

Archaeological Investigations at the Posey Site (18CH281) and 18CH282 Indian Head Division, Naval Surface Warfare Center, Charles County, Maryland

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DRAFT

**Archaeological Investigations at
The Posey Site (18CH281) and 18CH282
Indian Head Division, Naval Surface Warfare Center
Charles County, Maryland**

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**JEFFERSON PATTERSON PARK AND MUSEUM
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March 12, 1999



Abstract

This report summarizes the results of a program of background research, archaeological fieldwork, and analysis conducted for the Department of Natural Resources of the Indian Head Division of the Naval Surface Warfare Center in Charles County Maryland. The subject of the project was the Posey Site (18CH281) and 18CH282, two archaeological sites located near Mattawoman Creek aboard the Surface Warfare Center. The investigation was undertaken by the Maryland Historical Trust's Southern Maryland Regional Center at the Jefferson Patterson Park and Museum.

The two sites were located and initially tested during a survey of limited portions of the facility in 1985. At that time, the Posey Site was interpreted as a probable Contact Period deposit thought to date from ca. 1600 A.D. to an unknown terminal point. Several intact subsurface features were discovered, one of which yielded material radiocarbon dated to 1575 +/- 90 years A.D.

The fieldwork conducted during the present investigation consisted of the excavation of 510 shovel test pits and 37 1.5-by-1.5-meter units. Several features - including postmolds, a possible pit, and sections of an intact midden deposit - were located and some were excavated or tested. This report describes the results of this fieldwork as well as a reanalysis of the 1985 materials.

Approximately 8000 artifacts and 4000 fragments of faunal material were recovered during the present project. Artifacts included large amounts of ceramic, lithic materials, hand wrought nails, brass fragments and other metal artifacts, bottle glass, shell and glass beads, and other materials. The majority of the ceramic assemblage was Potomac Creek Plain, although lesser amounts of Camden, Yeocomico, and several types of wheel thrown wares were also recovered. Lithic materials included European flint as well as local quartz, quartzite, and chert. Faunal materials consisted primarily of indigenous bone fragments, and indicated exploitation of adjacent woodland and riverine environments. Five pig tooth fragments, however, raise important questions about the diet of the site's occupants, although the majority of the faunal materials were recovered from plow-disturbed contexts.

Artifacts recovered from the site indicate a single occupation component, probably Native American, dating to the period between 1650 and 1700 A.D. The site functioned as a locus for the manufacture of trade goods, and for the reprocessing of materials acquired through trade. Changes in the morphology of ceramic vessels produced on the site have been interpreted as indicative of a transitional phase in a process of Native American cultural change that occurred through the second half of the 17th century.

The results of the fieldwork and subsequent analysis support a determination of National Register significance for the Posey Site.

Acknowledgments

This investigation was made possible by a Department of Defense Legacy Resources grant awarded to the Research Department of the Jefferson Patterson Park and Museum through Captain Wayne Newton, commander of the Indian Head Division of the Naval Surface Warfare Center and Commander Robert Honey, Chief of Staff Operations. Both gentlemen greatly supported the project from its inception. Mr. Jeff Bossart of Indian Head's Environmental Division actually obtained the grant. In addition, Jeff coordinated the archaeology with the requirements of the military activity on the facility, and provided the project with a full range of logistical support, including a temporary laboratory. The project would not have succeeded without his guidance and assistance. Deanna Scher and Bill Green of the Environmental Division were also instrumental in the planning and conduct of this investigation.

Chris Adams and Sandy Schroeder of Indian Head's Public Affairs Office handled all press relations and assisted in the planning of an open house on the site. Sue Hayes, Lou Scalferi, Tom Cox, and J.R. Wheeler of the Public Works Division provided numerous maps and documentary information on the development of the Naval Warfare Center and its effects on the archaeological record. The Posey Site [REDACTED]

[REDACTED] made for an interesting and challenging field environment, and we could not have accomplished our work without Mike Olup and Chester Henderson of the Safety Department, who assisted in the formulation of safety procedures followed throughout the investigation, and in the training of the archaeology crew. Personnel [REDACTED] cooperated with us in every way, and Dave Clark, Rick Urbanski, Joe Cooper, and many others provided us with the assistance necessary to complete the project. Dave Clark in particular deserves a great deal of credit for the success of this investigation.

The Posey Site is a unique and significant resource, and members of the archaeological community expressed a great deal of interest in this project. In order to bring as wide a range of viewpoints as possible to the investigation and the interpretation of the site, an Advisory Committee was formed. Committee members included Jeff Bossart, Virginia Busby of the University of Virginia, Wayne Clark, Richard Hughes, and Gary Shaffer of the Maryland Historical Trust, and Stephen R. Potter of the National Park Service. These committee members attended several meetings with the project staff, and provided valuable information that greatly enhanced this report. In addition to serving as a committee member, Richard Hughes provided information from his files that allowed the reconstruction of events that occurred during the 1985 testing of the site, and helped track down artifacts from the collection.

Julia King and Edward Chaney of the Jefferson Patterson Park and Museum served as principal investigators for the project. James Harmon directed the fieldwork and laboratory analysis, and wrote this report. The field and lab work was done by Cari Young-Ravenhorst (Crew Chief), Shannon Weiss, Elizabeth West, Dan Reyes, Joel Tyberg, Michael Conner, and Amy Porter. Beth Goodman, a recipient of a Lockheed-Martin Science and Technology Fellowship, participated in the project's field and laboratory work in order to develop a mathematics curriculum unit for 8th grade students.

Other members of the archaeological community who contributed valuable advice or other input into the project include: Maureen Kavanagh and Dennis Curry of the Maryland Historical Trust, Julie Earnstein and Mark Leone of the Anthropology Department of the University of

Maryland, College Park, Anne Turkos of the University of Maryland Libraries Department of Archives and Manuscripts, Silas Hurry of Historic St. Mary's City, Esther Doyle Read of the Baltimore Center for Urban Archaeology, and Al Luckenbach, the Anne Arundel County Archaeologist.

Finally, the assistance of Calvert Posey, who discovered the site, with both the planning and implementation of this investigation is gratefully acknowledged. Mr. Posey visited the site with the project archaeologist in August 1995, and at that time discussed its dimensions and layout. Mr. Posey returned to the site in July 1996 to comment on the on-going field work. His assistance enhanced our understanding of the site that bears his name.

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Section 1: Introduction

This report presents the results of an archaeological investigation conducted pursuant to a scope of work prepared by the Southern Maryland Regional Center of the Maryland Historical Trust at Jefferson Patterson Park and Museum (King 1995; see Appendix A). The subjects of the investigation were two archaeological sites located on the north shore of Mattawoman Creek aboard the Indian Head Division, Naval Surface Warfare Center (IHDIVNAVSURFWARCEN) in Charles County, Maryland (Figure 1). The sites, designated the Posey Site (18CH281) and 18CH282, were recorded during a 1985 investigation designed to locate potentially significant archaeological deposits aboard the Navy facility (Barse 1985).

The 1996 project had several goals, including the identification of temporal and spatial boundaries at both sites, the interpretation of site-specific activities, and, if possible, the comparison of early and later period deposits within the sites. A collection of artifacts in the possession of Mr. Calvert Posey, who originally discovered the Posey Site, was to be inventoried, if possible. Finally, the reputed location of a nearby ossuary or cemetery was to be tested. The scope of work for the project also stipulated the collection of core samples from Mattawoman Creek adjacent to the site.

The present project began on January 15, 1996. Investigations began with a re-analysis of the collections from the 1985 investigation of the Posey Site and 18CH282. Additional background research to aid in the interpretation of the 1985 collection, in planning for the current investigation, and in interpretation of the total assemblage was also undertaken. Fieldwork was performed between May 29 and August 6, 1996. Core samples from Mattawoman Creek were collected for analysis September 5, 1996, and faunal samples were analyzed in 1997.

The project was conducted under the direction of Julia A. King and Edward E. Chaney. James M. Harmon served as the project director. Artifacts, photographs, and other field and laboratory documentation are presently curated by the Maryland Historical Trust's Maryland Archaeological Conservation Laboratory through a formal agreement with the Indian Head Division, Naval Surface Warfare Center.

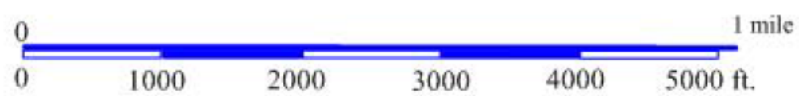


Figure 1. Site Location (Indian Head Quadrangle, Maryland-Virginia, 7.5 minute series).

Section 2: Project Area Description

The project area for this investigation consisted of a limited portion of a terrace adjacent to the northern shore of Mattawoman Creek aboard the Indian Head Division, Naval Surface Warfare Center in Charles County, Maryland (Figure 1). The initial project location was determined by the extent of the then-known boundaries of the Posey Site, while the eventual extent of the area was defined through shovel test pit excavation (Figure 2). In all, 4.012 hectares (9.89 acres) were included in this investigation.

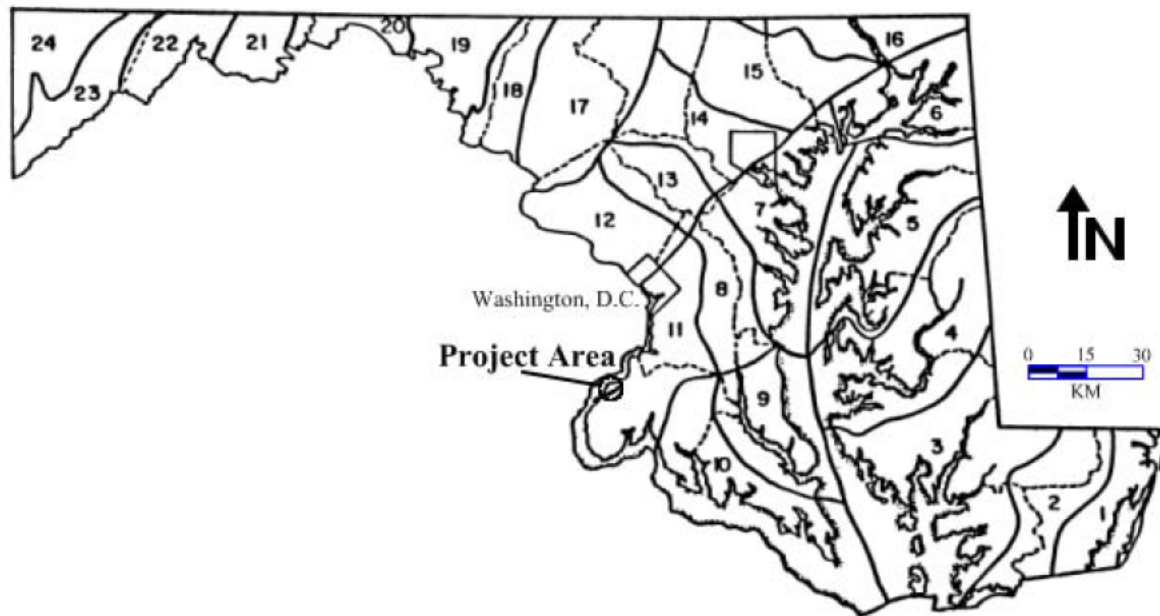
The project area lies approximately 45 miles southwest of Annapolis and 25 miles south of Washington D.C., in rural southern Maryland (Figure 3). The portion of the Naval Surface Warfare Center that contains the site is located on Mattawoman Neck, a peninsula bounded on the north by the Potomac River, on the south by the northern shore of Mattawoman Creek, and on the east by a property line that separates the Naval Surface Warfare Center from the town of Indian Head. [REDACTED]

[REDACTED]

The terrace that contains the site is relatively level, with elevations ranging between 9.33 and 10.46 meters above mean sea level. Overall, the landform slopes gently south toward Mattawoman Creek. Natural topographic relief within the site was originally very limited. [REDACTED]



Figure 2: Site Area Showing 1996 Excavation Units and Core Area.



