

CONCLUSIONS AND INTERPRETATIONS

Archival research has revealed that the property on which the Whitten Road Site is located was settled by the Stewart family by 1732 and that the property remained in the family until 1807. During this period the Stewarts' farm was a prosperous one--tax assessment records indicate that by 1798 the Stewarts were in the top 10% of taxables in White Clay Creek Hundred. During this last quarter of the eighteenth century, the Stewarts constructed a 2 and 1/2 story brick house (N-4003) approximately 1200 feet from the limits of 7NC-D-100. After the Stewarts moved out, documentary resources indicate that tenants were brought in.

From 1807-1814, the property was owned by Amassa Smith who continued to farm it successfully. No specific mention of tenants on the property, however, appears in the archival record until 1816, two years after Smith sold the land to Abraham Warrick. In 1816, tax assessment records indicate that Jacob McCallister was a tenant on Warrick's land and lived in a "log house" on an approximately 14 acre parcel within Warrick's holdings. This parcel is the same holding described in a 1773 Orphans' Court appraisal of the Stewarts' property and places McCallister in the structures identified at the Whitten Road Site. Thus, by 1816, the Whitten Road Site had been occupied for over 80 years--first by the Stewart family and then by the tenants of subsequent owners.

Jacob McCallister left White Clay Creek Hundred in 1822 and by 1825, Warrick had another tenant on the property, Nathaniel Wolf. In 1834 Warrick sold the property to Edward Hamman. After 1834, Wolf is not mentioned in any of the tax assessment or deed records, but was probably still on the property. In 1851, an Orphans' Court appraisal for Hammans' estate reported the "log tenement" to be in poor condition. By 1853, all of the structures composing the tenancy had been destroyed or were uninhabitable and of no monetary value.

As summarized above, archival sources indicate that the Whitten Road site was occupied from the second quarter of the eighteenth century until the mid-nineteenth century. The site was first occupied by the owners of the property and then by a series of tenants. This tenant occupation lasted from last quarter of the eighteenth century until the last occupation ca. 1853.

The archival evidence of occupation at 7NC-D-100 is difficult to relate to the archaeological data generated by mitigation efforts. Part of this difficulty lies in our incomplete understanding of eighteenth century construction and farmstead layout techniques of earthfast housing in Delaware and in the degree of disturbance to the site sustained over 100 years of plowing and nearby gravel pitting operations. Evidences of sills, earthen floors, and block supports are not expected, and indeed did not, survive under these conditions. Thus the architectural evidence at the Whitten Road site is strongly biased towards postholes, postmolds, and other deeper subsurface remains.

The material culture evidence of the occupation of the Whitten Road site, however, fits in well with the documentary record. The archaeological record indicates the presence of three post-in-the-ground structures and a mean ceramic occupation date from all structural features at the Whitten Road site of 1790.8 without redwares (N=58) and 1811.8 with redwares valued at 1825 (N=252). The mean occupation dates indicated by ceramics in the plowzone above all of the structures is 1796.5 without redwares (N=2117) and 1818.3 with redwares (N=9055). This is consistent with a mean occupation date of ca. 1795 from archival research.

The earliest documentary description of the structures located by data recovery operations at the Whitten Road site is contained in the 1773 Orphans' Court assessment of John Stewart's estate. These records describe four structures on the property-- a "frame dwelling house with a new Cedar roof," a "log kitchen with an oak roof," and an "old barn and stable in bad repair" although it is possible that the barn and stable were the same structure (NCCOC D-1-422). Evidence of only three structures, however, was located by data recovery operations, thus making it difficult to attribute specific associations between Structures I-III as identified archaeologically and the four buildings described by the Orphan's Court return.

At the time of this return, the frame dwelling house was in need of several repairs--rebuilding the chimney at the "east end of the house," laying in a new floor "over head," and repairing the stairs. The "two rooms over head" were also to be "finished." This description implies that the frame dwelling house was probably a one-story structure with an overhead loft divided into two rooms. Of the three structures identified at the Whitten Road site, Structure I comes the closest to fitting this description. The archaeological evidence, however, is not conclusive and Structure I may in fact represent the log kitchen. A discussion of the association of Structure I with either the dwelling house or the log kitchen and Structures II and III with the barn and stable respectively is presented below.

