14. DOWN IN THE PITS

The most numerous features were shallow pits created for some useful purpose, but archæological detective work was needed to interpret them.

All features are artifacts, but they are immovable, rather than portable artifacts. Traditional archæology tends to focus on pit features, which usually appear as colored smudges in the yellow subsoil. But more broadly, the definition of "features" should include any changes wrought by humankind. Features at Bloomsbury included ditches, property lines, woodlots, chemical content, and even the plowed soil.

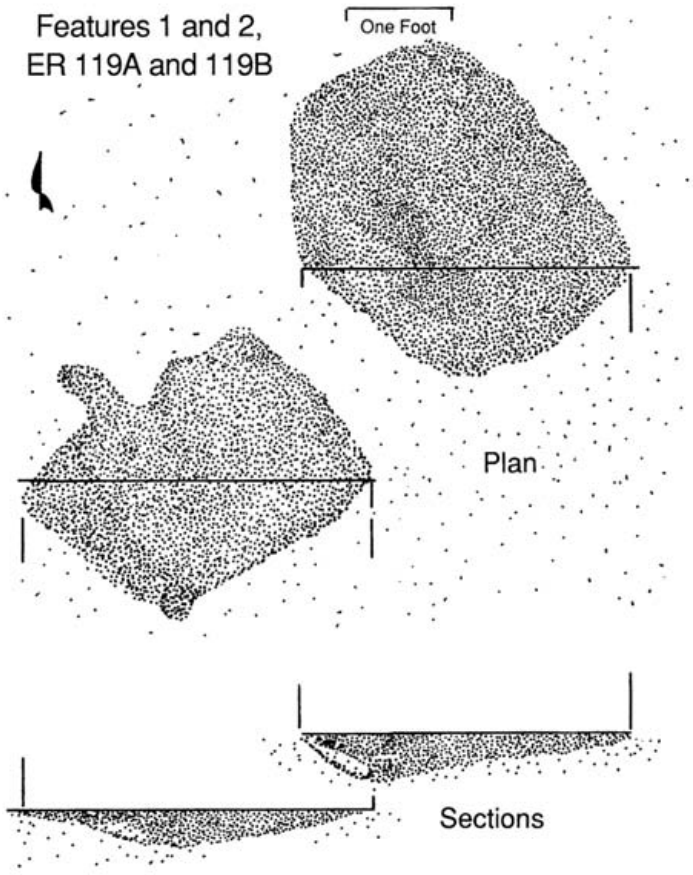

Figure 84

Two small features in the southwest corner of the site, sectioned along the lines shown in plan, at top.

One characteristic of features, not shared with portable artifacts, is the fact that they always are pertinent to site history. While some features provide context for included artifacts, others merely provide mysteries to be solved.

The house site was located on a small patch of well-drained soil, into which a number of pits had been dug. These pits were confined to the immediate vicinity of the house, and their distribution was congruent with both the well-drained soil and the distribution of portable artifacts.

FEATURE 1 AND FEATURE 2

These two features in unit 1080 O, ER 119a and 119b, appear to be contemporary, even though there were no crossmends between them. Brick, daub, and charcoal were found in a matrix that included some yellow clods.

FEATURE 3 AND FEATURE 4

Coal and clinker were found in the plowzone of unit 1100 O, where features 3 and 4 were later discovered. The source of the coal was not determined, but coal usually is a marker for nineteenth-century and later sites in Kent County.

These were small overlapping irregular basins near the edge of the pump or well feature (ER 137, Feature 5). Feature 4 contained most of the base of a black-glazed red earthenware vessel with a flat bottom $2^{3}/_{8}$" in diameter. There was no coal in the feature itself, prompting the tentative conclusion that the coal reached the site after the subsoil features were created.