MARYLAND ARCHAEOLOGICAL RESEARCH UNITS

COASTAL PLAIN PROVINCE

- Unit 1 - Atlantic Drainage
- Unit 2 - Pocomoke Drainage
- Unit 3 - Nanticoke-Wicomico-Manokin-Big Annemessex Drainages
- Unit 4 - Choptank Drainage
- Unit 5 - Chester River - Eastern Bay Drainages
- Unit 6 - Sassafras-Elk-Northeast-Bush-Susquehanna Drainages
- Unit 7 - Gunpowder-Middle-Back-Patapsco-Magothy-Severn-South-Rhode-West Drainages
- Unit 8 - Riverine Patuxent Drainage
- Unit 9 - Estuarine Patuxent Drainage
- Unit 10 - Estuarine Potomac Drainage
- Unit 11 - Riverine Potomac Drainage

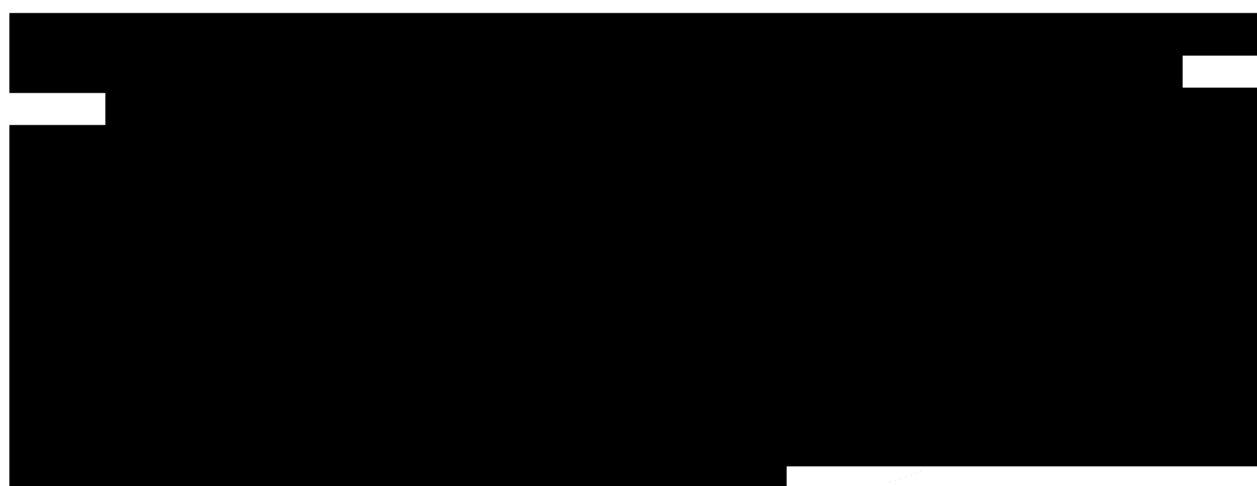
PIEDMONT PROVINCE

- Unit 12 - Potomac Drainage
- Unit 13 - Patuxent Drainage
- Unit 14 - Patapsco-Back-Middle Drainages
- Unit 15 - Gunpowder-Bush Drainages
- Unit 16 - Susquehanna-Elk-Northeast Drainages
- Unit 17 - Monocacy Drainage

APPALACHIAN PROVINCE

- Unit 18 - Catoctin Creek Drainage
- Unit 19 - Antietam Creek-Conococheague Creek Drainages
- Unit 20 - Licking Creek-Tonoloway Creek-Fifteenmile Creek Drainages
- Unit 21 - Town Creek Drainage
- Unit 22 - Evitts Creek-Georges Creek Drainages
- Unit 23 - Potomac-Savage Drainages
- Unit 24 - Youghiogheny-Casselman Drainages

Figure 3. Maryland Archaeological Research Units.

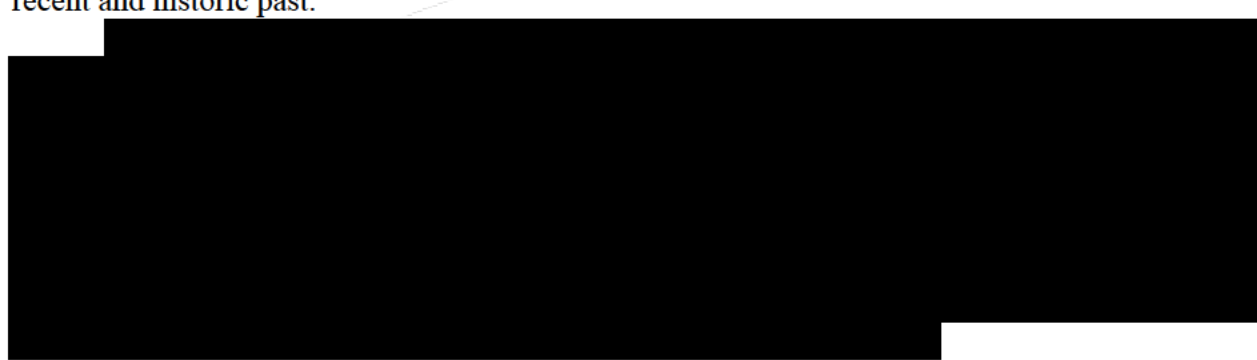


The Posey Site is located within the western shore subdivision of the Coastal Plain physiographic province (Figure 3). The terrace on which the site is situated is comprised of relatively unconsolidated sediments of both marine and alluvial origin. The sediment layers that comprise the current surface are of Pleistocene and Holocene origin, but underlying material, consisting of unconsolidated sand, clay, and gravels, are of older Cretaceous origin (Vokes 1966).

The soil at the project area is Matawan Loamy Sand (Ms), part of the Evesboro-Keyport-Elkton Association (Figure 4). Hall and Matthews (1974:26) describe Matawan Loamy Sand as:

...soils that are nearly level to gently sloping, moderately well drained to well drained, and deep. They have a thick sandy surface layer and a clayey subsoil through which water moves slowly. These soils are formed on uplands in a sandy mantle over loamy sediment...

In a representative profile, the surface layer, about 19 inches thick, is loamy sand. The upper layer of subsoil, about 8 inches thick, is light yellowish-brown, firm sandy clay loam. The soils within the project area generally conform with this description. They have been modified, however, by human activity that includes plowing and the construction of roads and buildings in both the recent and historic past.



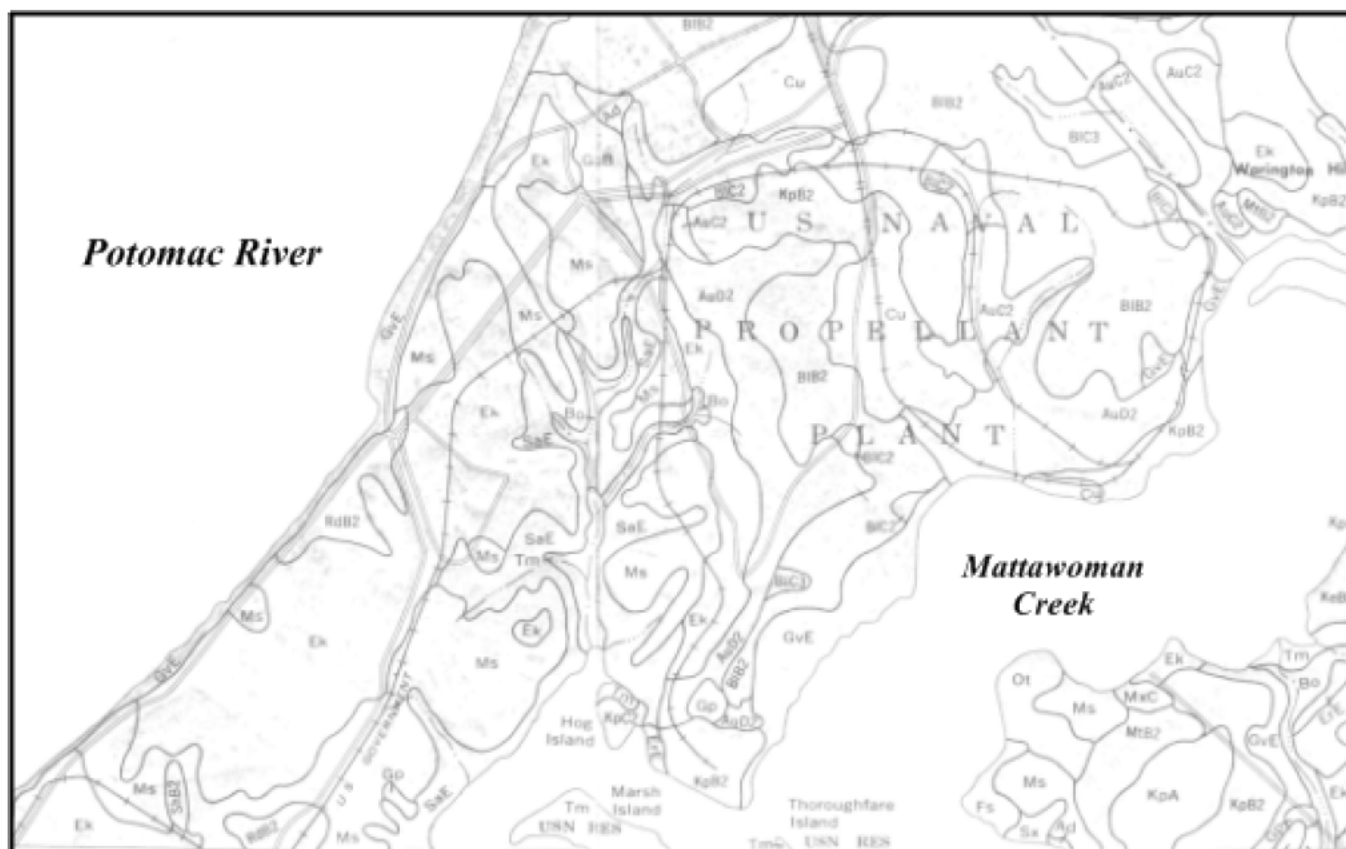


Figure 4: Site soils (Hall and Matthews 1974:sheet 6).

[REDACTED]

The Potomac River at the mouth of Mattawoman Creek is located in the tidal freshwater zone throughout much of the year, although salinity levels may reach 0.5 parts per thousand (tidal fresh-oligohaline transition) between June and September (Lippson et al. 1979:36). Both the Potomac River and Mattawoman Creek are influenced by tidal flows at points adjacent to the Posey Site.

The vegetation in the vicinity of the project area has been greatly impacted by human activities. The history of intensive agricultural use of the Mattawoman Neck has resulted in several cycles of vegetation change since Late Woodland times. At present, the core area of the site is located near a small stand of oak and walnut trees with trunk diameters ranging from approximately 15 to 50 cms (Figure 2). A lawn surrounds this area, and taller grasses and some low forbs are present to the west and north of the site. Areas to the east, southeast, and south of the site are covered by dense stands of oak and pine trees interspersed with areas of brush and poison ivy. The southern portion of the site is covered by a mixture of lawn areas, woodlands, and several isolated trees.

[REDACTED]

Like the flora, the riverine and terrestrial fauna of the area have been greatly impacted by human activity. Within the greater area, a diversity of mammal species are present, including beaver, fox, groundhog, muskrat, opossum, otter, rabbit, raccoon, skunk, squirrel, and white tail deer. These animals would also have been present historically, along with several others no longer endemic to the area, such as black bear. Birds naturally occurring in the area include coots, ducks, geese, other waterfowl, eagles, hawks, osprey, quail, turkey, and numerous species of songbirds. Various reptiles and amphibians are also present, as well as numerous species of fish and shellfish in surrounding waters. The salinity levels in the Potomac River and Mattawoman Creek at points adjacent to the site are too low to support the development of oyster beds; however, populations of freshwater clam and mussel species were present historically and recently in both waterways. During the course of fieldwork, groundhogs, deer, rabbits, squirrels, black rat snakes, and several avian species were observed.

Section 3: Prehistory and History of the Project Area

The prehistory and history of Mattawoman Neck and the Potomac River drainage extends from at least 10,000 years ago to the present. The archaeological materials comprising the Posey Site were deposited relatively recently, approximately 300 to 350 years ago. In order to interpret the site as part of a continuum of human occupation, however an understanding of the effects of environmental change on the area, deep prehistory, and more recent history is necessary. This section presents an overview of this information, with an emphasis on the periods immediately preceding, during, and following the occupation of the Posey Site.

Several scholars have written exhaustive overviews of the chronology and material culture for the prehistory of the Chesapeake region, southern Maryland, and the Potomac River drainage (cf. Clark 1976, 1980; Steponaitis 1983, 1986; Barse 1988; Potter 1993; Dent 1995). The published works of these authors, and several others, have been used to create an overview of local prehistory for this report. The chronological divisions developed by Steponaitis (1983) in her study of the Patuxent River drainage have been used here, with information concerning local variation in the Potomac drainage inserted where necessary. The late prehistory of the Potomac Creek complex or focus has a more direct application to interpreting the archaeological record of the Posey Site, so this period is dealt with in more detail at the end of this section.

Section 3.1: Pleistocene/Holocene Environmental Reconstruction

The environment of southern Maryland has changed dramatically since the area was first occupied by humans. These environmental changes have had a great impact on both the lifeways of those who lived in the area, and on the visibility of the archaeological record. The following section presents salient information about these climactic changes and their archaeological implications.

At the end of the Wisconsin glacial period, the Potomac River was a freshwater tributary of the Susquehanna River (Geo-Recon, International [Geo-Recon] 1981). As the climate subsequently became warmer, glaciers began to melt, and released water caused a rapid rise in sea level.

Mean sea level today is at least 340 feet higher than it was 12,000 years ago (Kraft 1977). Sea level rose at a rate of approximately 0.5 feet per century between 10,000 and 6000 B.C., and increased to 1.5 feet per century between 6000 and 2000 B.C. Sea level rise has drowned the ancestral Susquehanna River and created the Chesapeake Bay. The tributaries of the Bay, including the Potomac, were also greatly modified. The mouth of the Potomac was transformed from a free-flowing freshwater tributary into a saline estuary.