The primary archaeological evidence for Structure I is a series of three paired postmolds/holes and two large features immediately to the west (Figure 19). The greatest dimension of

the structure was determined to be approximately 24 X 24 feet including an earlier 8 X 18 foot section along the east wall. The total area of the structure was therefore approximately 576 square feet, well within the range of 144-1400 square feet for tenant and owner occupied frame dwellings in Maryland (Stiverson 1977) and 216-1450 square feet for Sadsbury Township, Chester County, Pa. (Bernard Herman 1987). This section was supported by the three paired posthole/mold features and appears to be earlier than the two large features to the west as one of these shallow, non-structural features (Feature 63) caps one of the paired postmold features (Features 63 A/B). No other indication of the specific date or sequence of construction within Structure I is available and too few ceramics (N=21) were recovered from the structural features to generate a meaningful mean ceramic date, although some of the earliest ceramics recovered at the site including tin-glazed and Staffordshire earthenwares were found in association with Structure I. A mean ceramic date for both the features within Structure I and the plowzone above it, however, was possible and yielded a date of 1783.3 without redwares (N=846) and 1817.1 with redwares valued at 1825 (N=4943). These mean ceramic dates are consistent with the known occupation of the site.

While the archaeological evidence clearly indicates the existence of a structure, it does not conclusively identify Structure I as any of the four structures described in the Orphans' Court assessment. The presence of a large burned area (Feature 63, Figure 19), shallow root cellar (Feature 65, Figure 19), and an associated concentration of blackened brick fragments (Figure 61) however, suggests that Structure I was probably either the frame dwelling or log kitchen. These are the only two structures described by the court that would have commonly included such domestic activities as heating, food storage, and food preparation. Additional evidence of domestic activity at Structure I was seen in the distribution of historic ceramics over the site in both the plowzone and the features and in the chemical analyses of the subsoil. These evidences of cooking, heating, and food consumption within Structure I are the only such evidences located at the Whitten Road site and are conspicuously absent from Structures II and III. As the probable barn and stable, this would be expected as such structures are usually not the site of intensive domestic activity.

Although the archaeological evidence of Structure I indicates that it was probably either the log kitchen or the frame dwelling, it is difficult to assign a more specific function to the structure. One of the most conspicuous aspects of Structure I was that no evidence of postholes, sills, or other structural members in the first constructed part of the structure west of the three paired features was located. This suggests that this portion of the structure was set onto blocks alongside the original 10 X 18 foot paired-tie beam section.

The location of the Feature 63 and the concentration of burnt brick in the southwest corner of Structure I, however,

lends some support to the interpretation of the structure as the log kitchen. In relation to the original 16 X 8 foot post-in-ground structure, Feature 63 and concentration of brick are along the west wall of the structure. While the location of the hearth within the log kitchen is not specified, the Orphans' Court return specifically mentions a chimney along the east wall of the frame dwelling house. With the evidence of a hearth and chimney along the west wall of Structure I, this indicates that Structure I is not the dwelling house and is therefore more likely to be the log kitchen.

Additional evidence that Structure I may be the log kitchen can be seen in the four postmolds (Features 53, 66-68, Figure 19) along the the northwest corner of the log or frame upon blocks addition. These features have been interpreted as additional supports along this corner of the addition and may indicate log construction, a type of construction known to be less stable than frame construction.

As with the evidence of the construction and features of the Structure I, the types and distribution of artifacts recovered from within and around Structure I also suggest some type of relatively non-diagnostic domestic activity and cannot be made to determine between the log kitchen or the frame dwelling. Over the entire Whitten Road site, the two greatest concentrations of historic ceramics (the most common and most important type of artifact within South's Kitchen Group) recovered in the plowzone are located along the southeastern and southwestern corners of the core section of Structure I (Figure 59, 86, and 87). Such concentrations are commonly held to be indicative of activity areas (South 1977, Miller 1983) and as expected for non-domestic areas, do not appear near Structures II or III. These concentrations of domestic artifacts around Structure I are significant even after allowances for plow-disturbance are made (Miller 1983).

