite was usually the primary temper. Eight redware vessels of a variety of forms had both the unique glaze and temper: Vessels 17, 19, 22, 23, 26-28, and 30 (Appendix III). Another two vessels, Vessels 20 and 24, did not have the dark brown glaze, but were tempered with the hematite mix. Another two vessels, Vessels 25 and 29, were glazed with the dark brown lead glaze, but tempered with a fine grit.

Kitchen and storage wares accounted for 17 of the 25 early vessels (68%). Tablewares accounted for the other eight vessels. No toilet or teawares were found (Table 7). By far the most common kitchen/ storage vessels were milk pans. Seven milk pans (Vessels 10-15 and 24) were identified. All of the milk pans were undecorated redwares with a thin lead glaze on the interior, were slab molded, heavily worn, and had unglazed exteriors. Four other smaller pans, two slip-decorated redwares and two undecorated redwares, were also found. The two slip-decorated pans, Vessels 9 and 19, had a distinctive white slip and clear lead glaze. Vessel 9 was sgraffito decorated and Vessel 19 had a trailed slip.

Crocks and jars were the only other kitchen/storage wares found at the site. The two crocks, Vessels 21 and 26, and both jars (Vessels 27 and 29) were undecorated redwares. Both crocks had the distinctive dark brown lead glaze. Only Vessel 26, however, was tempered with the hematite mix. One of the jars, Vessel 27, had both the dark brown glaze and unusual temper. The temper of the other jar (Vessel 27) was primarily small quartz grit. Vessel 27 was glazed with a simple clear lead glaze.

Eight minimum tablewares were identified (Table 7). All of the hollowwares were wheel-thrown. Five of the eight vessels were redwares, but the other three vessels were refined, imported wares. The eight tablewares consisted of three jugs, two mugs, one cup, one bowl, and one pitcher. The pitcher (Vessel 28) and cup (Vessel 25) were undecorated redwares. The pitcher was glazed with the dark brown lead glaze and the cup had a thin, clear lead glaze. Two of the three jugs (Vessels 20 and 30) were undecorated coarse redwares. Vessel 20 had a distinctive green-tinted clear lead glaze not found on any other vessel at the site. Fithian (1992: personal communication) has found a similar copper-tinted glaze on redware vessels from the Arnell Creek Site (7S-G-23) in southern Delaware which was occupied from ca. 1680-1720. The third jug was the debased English brown salt-glazed stoneware Bellarmine found in the well and the plow zone above it. The circular sprigged rosette from the vessel appears in Plate 14.

The only bowl from the site was a large slip-decorated vessel (Vessel 18) with a thin, heavily worn trailed white slip under a thin, green-brown lead glaze. The glaze was much darker and opaque than the green-tinted glaze found on the one jug. The remaining two Whitehart tablewares were mugs. One mug, Vessel 2, was a Staffordshire vessel. The other mug, Vessel 1, was a German blue-and-gray salt-glazed mug. The Staffordshire mug was represented by three small sherds. Two of the sherds were decorated with a finely combed brown slip design typical of early Staffordshire wares. The German blue-and-gray mug was represented by one small fragment found in the plow zone. Vessel 1 was heavily worn, but retained the bright blue cobalt color typical of early Rhenish stonewares. The mug was probably bulbous in shape.

The Whitehart ceramic assemblage consisted of a wide range of common late seventeenth and early eighteenth century wares. All of the vessels were either tablewares or kitchen storage wares. Plates were noticeably absent. The lack of plates and other flatwares suggests that Richard Whitehart and his family ate from wooden plates, trenchers, and platters. Some of these flatwares may have been made of pewter, but the small size and presence of few refined ceramic wares suggests that the Whiteharts probably used wooden plates.

The 11 minimum glass vessels from the Whitehart Site are summarized in Table 8 and listed in more detail in Appendix II. Five of the 11 vessels were intrusive, post-occupation bottles dating to the mid-nineteenth to twentieth centuries. All five later bottles, Vessels 1-3, 6, and 7, came from the plow

TABLE 8

Summary of Glass Minimum Vessels, Richard Whitehart Plantation

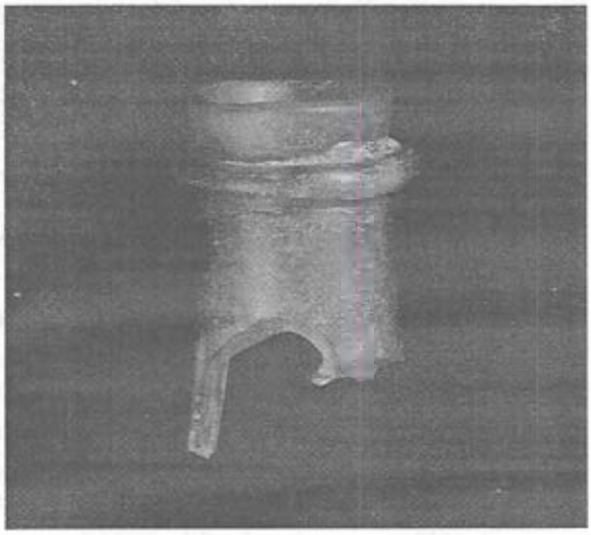
Vessel	Context	Function	Form
1	Plow zone	container	machine-made soda bottle
2	Plow zone	container	machine-made milk bottle
3	Plow zone	household	mold-blown clear bottle
4	C532, Plow zone	liquor	free-blown wine bottle
5	C391	medicine	free-blown clear bottle
6	Plow zone	household	mold-blown baking powder bottle
7	Plow zone	liquor	machine-made beer bottle
8	C497	liquor	free-blown wine bottle
9	C532	liquor	free-blown demijohn
10	Plow zone	liquor	free-blown wine bottle
11	C519	liquor	free-blown wine bottle

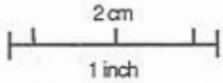
zone. The six seventeenth century vessels came from the plow zone and four features. The four features were the well (Feature C495), two trash pits (Features C391 and C392), and a rodent burrow (Feature C519) associated with the sheet midden. Five of the six early vessels were wine bottles. One large demijohn, Vessel 9, and four dark olive wine bottles were identified. Three of the four wine bottles, Vessels 8, 10, and 11, were English "onion-shaped" bottles. The fourth wine bottle, Vessel 4, is probably French and had a distinctive applied string rim (Plate 17).

The only other seventeenth century bottle was Vessel 5, the clear medicine bottle found in Feature C391 (Figure 31). Unlike all of the other early glass vessels at 7K-C-203C that were less than five percent extant, Vessel 5 was nearly complete. The bottle was finely made of very thin, clear lead glass. Lead glass was first produced in England ca. 1670, but the lack of crizziling on the vessel suggests it was made after 1680. This date is consistent with the known occupation of the site by the Whitehart family from ca. 1681-1701.

PLATE 17

Glass Vessel No. 4 (Wine Bottle), Richard Whitehart Plantation





Conspicuously absent from the glass assemblage of the Whitehart Plantation was any evidence of glass tablewares. Six stemmed wine glasses were found at the nearby John Powell Plantation, but none were found at 7K-C-203C. Redware and occasional refined ware mugs must have sufficed for everyday drinking needs and whatever meager entertaining the Whitehart family may have done.

Architectural Artifact Analysis

A total of 808 architectural artifacts were recovered from the Whitehart Plantation. Only 141 artifacts (18%) came from intact contexts. By far the most common architectural artifacts were wrought, cut, and unidentified nail fragments. Nail fragments accounted for 76 percent of all architectural artifacts. The 615 nails fragments consisted of 30 wrought nail, 103 cut wire nail, 2 wire nail, and 480 unidentified nail fragments. Other architectural artifacts included, 146 brick fragments (0.4 kilograms) and 12 small mortar or daub fragments. The only other architectural artifacts were 35 small window glass fragments. None of the window glass fragments date to the Whitehart occupation.

The very small amount of architectural artifacts at the site indicate that the Whitehart buildings were probably wood structures built with hand-fitted joints and wooden pegs. Plow zone brick and nail distributions identify the Whitehart house as probably the only structure with any brick or nail construction. The small amount of daub also suggests that the Whitehart house did not have any substantial wattle-and-daub walls or interior partitions.

TABLE 9

Results of Faunal Analysis, Richard Whitehart Plantation

	MNI	NISP	% of Total MNI	MODIFICATION Cut	Chopped	Charred	Gnawed	AGE
Domestic Species								
Cow	1	22	5%	–	2	7	–	1>24 mos.
Pig	1	6	2%	–	–	–	1	
Total	2	28	7%	0	2	7	1	
Wild Species								
Deer	1	12	3%	–	–	–	–	
Beaver	1	5	1%	–	–	–	–	
Opossum	1	3	<1%	–	–	–	–	
Rabbit	1	16	4%	–	–	–	–	
Turtle	1	44	11%	–	–	5	–	
Fish	1	4	1%	–	–	–	–	
Total	6	84	22%	0	0	5	0	
Other								
Dog	3	126	32%	–	–	–	–	
Unidentified bird	–	10	2%	–	–	–	–	
Rodent	1	2	<1%	–	–	–	–	
Snail	–	4	1%	–	–	–	–	
Unidentified Mammal	–	129	33%	2	–	178	–	
Unidentified	–	6	1%	–	–	–	–	
Total	4	277	71%	2	0	178	0	
Total	12	389	100%	2	2	190	1	

MNI : Minimum # of individuals **NISP** : # of identifiable specimens

Note : Total excludes 232 fragments of a single, intrusive stillborn calf from Feature C402

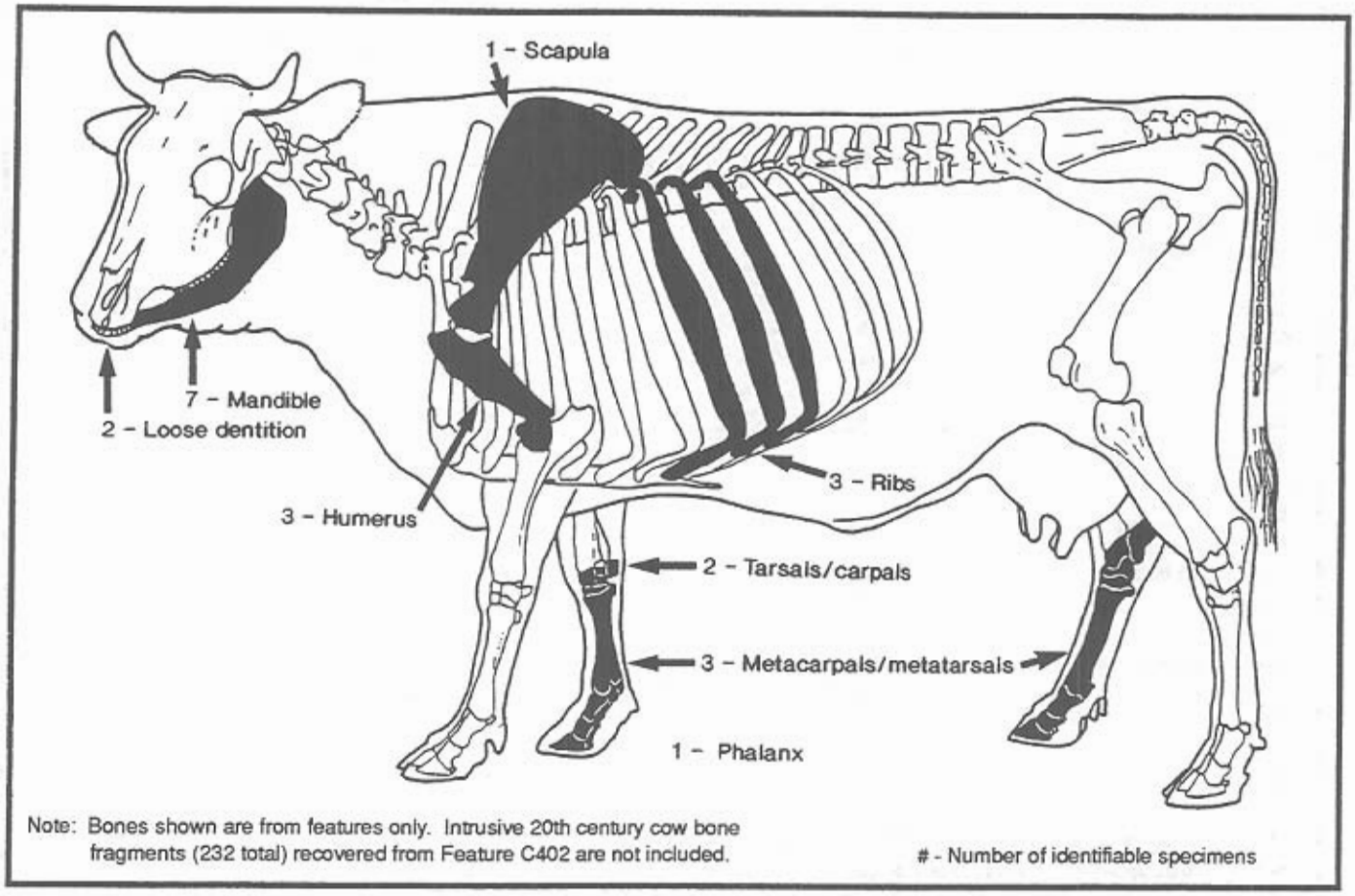
Floral and Faunal Assemblage Analysis

A total of 1,009 faunal remains and 56 floral artifacts were recovered from plow zone and feature contexts at the Whitehart Plantation. The 1,009 faunal remains include 142 plow zone artifacts, 232 fragments of a single recent calf burial, and 85 small oyster shell fragments. Also included in this total are 10 small fish scales found in the flotation samples from the trash midden, Feature C648. The calf remains came from an intrusive twentieth century feature, Feature C402. The oyster shell fragments came primarily from the plow zone. No detailed oyster shell analyses were undertaken due to the fragmentary shell remains.

A total of 389 non-shell faunal remains were recovered from intact feature deposits dating to the late seventeenth century Whitehart occupation (Table 9). The hearth/chimney (Feature C465) and five trash deposits (Features C360, C477, C519, C521, and C648) contained over 90 percent of the 112 identifiable wild and domestic edible species remains recovered. Twelve minimum individuals of 10 different domestic and wild species were identified (Table 9). The 12 individuals consisted of two edible domestic animals, six edible wild animals, and four other animals. The four other animals consisted of three dogs and one rodent. None of the dogs or rodents had butchering marks and were probably not food items.