The exact timing of the establishment of brackish conditions within the lower portions of the Potomac is unknown (Geo-Recon 1981). Major changes in the assemblage of local faunal species would have coincided with the increased salinity of the lower portions of the river. Anadromous fish species moved their freshwater spawning grounds further up river as salinity increased. Oysters were probably established in the lower estuary 6000 to 8000 years ago; however, the current project area is located above portions of the river where conditions are suitable for oyster beds.

Additional effects of the transformation of the post-glacial climate were changes in terrestrial floral communities. Between 14,000 and 10,000 B.C., the mosaic grasslands of the glacial epoch were replaced with mixed coniferous forests with deciduous components. This vegetation pattern gave way to beech, birch, hemlock, and oak forests between 9000 and 7000 B.C. An oak-hickory

association dominated the period between 7000 and 4000 B.C. At the same time, increasing sea levels began to create swamp and marsh environments adjacent to the river, as Pleistocene terrace landforms continued to be inundated. Between 7000 and 2000 B.C. the forests reached their climax stage. The absence of open spaces in the forest cover resulted in a decline in deer populations, but plant and other animal food resources became more abundant and diverse. The area surrounding the present-day Naval Surface Warfare Center probably assumed its pre-Contact vegetational pattern at approximately 1000 B.C., with oak, chestnut, and hickory occurring on dry uplands and sweet gum, poplar, and maple present in lower-lying wetter areas (Barse 1988).

The implications of these climactic and sea level changes for the archaeological record are several. Sea level rise through time has resulted in the inundation of numerous archaeological sites. Although sites may be preserved under sediment deposits, they are currently unavailable for research, and will remain so indefinitely. The scouring effects of rising water may also have effectively destroyed such archaeological deposits without burying them.

Geomorphic transformation of the Potomac River valley has not been the only effect of sea level rise. The resultant increase in salinity in the lower portion of the river changed the patterns of anadromous fish runs and also had an effect on the spatial distributions of brackish and freshwater species such as turtles, clams, and mussels. Although environmental changes cannot be identified as the only causal factors in cultural changes, there is significant correlation between environmental change and human adaptation (Carbone 1976). The availability of a diversity of new food resources aided in the establishment and subsequent intensification of human occupation in the region through the Archaic and Woodland periods (ca. 7500 B.C. to A.D. 1600). In addition, the strong riverine orientation of these cultures was, at least in part, a response to the changes in resources available for exploitation.

Section 3.2: Paleo-Indian Period

The earliest evidence of human occupation in the Middle Atlantic consists of artifacts and sites associated with the Paleo-Indian Period, defined by Steponaitis (1983) as extending from 9000 to 7500 years B.C. (Table 1). Reconstructions of the settlement pattern of the Paleo-Indians that occupied the Middle Atlantic suggest that they moved inland from the coast, and then back, exploiting seasonally available resources. This mobile food procurement strategy--the "seasonal round"--centered on periodic occupation of base camps associated with quarries of high quality cryptocrystalline lithic materials. Although the exploitation of these high quality materials from primary sources has often been considered a hallmark of Paleo-Indian occupation, secondary, or cobble, lithic sources were utilized in Talbot County on the Eastern Shore of Maryland for the production of Clovis points and other Paleo-Indian tool types (Lowery 1989). Pleistocene megafauna has traditionally been considered the primary food resource utilized by the Paleo-Indians. More recent work has suggested that the Paleo-Indians exploited a wider range of resources, particularly deer and elk, as well as plant and riverine foods (McNett 1985; Barse 1988).

The primary diagnostic artifact of the Paleo-Indian Period is the fluted projectile point. These points are characterized by the presence of medial flake removals from the basal area, or

Period	Time Range	Diagnostic Artifacts
Paleo-Indian	9000-7500 B.C.	Clovis Fluted Middle Paleo-Fluted Hardaway
Early Archaic	7500-6000 B.C.	Palmer Corner-Notched Kirk Corner-Notched Kirk Stemmed LeCroy Kanawah St. Albans Side-Notched
Middle Archaic	6000-4000 B.C.	Stanly Stemmed Neville Morrow Mountain Guilford
Late Archaic	4000-1000 B.C.	Piscataway Otter Creek Brewerton Holmes Savannah River Koens-Crispin Perkiomen Susquehanna Orient
Early Woodland	1000 B.C. – A.D. 200	Calvert Points Marcey Creek Ceramics Dames Quarter Ceramics Accokeek Ceramics
Middle Woodland	A.D. 200 – 1000	Rossville Selby Bay Pope's Creek Ceramics Mockley Ceramics
Late Woodland	A.D. 1000 – 1600	Jack's Reef Levanna Madison Townsend Ceramics Rappahannock Ceramics Potomac Creek Ceramics

Table 1: Prehistoric Periods Chronology (after Steponaitis 1983)

flutes. A variety of these point types have been located within the continental United States. The most common of these types is termed the Clovis, a lanceolate form with the diagnostic flake removals at the base. Dalton and Hardaway points are other fluted point types diagnostic of the latter

portion of the Paleo-Indian Period. Although the research of Steponaitis (1986) indicates that most presently-known Paleo-Indian sites lie in fresh water zones of the upper riverine regions of the Chesapeake, little evidence of Paleo-Indian occupation has been discovered in the immediate area of the Posey Site. The recently discovered Higgins site in Anne Arundel County is the first intact Paleo-Indian site to be excavated on Maryland's Western Shore (Ebright 1992).

The primary evidence for any Paleo-Indian occupation within the coastal plain of Maryland and the rest of the Middle Atlantic region consists of surface finds of fluted projectile points. By 1982, a total of 57 fluted points had been reported from Maryland; archaeological investigations and collecting since then has undoubtedly increased this number (AENA 1982). Wanser (1982:6) observed six Paleo-Indian points that had been recovered from four sites in the vicinity of Zekiah Swamp in southern Charles County. Barse's (1985:25-26) summary of the National Museum of Natural History collections reports the presence of a single small fluted point of greenish-gray chert from the Naval Surface Warfare Center, found at Bullit Neck on the southern bank of Mattawoman Creek. It is unknown whether this particular point was included in Wanser's (1982) summary.

It is probable that evidence for occupation within the current coastal plain is limited due to rising sea level following the end of the Wisconsin glaciation, which has inundated much of the former shoreline, a geographic zone considered to have good potential for containing Paleo-Indian sites. In addition, the low population densities that characterized the Paleo-Indian Period, and the long passage of time since these occupations, has most likely resulted in the deposition and subsequent recovery of few durable artifacts.

Section 3.3: Archaic Period

Aboriginal cultures on Maryland's coastal plain are well-documented archaeologically for the Archaic Period—approximately 7500 B.C. to 1000 B.C.—when boreal forests replaced grassland environments in the region. While it is assumed that Early Archaic groups followed a seasonal round of hunting, fishing, and gathering activities typical to hunter-gatherers, the advent of the Archaic Period is marked by a wide-spread diversification in the types of tools present within the aboriginal tool kit. This efflorescence in tool types is understood as evidence of the exploitation of a much wider range of both plant and animal resources as the environment moderated, following the retreat of glaciers to the north. The Archaic Period is subdivided into Early, Middle, and Late sub-periods based on changes in resource procurement strategy and diagnostic artifacts. Tool kits and resource procurement strategies changed along with the environment during this period, as humans sought new ways to effectively exploit the resources that became available through time.

The Early Archaic, defined by Steponaitis (1983) as extending from 7500 to 6000 B.C., has been characterized in the Middle Atlantic region as an extension of the preceding Paleo-Indian Period. Emphasis on the use of high quality cryptocrystalline materials and a resource procurement focus on hunting continued (Barse 1988). Decreased emphasis on high quality lithic materials toward the end of the Early Archaic indicates a shift away from a quarry-dependent seasonal round, a major change from the Paleo-Indian Period. In southern Maryland, however, this pattern seems to be reversed. Artifact collections from the Patuxent River and Zekiah Swamp show a reliance on local materials, particularly quartz and quartzite, throughout the Early Archaic. However, by the end of the period, non-local rhyolite is predominant (Wanser 1982:82). The absence of quarries in the area probably accounts for the southern Maryland pattern. The increased use of non-local stone at the end of the period may indicate a developing trade network. Artifacts diagnostic of the Early

Archaic in southern Maryland include corner notched projectile points, with some stemmed and bifurcate based points appearing toward the end of the period. With the exception of the Zekiah Swamp area, relatively few sites from this period have been discovered in Southern Maryland, probably as a result of small population sizes and the rise in sea level (Wanser 1982:82).

The Middle Archaic Period, defined by Steponaitis as extending from 6000 to 4000 years B.C., was a time of continuing diversification in resources utilized, the beginning of a shift toward a marine or riverine orientation, with the attendant increasing importance of gathered plant foods. These changes in aboriginal lifeways are evidenced by the appearance of tools for processing these food types. Middle Archaic occupations and adaptations are poorly understood in southern Maryland, primarily because there has been little systematic excavation of sites dating to this period.

The Late Archaic has been defined as that period between 4000 to 1000 B.C. A wide range of resources originating in a variety of environments was utilized by the Late Archaic peoples in southern Maryland. The development of a focus on the exploitation of marine resources, including both shellfish and littoral species, may account for the increase in population density that occurred during this period.

A high number of Late Archaic sites have been documented within the systematically surveyed portions of Charles County. These sites are concentrated in an approximately one kilometer strip adjacent to major waterways in the county (Maureen Kavanagh, personal communication, 1996). In general, Late Archaic sites in the Potomac drainage are more common in the northern riverine sections than in the southern estuarine portions. This is probably due to the continued rise in sea level over the last 3000 years. Base camps located in rich environmental zones along the rivers and contemporary interior seasonal camps for the procurement of varied resources have been found in southern Maryland (Wilke and Thompson 1977:22).

Artifacts diagnostic of the Late Archaic consist of a relatively wide variety of projectile points. Three basic traditions are present. These are the Piedmont, the more northerly Laurentian, and the BROADSPEAR traditions. Piedmont points are long, narrow bladed forms with weakly contracting stems. Local varieties include the Holmes and Orient Fishtail. The notched Laurentian types include Otter Creek and Brewerton points. Local varieties of the BROADSPEAR tradition include Perkiomen, Susquehanna, and Savannah River points. Another diagnostic trait of the latter portion of the Late or Terminal Archaic is the manufacture and use of ground steatite bowls. A rise in population and the exploitation of a wider range of seasonally available resources may have made the development of this storage technology necessary. These vessels are a precursor of the ceramic technology that is the archaeological signature of the later Woodland periods.

Section 3.4: Woodland Period

The development and widespread use of ceramic technology is the primary marker for definition of the Woodland Period. This period is also marked by increasing sedentism and the development of horticulture. Like the Archaic Period, the Woodland has been sub-divided into Early, Middle, and Late, based on changes in ceramics and other artifacts that reflect shifts in resource procurement and settlement patterns. The Early Woodland Period has been defined as extending from 1000 B.C. to 400 B.C., the Middle Woodland from 400 B.C. to A.D. 900, and the Late Woodland from A.D. 900 to European contact in the 16th and 17th centuries (Steponaitis 1983, 1986).

The appearance of ceramic technology marks the advent of the Woodland Period. The earliest ceramic vessels appear to be the successors to the ground and carved lug-handled, flat-bottomed steatite forms that were manufactured during the terminal portion of the Archaic Period. Early Woodland ceramic types, designated Marcey Creek and Seldon Island within the project region, were tempered with fragments of crushed or ground steatite (Stewart 1982). Accokeek and Popes Creek ceramics, though probably somewhat later in time, are common on Early to Middle Woodland sites in the vicinity of the Posey Site (Steponaitis 1983). A distinguishing characteristic of the two wares is surface treatment: Accokeek ware is usually cord-impressed, while Popes Creek is net-impressed. Both are tempered with coarse sand or quartz grit (Egloff and Potter 1982). Projectile point types diagnostic of the transition from the Late Archaic to the Early Woodland include Orient Fishtail varieties and stemmed Calvert points.

The Middle and Late Woodland tradition along the coastal plain and upland forests came to be marked by a diversified hunting and gathering economy, made possible by the increasingly more complex riverine environment of the Chesapeake Bay. Trapping fresh and salt water fish, hunting small mammals, the development of corn horticulture, and gathering other plant resources were all part of the subsistence patterns of Woodland peoples. By the Late Woodland Period (A.D. 900 to contact), this increasingly diversified food procurement strategy was accompanied by settlement in large, permanent and semi-permanent stockaded villages (Wilke and Thompson 1977:23). Two such sites, Moyaone and the Potomac Creek Site, are located in relatively close proximity to the Naval Surface Warfare Center (Potter 1993:120). Artifacts diagnostic of Late Woodland culture in southern Maryland consist of Townsend and Potomac Creek ceramics and triangular projectile points that were often manufactured from quartz pebbles (Reeve et al. 1991). The changes in projectile point technology from the Early/Middle Woodland Period to the Late Woodland are considered to be related to a shift to the use of the bow and arrow.