The association of Structures II and III with the stable and barn respectively as mentioned in the 1773 Orphans' Court record is based on four observations. First of all, the location of Structures II and III in relation to Structure I corresponds to the classic "hollow square" pattern of farmstead layout recognized by Glassie (1968) and Manning (1983). This pattern at the Whitten Road Site is created by both the location of Structures I-III and in the fencelines uncovered and clearly suggests that Structures II and III were outbuildings (Figure 90).

The second indication that Structures II and III were outbuildings and not domestic sites is their small size. Although the hole-set block supports used in Structure II probably resulted in a stronger and more substantial structure than Structure I, Structure II is substantially smaller, only 200 square feet compared to 576 square feet for Structure I. In addition, Structure II is substantially smaller than any of the main dwelling houses known from the excavation of numerous other

historic sites characterized by earthfast construction (Carson et al. 1981). The same is true of Structure III--at a total dimension of 280 square feet, this structure is substantially smaller than earthfast structures identified by Carson et al. (1981). In addition, the four paired postmold/hole features that compose Structure III were consistently much smaller and not set as deeply into the ground than either Structure I or II, suggesting a comparatively less substantial structure. Such construction is consistent with the interpretation of Structure III with the stable.

The third indication that Structures II and III were outbuildings and not sites of domestic activity are the consistently low concentrations of historic ceramics and other domestic artifacts found over both structures (Figures 54 and 60). In addition, very few ceramics and other artifacts were recovered from the postmolds and holes of Structure II and especially Structure III.

The chemical analysis of the subsoil over the Whitten Road Site provides the fourth indication that Structures II and III were agricultural outbuildings and not areas of intensive domestic activity. Both Structures II and III showed significantly higher concentrations of phosphates than Structure I and lower concentrations of potassium. Phosphate levels indicate accumulations of organic waste and are expected to be higher around livestock than domestic quarters. Potassium levels indicate wood ash and are expected to be higher around domestic structures than outbuildings.

One possibility concerning Structures II and III is that the "old barn and stable in bad repair" described by the Orphans' Court return of 1773 was only one structure and not two separate ones. In this case, the barn and stable would have been one structure in which hay and other agricultural products were stored above a stable area. This possibility is supported by the substantial size of the hole set posts of Structure II, which may well have been strong enough to support the additional weight. This is not clear in the archaeological record as evidence of substantial repair and even the replacement of an earlier structure is indicated.

Although few historic ceramics were recovered from within the architectural features of Structures II and III, a mean ceramic date including artifacts from the plowzone above both structures is possible. The mean ceramic date associated with Structure II is 1804.9 (N=856) without redwares and 1818.0 (N=2993) with redwares valued at 1825. This is similar to that indicated for Structure III--1805.2 (N=450) without redwares and 1816.5 (N=1371) with redwares.

Although English-made vessels dating to the mid-eighteenth century were apparent, the number of vessels represented was relatively small (see Table 12). The vast majority of ceramics present are various coarse and refined red earthenwares,

many of which were probably locally produced (see Table 12). Two additional broad generalizations may be made about the ceramic assemblage from the site, and both have significant implications:

- 1) A continuum in English ceramic chronology is represented.
- 2) The single most-common ceramic type is coarse earthenware likely to have been locally produced.

An unbroken site occupation is suggested by the chronology of imported ceramic types as well as by the plowzone artifact distributions. The most temporally diagnostic of these are the English ceramics and only limited study of individual vessel forms was possible due to the paucity of large, conjoinable sherds from features. Study of vessel form has indicated that these English ceramics were generally used in food consumption. Included are various tea-wares which compose sizable proportions of both white salt-glazed stoneware and porcelain. Most vessels of the latter type are also of English origin, although a fraction of the sample appears to be Chinese in origin.