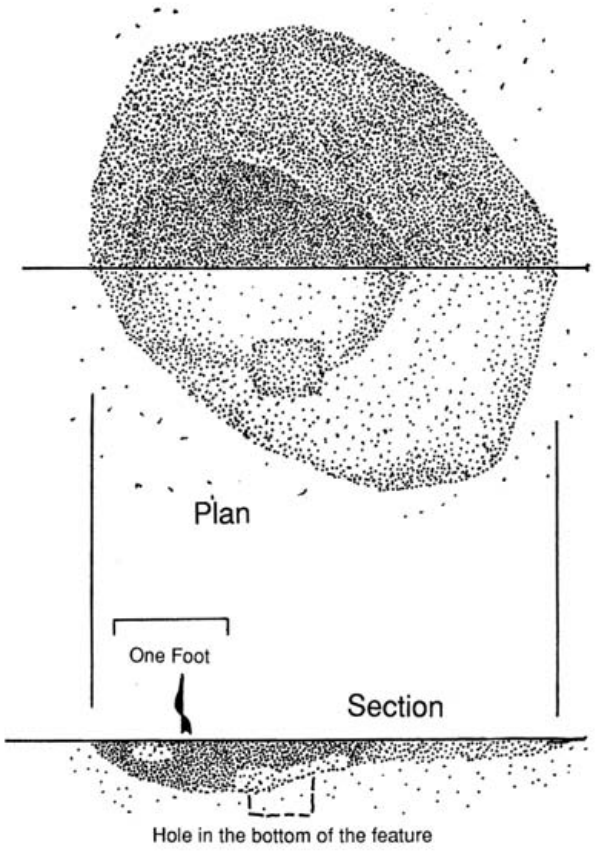

Figure 85

Feature 8 is typical of the basin shaped pits, with shallow post holes in the bottom, and chemical characteristics similar to the class.

FEATURE 7

This irregular pit feature, with a mean ceramic date of 1791, may have been a root mold or tree fall. It was first tested in November (146b) and finished in July (146f).

Daub and oyster shells were the dominant contents, but the feature also contained pieces of a beaded-edged creamware vessel that appears to be a teapot.

FEATURE 8

A tractor tire rut damaged this shallow pit feature, ER 149e, which was only five inches deep below the plowzone. The pit was irregular in shape, about four feet in diameter. There was a post mold near the center of the feature. Pit fill included burned clay, bone fragments, and a piece of red earthenware. The presence of unweathered clods in the fill indicates that the hole was backfilled soon after it was opened.

FEATURE 9

This is another short-term hole, ER149f, not as regular in shape as most of the pit features. It was three by four feet in plan, but deeper than feature 8, at $13^1/_2$ inches below plowzone. The fill included many pieces of burned clay as well as some domestic pottery. There was no sign of burning, and the cloddy fill gave evidence that the hole was backfilled soon after it was opened.

FEATURE 10

This pit, ER130e, six feet wide, was irregular in shape but less than a foot deep below the plowzone. It cut into the "pump" hole, Feature 5. Pit contents included daub and ash, oyster shells, fire-cracked rock, and earthenware. Its boundaries were indefinite, and disappeared in the north.

FEATURE 11

Feature 11, ER 145f, was dish-shaped, about five feet in diameter and seven inches deep below the plowzone. The bottom of the hole was lined with unweathered yellow clods, while most of the fill consisted of earth mixed with black charcoal fragments. A conch shell lay on the floor of the pit. There was a small hole, probably a post impression, in the edge. Fill included oyster shell, bone, wine bottle fragments, creamware and scratch-blue white stoneware. Mean ceramic date was 1785.83.

FEATURE 12

Next to Feature 11, this small pit was filled mostly with yellow clods, capped by a layer of ash. Oyster shell and fragments of a case bottle were found in association with ash and fired clay bits.

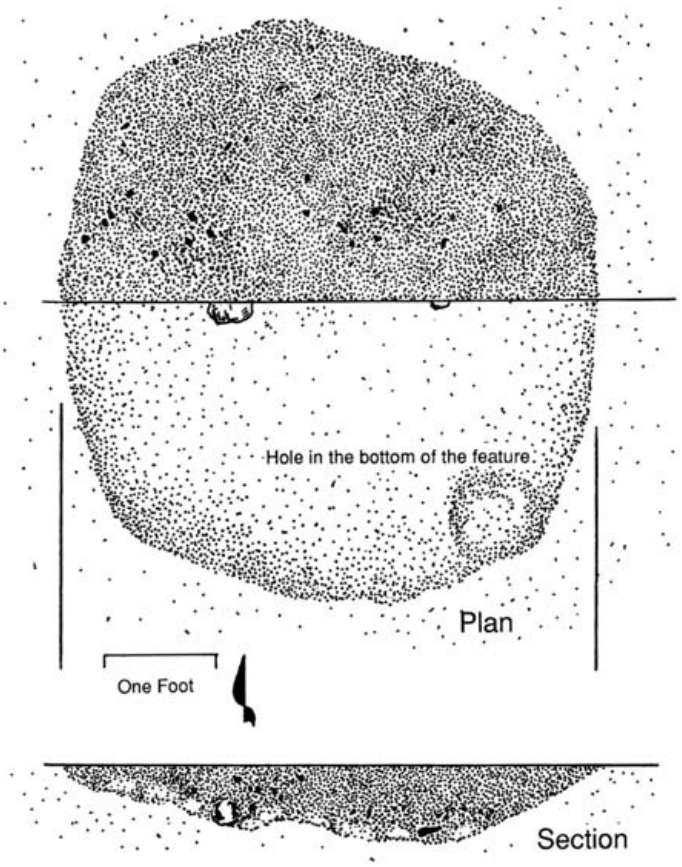

Figure 86

Feature 11 was a very trashy pit. It shared shape and chemical profile with the other dish-shaped pits.

FEATURE 13

This small disturbed shallow pit, only 20 inches across and a few inches deep at its deepest, contained only fired clay, oyster shell, and charcoal.