Lithic industry within the Late Woodland Period is often characterized by the use of locally available secondary source materials deposited in gravel beds. These materials are often exposed in river banks, alluvial beach deposits, and similar environments. Quartz and quartzite dominate many assemblages, but jasper and cherts are also utilized. Artifacts include a variety of projectile point types, with triangular projectile points most common in the Late Woodland, and a wide range of retouched pebble and flake tool forms.

Section 3.5: Piscataway/Potomac Creek Overview

By approximately 1300 A.D., people associated with the emergent Potomac Creek culture were settling on the coastal plain portions of the Potomac River drainage. Although there are several theories concerning the development of the Potomac Creek culture in this area, most scholars believe that it began to develop in the Potomac Piedmont between 900 and 1300 A.D. The developing culture from that time period is currently known as the Montgomery Complex, the defining characteristic of which is the manufacture and use of a cord-marked, grit-tempered ceramic known as Shepard Cord Marked. Other material culture associated with the complex includes medium size triangular projectile points of rhyolite, quartz, or chert. Evidence of a relatively elaborate bone tool industry that included awls, fishhooks, beamers, and other tools has been recovered from sites where preservation conditions were good (Clark 1980:10-14).

Villages of the Montgomery Complex people in the Potomac Piedmont were abandoned by c. 1350 A.D. A series of movements by the Monangahela, Luray, and Mason Island cultures appear to

have pushed the Montgomery Complex people out onto the coastal plain, where they in turn displaced peoples of the Rappahannock Complex, makers of the shell-tempered ceramic of the Townsend Series (Potter 1993:132).

The distinguishing characteristic of Potomac Creek sites on the coastal plain is the presence of Potomac Creek ceramics (Potter 1993:123). This ware was first defined by William Henry Holmes in 1903, and is described as a quartz grit or medium sand-tempered, compact, hard-pasted ware. Vessels are coil constructed, have cord-marked or plain exteriors, and range from small to large in size (Egloff and Potter 1982:112). Other artifact types frequently recovered from Potomac Creek sites include fragments of roulette-decorated smoking pipes and triangular projectile points of quartz, quartzite, or other locally available pebble materials; however, these are not exclusive Potomac Creek traits (Stewart 1989:56-67; Potter 1993:122).

At least two large palisaded villages were established after the arrival of the Potomac Creek people in the coastal plain region. They were located at Accokeek on the northern shore of the Potomac River, and at Potomac Creek on the southern shore (Potter 1993:132). Increasing populations of Native Americans throughout the region may have led to competition and inter-tribal hostility in the period after 1300 A.D. The presence of nucleated settlements and palisaded villages in the period preceding European contact suggests a continuing need for defensive fortifications throughout the remainder of the Late Woodland Period (Clark 1980:20). It is apparent, however, that only the larger or more important villages, or those along cultural borders, were palisaded (Potter 1993:174).

The descriptions of the villages of Native Americans taken from early English accounts vary greatly, but generally villages of the Late Woodland peoples appear to have ranged in size from 12 to over 25 houses (Figure 5). The fortified settlements were usually stockaded with earthfast posts, and the houses were arbor-like structures built of poles sunk into the ground and covered in bark or thatch. Archaeologists believe that the village locations were occasionally moved, due to agricultural practices that depleted the soils after several years of use. Despite the benefits of the sporadic burning of trees that was intended to clear land for agriculture, and the combined planting of corn and legumes, the lack of regular fertilization eventually left soils unproductive (Potter 1993:23-42). Other factors contributing to village movement included the exhaustion of local sources of fauna, wood, and other plants through intensive gathering and hunting in a limited catchment area around a settlement.

These semi-permanent villages served as base camps, and were only part of a settlement pattern that included the dispersal of residents throughout the year to take advantage of the changing flora and fauna. John Smith noted that at different times in the year the villages were all but deserted. He noted that in early fall, before the big hunts, the villages were the center of social activity, but later were vacated as people went inland in the late fall to hunt deer. The villages were also occupied sporadically during the spring and early fall when the focus of resource procurement shifted to nearby riverine environments. During late winter and early spring the villages were repopulated as people prepared agricultural fields (Potter 1993:40-43). While Native Americans took advantage of

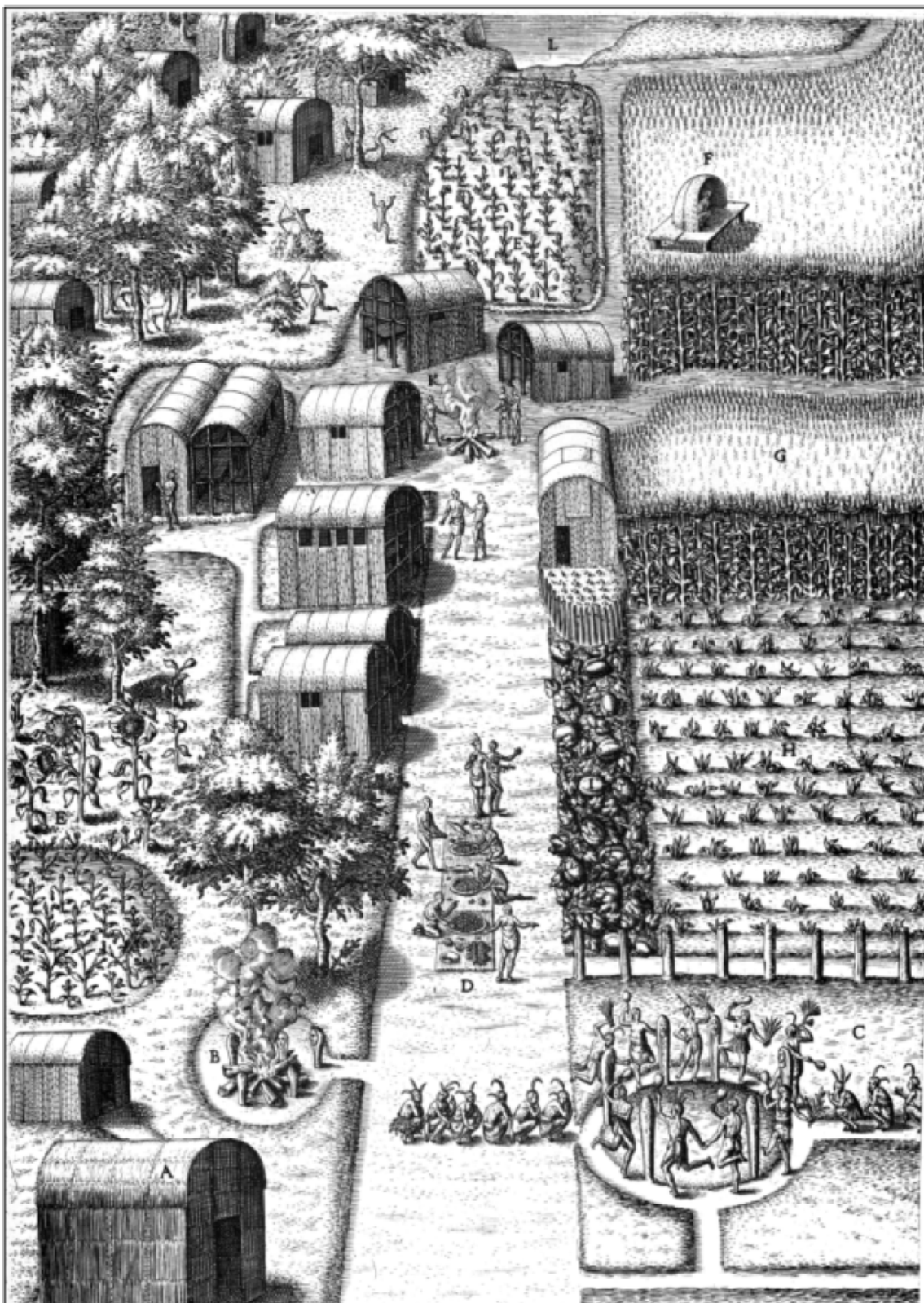


Figure 5. White's Drawing of Secotan (Harriot 1972 [1590]:69).

natural resources by moving their camps to follow the seasonal round of food sources, these moves also allowed local biological resources to regenerate.

The Native Americans who lived in the coastal plain portion of the Potomac drainage had a complex society, socially and economically organized into kin-based bands, which in turn were loosely organized into confederations at the time of European contact (Potter 1993: Introduction; see also Clark and Rountree 1993:112-116). Scholars believe that, by 1608, the Native American groups who lived north of the Potomac were organized into about ten petty chiefdoms. Of these groups, the Piscataway, Anacostank, Mattawoman, Nanjemoy, and Portobacos were further organized into a paramount chiefdom headed by the Piscataways (Clark and Rountree 1993:115). The Paramount Chief or leader of this group was known as the Tayac, and as many as 13 of these leaders had governed the group by the 1630s. Subunits or petty chiefdoms were governed by Werowances. The people within this group of petty chiefdoms were called the Piscataways by the English colonists, and the Conoy by the Iroquois. The current project area is located within the traditional territory of the Mattawoman, as identified by Clark and Rountree (1993:114).

Several of the component groups of the Piscataway, including the Mattawoman, retained some control of their territories through the 1690s, while the groups further to the south and east were rapidly displaced from their traditional territories under pressure from the newly-settled Maryland English (Clark and Rountree 1993:113). English colonial desire for farm land ultimately pushed Native Americans into small reservations, away from the most fertile soils of the Chesapeake.

Estimates of the population of the Piscataway Paramount Chiefdom at the time the Maryland colony was founded in 1634 are as high as 3400 individuals (Cissna 1986:52). The distance between the new settlement at St Mary's City and the center of Piscataway population further up the Potomac helped the Piscataway avoid contiguous settlement with the English for several decades (Merrell 1979:555), thus slowing declines in both the amount of land remaining under Native American control and in their population.

Although this lack of directly contiguous settlement in the second and third quarters of the 17th century did slow the decline in population and loss of land by the Piscataway, they were eventually subject to both. Several scholars have dated the eventual disappearance of the Piscataway from Maryland to 1697, when the last of them supposedly left the colony and settled in the "woods" of Virginia (Marye 1935:230-232; Ferguson 1937:41). These refugees returned to Maryland for a brief period in 1700, but soon left the colony again on a migration that led eventually to Otsiningo on the Chenango River near Birmingham, New York by 1758 (Feest 1978: 246). The George Williams case discussed below indicates that not all of the Native Americans who lived in Charles County left with the Piscataway in 1697. They apparently were not recognized as an independent political unit after this time, but at least some Native American populations survived in the county from the 18th century onwards.

The survival of these Native American groups in Charles County has been the subject of repeated sociological research efforts from the late 19th century to the present. Research conducted prior to 1960 by Thomas J. Harte on the origins of the Brandywine or Wesorts populations in southern Maryland, concluded--through the use of census, parish, and other documentary records--that "with reasonable certainty they originated in Charles County, Maryland prior to 1778" (Porter 1980:44). A survey conducted by James Mooney of the Smithsonian Institution in 1898 indicated that a "remarkable" number of local groups of Native American origin were present throughout

southern Maryland at that time (Porter 1980:42). These populations were characterized as tri-racial isolates. Occupation of marginal lands has been cited as a survival strategy among these groups, as well as endogamous marriage practiced by a core group of families through time. A strong sense of identity as other than African-American or Caucasian has also been defined as a social characteristic of these groups that enabled survival as a cultural unit (Gilbert 1945, 1946; Harte 1963). A group of the Piscataway remaining in Southern Maryland filed for federal recognition of tribal status in November 1995. One condition of recognition will be the ability of the applicant group to prove direct descent from the aboriginal Piscataway.

Section 3.6 Post-Contact History

The first Europeans to explore the Chesapeake Bay arrived sometime in the first half of the 16th century. Spanish cartographers mapped portions of the bay as the Bahia de Santa Maria as early as the first quarter of the century (Dent 1995:260). Another Spanish voyage of discovery took place around 1570, taking as prisoner from somewhere along the lower portions of the Chesapeake a young Native American who became known as Don Luis. English exploration of the region began as early as 1584, when ships associated with the early colonial venture at Roanoke entered the bay.

The Jamestown colony was founded on the James River in 1607. Shortly thereafter, John Smith began one of several explorations of the Bay and its tributaries. These voyages extended to include both the Potomac and the Patuxent Rivers. One culmination of Smith's explorations was his 1608 map of what was then the Virginia colony. This map included the purported locations of Native American villages on both sides of the Potomac, and indicated a commoner village across Mattawoman Creek from the Posey Site (Figure 6). This village, labeled Cinquaoteck, was denoted by a small dot, indicating a village that was not the home of a Werowance. Although the village is located in the immediate area of the Posey Site, it is clearly on the opposite side of the creek, and the archaeological data recovered from the Posey Site indicates a later occupation than the village mapped by Smith.