Despite the variety of English-made ceramics of known manufacture duration, the most common ceramic type is by far red earthenware. The majority of this is thought to be of local manufacture. Approximately one-third of the vessel estimate consists of slip-decorated wares most of which are consumption-related plates and dishes. This suggests an expression of local influence stemming from the German-American southeastern-southcentral Pennsylvania culture region. While some of the undecorated vessels could be of English origin, this cannot be ascertained. However, with the broad range of known English types present, it seems unlikely that much red earthenware would be imported when it was locally available. Most of the redware is coarse and when possible the study of form suggests utilitarian vessels. Some redware is also refined, and recognizable forms indicate the vessels are related to food consumption.

The presence of the redware dominated ceramic assemblage probably reflects the increased accessibility of the ware through local manufacture. The large percentage of redware in the overall assemblage is not seen as a reprieve from dependence upon English ceramics as post American colonial-period English types are also found in the assemblage. In addition, redware fragments found in association with white salt-glazed stoneware are indistinguishable from others found in features with later pearlware. Redware is simply the most common ceramic type found on the site, largely because it characterizes nearly all utilitarian forms in addition to forms used in food consumption. Thus the amount of redwares at a site is not necessarily a reflection of the socio-economic status of the historic occupants.

An additional archaeological implication of the high absolute and relative amount of redwares within the ceramic assemblage can be seen in the mean ceramic dates generated for the Whitten Road site (Table 11). As can be seen in Table 11, the addition of redwares into the mean ceramic date calculations consistently inflates the mean value by approximately 20 years. For these calculations, non slip-decorated coarse and utilitarian redwares were given a mean ceramic value of 1825. Slip-decorated redwares were given a mean ceramic value of 1785.

Additional research questions outlined in the data recovery plan concerned refuse disposal processes. Data from the excavations indicate that dramatic changes in these processes did not occur during the occupation of 7NC-D-100. This can be compared to the patterns of refuse disposal identified for other historic sites in Delaware, and specifically the Ferguson/Weber Homestead, the Hawthorn site, and the Wilson-Slack Agricultural Works Complex (Coleman et al. 1983, 1984, 1985). Each of these occupations spans a period of time from approximately the mid-nineteenth century through the twentieth century, and are later than the occupation of 7NC-D-100. Nonetheless, the patterns of refuse disposal observed at these sites will be discussed as indicating changing trends in refuse disposal through time.

The overall refuse disposal system at 7NC-D-100 consists of a casual yard scatter, apparently for the entire occupation of the site, although historic plowing may have disturbed some of the shallower refuse pits. While this corresponds well with what South (1977) has found on other eighteenth century British-American sites, Deetz (1977, 1982) has contended that in the second half of the eighteenth century, refuse disposal techniques underwent a dramatic change. At this time, deep pits were dug for the explicit purpose of disposing of refuse, rather than indiscriminately strewn it about the area of the dwelling. Deetz views this phenomenon as an expression of a changing world view, one geared toward order and balance in all aspects of life. At the Whitten Road site, however, the pattern of refuse disposal is one of consistently sheet refuse which appears to have continued into the nineteenth century. Although Feature 144 appeared to have been dug for the express purpose of refuse disposal, this is not necessarily true of Feature 65, which was the only other fairly large midden deposit encountered during data recovery excavations. Although it did yield some household and demolition debris, these materials are not so heavily concentrated as to suggest that it was deliberately dug to minimize the degree of yard scatter. The proximity of this and smaller midden deposits to presumed structure-related features raises the possibility that they may have been intentionally dug as subterranean storage units. Feature 65 stands in sharp contrast to the rich refuse deposits found in the comparably dated occupation of the Narbonne House, which were packed with refuse and provided clear evidence of intentional excavations for this purpose (Moran 1976).