FEATURE 14

One of the smaller dish-shaped features, ER 211e, this pit contained a piece of brick and a quantity of daub, indicating that it may have had a function similar to the others.

FEATURE 15

This pot-shaped feature, ER 123b, had a grey ashy fill containing many artifacts. Clam and oyster shells both were present in the fill. Artifacts in the fill included several later ceramic types and yielded a mean ceramic date of 1796.78, near the end of the site's history. The surrounding soil was heavy clay, which would have been poorly drained. There was considerable ash and trash in the fill, but no evidence of burning.

FEATURE 16

This pair of small square features (ER123c) may have been prop holes, possibly connected with the performance of a process in feature 15.

FEATURE 17

This dish-shaped pit feature, ER 129e, was located just west of the western well. It was seven feet in diameter, nine inches deep. An intrusive small hole was located in the northeast rim. Fill included a large amount of burnt daub, brick, ash, and oyster shell. There was no sign of burning on the floor of the pit.

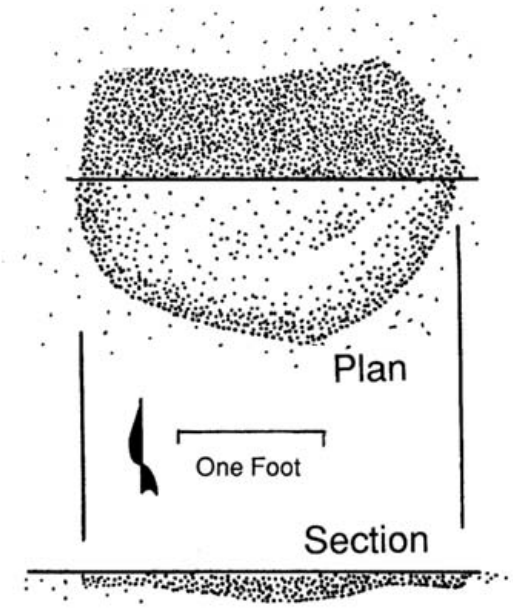

Figure 87

Some of the pit features were extremely shallow, and many may have been plowed away.

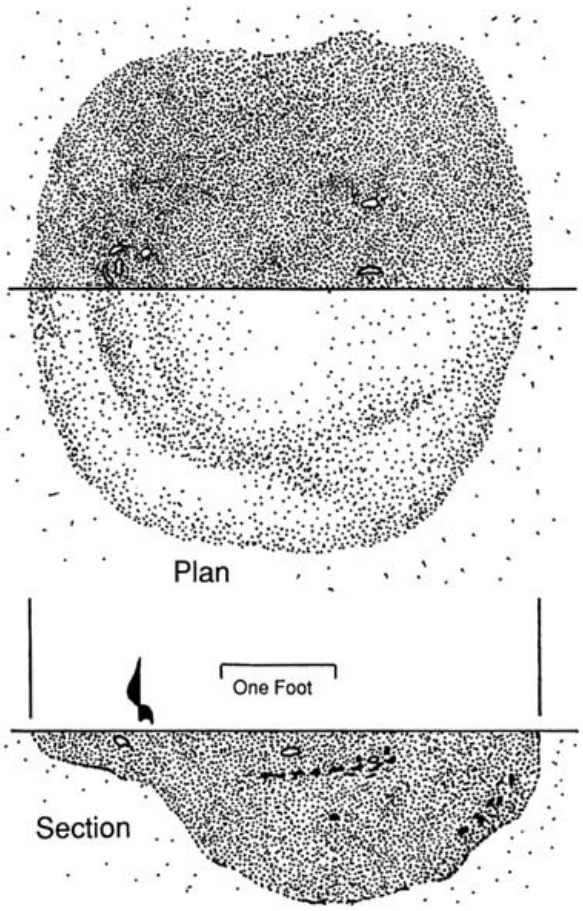

Figure 88

Feature 15, one of the deeper pits on the site, may have been dug fairly late in the site history. It was chemically similar to the dish-shaped pits.

Artifacts in the pit included sherds of red earthenware, sheet iron, turtle carapace, and long bones of cow. A rotted shoe in the bottom of the pit left a stain, but was not retrieved. The trash appeared to be incidental, and not intentionally deposited. The fill matrix consisted of fresh, unweathered, clods, indicating that the hole had stood open for only a short time.

FEATURE 22

This round feature (ER179e), nearly five feet wide, yielded a mean ceramic date of 1789.29, which places it in the later occupation period of the site, during which the nearby eastern well was dug. The daub was quite densely packed in several lenses as if it had been sifted out of the ashes, and a deposit of clay fill capped the feature.

Ceramics in this pit included scratch-blue white stoneware, slip-decorated red earthenware, black-glazed earthenware, and creamware. Pearlware was absent from this pit. Faunal material included calcined bone that was not burned here, since there was no sign of burning in the pit itself.