In the period following Smith's exploration of the bay and its tributaries, more settlers moved into Virginia and the Native American/colonial interaction in the Potomac drainage intensified. This intensification soon led to conflict, and the first Anglo-Powhatan war was fought as a series of small scale raids in the area of the James River between 1610 and 1613. By the early 1620s, conflict between settlers in the Jamestown area and the Powhatan Confederacy precipitated a series of massacres and larger battles collectively known as the Second Anglo-Powhatan War. This conflict continued throughout the decade. At least one major raid was made by the English on Native American groups associated with the Piscataway on the north side of the Potomac in 1623, following the killing of Henry Spelman and 19 other traders near present-day Washington, D.C. (Potter 1993:187). The conflict eventually ended in a negotiated peace in 1632 (Rountree 1993:190).

Although the period of time between Smith's explorations and the founding of the Maryland colony in 1634 was marked by conflict, there was concurrent development of Native American/colonial trade networks throughout the Potomac River drainage (Rountree 1993:183). This early trade was focused on the exchange of corn, but trade in furs began to develop by the late 1620s (Potter 1993:188). The nature of trade interaction along Mattawoman Creek is largely unknown; however, there is repeated documentary evidence of trade interactions along the Potomac River both above and below the mouth of Mattawoman Creek. An account of the fur trade published around 1630 references the exchange of cloth, axes, knives, and strings of beads for furs, and the

same account indicates that a large proportion of all trade goods were given away as presents to "Kings and great men" for the purpose of facilitating relations between the Native Americans and the English traders (Fleet 1989:17).



Figure 6. Section of John Smith's 1608 Map of Virginia.

Maryland was permanently settled in 1634 by English colonists under the proprietorship of Lord Baltimore. Several contemporary documents contain descriptions of the Piscataway and the events surrounding the establishment of the settlement at St. Mary's City. Noteworthy among these are Father Andrew White's "A Briefe Relation of the Voyage Unto Maryland" (1634), and the anonymous 1635 "A Relation of Maryland" (Hall 1910:25-43, 63-112). The initial portions of both of these narratives are concerned with the voyages of the *Ark* and *Dove* to Maryland with the original colonists; however, they soon turn to the negotiation between Governor Leonard Calvert and the Tayac of the Piscataway over the location of the new settlement. After some parley, Calvert asked the Tayac if he would be content to have the settlement located within his country. The Tayac replied that "that he would not bid him goe, neither would he bid him stay, but that he might use his owne discretion" (Hall 1910:72). This lack of a strong invitation may have been the result of the raids on the Piscataway during the Anglo-Powhatan War some 10 years earlier, but the precise reason is unknown. In any event, Calvert and the colonists sailed back down the Potomac, and after some further exploration with Captain Henry Fleete, selected a site for settlement on St. Mary's River, then known as St. George's River.

The site selected for the settlement was in the possession of the Yaocomacos, a semi-independent Native American group whose territory fell between the Piscataway Confederacy and the Patuxent Alliance (Clark and Rountree 1993:113-116). The land was purchased from the Yaocomaco for some "English Cloth (such as is used in trade with the Indians), axes, howes, and knives" (Hall 1910:73). The anonymous "Relation" does not specify the exact location or size of the purchase, but Father White wrote that "we bought the space of thirtie miles of ground of them," and that the King of Yoacomaco lived on the side of the river opposite the new settlement (Hall 1910:42).

Settlement of the new colony was encouraged through a system of headrights, and through the granting of manors and manorial privileges. The growing of tobacco for export to England, using a system of indentured servitude, was rapidly established as a lucrative economic enterprise. By the second half of the 17th century, in what has been termed the "yeoman's golden age," the richness of the soil and the high price of tobacco allowed a certain degree of social mobility for indentured and free alike (Carr et al. 1991). The colonists quickly moved out from St. Mary's City to settle along rivers and creeks, creating a thinly-populated landscape of farms, cleared fields, and forests. The many waterways of the region took the place of roads and served as conduits of settlement and trade. Research has revealed that 90% of known 17th-century sites in Southern Maryland lie within 5,000 feet of modern river shorelines, and that interior regions of the Chesapeake remained sparsely settled well into the 18th century (Smolek 1984). The demands of tobacco, which quickly exhaust the soil, and the cultivation methods of the colonists, which favored a system of rotating tobacco and corn followed by many years fallow, made the acquisition of large tracts of land a necessity. Within several years of the founding of the Maryland colony, the demands for land caused an outward expansion of the settled area in several directions, including north and west up the Potomac River. This movement and population growth eventually resulted in the founding of Charles County in 1658 (Walsh 1977:2). The issue of ownership and control of the land on which the Posey Site is situated is clouded by legal disputes and conflicting claims during the period the site was apparently occupied, approximately 1650 to 1700 A.D. Ownership and right to use the land was disputed into the first half of the 18th century as well.

The first application by a European for a land grant in the area was made by Thomas Cornwallis on August 8, 1636 (Patents AB&H:3). Cecil Calvert, the Second Lord Baltimore, granted 5000 acres in what would become Charles County to Cornwallis in return for "1000 pounds of wheat or other commodities with the value thereof." The land was granted with manorial rights, excluding only Royal Mines, and the rents were to be paid on the Feast of the Annunciation or the Feast of St. Michael the Archangel.

In the early years of the Maryland colony, Cornwallis was active in the fur and corn trade, but only as a sidelight to his main business as an importer of manufactured goods and an exporter of tobacco (Stone 1982:33). Cornwallis was also one of the great landowners of the early years of the colony, and he possessed several large tracts in St. Mary's County as well as other parcels in Charles County. Cornwallis had come to Maryland with the colony's founders in 1634, but returned to England several times before moving back there permanently in 1659 (Stone 1982:43; Newman 1985: 188-189).

Although the original grant of land was made to Cornwallis in 1636, it was apparently re-surveyed in 1654. In July of that year, Robert Clark, a surveyor, laid out a 5000-acre parcel for Cornwallis that included the current project area. The parcel was described as follows:

A tract of land lying on the east side of Piscataway River called Mattawoman Neck beginning at a marked ash tree in a swamp near or by an Indian Town running for breadth southeast into the woods 960 perches [15,840 feet] bounding on the east with the said southeast line on the south with a line drawn west from the end of the southeast line into a fresh run of a great creek called St. Thomas Creek and with the said fresh and creek with the said river for the length of 150 perches [2475 feet] on the north with the said river for the length of 1600 perches [26,400 feet] containing and now laid out for 5000 acres more or less. (Patents AB&H:400).

A letter from Lord Baltimore to the colony's Commissioners with the same date as the surveyor's report references the 1636 grant and reiterates its terms. However, the rent was changed to 5 lbs. sterling or 10 bushels good corn payable at the Feast of the Nativity (Patents AB&H:401).

The northern boundary of Cornwallis' grant lay in a line along the edge of the Potomac River. The point at which the metes and bounds originated is probably near an unnamed drainage north of present-day Potomac Heights and south of Chapman Point. The creek called St. Thomas' in the surveyor's report is apparently present-day Mattawoman Creek, and there are several tributaries that flow into it that could form the southern and western boundaries along with the surveyed line. The 150 perches between the fresh and creek and the said river referred to in the report corresponds to the line across Deep Point at the southern end of the Neck. This interpretation of the deed would place the Posey Site near the southeastern edge of the granted land.

Four years after the Mattawoman Neck land was surveyed for Cornwallis, approximately 400 Europeans lived in 100 households west of the Wicomico River (Walsh 1977:2). Charles County was founded in 1658 when it became too difficult for these settlers to travel to St. Mary's for court. Although the majority of colonial settlement then was in the southeastern portions of the county, it is unknown if any permanent settlements were located in the area of Mattawoman Neck.

Although the land was patented to Cornwallis in 1654, it is probable that he did not immediately occupy or begin producing tobacco on Mattawoman Neck. It is possible that he held the land purely for speculative purposes, and there is no evidence that he exercised his manorial rights through leases or other mechanisms. The Mattawoman Neck land may have been occupied by Native Americans for at least several years after ownership was granted to Cornwallis. In October 1665, Nancotamon, one of the great men of Mattawoman, came before the Council and asked what his people should do, whether they should "Remove further into the woods or to remayne upon the land where they now or lately lived" (Archives of Maryland [Archives] III:534). The Council ordered the surveying of the metes and bounds of the "ould habitations" of the Mattawoman Indians, and, in the interest of peace and safety, forbade any Englishman from taking up lands within those boundaries. It further ordered that "noe English man shall seate for the future in any place within three miles of the Indians of Charles County without expresse order of the Governor and Councell first had and obteyned upon payne of twelve months imprisonment" (Archives III:534). The exact location of the old habitations of the Mattawoman is not specified, but it is probable that at least some of this land was located in the vicinity of Mattawoman Neck.

Articles of Peace and Amity between 12 Native American groups, including the Piscataway and Mattawoman, and the English colonists were made on April 20, 1666 (Archives II:25-27). Section 10 of the articles stipulated that the "severall [nations] aforesaid shall continue upon the places where they now live," that the boundaries of their respective territories would be laid out by the Governor in the public interest, and that the Native Americans would not be forced to leave the places appointed to them by the Governor without their consent. Again, the exact location of the land on which the Native American groups lived was not specified; however, the traditional territory of the groups involved extended from at least the confluence of the Anacostia River with the Potomac on the north to the Wicomico River on the south, and inland to the Zekiah Swamp (Clark and Rountree 1993:114).

An apparent effort to clarify the boundaries of the land set aside for the Native Americans under the Articles of Peace and Amity was made in December 1668, when the Council met at St. Mary's City. At that time, Jerome White, Surveyor General of the colony, and two others were ordered to meet with the Indians in the area, lay out the metes and bounds of the reserved land, and to make a certificate of the full quantity thereof (Archives V:34-35). The council issued an order that forbade settlement of the area between the heads of Mattawoman and Piscataway Creeks until portions of the land were allotted to the Indians, and if this land was not to their satisfaction, a part of the territory on which they resided at the time of the Peace was to be reserved for their use. The area between the heads of the two creeks is substantially less than the traditional territory of the Native American groups that were involved in the 1666 Articles of Peace and Amity, but does include the current project area.

Augustine Hermann's 1670 map of Virginia and Maryland identifies the area around Mattawoman Neck as Pamunky Indian Land, and three longhouse structures are illustrated in the area northeast of the Naval Surface Warfare facility (Figure 7). The land identified as Indian Land roughly corresponds with the area described in the 1668 Council order. The portion of the Neck that contains the Posey Site was depicted as vacant. However, the Hermann map should not be taken as a literal representation of the number of Native American buildings on Mattawoman Neck, nor of their locations. It appears that Hermann was merely using the symbolic convention of three longhouses to depict any Native American lands. Another interesting aspect of the map is the presence of five

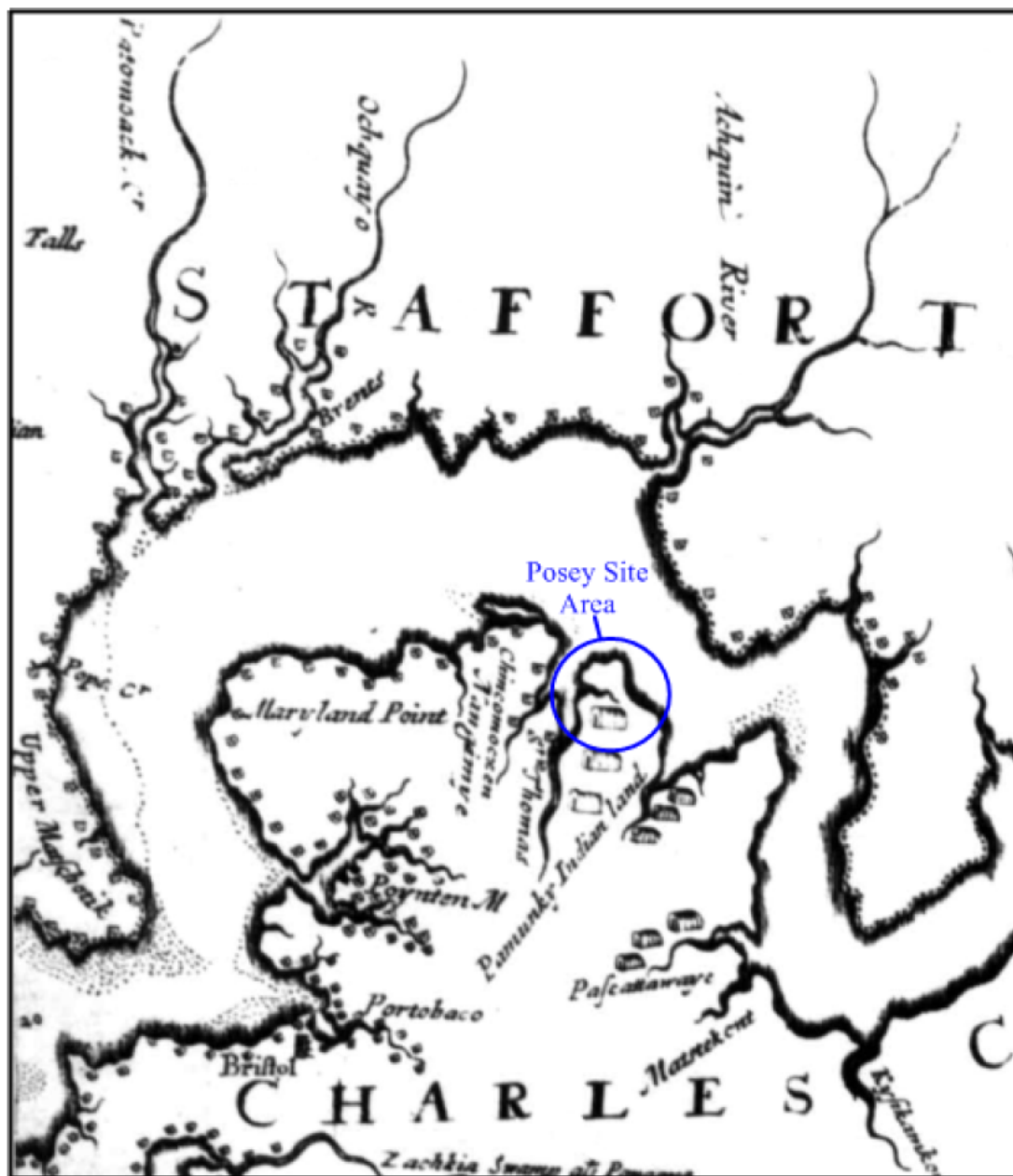


Figure 7: Section of Augustine Hermann's 1670 Map of Virginia and Maryland.