FIGURE 32

Location of Identifiable Cow Bone, Richard Whitehart Plantation



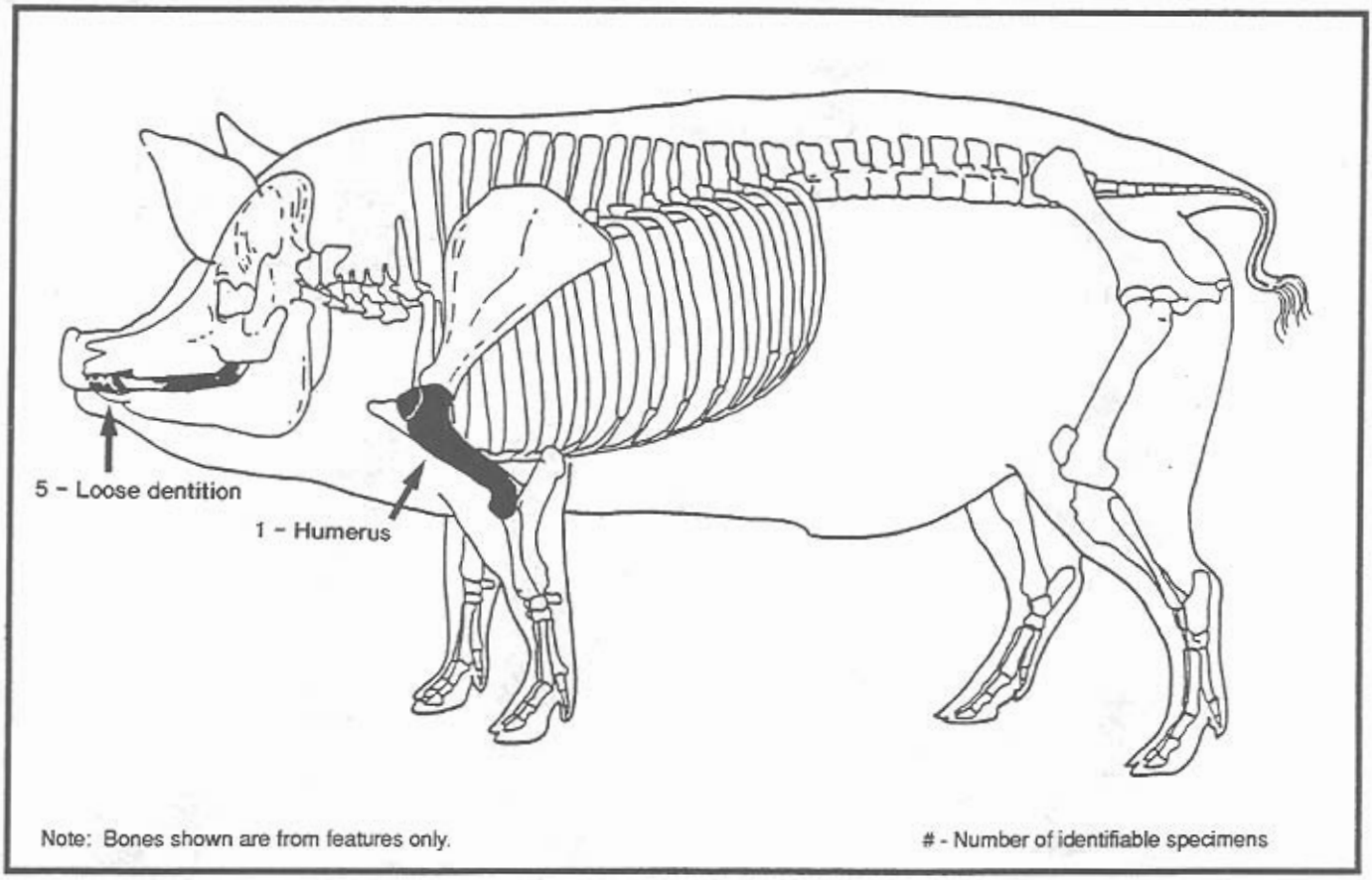
The two minimum edible domestic animals were one cow and one pig. The cow was at least two years old when butchered. The age of the pig could not be determined. Seven of the 22 cow remains (32%) were charred and two bone fragments (9%) had chop marks. One of the six pig bones had been gnawed by a carnivore, presumably one of the three Whitehart dogs. No butchering marks were found on any of the pig remains. The location of the identifiable cow and pig bones on typical carcasses are shown in Figures 32 and 33.

The six minimum edible wild animals consisted of one deer, one beaver, one opossum, one rabbit, one turtle, and one unidentified fish (Table 9). Five of the 44 (11%) turtle bones were charred. No other butchering marks or indications of age at death were found on any of the wild animal remains. One third (33%) of the remaining 277 identifiable faunal artifacts from features were the bones of unknown large mammals. Most of these animals were probably either deer or cows. Ten unidentifiable bird bones, possibly from a single duck or goose, were also found.

Although more usable meat could have come from the cow and pig than all six wild animals, wild species were clearly a major food resource for Richard Whitehart and his family. Deer, beaver, opossum, rabbit, turtles, fish, and probably ducks and geese, were hunted. The high percentage of wild to domestic species at the site is consistent with the large number of heavily used gunflints found.

FIGURE 33

Location of Identifiable Pig Bone, Richard Whitehart Plantation

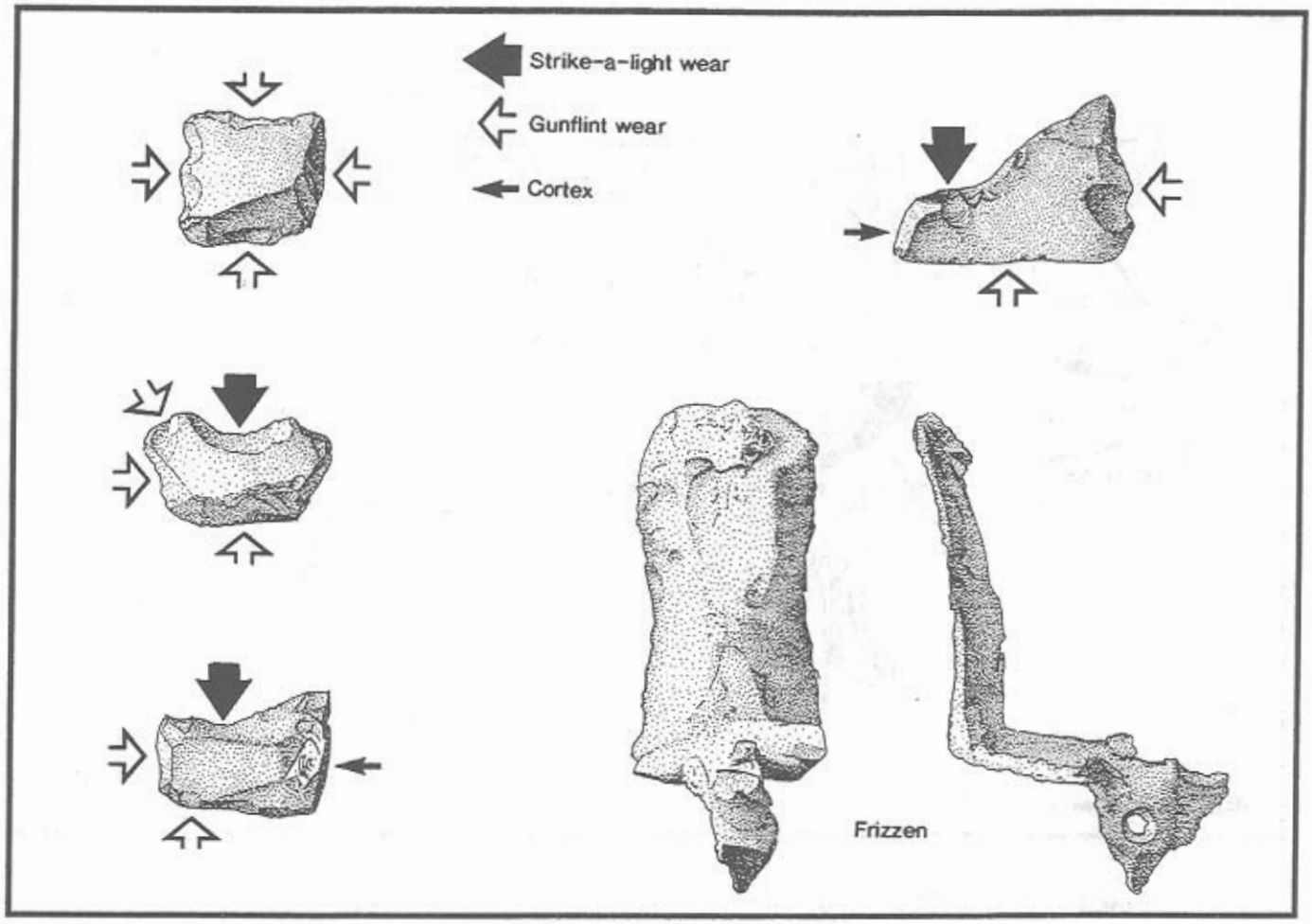


A total of 49 identifiable charred floral remains were recovered from four deep features (Table 6). Uncharred remains were not cataloged. The four features were the well (Feature C495), the sheet midden (Feature C648), and two trash pits (Features C532 and C564). Three unidentified seeds and 26.3 grams of charcoal were also recovered from the four features. Although only a few floral remains were found in the deep features, a wide variety of species was represented. Thirty-nine species were identified. Twenty-nine of the 39 species (74%) were open, disturbed land weed species such as crabgrass, pokeberry, vetch, and nightshade. The remaining 10 species consisted of three edible species (sage, sorghum, and grape), one tree species (sweetgum), and six wetland species. The three most common wetland species were bulrush, saltbush, and goosefoot.

None of the deep features, including the well, contained more than 22 identifiable floral artifacts. Indeed, only five species were found in more than one context. The five species were all common open, farmland species: crabgrass (Digitaria), gayfeather (Liatris), pokeberry (Phytolaca), nightshade (Solanum), and vetch (Vicia). The small number of floral ecofacts, but wide range of open farmland species suggests that the deep features at the Whitehart Plantation received floral material from surrounding fields over a relatively short period. The very small number of edible species, even in the sheet midden and trash pits, is more problematic. Either these remains were never used and deposited, or simply did not survive.

FIGURE 34

Gunflints and Frizzen from the Richard Whitehart Plantation



Gunflints and Arms Equipment Analysis

A total of 37 gunflints and gunflint flakes were found at the Whitehart Plantation. Three other arms-related artifacts, including a frizzen, were also recovered from plow zone and feature contexts. Seventeen of the 37 total gunflint artifacts were finished flints. The remaining 20 artifacts were flakes. All 17 gunflints showed extensive wear on at least two, and more commonly three and four, sides. The gun frizzen and four heavily worn, carefully curated flints are shown in Figure 34. All of the flints were small and had been discarded after becoming unusable.

Three of the 17 discarded gunflints also had strike-a-light wear on at least one side (Figure 34). All of the gun-flints and gunflint flakes were made from European, probably British, flint. Only two of the 17 gunflints, however, were professionally produced on prepared European gun spalls. Indeed, eight of the 17 discarded gunflints still had cortex on at least one side. One quarter of the 20 gunflint flakes also had cortex. The presence of cortex on both flakes and discarded gunflints indicates that the Whiteharts made some of their gunflints themselves from cobble sources and carefully refaced and curated all of the gunflints they used. Flints no longer suitable for firearms became strike-a-lights. Even the strike-a-lights were used until they became too small and blunt to be effective.

Tobacco Pipe Analysis

A total of 470 clay pipe fragments and 26 personal artifacts were found at the Whitehart Plantation. Three of the 470 clay pipe fragments were made of terra-cotta; the rest where made of white pipe clay. Only 65 measurable pipe stem fragments, however, were identified from both plow zone and feature contexts. The remaining 405 pipe fragments were primarily small bowl fragments. Fourteen percent (N=65) of all pipe fragments and 25 percent (N=16) of the measurable stems came from intact feature deposits.

By far the most common diameter of the 65 measurable pipe stems was 7/64ths (N=30, 46%). The next two most common diameters were 6/64ths (N=17, 26%) and 5/64ths (N=15, 23%) The only other diameter found was 9/64ths (N=3, 5%). No other pipe diameters were found. Harrington's (1954) histogram of bore diameter relative to date of manufacture suggests a mean occupation date of ca. 1680-1710. The mean pipe stem date for the site using the Binford (1962) formula is 1689.9 (mean of 6.32). The mean date of the 16 measurable stems from feature contexts is 1671.2 (mean of 6.81). The date of the 49 plow zone stems is 1696.0 (mean of 6.16). A mean date of 1689.9 for the entire site fits well with the archivally determined occupation of the site by the Whitehart family from ca. 1681 to 1701. The bore diameter of the three unmarked terra cotta pipe stems was 7/64ths.