FEATURE 23

This small round feature (ER179f) was nearby, and may be associated with Feature 22. There were no diagnostic artifacts, but the fill included calcined bone.

FEATURE 24

In the same cluster with features 22 and 23, this 32" pit (ER179g) was somewhat deeper, but less well-defined. It also contained brick, daub and red earthenware.

FEATURE 25

This round feature, a foot in diameter and half a foot deep, contained no artifacts. It probably was a post hole.

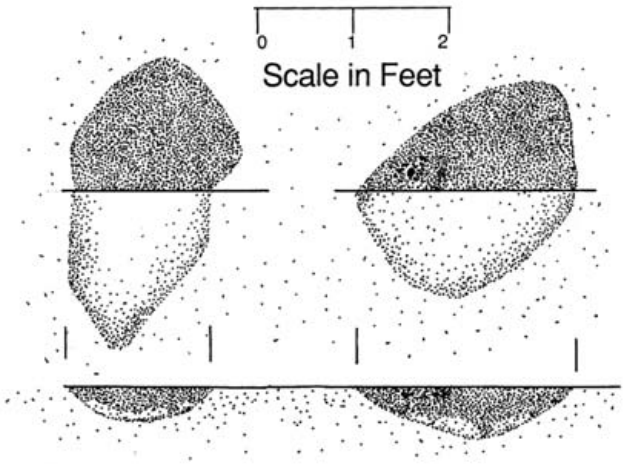

Figure 89

Features 13 and 14, which lay adjacent to one another, were small versions of the larger dish-shaped pits.

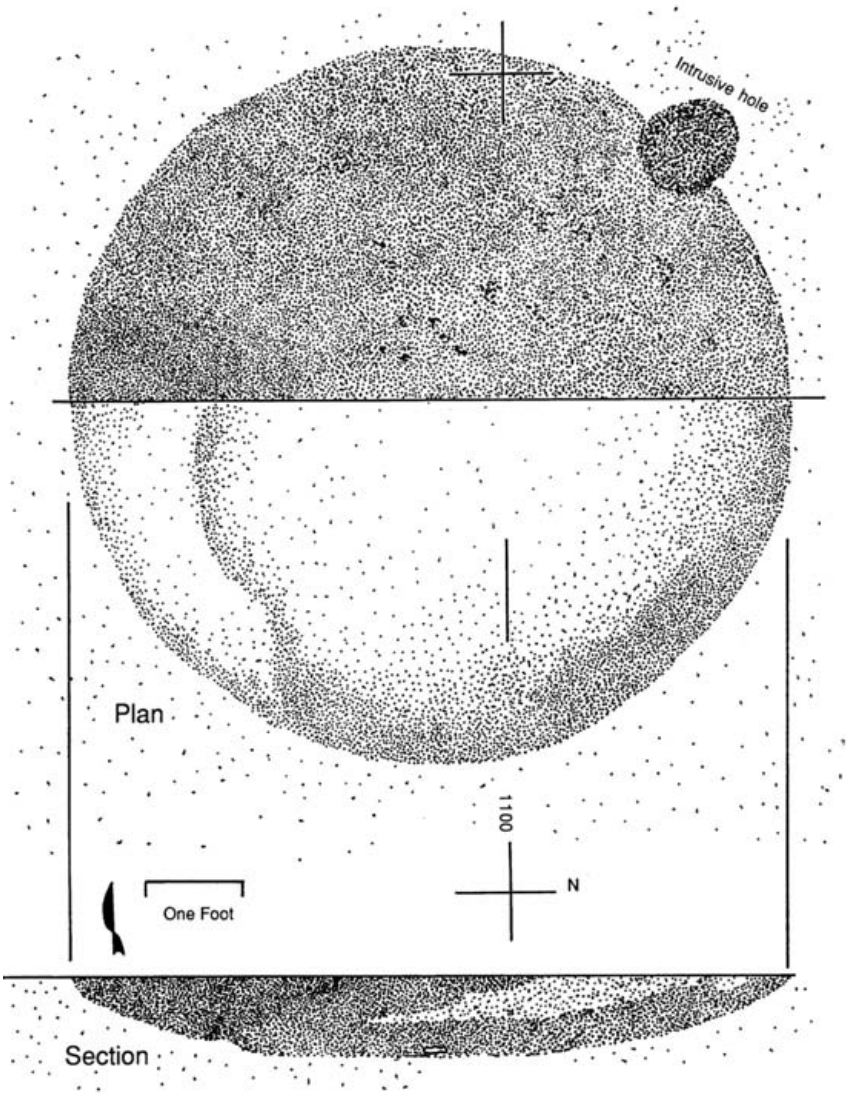

Figure 90

The large basin, Feature 17, appears to be associated with the western well. It belonged to the chemical cluster with the other dish-shaped pit features.