symbols representing colonial settlements on the south side of Mattawoman Creek, opposite the site area. Although these symbols may not accurately portray the location of sites, it is almost certain that there actually was some colonial settlement on the southern bank of Mattawoman Creek at the time the Posey Site was occupied.

Despite the apparent recognition of Native American claims to the land, and contemporary acknowledgment of their presence in the area, pressure on the Native American population in northern Charles County increased as European colonists continued to move into the area throughout the second half of the 17th century. The colonial population in Charles County increased steadily through the remainder of the century, reaching an estimated size of 2989 by 1704 (Walsh 1977:22).

After Thomas Cornwallis died in the late 1670s, his property, including Mattawoman Neck, was willed to his wife Penelope. In October 1688, Penelope Cornwallis sold Mattawoman Neck to Captain Edward Pye. Two deeds exist from this transaction, dating to the 19th and 20th of October (Provincial Court WRC No. 1:606, 607). The deeds vary in detail, with the document of October 20th offering considerably greater information concerning the parcel. The layout of the property as described in this deed is identical to the surveyor's report made for Cornwallis in 1654; however, the last line indicates that the land is "now in the possession of Indians". The possession of the land by Indians was apparently not considered to be an impediment to the sale, and there was also no limitation on its exchange despite the formal order of the Council in 1665 that prohibited settlement in the area by colonists. Pye purchased the land for 71 pounds lawful money (Provincial Court WRC No. 1:607).

When Charles County was established in 1658, its western boundary was defined by the Potomac River "up as high as any plantation is now seated" (Walsh 1977:2). By 1695, settlement had extended north and west far enough to warrant the establishment of Prince Georges County, and its southern boundary was defined at the southern bank of Mattawoman Creek. Mattawoman Neck and the current project area remained a part of Prince Georges County until 1748, when at the request of the county residents the Maryland Assembly voted to redraw the county boundaries and the Neck was returned to Charles County (Van Horn 1976:85).

Although Edward Pye purchased the land from Cornwallis' widow in 1688, it is unclear who occupied Mattawoman Neck for the remainder of the century. Pressure to use the land for tobacco was increasing. On August 17, 1695 it was:

Proposed that some way be found out that may occasion the seating of a certain Indian Tract of Land, scituated betwixt Pomunky and Mattawoman extending at least twenty miles upon the River of Potomock and now within the limits and boundsof Prince Georges County, therefore his Exncy does particularly Recommende (for his Mats Service) some way be found out to oblige the Indians to suffer the seating thereof, wch will occaison a greater quantity of tobacco to be made, as also advance and encourage the aforementioned New County." (Archives XX:282).

The tract described includes Mattawoman Neck. Apparently, the land was still controlled to some degree by Native Americans 41 years after the original grant to Cornwallis and seven years after it was sold to Edward Pye. However, this record is not clear about the status of Native

American occupation of the parcel. Based upon the archaeological evidence recovered from the Posey Site, it was about this time that the site was abandoned.

Edward Pye died around 1696, and the Mattawoman Neck land was willed to his son Charles (Barse 1985:17). The entire 5000 acre tract remained intact during Charles' ownership, and it was at this time that the first firmly established use of the land by tenants is indicated by documentary evidence. However, it was more than 40 years after Edward Pye's death before active leasing of portions of the property began. In the interim, there were a series of boundary disputes primarily concerned with establishing the northern extent of the tract. An initial complaint made by William Byson in 1706 resulted in the Chancery Court fixing the northern boundary of Pye's land (Chancery Court PC:5). Depositions were taken from several local residents by William Hutchinson and Robert Middleton concerning the northern boundary of the land in July of that year. Their testimony was concerned with the northern boundary of the parcel, and indicated it was near a Pomunkey Town and an island in the Potomac possibly known by the name of Mumps Island (Chancery Court PC:561).

The boundary dispute was not further recorded until the fourth Tuesday of June, 1728, when Walter Pye made a deposition concerning the beginning boundary of the Mattawoman Neck land on behalf of his brother Charles (Barse 1985). Several days later, on July 5, the Chancery Court set up a Commission to "perpetuate the memory of the bounds of the said tract" (Chancery Court M:341). The commission, consisting of George Noble, John Stewart, Peter Dent, and Thomas Marshall, was to arbitrate the dispute by notifying and examining witnesses.

The dispute was apparently inactive again until January 1735, when the commission listened to a series of depositions on behalf of Charles Pye (Chancery Court T:281-282). A total of six depositions was made, all of which concerned the northern boundary of the Mattawoman Neck parcel. The depositions indicated that the boundary was in a swampy area where there had been no clear water passage for at least 50 years, and that an island-like point of land had marked the edge of the boundary. This land was now occupied by George Mason, and was near an Indian town or an "Old Pomunkey Town." One of the deponents was John Gardiner, 80 years old, and he stated that in his 50 years of memory he did not recall any other Indian towns in the area or any Indian cabins below (south) "of this place" (the northern boundary of Mattawoman Neck). If Gardiner's memory was reliable, his deposition indicates that the Posey Site was probably abandoned by 1685 (50 years prior to the 1735 deposition), and that there may have been some colonial settlement north of Mattawoman Creek at that time.

In June 1735, Charles Pye requested a resurvey to ascertain the boundaries of the Neck and to incorporate any surpluses found to exist (Patents FF:30). The Chancery Court ordered the resurvey and authorized the incorporation of any lands whether or not they were cultivated. Along with John Gardiner's deposition, this seems to indicate the possibility of colonial settlement on land north of Mattawoman Creek prior to 1735.

Further legal issues concerning the ownership of the land had not been resolved by 1736. On April 7 of that year, the following letter from the Council clerk to Charles Pye was recorded in the Proceedings of the Council of Maryland:

"Sir, I am ordered by the Governor and Council to acquaint you that upon a complaint made to the Board by George Williams, an Indian; It is recommended that you to let him the said Indian and his family

live quietly upon the land where they are now settled..." (Archives XXVII:94-96).

Pye's reply stated that:

a certain Indian named George is set down upon a part of the said land called Mattawoman Neck under colour of the aforesaid reserve, and even within the enclosure made by the said Charles Pye, that the said Indian not only disturbs him in his possession, but marks his hogs, kills and destroys his game within the said enclosure, and encourages people who live on the other side of Mattawoman Creek to bring over their hogs and cattle to feed upon the land belonging to the said Charles Pye, and feeds and looks after the said stock in the winter for which he is paid, as also for tobacco plants which he sows and sells to them (Archives XXVII:94-96).

The exchange in the George Williams case indicates that the dispute was concerned with the legal right of Native Americans to occupy lands reserved for them at the signing of the Articles of Peace and Amity of 1666, lands that in this case had also been previously granted to Thomas Cornwallis in 1654 (Archives II:26). The issue of concern for Pye was his right to control and profit from the land, although the Council at least initially recognized that Williams had some right to live in the area. Pye's argument for removal of Williams is based upon the date of the original grant, and tangentially upon the granting of other lands within the area that had been reserved in 1666. The decline in population of Native Americans in the area and the lack of other use of portions of the reserve is also cited. The Council decided to vacate its previous directive and allow Pye his "remedy at law against the said Indian" (Archives XXVIII:96).

Considerable information as to the activities of Williams can also be collected from this record. The original complaint was made by Williams, indicating that he was familiar enough with the colonial legal system to turn to the Council for relief. Williams hunted game to some extent, although with what tools remains unknown. The accusation that Williams was marking hogs indicates that he may not have considered them solely as a resource for immediate consumption, but that they also had value as livestock. Williams was also keeping other people's livestock for pay, and in so doing participated in the developing market economy. Perhaps most significantly, he produced and sold tobacco, the staple crop which came to typify much of the Euroamerican colonial experience in the Chesapeake. This record indicates that some Native Americans were living on Mattawoman Neck until at least 1736, and were able to become familiar enough with the developing colonial system to interact in both legal and economic spheres. This evidence indicates not only the presence of Native Americans in the Mattawoman Neck area, but also points to the development of a fundamentally changed cultural system that combined both aboriginal and colonial elements by 1736.

The reason for the renewal of the boundary dispute and the initiation of the George Williams case is unknown; however, on April 9, 1737, a lease of 125 acres of land on the Neck was made by Charles Pye to his brother Edward (Patents T:452). Four months later, Pye leased 214 acres in two parcels to his brother Edward (Patents T:498). It is possible that the disputes over the land were

precipitated by planning of this new use of the property, but there is no direct evidence to support this assertion.

Charles Pye granted power of attorney to his brother Edward in October 1736 for the purpose of making leases on Mattawoman Neck, although the documents were not recorded until February 1738 (Patents T:563). Not only was Edward empowered to make leases, he was also specifically allowed to cut and sell timber from the property, collect and discharge his brother's debts, and to sell household goods if necessary. The power of attorney also specifically made all previous contracts related to timbering on the property null, which may indicate some use of the land for this purpose prior to 1736.

At least 17 leases were made on Mattawoman Neck during the period between 1737 and 1744. Each of these was made by Walter Pye under a power of attorney granted him in early 1737. The leases ranged in size between 50 and 125 acres, with the majority being 100 acres. Terms were for 1 or 2 natural lives, and rents ranged between 400 and 1000 pounds of tobacco yearly, with a fat turkey due at Christmas and several fat chickens due in midsummer. Each leaseholder was required to plant apple or quince orchards, and limits were placed on the right of tenants to cut and sell timber. Any improvements in the form of buildings and fences that were made were to be left in place at the end of the terms of each lease. As indicated above, the first of the leases was made to Charles' brother Edward, but the remainder were made to people apparently unrelated to the family.

Charles Pye owned Mattawoman Neck until his death in 1750, approximately 50 years after archaeological evidence discussed below indicates abandonment of the Posey Site. He had an enclosure on the land at least as early as 1736 (Archives XXVII:96), although his residential status is undetermined. The presence of tenants on the land is probable after 1737, when leases of farmland began to be made within the 5000 acre Mattawoman Neck parcel. The status of George Williams' residence is unclear, but Pye's apparent intention was to force him off the property after the 1736 Court decision. There is no direct evidence of Native American occupation or use of the property after this time, but the ethnicity of those who were granted leases was not recorded, and some of those who lived and worked on the Neck through the 18th and 19th century may have been Native Americans.

After Charles' death in 1750, the land was willed to his son John H. Pye. John Pye apparently continued the system of leasing portions of the property, and at least three additional leases were made in the period between 1750 and 1758. When John died in 1772, he willed the 5000 acre Mattawoman Neck parcel to his wife, three daughters, and two sons. This marked the first time that the land was broken up into smaller units, although each of the six shares were substantial. The portion of the property that became the Surface Warfare Center was divided into three parcels owned by Margaret, Ann, and Edward Joseph Pye (Barse 1985). The remaining three parcels consisted of property outside of the current boundaries of the facility. Two of these three parcels remained intact until the land was transferred to the federal government in the last years of the 19th century (Figure 8). The Posey Site is located on the portion of Mattawoman Neck that became the property of Edward Joseph Pye following John H. Pye's death.