Excavations at the Ferguson/Weber Homestead consisted of a system of sampling around an extant structure which historic documentation indicated was built ca. 1837 and is thought to have become a tenement sometime in the nineteenth century. Artifact distributions suggested that the earliest diagnostic ceramics (creamware and pearlware) tended to concentrate close to the house while later ones (whiteware and ironstone) were distributed some distance from it. This is different than the disposal practices apparent at the Whitten Road site and suggests the emergence of an ordered system of refuse disposal involving its removal to areas further from the dwelling that did not take place at 7NC-D-100.

Also different than the disposal pattern seen at the Whitten Road Site was that seen at the historic component of the Hawthorn site (7NC-E-46). The historic component of this site was occupied continuously from the late eighteenth century until well into the twentieth century. Data recovery excavations at the site indicated that the area of densest artifact distribution was in the vicinity of the northeast corner of the remains of a structure. The archaeological evidence of disposal patterns at the Hawthorn site suggests that a change in refuse disposal occurred with the changing spatial utilization of the site with the earlier ceramics tending to be found closer to the structure than later ceramics. This suggests a trash disposal pattern in which the disposal of household debris occurred further and further from the house over time. This change is somewhat similar to that seen at the Ferguson-Weber Homestead, but is not as pronounced. In fact, the mixture of both eighteenth and nineteenth century types of wares at the Hawthorn site is reminiscent of the sheet refuse which characterizes 7NC-D-100 although it may also be due in part to demolition disturbance. This suggests that the prolonged occupation of the historic component of the Hawthorn site may be a factor in recognizing changing disposal patterns. Thus one reason that no change in the overall pattern of refuse disposal at the Whitten Road Site may be due to its comparatively brief occupation span.

Data on refuse disposal patterns at the Whitten Road site can also be compared to those seen at the Wilson-Slack Agricultural Works Complex. Like the Ferguson/Weber Homestead and the historic component of the Hawthorn site, this occupation is also largely confined to the mid-nineteenth throughout the twentieth centuries. Also like these sites, patterns of artifact distributions were observed in an intensive sampling technique, which in this case involved the excavation of 335 shovel/posthole units around extant structures. These excavations indicated that refuse disposal consisted of yard scatter but more significantly, intentionally excavated trash pits were also located. In addition to the presence of these deposits, changes in the spatial utilization of the site can be seen in the distribution maps of various ceramic types. The contention is that earlier disposal practices involving the yard scatter of domestic debris such as pearlware, yellowware, and redware occurred primarily in the vicinity of the rear door of the house. Later disposal

practices involving the discard of whiteware and ironstone occurred in the area of the east yard, between the house and the barn.

The most significant change in the manner of refuse disposal at the Wilson-Slack site, however, is in the presence of refuse pits which can be viewed as a considerable refinement in refuse disposal practices, from indiscriminate yard scatter to a more orderly discard system. A change in refuse disposal practices from those evident at 7NC-D-100 is clearly evident. As the disposal of refuse at the Ferguson/Weber Homestead further and further from the house with time may be an expression of changing lifeways, so too may the occurrence of trash pits at the Wilson-Slack Complex. In both cases, the trend toward more orderly systems of refuse disposal are evident in mid-nineteenth through twentieth century contexts.

Like the Whitten Road site, data recovery excavations at the Ferguson/Weber Homestead, the historic component of the Hawthorn site, and the Wilson-Slack Agricultural Works Complex have all examined the issues of spatial organization and patterns of refuse disposal. Generally, the patterns of disposal at each of these three sites appear to contain an element of the refuse disposal system apparent at 7NC-D-100 which consists of a casual yard scatter around structures. While other researchers have found this disposal technique to characterize both seventeenth and eighteenth century historic sites it is also demonstrated to have lasted into the nineteenth century (South 1977; Deetz 1977; Miller 1983).

The archaeological and documentary evidence of the historic occupation of the Whitten Road site indicates that the tenant inhabitants of the site occupied at least three and probably four structures on a 20 acre parcel within the larger 260 acre property of the owner. This tenant parcel was partly fenced and contained by 1851, several small orchards and a dug well. The two known tenants, McCallister and Wolf, provided the seasonal labor demanded by the aggressively commercial wheat agriculture practiced by the Stewarts, Smiths, Warricks, and Hammans. Tax assessment records show that the 260 acre farm was a prosperous one and that its owners consistently ranked within the top 10% of the taxables in White Clay Creek Hundred.