FEATURE 30

This shallow rectangular feature contained wood ash but no artifacts. It is in the same ten-foot unit with the second five-foot test square (ER13e).

FEATURE 31

This was another rectangular shallow feature just below the plowzone of the first test square (ER12). It, too, was ashy.

FEATURE 32

A pair of post molds marked the bottom of this five-by-six-foot pit (210e), and probably are related to its use.

FEATURE 34

This basin feature (42 e, g), located in the activity area on the west of the site, was one of the deeper basins on the site. It contained daub fragments and some fire-cracked rocks.

FEATURES 41 AND 42

This pair of features (71e and 71f) was part of the activity area on the west of the site. The newer feature, number 41, yielded a mean ceramic date of 1802.5. Nearby a blue bead was found in the topsoil. Oyster shells, bones, and daub were found in both holes. There was a lens of dark soil in the center of feature 42.

FEATURE 44

A lens-shaped feature (175e), this shallow pit was almost perfectly circular, just north of feature 32 along the eastern boundary of the site.

FEATURES 45 AND 46

The fill of the complex feature 45 (47e, h, i, j, k, l, m) was described as “ashy” and was recorded as several distinct interleaved deposits. It lay at the north end of a disturbance marked on the south by feature 46 (47f, g). These basin-shaped pits represent some activity that was performed repetitively on the same site.

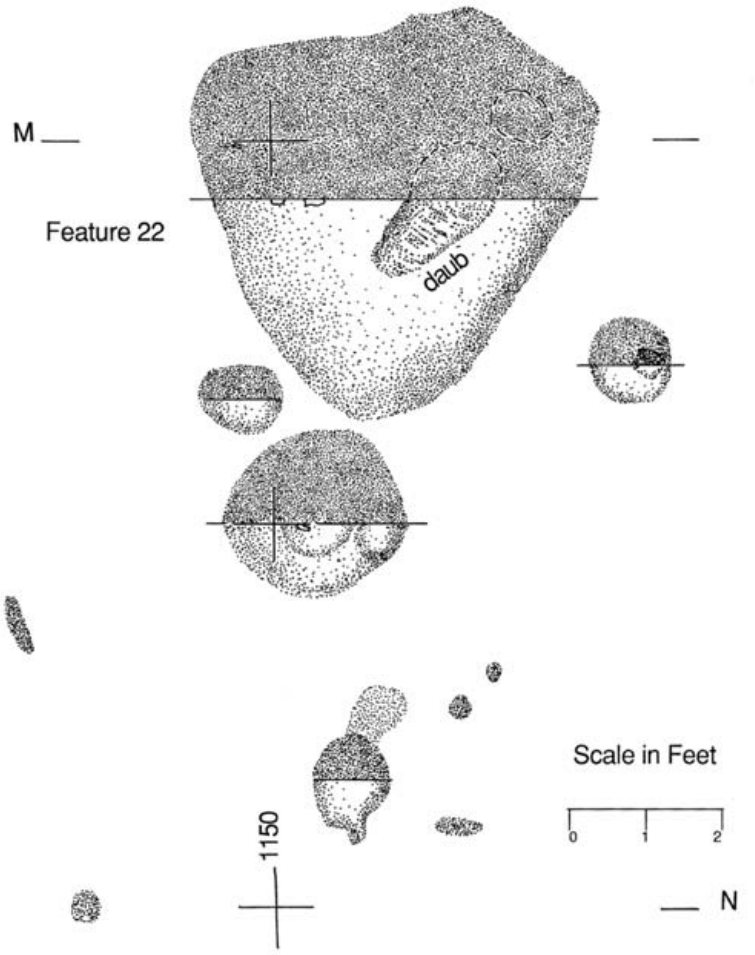

Figure 91

This cluster of features may be a related activity area surrounding a large basin. Its mean ceramic date places it in the later period of site occupation, but the newest ceramic type, pearlware, is absent. Chemically Feature 22 resembles the other basins.

FEATURES 56 AND 57

These two pit features appear to mark the northeast corner of the site's activity areas. Feature 56 (77e, f), an oval pit that could be a fallen tree hole, yielded a mean ceramic date of 1795.67. Contents included fired clay bits and ash. At the bottom of the pit was a mass of fired clay pieces that had fused together. Feature 57 (77g) was an irregular basin that included burned clay bits and oyster shell and an engraved glass tumbler.

FEATURE 59

Outside the core of the site was a pit surrounded by several small postmolds (48a). Most remarkable of the finds was a well-moulded pearlware teapot spout, which reflects a high economic outlay. This pit was dug under emergency conditions during the last days of the project, and there was no time to explore possible related features outside the stripped area. The central pit is more like a "trash pit" than any other on the site, but there were very few vessels that appear to have been primary trash deposits.