The use of the name Indian Head in reference to the part of the Mattawoman Neck parcel on which the site is situated apparently originated sometime around the middle of the 19th century. Until that time, the Mattawoman Neck area was labeled "Indian Land" or "Indian Point" on maps that depicted it (Figures 9 and 10). The first reference to the use of the term Indian Head for the area is from a map dated 1864; however, earlier references may be extant (Figure 11). The reason for the



Figure 9: Section of Henry Moll's 1708 Map of Virginia and Maryland (Papenfuss and Coale 1982:22).



0 10 20 30 40 miles



Figure 10: Section of Dennis Griffith's 1794 Map of the State of Maryland (Papenfuss and Coale 1982:52).

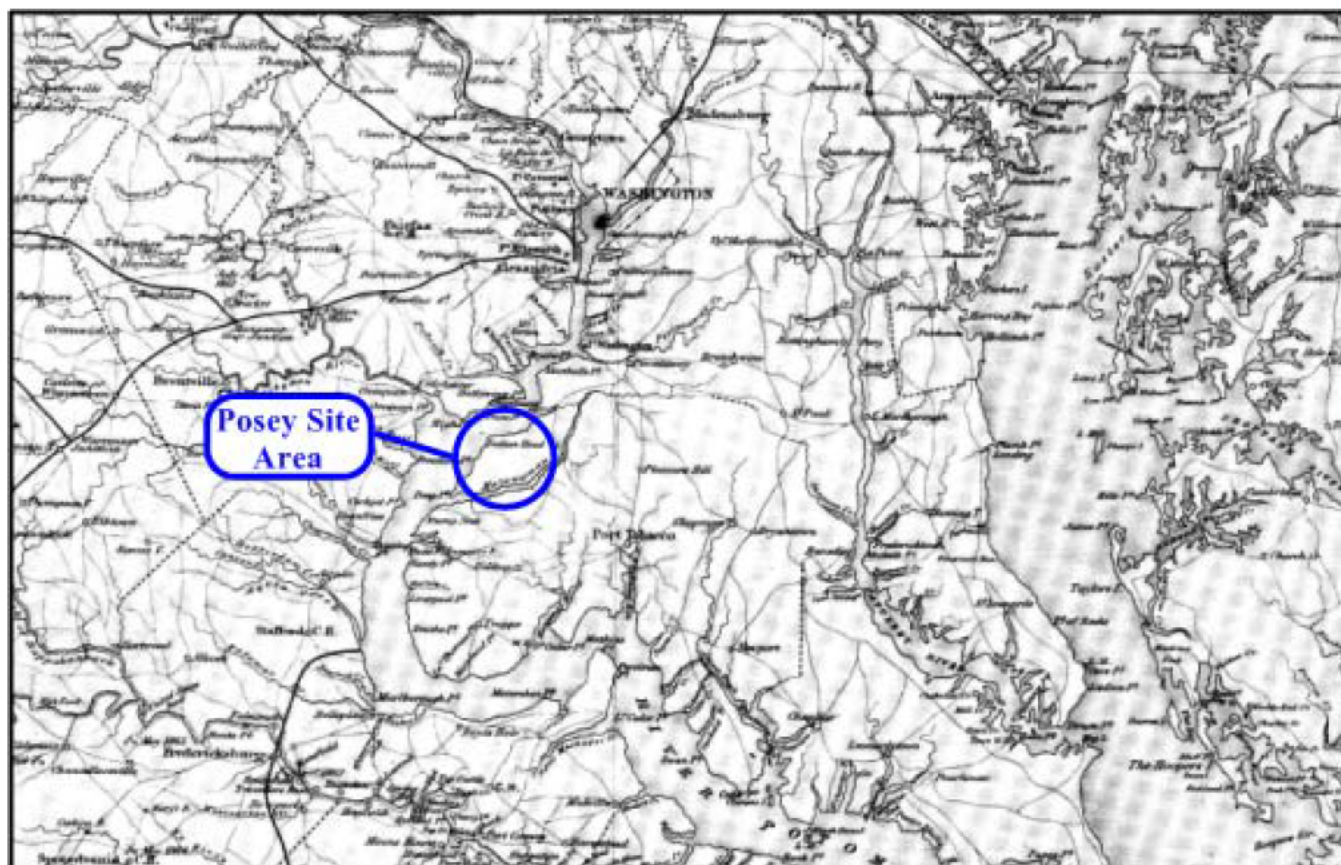


Figure 11: Section of Colonel Sir Henry James' 1864 Map of Richmond (Papenfuss and Coale 1982:76).

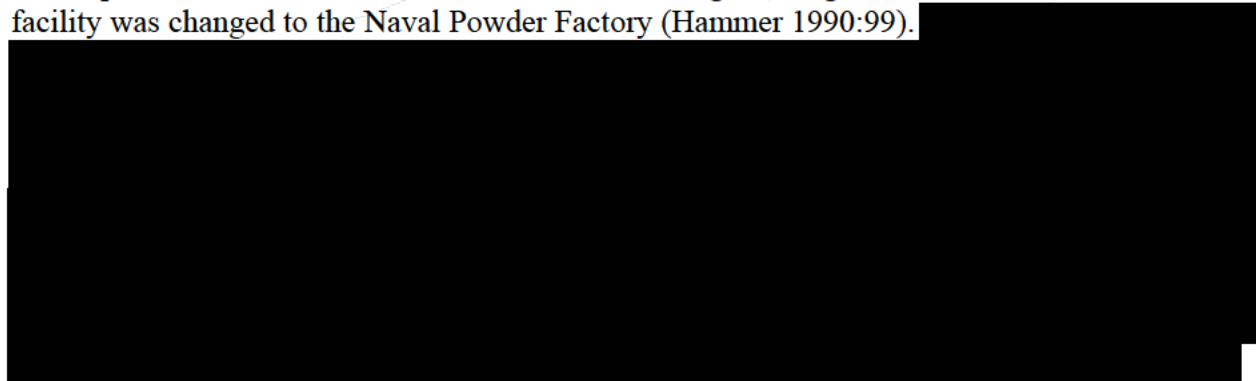
shift in name for the land is unclear, and several accounts of its origin exist. One is that the name originated after a local Algonquian chief who mounted the head of an enemy on a spear and planted it on the point as a warning to potential interlopers; another is that the shape of the landform resembles an Indian's head when seen from the air (McInnis et al. 1976:71-72). It is possible that the legal issues concerning the ownership of the land, and the known presence of Native Americans in the area until at least 1736, had an effect on the eventual name for the Neck.

The land that contains the Posey Site was known as the Hopewell Farm when it was purchased by the federal government from Adolphine Reuter on April 5, 1918 (Rogers, Golden, and Halpern, Inc. 1990:3-8). At that time, it had had a series of 13 different owners who exchanged the land either through inheritance or sale in the years after 1772 (Barse 1985). During the period up to 1918, the land was apparently farmed or left undisturbed as woodlands or pasturage.

The military facility at Indian Head was founded in 1890 by Ensign Robert B. Dashiell as a proving ground for naval ordnance. It was initially established on the Old Smoot Estate, also called Cornwallis Neck, following an initial purchase of land by the Navy on May 14, 1890 (Rogers, Golden, and Halpern, Inc. 1990:3-8). This portion of the newly established facility was located east of Hopewell Farm. By 1898, construction had begun on a smokeless powder factory, and in 1900 the first product was manufactured (Hammer 1990:96). Structures associated with the factory operation were located northeast of the Posey Site, beyond an approximately 700 acre parcel known as the Fisher tract when it was acquired by the Navy in the spring of 1918. The facility expanded rapidly in the years leading up to World War I, but experienced a major slowdown in growth after the war ended in 1918 (Davis and Edwards 1995:31).

Subsequent purchases of Deep Point Farm (June 1918 from Arundel Sand and Gravel Co), the Fisher tract (June 1918 from Mitchell and Mattingly), and 66 acres owned by S.E. Mudd (also in June 1918) allowed the Navy to consolidate its holdings on Mattawoman Neck. Hog, Thoroughfare, and Marsh Islands were also acquired between April and June 1918. The configuration of the Surface Warfare Center remained unchanged until 1955, when 12.74 acres at the northeastern edge of the facility were given to the Charles County Board of Education for the construction of a new elementary school. Several additional disposals totaling 61.37 acres, all adjacent to the elementary school, were made for school and other civic buildings in the period between 1955 and 1985. On September 11, 1985, the Surface Warfare Center achieved its current configuration on the Neck (see Figure 8).

The testing of naval ordnance was discontinued at the Indian Head facility in 1921, when those operations were moved to a safer location at Dahlgren, Virginia. At that time, the name of the facility was changed to the Naval Powder Factory (Hammer 1990:99).





Section 4: Previous Archaeological Research

[REDACTED]

The site itself was discovered by Calvert Posey in 1963. For approximately four months, Posey and several others spent their lunch hours investigating the area. They collected significant numbers of artifacts [REDACTED]

[REDACTED]

Posey wrote a short, unpublished article on the site. He reported the recovery of large numbers of artifacts that were determined to be of both European or colonial and Native American origin (Posey n.d.:3-6). Artifact types found by Posey included ceramic, metal, glass, a few beads, and flakes of flint and quartz. Numerous copper or brass fragments and triangular ornaments were recovered, and an iron blade fragment was identified as a tool used in the cutting of the ornaments from larger sheets of metal. Features reported at the site included several house patterns of an undescribed shape that measured approximately 12 by 20 feet, randomly scattered throughout the inhabited area. Larger post molds within these reported structures were approximately 4 feet apart. In addition, numerous pits containing a very dark, artifact-rich fill were observed. These were approximately 18 inches in diameter and about 30 inches deep, and were also scattered throughout the village area. An area at the eastern edge of the site was identified as the location of an Indian football field, and was marked by two shaped stones that apparently functioned as goals.

[REDACTED]

In 1985, a survey designed to locate archaeological resources was performed on portions of Mattawoman Neck within the Naval Surface Warfare Center (Barse 1985). The Posey Site and 18CH282 were tested during this project, and the majority of this section is concerned with that work. An overview of the 1985 investigations of the two sites is presented in the first part of this section. The second portion contains the results of a reanalysis of the extant collection from the sites.

Section 4.1: Overview of the 1985 Testing

Eleven units totaling 11.5 square meters were excavated at the Posey Site in 1985. Eight square meters of this excavation was placed into a single block, and the remaining three units were dispersed across the site. The exact placement of the dispersed excavation units is unknown;

however, the eight-unit block, [REDACTED] was relocated during the current investigation.

[REDACTED] Although not stated, the apparent purpose of the excavation block was to collect a sample of artifacts from the plowzone, assess the presence or absence of features on the site, and to sample identified features. In addition to the excavation units, four shovel test pits were placed randomly within the wooded areas adjacent to the block excavation. The locations of these shovel test pits were not mapped, and no artifacts were recovered from them. Barse determined the site to be approximately 75 by 40 meters across, although boundaries were not firmly established by systematic testing. The undisturbed portion of the site was reported to consist of an approximately 12 by 18 meter area in the wooded patch [REDACTED] (Barse 1985:148).

Two characteristic soil profiles were revealed in the excavation units opened at 18CH281 in 1985. The first of these consisted of an Ao horizon and plowzone over subsoil, and was present in the excavation block in the relatively undisturbed area of the site. The second profile consisted of disturbed sands over disturbed subsoils, and was located in tested areas outside of the undisturbed part of the site.

The plowzone over subsoil profile consisted of an approximately 8 cm-thick dark brown (10YR3/3) loamy sand Ao horizon over 15 cms of yellowish brown (10YR5/4) loamy sand plowzone. Underlying subsoils consisted of light yellowish brown (10YR6/4) loamy sand. No observations as to the texture or contents of these soils were reported. This profile was found to be present only within the excavation block located in the wooded patch [REDACTED], but Barse (1985:154) thought it may have extended to other undisturbed portions of the site as well.

The second profile revealed in the 1985 test units consisted of an approximately 8 cm-thick layer of dark brown to dark yellowish brown (10YR3/3 to 3/4) loamy sand over dark yellowish brown (10YR4/6) loamy sand subsoil. The upper stratum of this profile was interpreted as redeposited soil [REDACTED]. The upper portion of the subsoil was found to be slightly disturbed, but cultural features that intruded into the subsoil may have been preserved [REDACTED] (Barse 1985:154).

Barse's summary of artifacts recovered at the site was descriptive rather than quantitative. Unfortunately, the information presented in the report was based on an incomplete analysis of recovered artifacts. The artifacts were divided into material culture classes, and each class was discussed in a brief paragraph. This information will not be reiterated in detail here; however, a complete summary of the artifacts recovered during the 1985 investigation is presented in the following section.

In addition to artifacts, Barse discovered seventeen features at the Posey Site in 1985. These features were all confined to the excavation block of eight one by one meter units. The features consisted of sixteen post molds and a small pit. Figure 14 is a reproduction of the planview of the block investigation presented in the 1985 draft report.