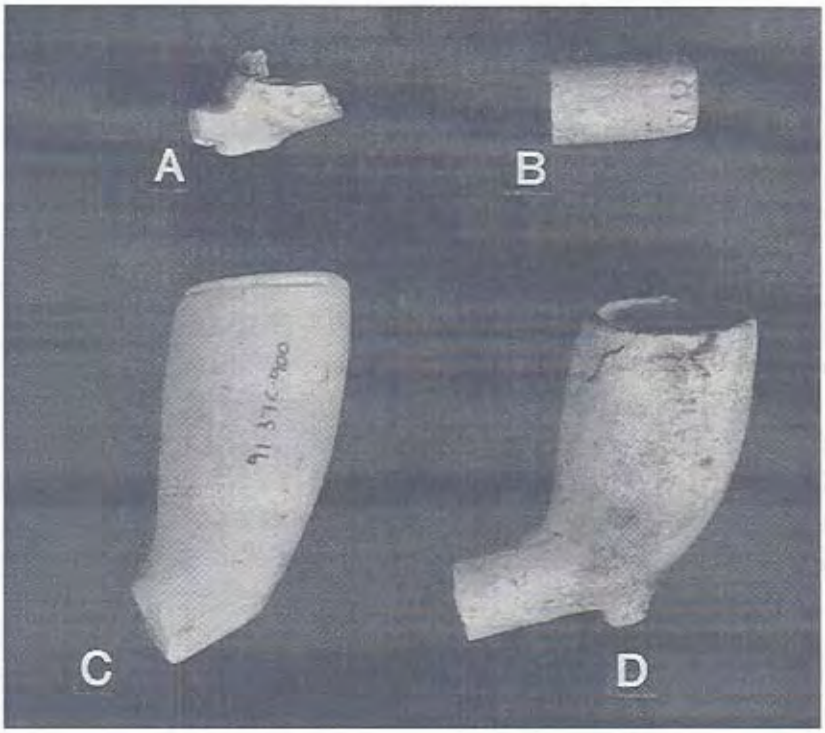
Only two pipe fragments contained maker's marks or other identification (Plate 18). One of the fragments (Plate 18A) was a bowl decorated with molded dots in a roughly circular pattern. This pattern has been found on Dutch pipes dating to ca. 1630-1675 in St. Mary's City (Chuck Fithian: personal communication, 1992) and England (Atkinson and Oswald 1972:176). The second marked fragment was a stem with an incised "MR T" under two rouletted bands (Plate 18B). The identity of this maker is not known. Two other large typical pipe bowls from the Whitehart Plantation are shown in Plate 18C and D. Unlike the slightly later Powell Plantation, spurred pipe bowls (Plate 18D) were occasionally found at the Whitehart Site. Spurred or heeled pipes, at least from Bristol manufacturers, generally indicate a pre-1690 date of manufacture.

Personal and Miscellaneous Artifact Analysis

Twenty-six personal artifacts and two miscellaneous artifacts were recovered from the site. Personal artifacts included six buttons, two thimbles, and two curtain rings. Iron chest furniture, fragments of an iron lock, and a brass plate used to repair a kettle were also recovered. A selection of these artifacts is shown in Plate 19. All six buttons were simple two piece flat iron and copper alloy buttons. The thimbles and curtain rings were also made of a copper alloy. All of the domestic artifacts from the site are typical of the late seventeenth and early eighteenth centuries. The two miscellaneous artifacts from the site were a small fragment of a triangular file and a melted brass sprue. The file was heavily worn and was found in Feature C511, a rodent hole inside the sheet midden. The brass sprue was 1 1/2 inches long and came from an unknown mold.

PLATE 18

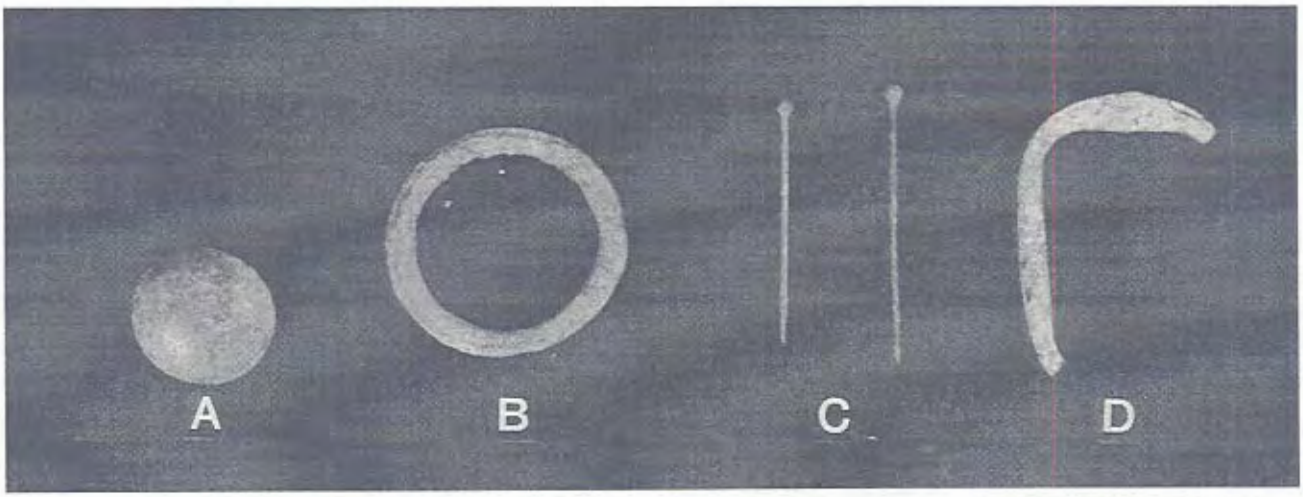
Pipes from the Richard Whitehart Plantation



A, C, D - Bowl Fragments B - Stem Fragment 2 cm 1 inch

PLATE 19

Personal Artifacts from the Richard Whitehart Plantation



A - Button B - Curtain Ring C - Pins D - Buckle Fragment 2 cm 1 inch

Soil Chemical Distributions

The distribution of plow zone and subsoil chemical densities was analyzed to provide additional information on farmstead layout, activity areas, and trash disposal patterns. Five distinct soil chemicals were analyzed: pH (Figure 35), phosphorus (Figure 36), calcium (Figure 37), magnesium (Figure 38), and potassium (Figure 39). In general, the subsoil samples yielded clearer evidence of the late seventeenth and early eighteenth century occupation of the site. The subsoil samples showed consistently more variation in chemical densities than the plow zone samples. This difference is especially clear in the distribution of soil pH and phosphorus shown in Figure 35 and 36. The plow zone samples were skewed by nearly 250 years of subsequent agricultural plowing and fertilization. This subsequent activity raised the overall soil chemical values obscuring many of the significant historical variations evident in the subsoil.

The distribution of plow zone and subsoil phosphorus is shown in Figure 36. High densities of phosphorus indicate areas of concentrated human and animal wastes. High densities of phosphorus have proven especially useful in identifying pens and outbuildings where animals have been housed for extended periods. Two areas of high subsoil phosphorus were identified at the Whitehart Site. The highest densities occurred as a single peak along the west wall of the Whitehart dwelling near the hearth/ chimney. This area of high subsoil phosphorus probably resulted from human wastes. No evidence of a privy was found at the site and the distribution of phosphorus suggest that human wastes were deposited quite near the dwelling. A small area of medium phosphorus density along the northeast corner of the house may also have resulted from human wastes.

The second highest phosphorus densities occurred near the western edge of the trash midden, Feature C648 (Figure 36). This area of concentrated animal wastes occurred inside Fenceline C indicating animals were sometimes penned in this area. The high phosphorus densities over most of the sheet midden may relate to three secondary concentrations along Fenceline B. The largest of these three areas of medium phosphorus density was located midway between Outbuilding III and IV. The other two areas were over Outbuildings II and III. The primary area of animal penning, however, appears to be the workyard area marked by the sheet midden. This workyard to the rear of the house was bounded by the three primary fencelines. Outbuildings I and IV showed no evidence of ever housing animals and the phosphorus densities found at Outbuildings II and III are minimal compared to those found at the house and trash midden. Outbuildings II and III were both small and had cellar holes undisturbed by animal activity.

The distribution of soil calcium is shown in Figure 37. By far the highest densities of subsoil calcium occurred at the hearth/chimney of the Whitehart dwelling. Two separate peaks of calcium along the south gable end and southeast corner of the house confirm the location of the chimney/hearth. These high densities also indicate the calcium-rich mortar or other building materials used in the hearth/chimney were probably not used anywhere else at the site. A second area of medium calcium density was identified along the northern end of the trash midden. This concentration occurred along the south side of Fenceline B. Slightly elevated calcium levels were encountered throughout the trash midden and probably originated from the manufacture of lime mortar for the chimney/hearth and the disposal of calcium-rich oyster shell in the midden. Indeed, the highest density of plow zone oyster shell was found in this part of the midden.