MYSTERY OF THE BASIN PITS

Only the two framed wells contain deposits that can be likened to "trash pits" where whole broken vessels were tossed together with other detritus. There were some post holes apparently related to fence lines, and a few heavier posts, but nothing that could be construed as a house foundation or earthfast post-in-ground.

Indeed, the site core's boundaries were described by a ring of similar features that were not fully understood when the site was being dug. Around the site perimeter was a series of similar shallow round pits that appear to represent a repeated household activity The features were generally round, less than a foot deep below the plowzone, and between two and six feet in diameter.

All were characterized by ash, fired daub or brick, and unweathered yellow clods that indicated a very short open time. In the bottoms of some features were depressions that appeared to be post holes supporting some kind of prop. None of the holes contained any evidence that burning had oc-

curred, even though they were full of ash. In the following table are listed the better-defined large round "basin" features, with their characteristics:

feat. no.	dia.	fired daub	shell	bone	post hole(s) below	mean ceramic date
14	2'2"	yes	no	yes	no	
41	2'9"	yes	yes	yes	no	1802.5
44	3'6"	yes	no	no	no	
57	3'6"	yes	yes	yes	no	
8	4'	yes	no	yes	yes	
11	4'10"	yes	yes	yes	yes	1785.83
22	4'9"	yes	yes	yes	no	1789.29
32	5'	yes	no	yes	yes	
34	5'	yes	yes	yes	no	
45	5'6"	yes	yes	yes	no	1793.89
17	7'	yes	yes	yes	yes	

The function of these pits was one of the mysteries confronting the analysis phase of the work. Sometimes, on other sites, such holes have been called "daub pits," where clay was quarried for renewing the chimney lining. However, these pits, at this site, are located on the type of soil with the least clay content; a more reliable clay source lay a few yards away, in the Othello soils.

Nor do the pits answer the description of household trash tips. In the first place, they are located inside the household activity area, as marked by both artifact and chemical distribution, where a soil disturbance would be in the way of normal traffic. Moreover, it is unlikely that the intention to discard trash would translate into a hole inside one's living area, rather than outside the enclosure fence.

The second argument against a primary disposal function is the extremely fragmentary nature of the pit contents. In only a few cases did the pits contain a significant fraction of any single vessel; most of the ceramic remains were small fragments from many vessels. They were not cooking pits, for the bottoms are not fire reddened.

The post holes in the pit bottoms, and similar features outside some of the other basins, may be interpreted as impressions from props associated with the pits' function.

Most contained oyster and/or clam shells, which may be a marker for seasonality or a clue to the pit function. Among the commonest inclusions were pig heads and long bones of other animals.

Ash from the domestic hearth, as identified by included daub, was present in each pit, and often was the largest single component after the soil itself. In several features there were clumps of daub that appeared to have been cemented together by sifting or some similar process.

SOAPMAKING AND TANNING

Home soapmaking and tanning, both used fireplace ashes. These processes are the likeliest functions of these pits.

Soap is made by boiling animal fat with lye. The process is so straightforward that virtually every household could convert its excess cooking fat into useful products without expensive special equipment. Any fat or fatty waste would do.

The first step in soapmaking was to make lye, usually by "dripping" from a specially-made vessel or "ash hopper." The hopper was a large watertight vessel, with a small hole in the bottom. Whenever the fireplace was cleaned, ashes went into the hopper. A container, such as a kettle, placed under the dripping hole would catch the liquid lye. The lye would then be combined with fat and cooked to make soap (Wigginton 1972:151-158; Guldbeck 1963, 1991). Lye also was used to make hominy from maize (Wigginton 1972:168). The late Clinton Weslager noted during his ethnographic interviews nearly sixty years ago that the Kent County Lenape remnant community used home-made, ash-derived lye as a scouring cleanser (Weslager notes, Bridgeton).

Sometimes the ashes were accumulated in a hollowed log, but the most common device was a hopper that stood on legs or props over a receiving vessel. Dick's

manual (Dick 1974:69) described the process:

> "Provide a box whose sides terminate in a point, and having an orifice at the lower end; this should be mounted high enough to allow of a vessel being placed underneath it, to receive the liquid that runs out of the bottom. The box is then well lined with straw upon which fresh wood ashes are placed, adding to the ashes about one twentieth the quantity of fresh slacked lime; then pour hot water upon it, and the lye will filter through into the vessel below. For the purposes of soap-making, this lye must be concentrated by boiling until a sound potato will not sink below the surface."

Home tanners in the Appalachian South used a paste of hardwood ashes and water to remove hair from hides to be tanned. The vessel for this operation was sometimes a hollowed log, but always was supposed to be non-metallic. (Wigginton 1975:55-78). Such a log, called a "leach" was found at the 1793-1813 Moravian/Lenape community of Fairfield, in Canada (Jury 1945:26).