The tenant occupants of the 7NC-D-100 participated in a type of agricultural tenancy known as smallholding. This type of tenancy has been intensively analyzed in Chester County, Pa. by Lucy Simler (1986) and her recent work helps to place the Whitten Road site into a regional social and economic context.

Smallholding tenants leased a small property, usually under 20 acres and were part of a "landless" (i.e., non-land-owning) class of agricultural tenants. Other types of agricultural tenants in the eighteenth and nineteenth centuries according to Simler were "farm tenants," who leased tracts suitable for commercial farming, "inmates" where married or widowed persons,

often with children who occupied rooms or cottages with garden plots within the households of landowners and "freemen" who were usually single men occupying the household of a landowner (Simler 1986: 547-548). Of these four types of agricultural tenants recognized in colonial Chester County, only the farm tenants and smallholders lived separately from the landowner.

According to Simler, agricultural tenancy was a labor system shaped by the demands of a commercial wheat economy and by family strategies--out of the need to house and support a work force geared to the extremely seasonal and labor intensive demands of wheat agriculture (Simler 1986:562). This connection has been made by a number of other researchers (Earle and Hoffman 1976; Lemon 1967, 1972; Price 1974) and has been applied to earthfast housing in Carson et al. (1981). Wheat agriculture demanded intensive labor for about three months out of the year during spring planting and fall harvesting, but offered little or no employment during the rest of the year. Wage labor, rather than slave or indentured servant labor therefore emerged as the most economical answer--landowners could ensure that they had sufficient labor on hand without the year-round expense of bound labor.

Smallholding tenancy then emerged for some landowners as an even more ideal solution. Land owners, by providing space and opportunities for income-producing activities on their farms to resident tenants, could ensure themselves of a stable labor supply while earning a cash or equivalent rent from the tenants without the year-round expense of supporting inmates, freemen, or any type of bound labor within their own household. At the same time, smallholders provided the additional labor needed to maintain the fertility of the farm and the capital improvements on it.

For McCallister, Wolf, and other smallholders, such a type of tenancy allowed them to achieve householding status on highly productive land at a time of rising land prices. Such tenants could thereby participate in a potentially very profitable market system with little capital and with a reasonable chance of success.

That the smallholding system of tenant labor was successful at the Whitten Road site is shown in the tax assessment and other documentary records. This success, however, may also be seen in the archaeological record. One feature of the artifact assemblage of the Whitten Road site, particularly the historic ceramics, is that the earliest materials, those that date to when the Stewarts as the owners of the property, is of no recognizably higher socio-economic status than the later materials recovered from the tenant period. Indeed no recognizably "tenant" artifact assemblage was recovered at 7NC-D-100 although redwares and utilitarian forms dominate both assemblages and in the case of James (I) Stewart, his inventory suggests that his wealth was in land and not in material goods.

These observations suggest that the traditional association of tenant sites and assemblages with inherently and recognizably lower status goods than owner occupied sites of the same period does not apply equally to all situations or time periods, particularly before the nineteenth century. This weakness in the simple association of tenant sites and cheap, locally made goods and owner-occupied sites with expensive, imported wares has been suggested for other sites in the Middle Atlantic (Catts et al. 1986, Beidleman et al. 1986, Coleman et al. 1985). The identification of a number of relatively wealthy tenants in both urban Wilmington (Heite 1987) and rural Chester County (Simler 1986:361) also cautions against such simple associations.

In conclusion, data recovery excavations at the Whitten Road site shed light on the early rural lifeways of tenants in northern Delaware. By comparing the Whitten Road site with later rural tenant sites, insights into changing patterns of spatial utilization and refuse disposal can be noted. In addition, data on earthfast housing and construction techniques was recovered.