FIGURE 35

Distribution of Soil pH, Richard Whitehart Plantation

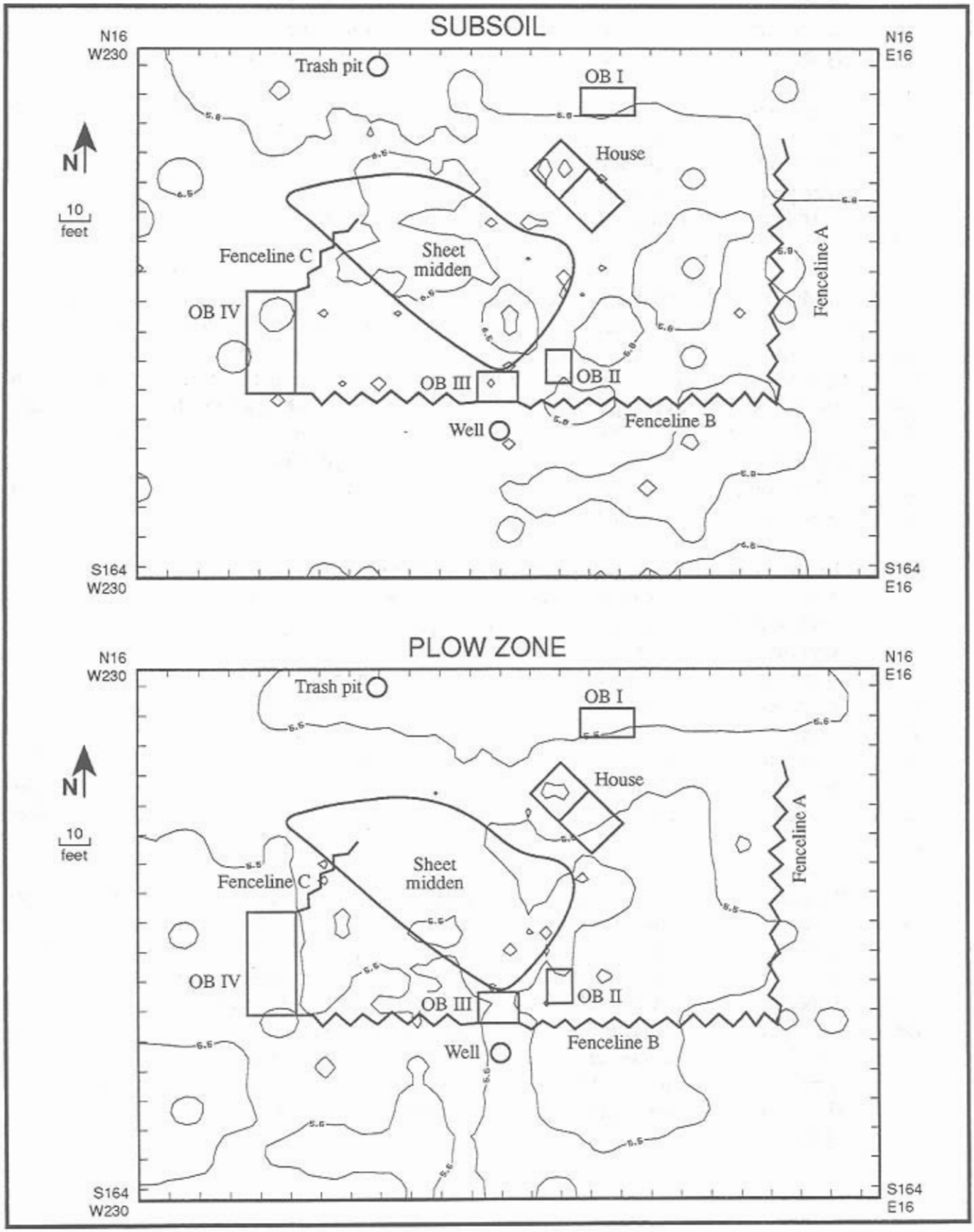


FIGURE 36

Distribution of Soil Phosphorus, Richard Whitehart Plantation

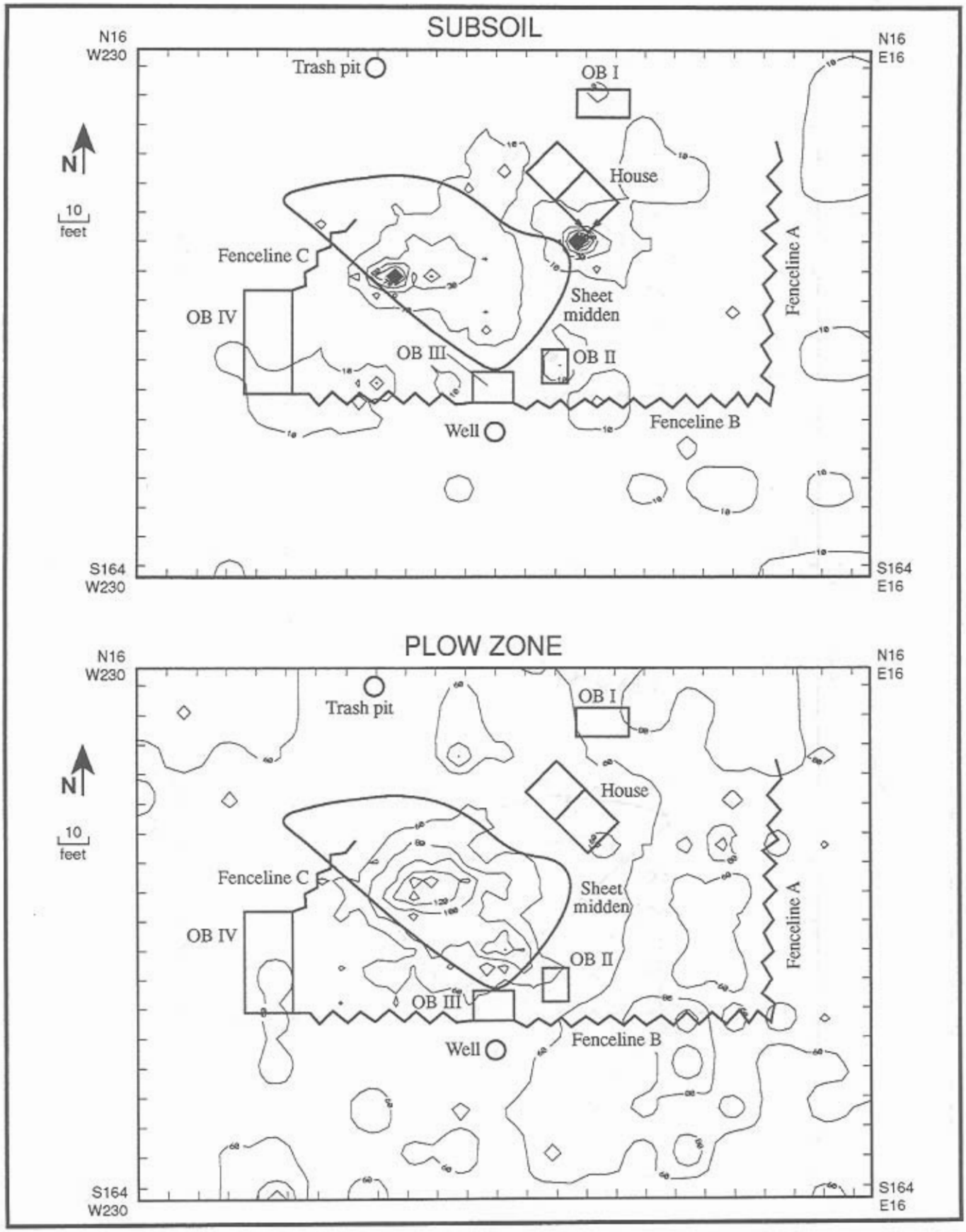
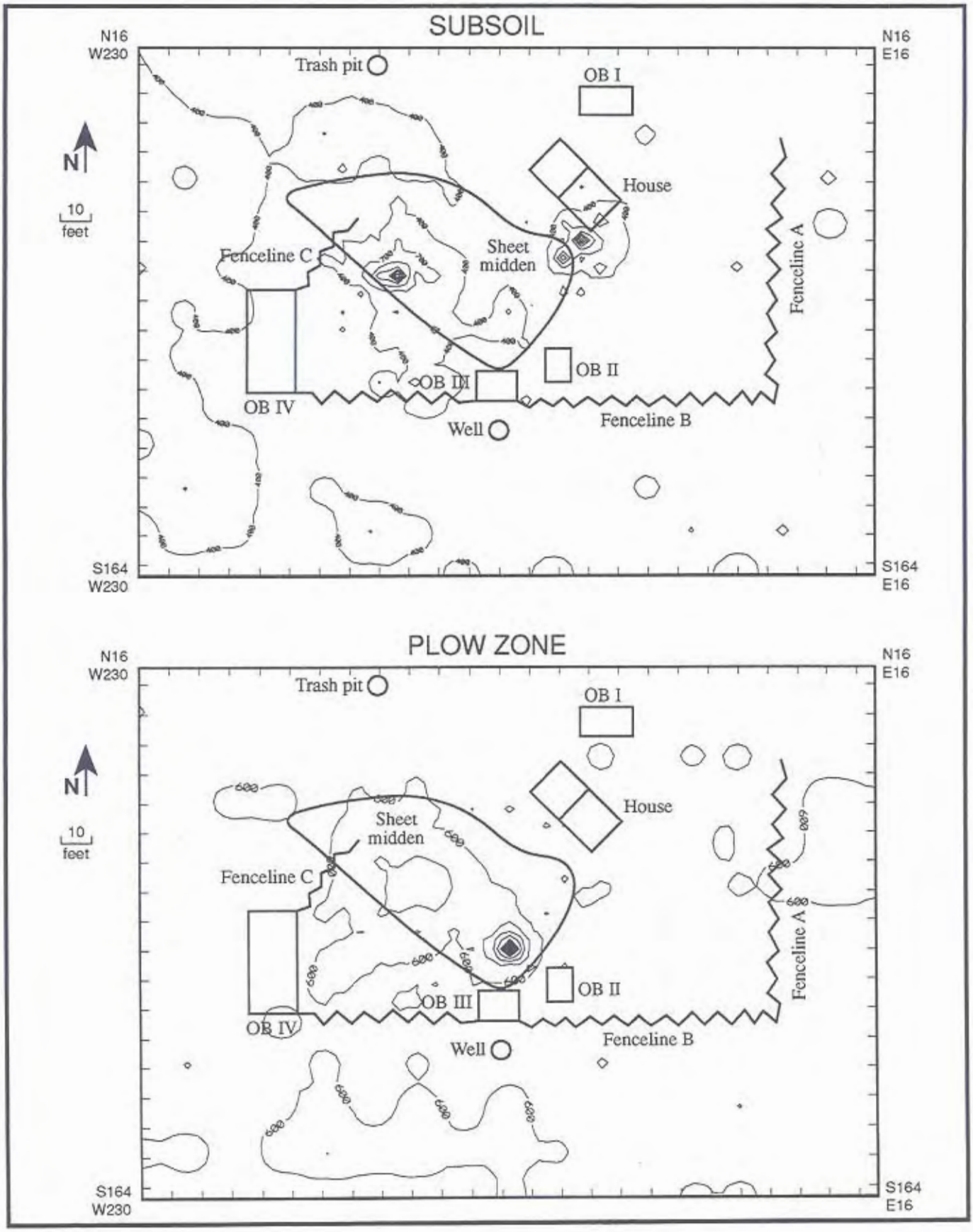


FIGURE 37

Distribution of Soil Calcium, Richard Whitehart Plantation



Magnesium levels usually mirror calcium levels and locate deposits of mineral-based building materials. The distribution of magnesium across the Whitehart Plantation, however, identified two areas of concentrated magnesium not associated with high calcium levels (Figure 38). The first area of high magnesium density was over the hearth/chimney and the trash midden. The second area was along the north edge of the trash midden. The reason for the second area of high density is not known, but may be associated with later agricultural practices as both plow zone calcium and magnesium were higher in this area.

The distribution of soil potassium is shown in Figure 39. Wood ash contains very high levels of potassium and high concentrations of this chemical usually identify areas where wood was burnt or ashes scattered. Two significant concentrations of potassium were found in the subsoil. The greatest densities of potassium were found approximately five feet south of the chimney/hearth of the Whitehart house. The second concentration was a larger area of subsoil potassium north of the trash midden near the high densities of calcium and magnesium. The distribution of subsoil magnesium also confirms the location of the chimney/hearth and indicates that wood ashes were disposed of near the house. Wood ash may also have been deposited over the north end of the trash midden, but as potassium is also a common ingredient in modern fertilizers, these secondary densities may not relate to the seventeenth century occupation of the site. Both potassium concentrations are reflected in the plow zone distribution.

Significantly, the absence of any high outlying concentrations of potassium indicates that the Whitehart family did not manufacture pearl ash. Pearl ash was made by burning large amounts of wood and was typically one of the first commercial products seventeenth and early eighteenth century farmers could produce. Pearl ash was used to make soap and other alkaline chemical products and was a convenient by-product of clearing the land for farming. "Pearling" activities, as they were known, should have left significant concentrations of potassium in the soil, but were conspicuously absent from the Whitehart Plantation and other early sites including the nearby Strickland Plantation (Catts et al. 1994).

In conclusion, the distribution of soil chemicals confirmed the location of the Whitehart house, sheet midden, and major activity areas. The distribution of specific chemicals, most notably phosphorus, identified concentrations of human and animal waste and located loci of everyday activity not usually recorded in the documentary record. The distribution of calcium, and to a lesser extent magnesium, confirmed the location of the hearth/chimney. The differences between the plow zone and subsoil chemical distributions confirmed the presence of significant contamination from subsequent agricultural practices and underscored the general utility of subsoil rather than plow zone sampling in soil chemical analyses.

Plow Zone Artifact Distributions

The distribution of plow zone artifacts at the Richard Whitehart Plantation were analyzed to provide additional information on farmstead layout, activity areas, and trash disposal patterns. Plow zone testing consisted of the excavation of 271 1- x 1-meter test units over the core area of the site as identified by the Phase II testing. The location of these test units is shown in Figure 18. Computer-generated distribution maps were prepared for three major groups of artifacts: architectural, ceramic, and non-ceramic domestic artifacts. The three major groups were then divided into 11 unique artifact

FIGURE 38

Distribution of Soil Magnesium, Richard Whitehart Plantation

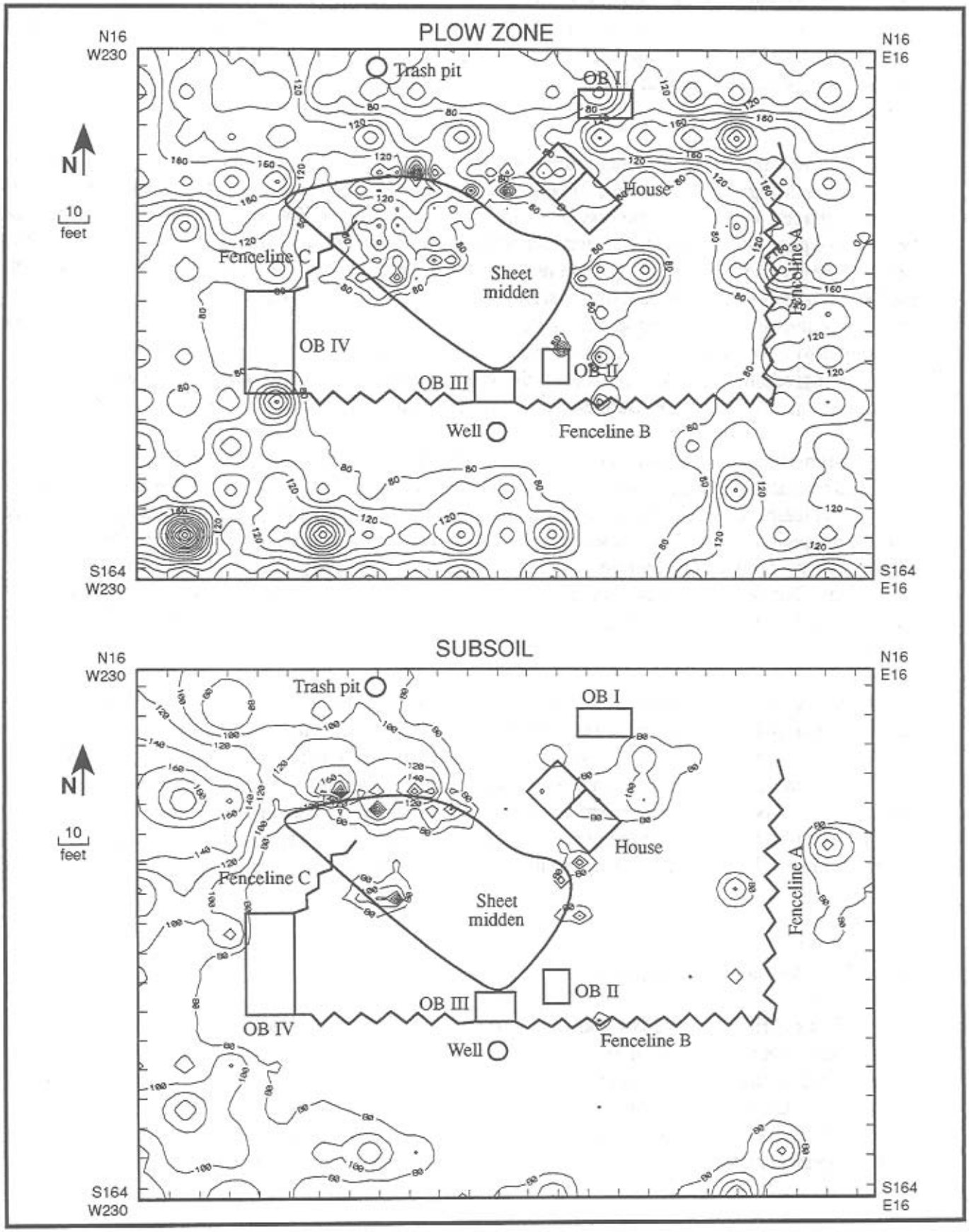
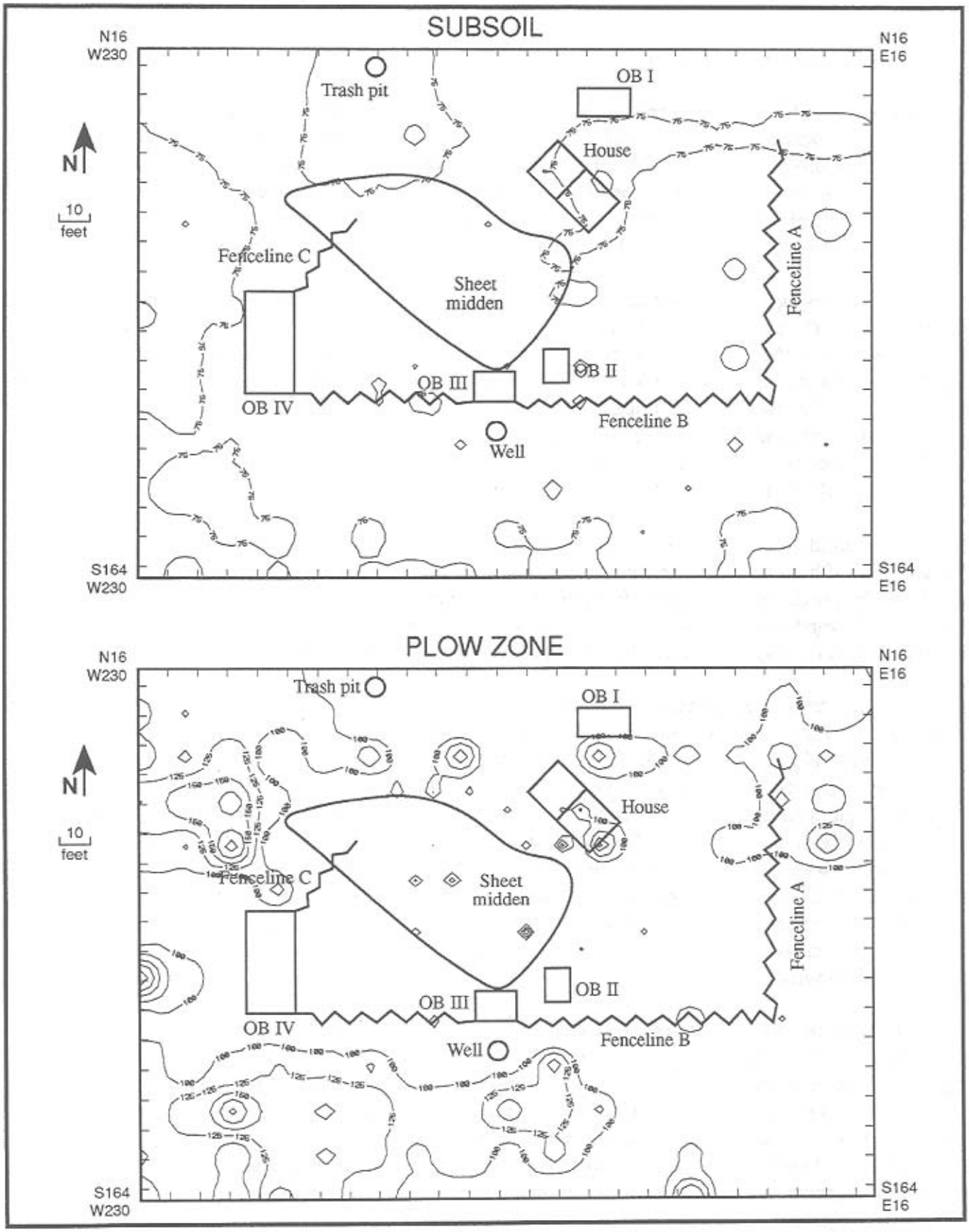


FIGURE 39

Distribution of Soil Potassium, Richard Whitehart Plantation



categories and each category was mapped separately. The number of computer-generated artifact density maps was limited by the small number of artifacts found at the Whitehart Plantation. The mapping software used, Surfer, could not accurately map artifact categories of less than 50 artifacts.