In some mountainous areas, lye leaches were built on stone platforms which featured drain channels carved in their upper surfaces. Some of these lye-catching stones have been misidentified as Native American petroglyphic sculptures (Swauger 1981).

Wooden vessels are recommended for home tanning today. A current home-tanning manual suggests that tannin can be obtained from the leaves and woods of certain plants, in addition to the traditional oak bark (Hobson 1977:6). This observation is important in light of the discovery, at the bottom of the eastern well, of many tiny chopped twigs. It has been suggested that the twigs could be leftovers from other processes, such as dyeing.

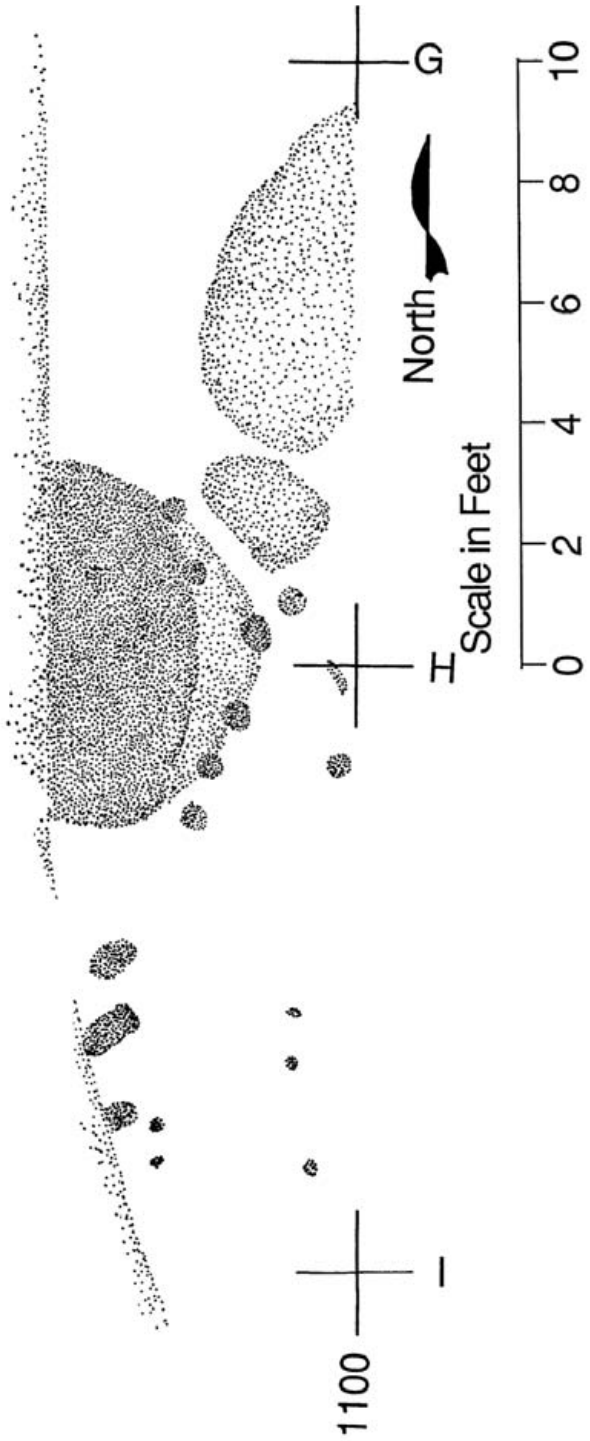

Figure 92
An outlying feature

Feature 59, clearly outside the homelot, more closely resembled a trash pit than any of the other features. It included an elaborate pearlware teapot spout and other late materials. It was surrounded by stake holes as far as was excavated.

SOIL CHEMICAL ANALYSIS

(Features of the dish-shaped class are indicated by boldface labels)