The distribution of architectural artifacts at the Whitehart Plantation is shown in Figures 40 - 42. More specifically, three separate artifact categories were mapped: total architectural artifacts (Figure 40), total nails (Figure 41), and total brick by weight (Figure 42). In general, the distribution of plow zone architectural artifacts confirms the location of the house, Outbuilding I, and the trash midden at the site. The two highest densities of architectural artifacts, primarily nail fragments, occurred over the house and the northern end of trash midden nearest the house. Total structural artifact densities in these two areas ranged from three to 17 artifacts per test unit. Large areas west and south of the house near Outbuildings II, III, and IV contained almost no structural artifacts at all. No significant amounts of window glass were recovered.

Not surprisingly, the highest densities of structural artifacts was over the south or chimney end of the Whitehart house (Figures 40 and 41). A single area of very high nail density was also found along the east wall near the center of the house. Both areas of high architectural artifacts were due almost entirely to high distributions of total nails as very few brick fragments were found in the plow zone over the house (Figure 42). The relatively low density of brick and nail densities over the entire Whitehart Site reflects the use of post-in-ground construction techniques that minimized the use of nails and brick. Indeed, Outbuildings III, and IV were probably constructed almost entirely without nails. What few nails may have been used were also probably salvaged from the buildings prior to razing.

The lack of plow zone brick over the chimney/hearth of the Whitehart Plantation is more problematical. The presence of high nail densities suggests the use of at least some nails in the wooden chimney. Small amounts of highly decayed brick were found in the subsurface remains of the chimney/hearth suggesting that the few bricks used to line the hearth may have been largely salvaged. This intensive reuse of expensive building materials is typical of early eighteenth sites in central Delaware (Catts et al. 1994).

The location of the trash midden and workyard behind the house is especially clear in the distribution of plow zone ceramics (Figures 43 - 45). The highest densities of seventeenth and early eighteenth century redware (Figure 44) and non-redware (Figure 43) ceramics are consistently associated with the trash midden. More specifically, the northern half of Feature C648 along Fenceline C had the highest concentration of early plow zone ceramics. Very few historical ceramics of any type were found outside of the trash midden. The non-redware category shown in Figure 43 consisted primarily of brown English Bellarmine and Rhenish blue and gray stoneware sherds. The redware category (Figure 44) consisted almost entirely of coarse, locally made redwares. The post-occupational category consisted of small amounts of creamwares, pearlwares, whitewares, and white granite wares. These later nineteenth and early twentieth century wares were found randomly over the entire site and were probably deposited as field scatter by subsequent agricultural plowing and manuring (Figure 45).

Despite the concentration of all early historical ceramics over the sheet midden, two distinct patterns are visible in the distributions of early redwares and non-redwares. First, the distribution of redwares appears to cover a larger area of the site than non-redwares. Two large, but slight concentrations of redwares occur north of Outbuilding I and east of Outbuilding II (Figure 44). No early eighteenth century or even post-occupational refined wares were found in these two areas. The redware concentration east of Outbuilding II is oriented to Fenceline B and may indicate an additional area of casual trash disposal. The northern redware concentration is also oriented to a known structural feature, Outbuilding I.

FIGURE 40

Distribution of Total Architectural Artifacts, Richard Whitehart Plantation

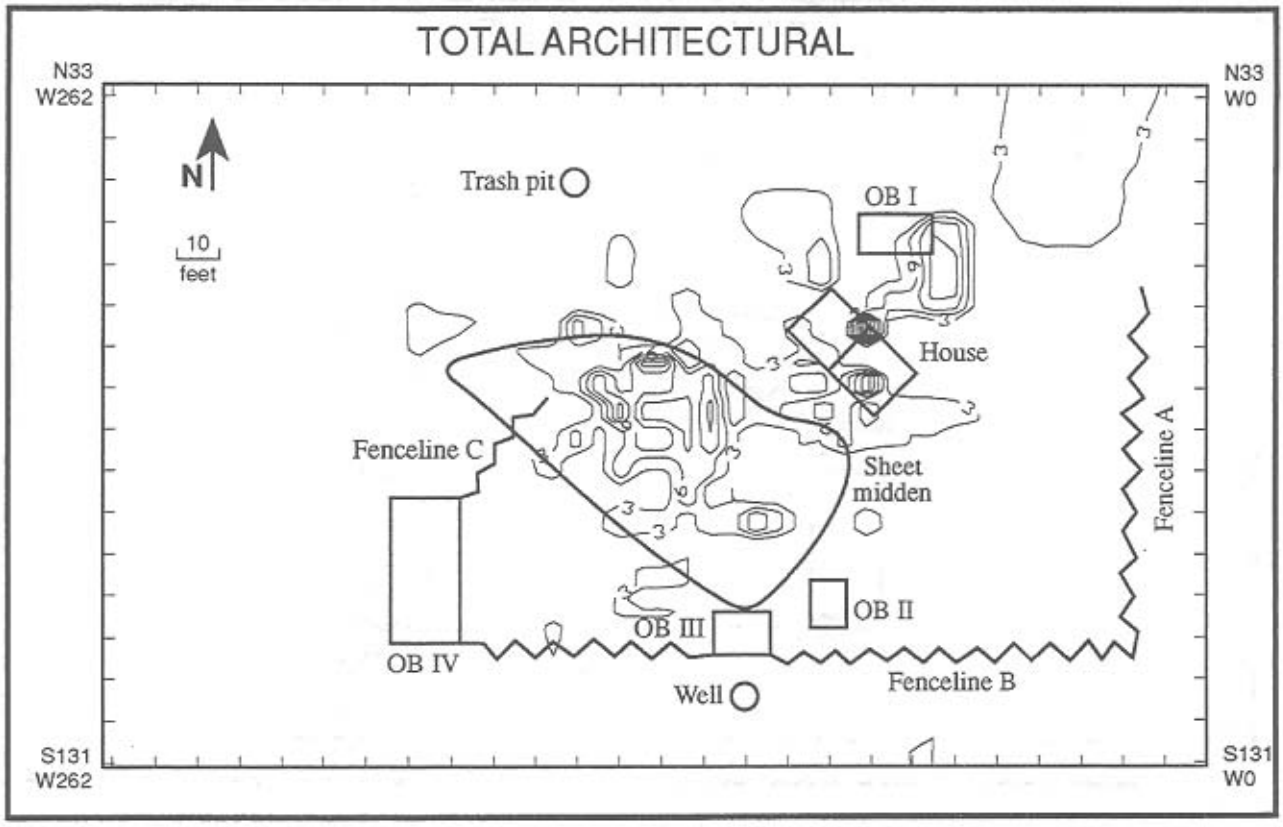


FIGURE 41

Distribution of Total Nails, Richard Whitehart Plantation

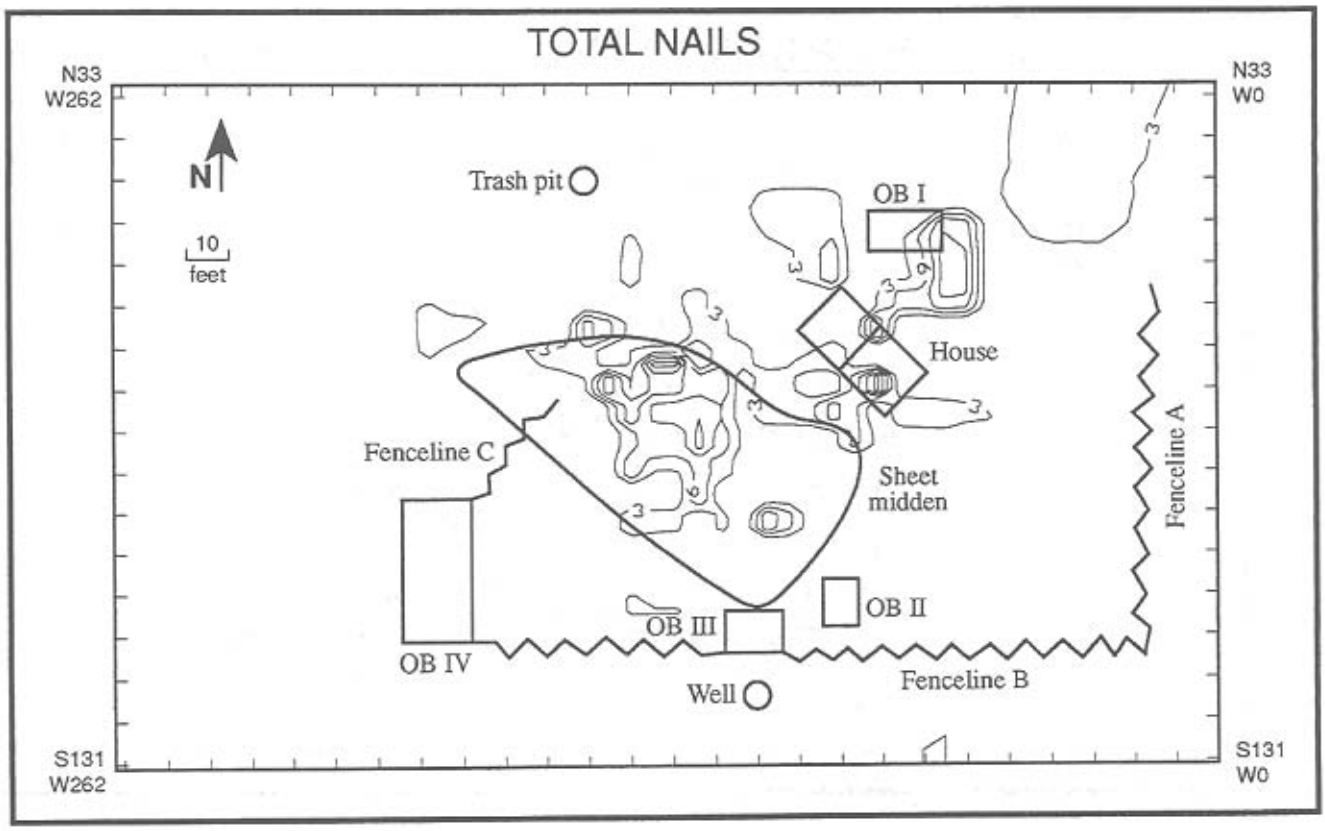


FIGURE 42
Distribution of Brick by Weight, Richard Whitehart Plantation

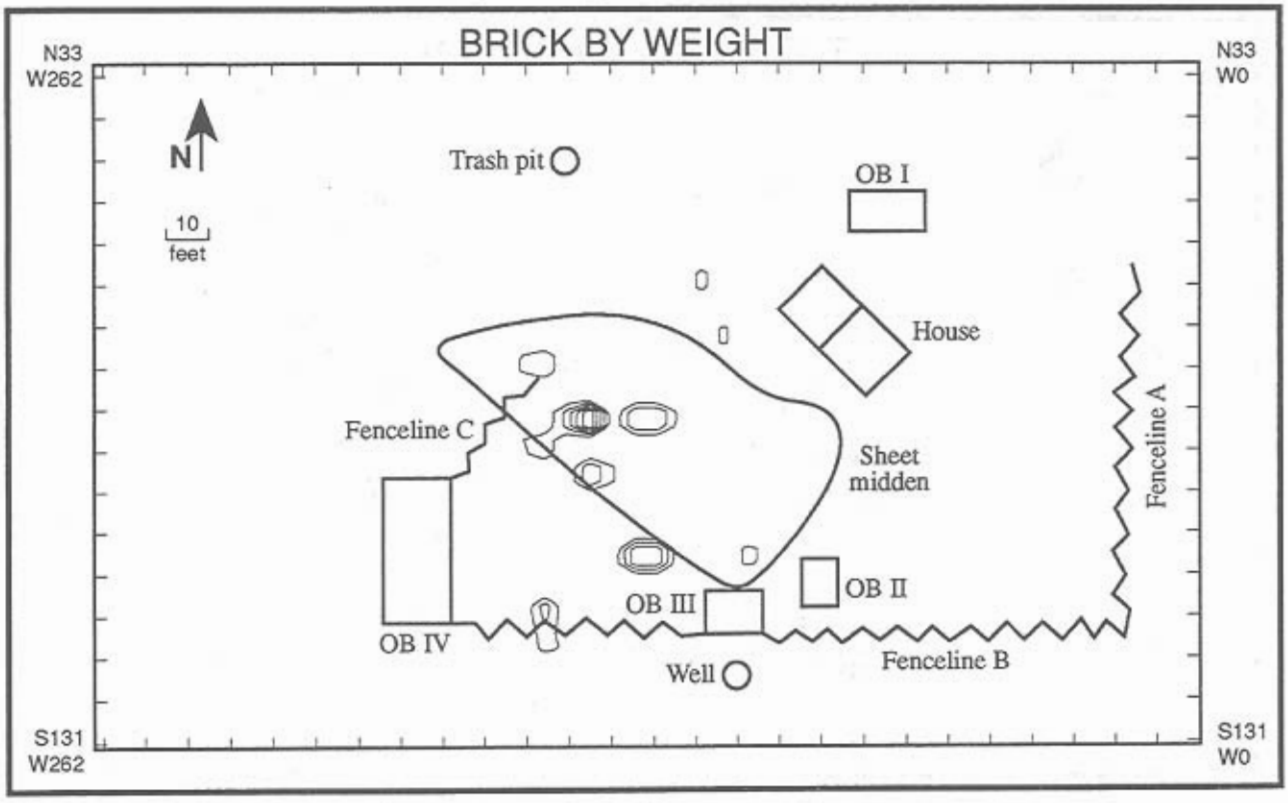


FIGURE 43
Distribution of Seventeenth and Eighteenth Century
Non-Redware Ceramics, Richard Whitehart Plantation

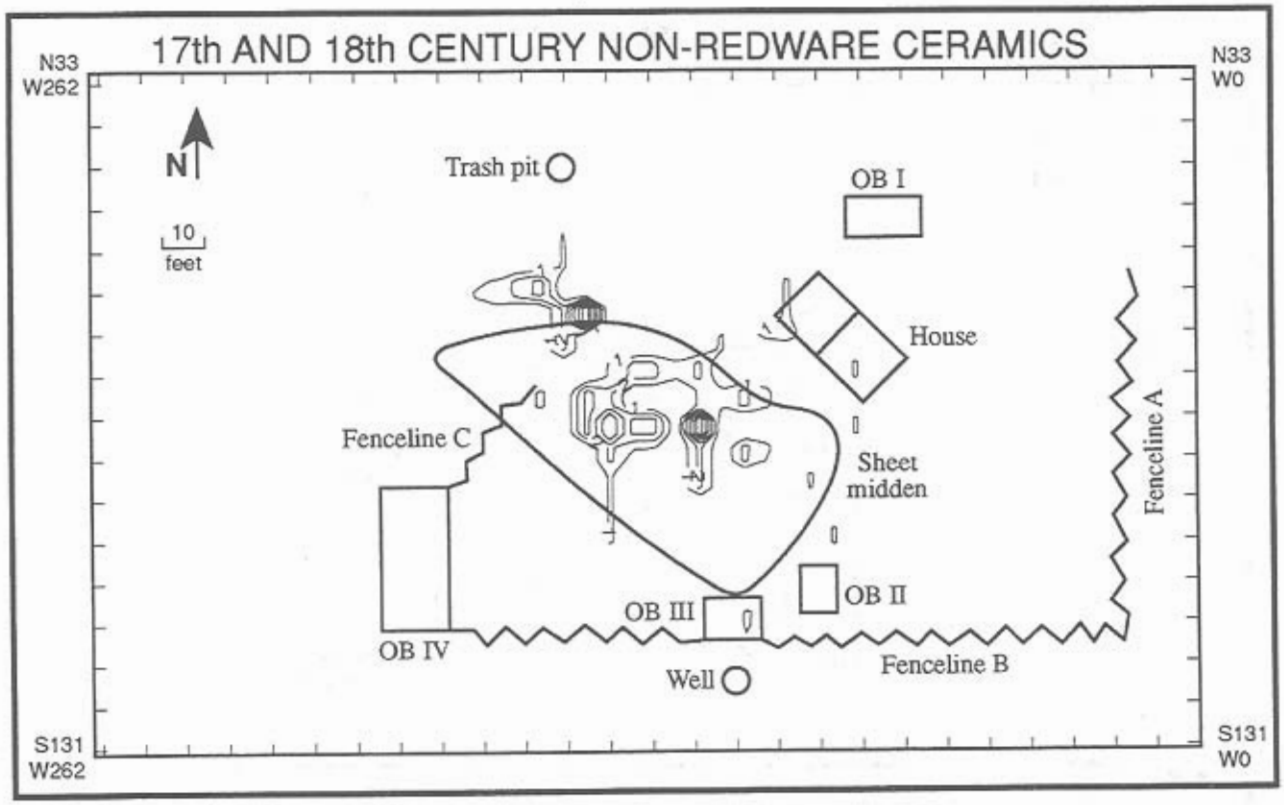


FIGURE 44

Distribution of Redware Ceramics, Richard Whitehart Plantation

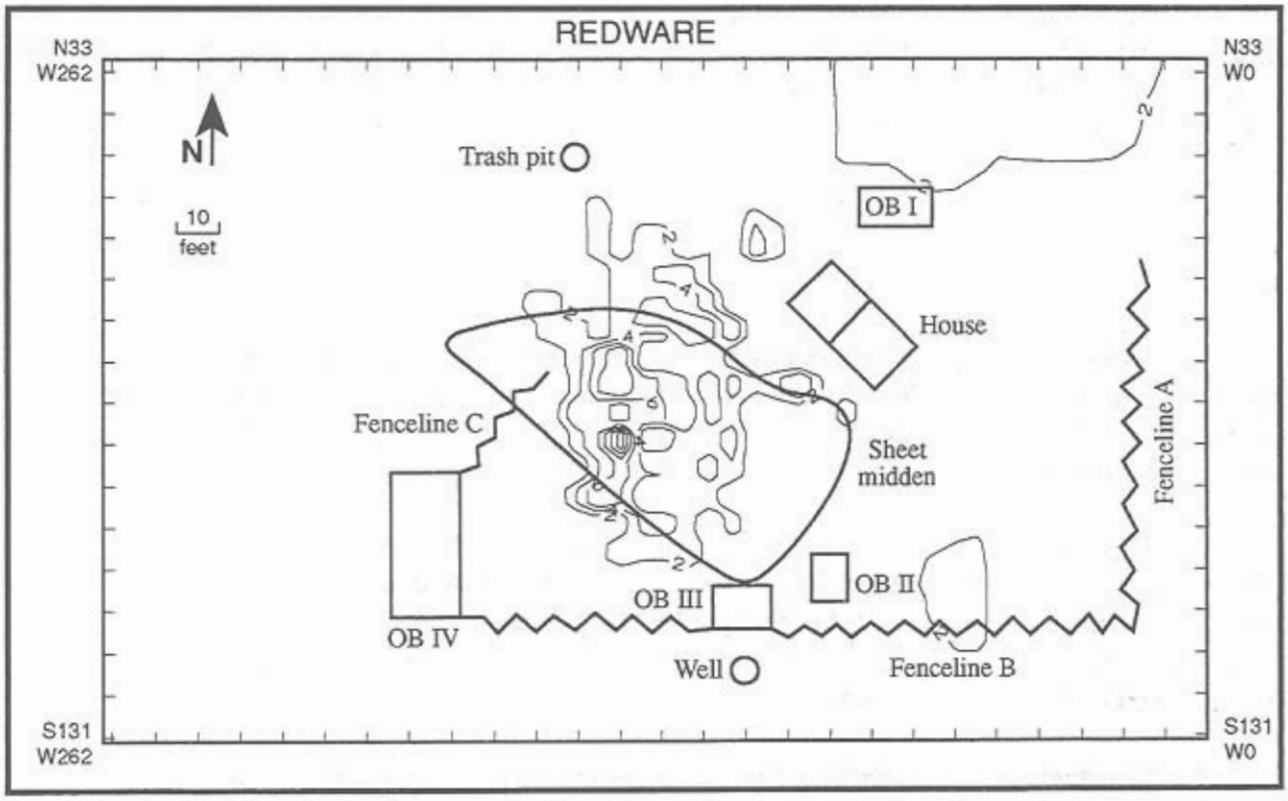
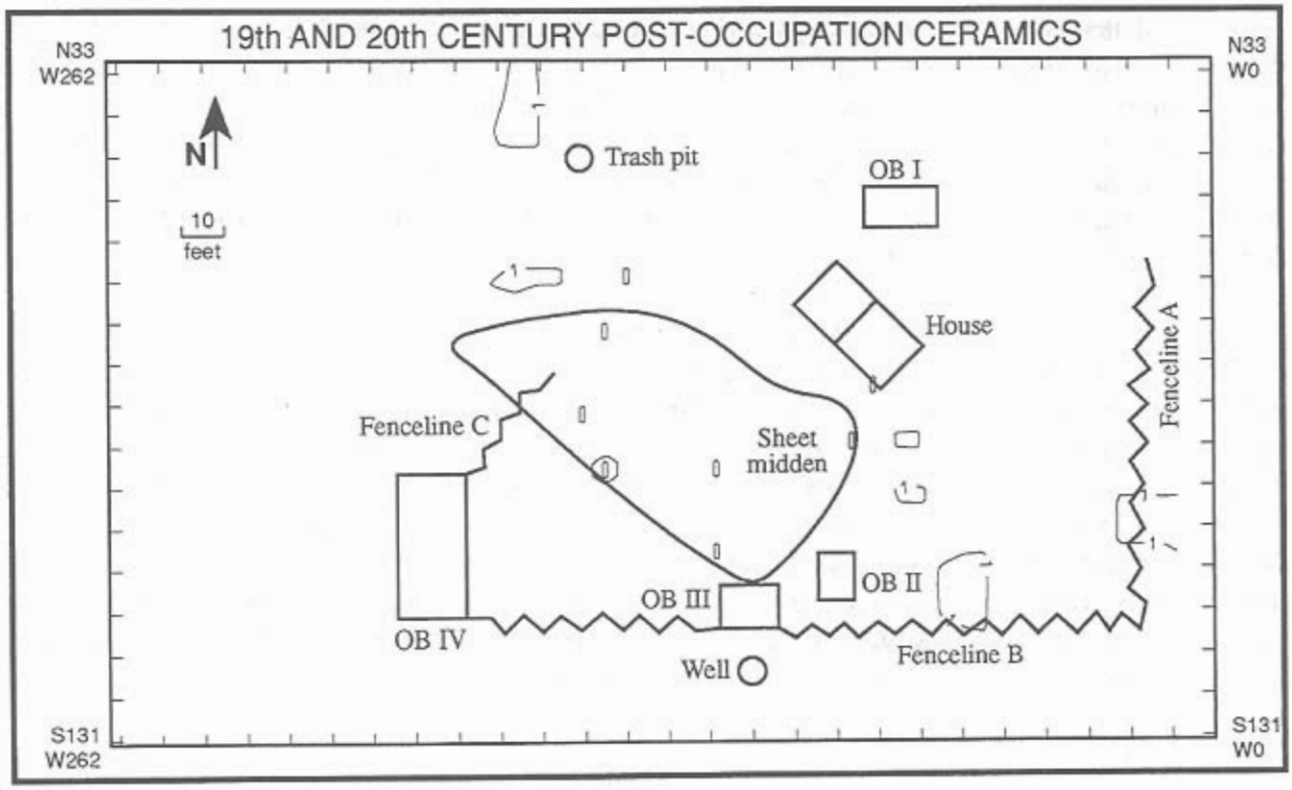


FIGURE 45

Distribution of Nineteenth and Twentieth Century Ceramics, Richard Whitehart Plantation



Although both of these secondary redware concentrations may be skewed by later wares, they suggest additional areas of casual trash deposition. If the refined wares were primarily deposited near the end of occupation, the presence of more common redwares in outlying areas may indicate an earlier trash disposal pattern. This earlier pattern would have been characterized by a more concerted effort to dispose of kitchen wastes and domestic debris farther from the house in the outlying trash pits rather than in the trash midden less than 10 feet from the house. This scenario, however, cannot be tested because of the small number of ceramics recovered, and the difficulty in dating precisely such early wares.

The location of the primary trash midden and other activity areas at the Whitehart Site are also evident in the distribution of other domestic artifacts such as olive bottle glass (Figure 46), bone (Figure 47), oyster shell (Figure 48), white clay pipes (Figure 49), and gunflints (Figure 50). Besides architectural remains and ceramics, these groups were the only artifacts with high enough counts to map.

Although only 57 fragments of olive bottle glass were recovered from the plow zone, these artifacts were found in three distinct areas. Two of the areas were within the trash midden (Figure 46). The third concentration occurred in the front yard of the plantation between the house and Outbuilding I. The presence of olive bottle glass in the trash midden was expected, but the concentration between the house and Outbuilding I may indicate a significant activity area.

The distribution of plow zone bone is shown in Figure 47. A single area of high bone density was found in the northern half of the trash midden, Feature C648. Bone was found on both sides of Fenceline C, but densities were generally higher south of the fenceline and nearer to the Whitehart dwelling. No bone was found in the plow zone outside of Feature C648. This distribution is consistent with known activity and trash disposal patterns.

The distribution of plow zone oyster shell was also highest in the north half of the trash midden (Figure 48). This concentration confirms the use of Feature C648 as a locus of domestic trash disposal. Oyster shell, however, was also found in four additional areas. The largest of these areas was east of the house roughly halfway between the dwelling and Fenceline A. The other three slight concentrations were east of Outbuilding II, between Outbuildings III and IV, and north of the trash midden near a known trash pit, Feature C532. The very low density of oyster shell in these four areas (less than two per test unit) precludes further analysis.