sorted on calcium

Grid unit or feature number and description		ER	pH	Phosphorous (mg/kg)	Potassium (mg/kg)	Calcium (mg/kg)	Mg (mg/kg)	Mn (mg/kg)	Zinc (mg/kg)	Copper (mg/kg)	Iron (mg/kg)
1	planting hole	119A	6.9	10.5	34.5	473.2	97.1	6.2	0.4	0.4	34.56
1130Q	south of site		6.7	4.122	33.8	478.1	122.8	22.5	0.3	0.6	
1180Z	southeast of site		6.7	4.5	33.4	558.3	163.3	13.9	0.3	0.8	
1110 O	pump or well area	137	6.9	10.043	85.4	565.2	140.1	31.7	0.6	0.7	
1050C	northeast of site		6.5	10.523	60.9	588.5	190	14.8	0.5	0.7	
56	irregular hole	77F	6.6	5.7	32.7	601.6	108.7	7.5	0.4	0.5	23.65
990M	west of site		7.1	11.249	63.2	606.7	181.8	13.9	0.5	0.7	
1160 U	southeast of site		6.5	2.364	31.4	612	125.6	17.5	0.3	0.5	
59	postmold & pits	48A	6.7	32.7	28.2	687.3	130.6	6.9	0.9	0.7	26.46
1100K	activity area in site	57	6.5	12.797	97.3	774.9	156.7	28.2	0.7	1.0	
52	planting hole	78E	6.6	9.3	34.3	787.0	121.6	10.6	0.5	0.6	21.87
1140K	vicinity of hearth	209	6.8	7.025	60.5	808.5	167.6	43.2	0.7	1.2	
1120L	activity area in site	204	7.1	8.092	56.2	831.7	144.5	35.2	0.5	1.0	
41	dish shaped pit	71E	6.9	23.6	33.7	956.9	97.5	12.0	0.6	0.7	29.92
22	dish shaped pit	179E	7.0	73.9	45.1	1316.1	132.4	18.6	0.9	1.1	21.78
8	dish shaped pit	149E	7.2	12.9	43.1	1359.2	100.9	14.3	0.6	0.7	33.80
45	dish shaped pit	47H	7.5	34.3	39.6	1537.4	69.4	14.4	1.7	0.7	29.53
17	dish shaped pit	129E	7.2	113.1	52.2	1865.2	131.7	14.7	1.7	1.6	12.29
50	post hole & mold	70I	6.7	3.4	46.3	3005.2	280.8	13.5	0.3	0.5	1.20
15	pot-shaped pit	123B	7.6	239.9	69.1	3132.7	192.0	22.7	4.4	1.0	5.20
5	pump or well	137F	8.0	153.9	72.9	3629.2	113.5	16.3	1.7	0.6	3.11
21	framed well	180AB	7.5	31.8	141.6	4215.5	66.1	61.5	1.8	0.4	69.44
17	dish shaped pit	129E	8.2	12.2	52.3	5014.8	103.8	0.2	0.0	0.2	0.13
11	dish shaped pit	145F	8.0	11.4	58.2	5069.4	103.9	1.0	0.0	0.2	0.14

Chemical profiles of the dish-shaped pits (features 41, 22, 8, 45, 17, and 11) tended to be similar. Here, for illustration purposes, the dish-shaped pits are compared to other components of the site and sorted according to the relative quantities of calcium. The pits and certain other features tended to cluster together, regardless of the chemical element being sorted, indicating that a particular process was involved with all these site elements.

Figure 93
Southwestern corner of the site

The earliest well on the site, Feature 18, was framed with wood that dendrochronology suggest stopped growing in 1767. A probable fence line, west of the feature, can be seen as a line of small post molds just below grid line N. South of the fence there were only a few features. The fence appears to mark the south edge of an activity area on the western side of the toft space. This boundary also was reflected in the surface artifact distributions; fewer artifacts were found in the plowzone south of this line. The presumed pump was placed at the south edge of the site's activity zone. Soil phosphorous was relatively low south of Feature 15, and high to the north.

For overall site plans, see pages 137-138 and endpapers

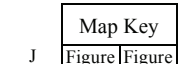

Figure 94
South of the eastern well

The east boundary of the site is the line described by a row of features running northeast. A fence or hedge probably constrained activities within the enclosure along this line. Calcium was concentrated in the soil southeast of the eastern well, near the features shown here. There was a weak concentration of phosphorous in the soil around features 8, 9, and 11, but the major phosphorous concentration was west of the eastern well.

For overall site plans, see pages 137-138 and endpapers

Map Key

Figure 95
Western activity area

The chemical survey revealed a high concentration of phosphorous in the center of the area shown here, which appears to be an activity area. The "irregular disturbance" appears to be a muddy patch that penetrated the subsoil, probably a work area in the yard. Various ceramics, both utilitarian and refined, were concentrated in this same part of the site. Pit features are absent from the areas with the highest phosphorous concentration.

For overall site plans, see pages 137-138 and endpapers

Map Key

Figure 96
Western activity area

The house, or houses, almost certainly stood in the area shown here, between the eastern well and the burned area that may be the hearth site. The line of pits on the right continues the eastern boundary of the site. Evidence for the house location includes a concentration of window glass near the hearth. Plowzone artifacts were sparse between the hearth and the well. There was a phosphorous concentration centered around grid coordinates 1130 K, near the west side of the supposed house. Four of the five large blue beads found on the site were recovered from the plowzones of five-foot quadrants at the places identified here and in Figure 97.

For overall site plans, see pages 137-138 and endpapers

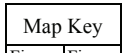

Figure 97
North of the house

The site ends abruptly with the north end of the line of pits. A scattering of small postmolds may be remnants of a fenceline. The fourth blue bead, possibly marking the north corner of the house, appears to mark the north end of the site as well.

For overall site plans, see pages 137-138 and endpapers

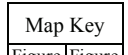

Figure 100
Production

In May 1995, soil conditions permitted one person digging to serve two sifters.