White clay pipe fragments were also most concentrated throughout the trash midden (Figure 49). Three distinct features of the distribution of clay pipe fragments were noted. First, even though white clay pipe fragments were found throughout the trash midden, two secondary concentrations of these artifacts were found north and west of the sheet midden. Both of these concentrations probably represent deposits made along the edges of the sheet midden. No other artifacts, however, were identified in these two areas. Thus, these two secondary concentrations of pipe fragments probably indicate extended yard activity areas west of the house. The second feature of the distribution of plow zone pipe fragments was a single area of low density inside the Whitehart dwelling. This area of low density was found in the southern half of the house near the hearth/chimney. Similar concentrations of pipe fragments were found near the hearths of other early Chesapeake houses (Pogue 1990) and probably relate to

FIGURE 46

Distribution of Olive Bottle Glass, Richard Whitehart Plantation

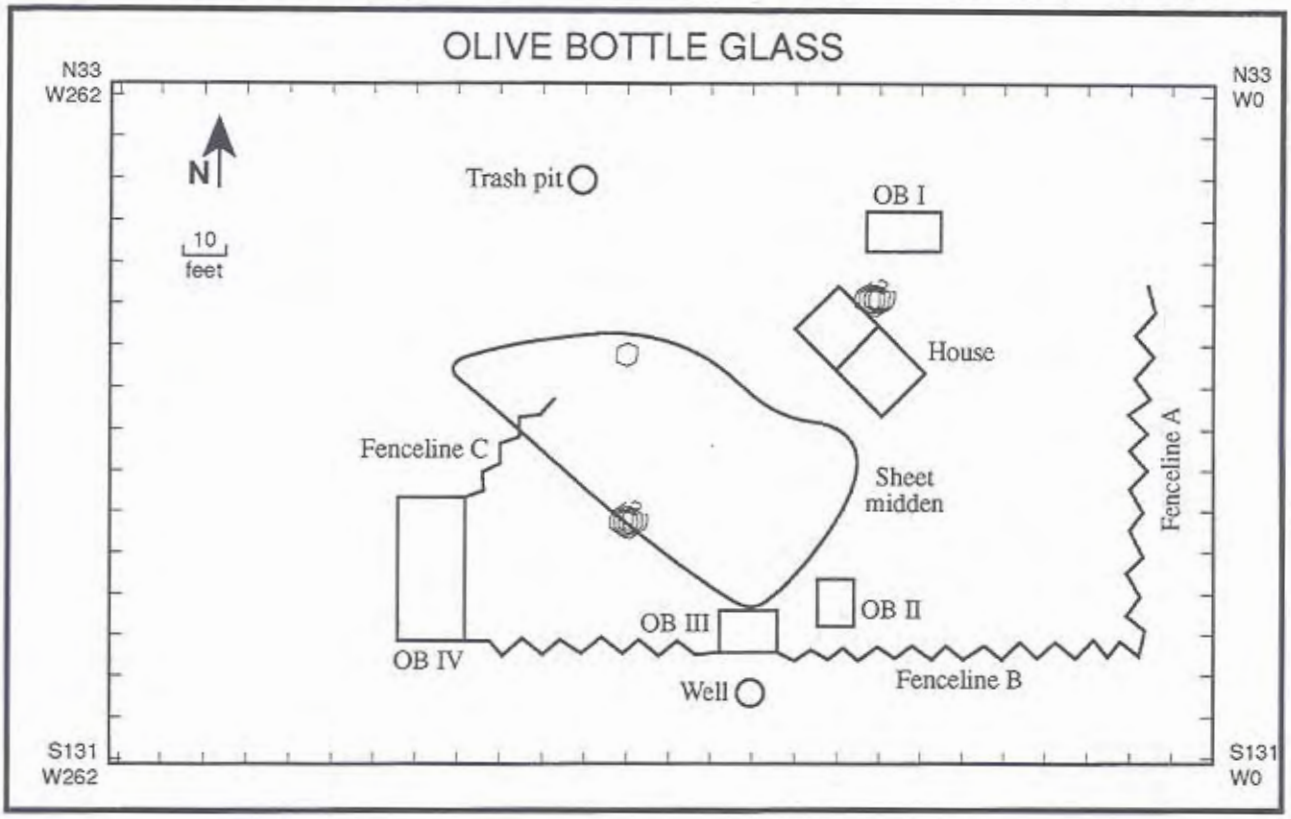


FIGURE 47

Distribution of Bone, Richard Whitehart Plantation

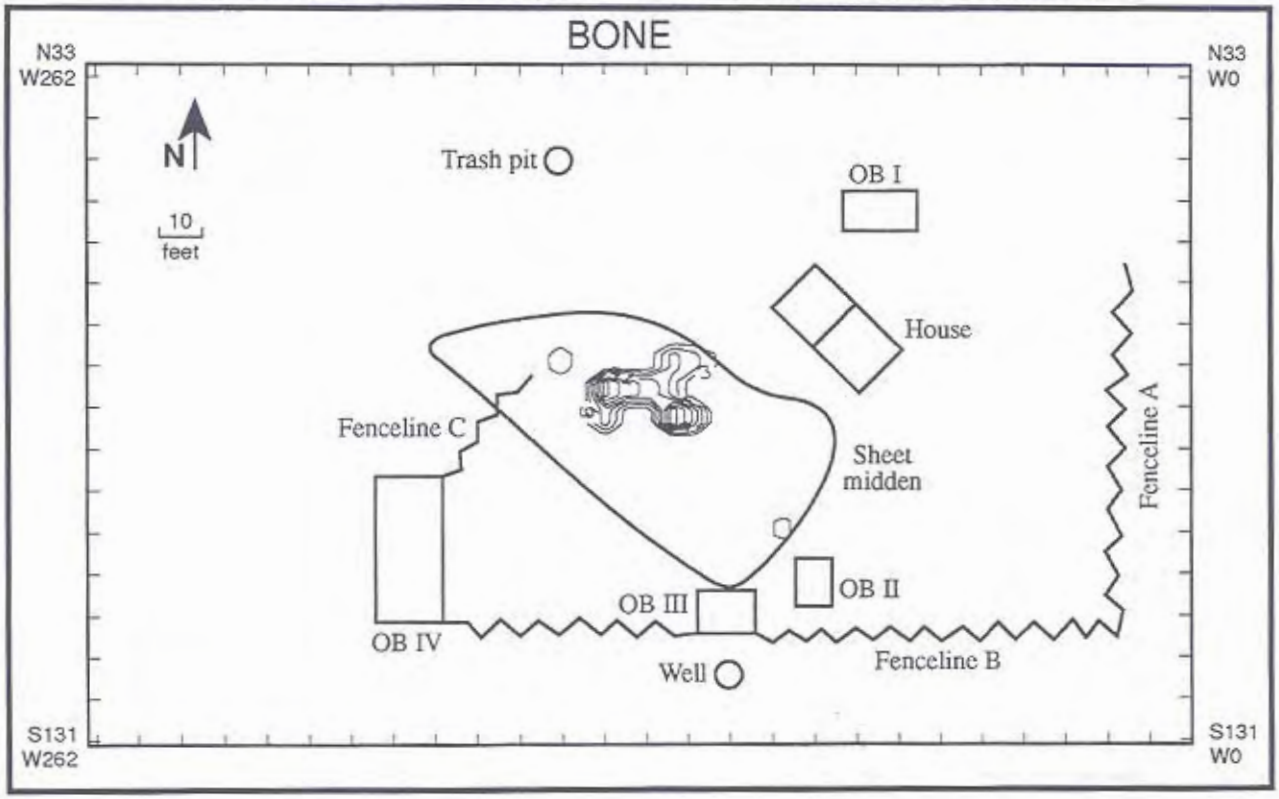


FIGURE 48
Distribution of Oyster Shell, Richard Whitehart Plantation

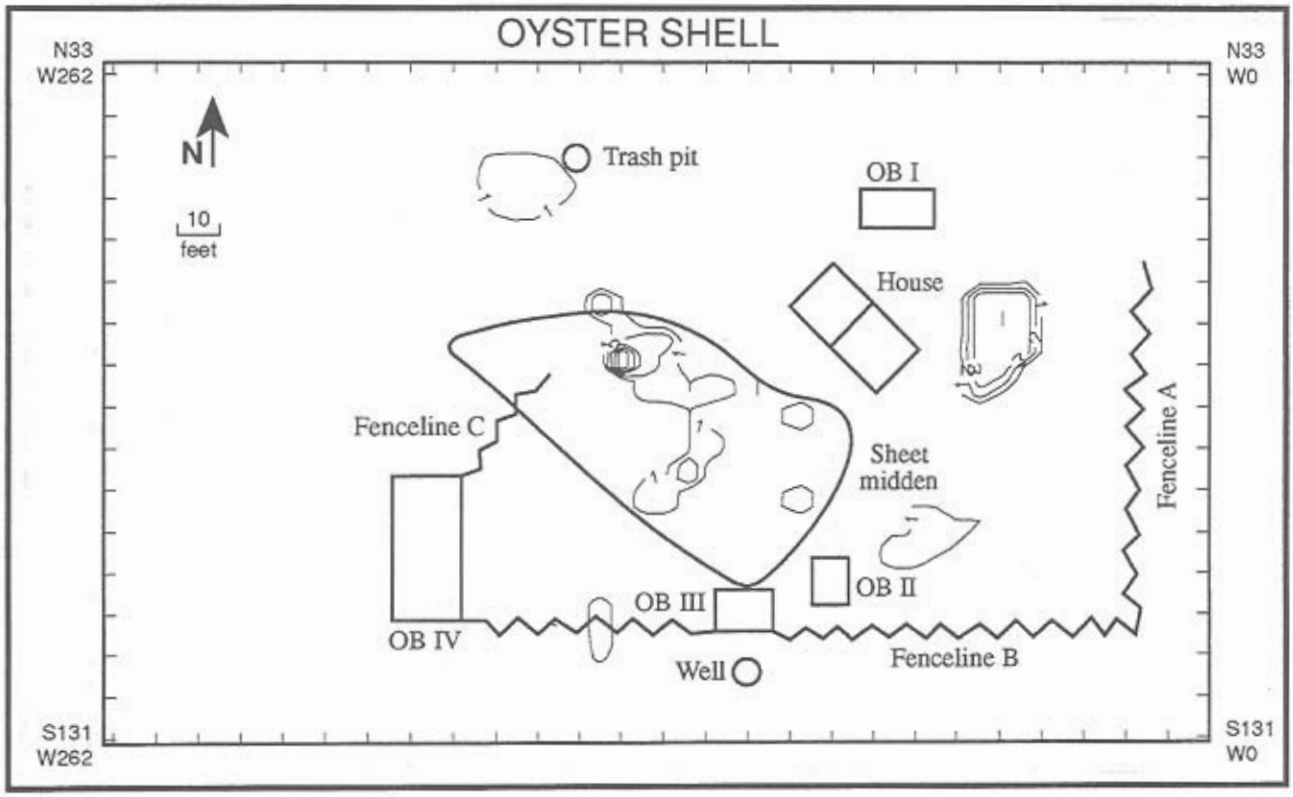


FIGURE 49
Distribution of White Clay Pipes, Richard Whitehart Plantation

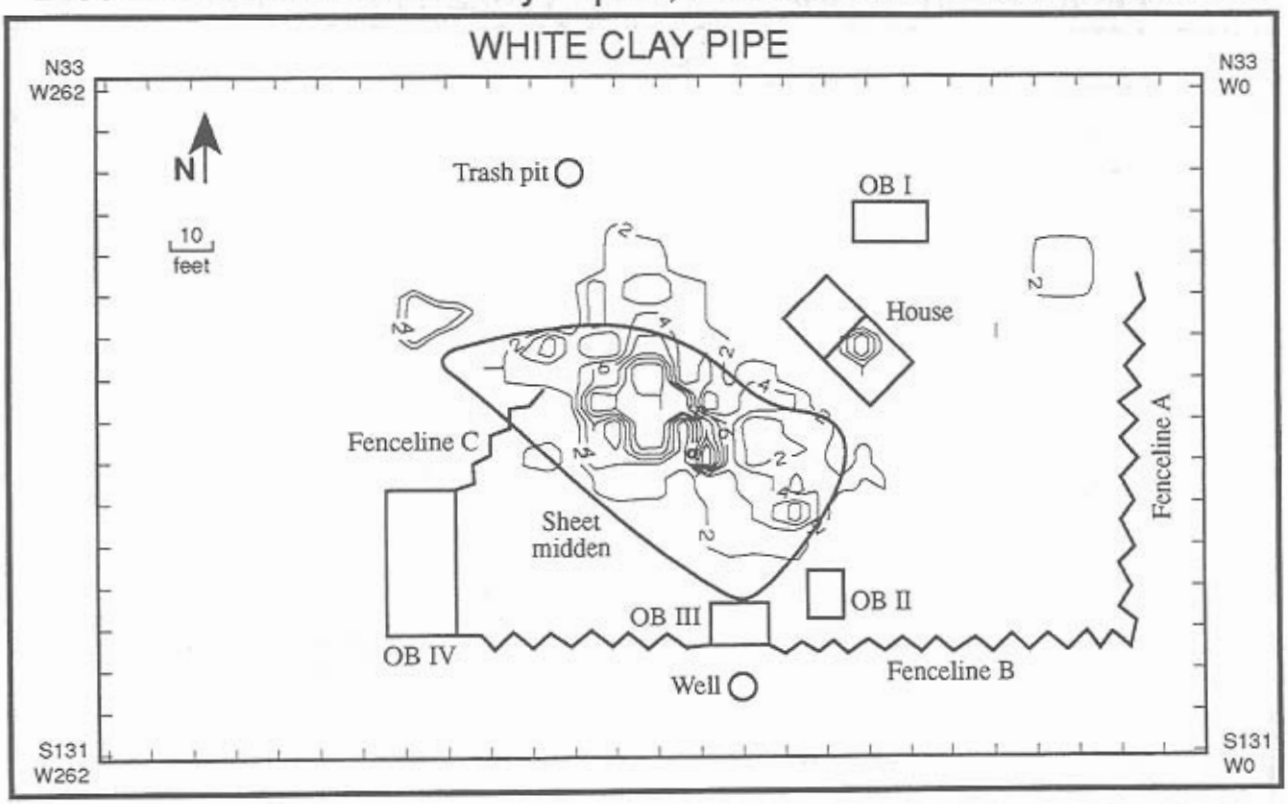
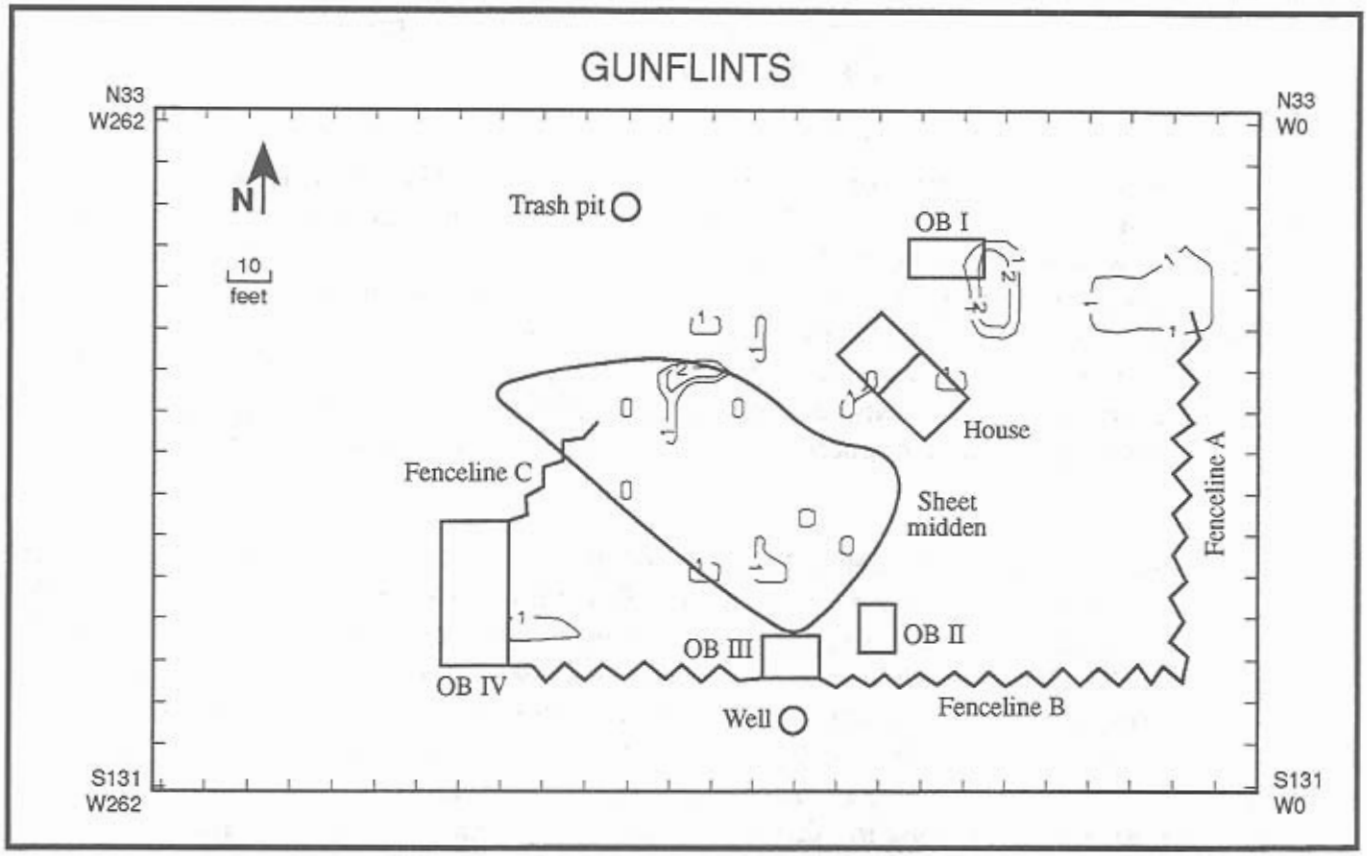


FIGURE 50

Distribution of Gunflints, Richard Whitehart Plantation



smoking inside the house. The third feature of the distribution of white clay pipe fragments was an isolated area of low density east of the house and along Fenceline A (Figure 49). Although only a few pipe fragments were found (one to four artifacts per test unit), this area also had relatively high densities of oyster shell. The presence of both artifact types suggest additional trash deposition and an activity area oriented to the front of the house and possibly Outbuilding I.

The last non-domestic artifact category mapped were gunflints and gunflint fragments. A total of 28 gunflints were found in the plow zone of the Whitehart Plantation and low densities of gunflints, one to three artifacts per test unit, were found over the entire site (Figure 50). Significantly, 76 percent of the gunflints recovered at the site came from plow zone rather than feature contexts. Gunflint manufacture and maintenance appears to have taken place outside of areas with deep features. Three areas of gunflint manufacture and maintenance were identified at the site. The most intensively utilized area associated with gunflints occurred in the front yard between the house, Outbuilding I, and Fenceline A. The highest gunflint densities over the entire site were identified here. No other artifact category, except white clay pipes, were found in this northernmost part of the site. The presence of gunflints and white clay pipe confirm the use of this front yard area for domestic activity, but not trash disposal.

The second area of concentrated gunflints was the northern part of the trash midden near the house (Figure 50). Artifact densities were nearly as high as the northern part of the site. The presence of gunflints in the trash midden, however, cannot be attributed to a unique activity area. These artifacts

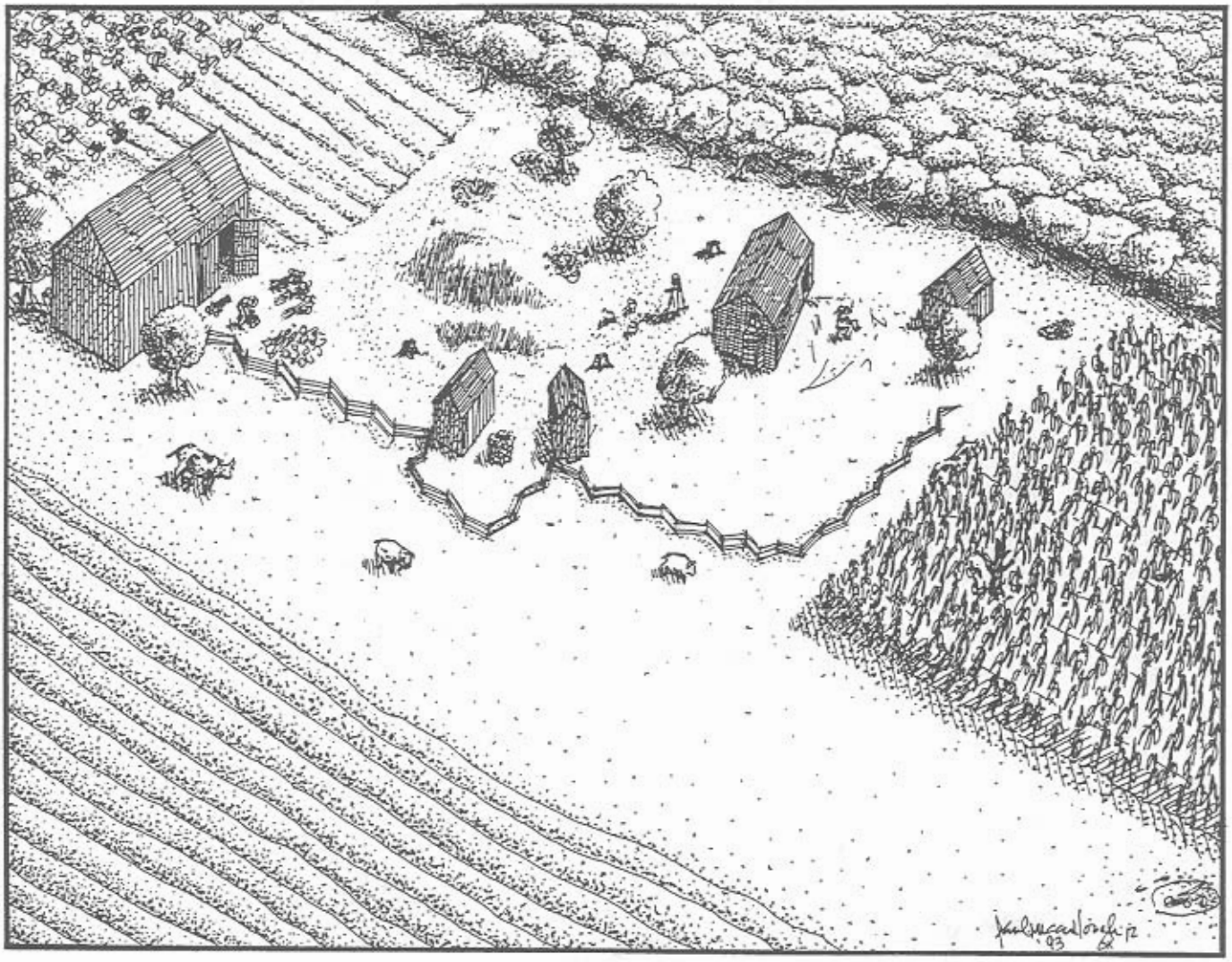
may have been deposited with other household trash in this most intensively utilized part of the sheet midden. The presence of occasional gunflints along the west wall of the house and slightly north of the sheet midden, however, may indicate more specialized activity areas within the midden. One additional area of gunflints was found near Outbuilding IV and Fenceline B (Figure 50). This area contained only a low density (one to three artifacts per test unit) of gunflints, but was surrounded by a large area of no gunflints or other artifacts. The presence of gunflints, but no other artifacts suggests a third area of specialized activity.

In conclusion, the distribution of plow zone artifacts at the Whitehart Plantation confirmed the location of all the major structures and the limits of the site. The location and limits of the sheet midden, Feature C648, were also reflected in the distribution of every artifact category. Additional areas of specialized activity, most notably smoking and gunflint manufacture and maintenance, however, were also identified. The most intensively utilized of these specialized areas was northeast of the house near Outbuilding I and Fenceline A. Little domestic trash, except perhaps oyster shell, were deposited there. The second area of specialized activity occurred southwest of the house near Outbuilding IV and Fenceline B. The presence of gunflints and tobacco pipes, but not ceramics or other domestic refuse, indicate a second specialized activity area.

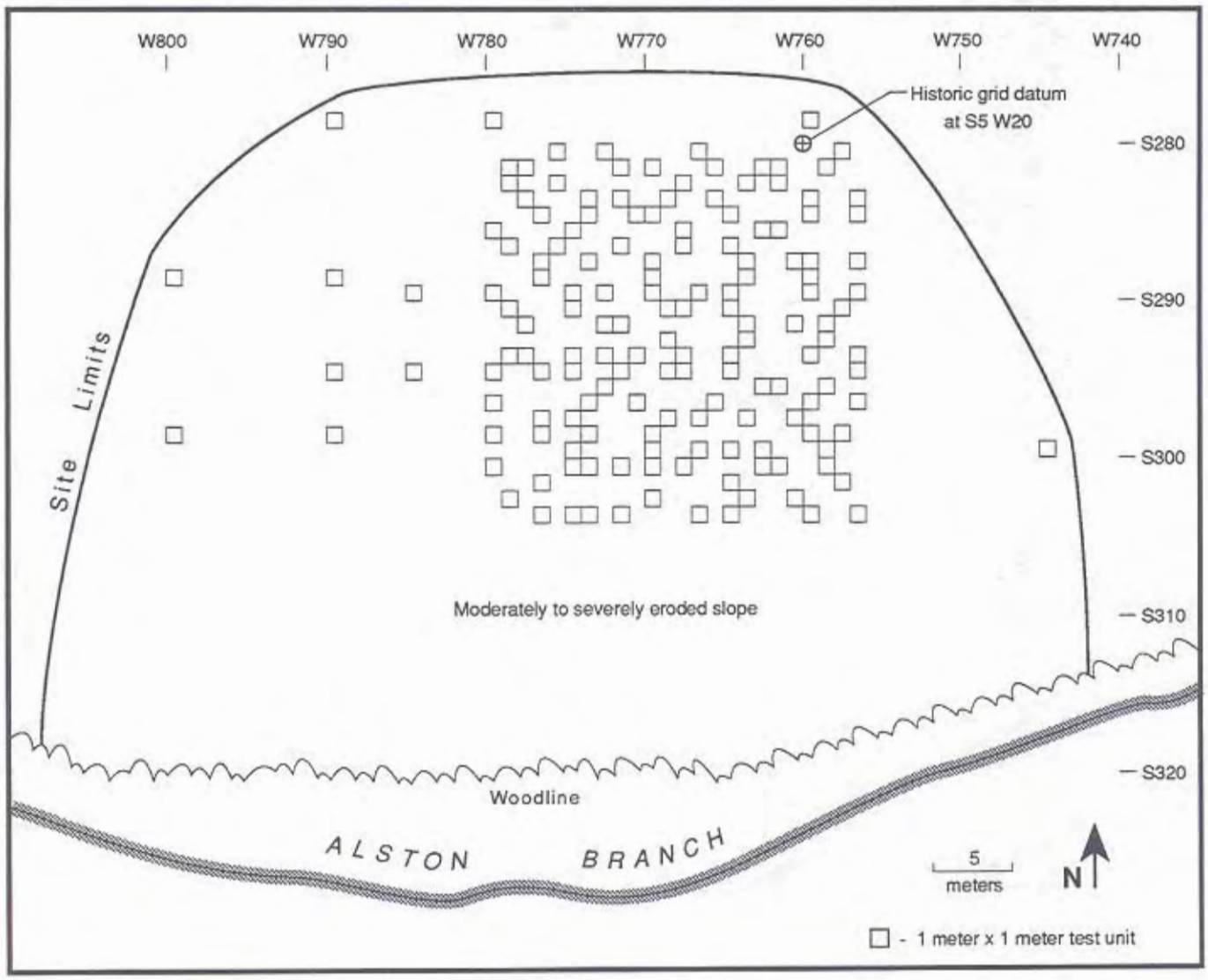
In sum, the Whitehart Plantation was occupied from ca. 1681-1701 by Richard Whitehart and his family. An artist's reconstruction of the site ca. 1690 is shown in Figure 51. Whitehart lived in 15-x 30-foot post-in-ground house. The house was oriented to the nearby confluence of Alston Branch and the Leipsic River. Daily activity, particularly household trash disposal, occurred behind the house. Indeed, the workyard between the house and the tobacco house (Outbuilding IV) became a large sheet midden. Specialized activities, including smoking and gunflint manufacture occurred in the front yard near the house and overlooking the Leipsic River/Alston Branch confluence. All of the outbuildings were loosely oriented to the house in a distinctly organic, rather than a symmetrical, Georgian manner. Discrete trash pits were also found up to 150 feet from the house. Fences protected the plantation from free-roaming livestock.

FIGURE 51

Artist's Reconstruction of the Richard Whitehart Plantation



N

FIGURE 52

Limits of the John Powell Plantation and the Location of All Phase II and Phase III Test Units