The sixteen post molds indicated on the planview were all discovered in relatively close proximity to each other, and Barse interpreted them as probably representing the outline of a small oval or roughly circular house or other structure (Barse 1985:155). Eight of the 16 were sectioned; however, no description of the soil matrix or contents of the post molds was presented in the project report. Two small fragments of unidentified burned bone that were apparently recovered from post mold #16 were curated with the collection. The exposed post molds ranged from 12 cms to less than 5 cms in diameter, and all were exposed at the subsoil/plowzone interface between 10 and 25 cms below the ground surface. The largest of the sectioned posts (#16) extended approximately 40 cms beneath the subsoil/plowzone interface. Three of the posts extended to between 22 and 24 cms below the interface, and the remaining sectioned posts were all less than 10 cms in depth.

The small pit located in the excavation block was designated Feature 1. It was roughly circular in plan, and was located at the plowzone/subsoil interface approximately 20 cms below the ground surface, near the northwest corner of the excavation block. The feature was approximately 60 cms in diameter, and sectioning revealed a shallow basin-shaped profile that extended to 17 cms beneath the soil strata interface. A charcoal sample recovered from the pit fill yielded an accelerated radiocarbon date of 1575 +/- 90 years A.D. (Boyce and Frye 1986).

The pit contained two distinctive fill strata. The uppermost consisted of a dark yellowish brown (10YR3/4) loamy sand containing a relatively high density of artifacts and faunal material. The second stratum also consisted of dark yellowish brown (10YR5/6) loamy sand, but contained no cultural material.

Several artifacts were reported for the upper layer of pit fill. Six of the artifacts were apparently piece-plotted, and, as reported, consisted of: "1) pipe stem; 2) Potomac Creek Plain rim sherd; 3) pipe bowl fragment; 4) pipe bowl fragment; 5) small mammal bone; 6) Potomac Creek rim with two cord wrapped lines. The pipe bowl fragment, #3, and the stem, #1, are part of the same pipe" (Barse 1985: 155). Although the bone was reported as small mammal in the project report, it appears to be an unidentified bird, probably turkey (*Meleagris gallopavo*), long bone fragment. Other artifacts present within the feature, and curated with the collection, include two Potomac Creek plain body sherds, one plain undecorated pipe bowl fragment, and one quartzite primary flake. Two flat disc shell beads were also recovered from the feature, but one of these was either lost or not curated (see below).

A relatively large quantity of faunal material was reported to be present within the upper layer of feature fill. This material included 16 fragments of mammal bone, 2 fragments of bird bone, 9 fragments of reptile bone, and 22 fragments of fish bone. Identified species found within the feature included white tailed deer, mud and soft shell turtles, suckers, gar, and catfish (Clark 1985). One unidentified charred nut fragment, either hickory or walnut, was also reported to have been recovered.

Barse's (1985:158) "preferred" interpretation for the Posey Site was that it was occupied by Native Americans just prior to contact with Europeans, and it continued to be inhabited for an unknown period of time after the European settlement of Maryland. The period of occupation for the site was determined on the basis of an accelerated radiocarbon date of 1575 +/- 90 years A.D., and on the presence of Potomac Creek Plain and Camden wares, both thought to be post-Contact aboriginal ceramics (MacCord 1969; Egloff and Potter 1982). Temporally diagnostic artifacts of European or Euroamerican origin that were recovered from the site were not used for chronological

assessment purposes. Barse (1985:157) interpreted them as representing trade goods rather than evidence of colonial occupation of the site.

Barse's (1985:146-159, 211) draft report also presented a series of generalizations regarding the process of culture change as reflected in the artifacts recovered from the site. The crux of his conclusions was that the site had tremendous potential for providing unique information on the patterns of acculturation to European colonialism, as well as deculturation from the traditional aboriginal lifestyle. He further argued that several categories of material culture were in various stages of abandonment at the site, and that observed changes in ceramic decorative motif and shifts in raw material procurement strategies were primary evidence for these "devolutionary" processes. A perceived abandonment of lithic technology at the site was interpreted as evidence of the adoption of superior European materials and finished tools in a domain of male-oriented material culture. Simplification in ceramic design motif was interpreted as a breakdown in the function of design elements in the maintenance of social boundaries in a viable aboriginal society (Barse 1985:159).

The second site examined during the current investigation was designated 18CH282. This site was also recorded during the 1985 survey performed by Barse, [REDACTED]

[REDACTED] No subsurface testing was conducted at 18CH282, and Barse apparently defined the site boundaries on the basis of a low density scatter of surface artifacts. At the time, Barse (1985:160) determined that 18CH282 was independent of the Posey Site because of a drainage swale separating the two sites, but due to their close proximity, he thought that 18CH282 might represent a limited use activity area or other associated component.

Five artifacts were surface collected from 18CH282 in 1985. These artifacts consisted of two Potomac Creek Plain body sherds, a quartzite primary flake, a quartz core, and an asbestos tile fragment. The presence of the Potomac Creek Plain ceramic at the site suggests a late prehistoric origin for these artifacts, but in the absence of subsurface testing or a larger surface-collected sample no precise temporal assignment is possible. [REDACTED]

Section 4.2: Reanalysis of the 1985 Artifact Assemblage

A total of 1,523 artifacts was curated following the 1985 testing at the Posey Site. Twelve hundred eighty-nine, or 84.63%, of the artifacts in this assemblage were recovered from the eight unit block [REDACTED]. Faunal material consisting of both shell and bone was also present, with 92% recovered from the large excavation block. Table 2 summarizes all artifacts and the faunal material recovered from the entire site.

The primary constituents of the assemblage were lithic debitage and ceramics. A single bone tool and a tubular bone bead were also recovered. The bone tool was a slender, elongate, polished fragment with a hole drilled through it. The artifact may have been used as a needle, but its function remains undetermined due to its fragmentary condition. The bone bead is a segment of a bird or small mammal long bone, ground on the ends, and is currently in very friable condition. This artifact appears to have been burned either before or after deposition.

Table 3 presents a breakdown of all lithic artifacts recovered from the site. Thirty-two lithic artifacts and five fragments of fire-cracked quartzite were recovered from the three isolated units excavated at the site. Material types present within this portion of the assemblage consisted of quartz, quartzite, and chert, and 75% of the debitage consisted of either primary or secondary flakes.

Two tools, a quartzite hammerstone and a retouched quartzite pebble, were also recovered from these portions of the site.

A total of 69 lithic artifacts and 68 fragments of fire-cracked quartzite was recovered from the excavation block (see Table 3). As indicated, the majority of the debitage assemblage from this

	TYPE	BLOCK	OUTSIDE BLOCK	SITE TOTAL
ARTIFACTS	CERAMIC-VESSEL	947	100	1047
	TERRA-COTTA-PIPE	67	1	68
	WHITE CLAY-PIPE	21	5	26
	LITHIC DEBITAGE	66	30	96
	LITHIC TOOL	3	2	5
	FCR	68	5	73
	BONE/SHELL-MOD	2	0	2
	GLASS	11	0	11
	NAILS-HW-ROSE	9	2	11
	NAILS-HW-T-HEAD	1	2	3
	NAILS-HW-UID	3	5	8
	METAL-CLOTHING	4	0	4
	METAL-FURNITURE	1	0	1
	METAL-UID	17	1	18
	MORTAR	25	0	25
	BRICK	3	4	7
	SLAG	1	0	1
	SUBTOTAL	1249	157	1406
FAUNAL/	SHELL-CLAM/MUSSEL	54	7	61
FLORAL	SHELL-OYSTER	1	0	1
	SHELL-UID	11	1	12
	BONE-BIRD	20	0	20
	BONE-RODENT	2	0	2
	BONE-UID MAMMAL	560	0	560
	BONE-FISH	66	0	66
	FLORAL	14	0	14
	SUBTOTAL	728	8	736

Table 2: Artifact Summary, 1985 Investigation.

area of the site is quartz, but European flint comprises 30.4% of the total. As with the lithic material from outside the block, the debitage assemblage tends to represent either secondary stages of biface production or the production of expedient flake tools. All material appears to be of cobble or other secondary source origin, with two flint cores present.

INSIDE BLOCK										
<i>MATERIAL</i>	<i>PRI</i>	<i>SEC</i>	<i>LSC</i>	<i>TER</i>	<i>AD</i>	<i>FCR</i>	<i>TOOL</i>	<i>CORE</i>	<i>GDS</i>	<i>TOTAL</i>
QUARTZ	14	6	2	0	8	0	1	0	0	31
QUARTZITE	3	3	0	0	2	68	0	0	0	76
CHERT	2	1	2	0	1	0	0	0	0	6
FLINT	4	7	1	0	5	0	2	2	0	21
UID IGNEOUS	0	1	1	0	0	0	0	0	0	2
STEATITE	0	0	0	0	0	0	0	0	1	1
<i>TOTAL COUNT</i>	23	18	6	0	16	68	3	2	1	
BLOCK TOTAL										137
OUTSIDE BLOCK										
<i>MATERIAL</i>	<i>PRI</i>	<i>SEC</i>	<i>LSC</i>	<i>TER</i>	<i>AD</i>	<i>FCR</i>	<i>TOOL</i>	<i>CORE</i>	<i>GDS</i>	
QUARTZ	9	7	1	0	3	0	0	0	0	20
QUARTZITE	5	0	0	0	1	5	2	1	0	14
CHERT	2	1	0	0	0	0	0	0	0	3
<i>TOTAL COUNT</i>	16	8	1	0	4	5	2	1	0	
OUTSIDE BLOCK TOTAL										37
SITE TOTAL										174

Table 3: Lithic Artifacts, 1985 Investigation.

Two of the three tools recovered from the block are made from flint primary or secondary flakes. The function of these tools is unknown, but steep edge angles suggest possible scrapers. It is also possible that these tools are blanks for the production of gun flints, but a larger sample would be necessary to support this assertion. The third tool recovered from the excavation block is a triangular quartz projectile point.

A single fragment of ground steatite or soapstone was also recovered from within the excavation block. This artifact was smoothed on both surfaces, but its small size (< 1 cm) prevented identification of either form or function. In addition, a small fragment (0.2 grams) of a yellow mineral, possibly limonite, was recovered from the block. The final lithic artifact consists of a fragment of apparently unmodified mica weighing less than 0.1 gram.

Table 4 presents a typological and sherd type breakdown for all ceramic vessels recovered from the site during Barse's testing. Three ceramic wares comprise the majority of the assemblage: Potomac Creek, Yeocomico, and Camden. The Potomac Creek ware was primarily of the plain variety, although some decorated rim and body sherds were present. All Camden and Yeocomico ware present was plain. A total of 100 ceramic sherds was recovered from the portion of the Posey Site outside of the eight unit excavation block. Ninety-five of these sherds were Potomac Creek, three were Yeocomico, and two were Camden. Five (5.6%) of the 89 Potomac Creek body sherds were decorated, with cord-wrapped stick or smoothed-over cord-wrapped stick impressions. One of the three Potomac Creek rim sherds exhibited cord-wrapped stick impressions. All Camden and Yeocomico ware in this portion of the assemblage was plain or smoothed. It cannot be determined if the Yeocomico and Camden sherds are from vessels other than those in the excavation block, but a minimum of four Potomac Creek vessels are represented by the six rim sherds recovered.

INSIDE BLOCK				
	BODY	RIM	FRAG.	Total
POTOMAC CREEK	561	33	115	709
YECOMICO	149	1	23	173
CAMDEN	39	11	3	53
OTHER WARES	9	0	0	9
	758	45	141	944
OUTSIDE BLOCK				
	BODY	RIM	FRAG.	Total
POTOMAC CREEK	77	6	12	95
YECOMICO	3	0	0	3
CAMDEN	2	0	0	2
	82	6	12	100
Site Total:				1044

Table 4: Ceramic Types, 1985 Investigation.

Nine hundred thirty-five ceramic vessel sherds were recovered from the eight unit excavation block. Potomac Creek comprises 75.8% of the total assemblage from the block. Only 30, or 5%, of the Potomac Creek body sherds exhibited any surface treatment. Surface treatments present on the sherds included smoothed-over cord impressions, direct cord-marking, and cord-wrapped stick impressions. A total of 63% of the Potomac Creek rims in this portion of the assemblage has some decoration, either simple direct cord impressions or cord-wrapped stick impressions. All Yeocomico and Camden ware present exhibited smoothed or scraped surfaces.

Calculation of minimum number of vessels present for each ware type indicated the presence of 14 Potomac Creek vessels, one Yeocomico vessel, and four Camden vessels within the block. The plain variety of Potomac Creek, representing close to 75% of the total assemblage, is the dominant form of this ware by the early 17th century (Egloff and Potter 1982:112). Eight of the Potomac Creek sherds, representing two vessels, were recovered from the feature radiocarbon dated to 1575 +/- 90 years a.d. Yeocomico vessels have been dated between 1510 and 1690 A.D. on other sites in the region. The temporal advent of Camden ware is less well documented, but it was identified at the type site at approximately 1660 A.D., and continued to be produced at least through the colonial period.

The Potomac Creek, Yeocomico, and Camden wares were recovered in association with nine sherds of colonial-era origin. Types present include undecorated tin-glazed earthenware, Rhenish brown and Rhenish blue and gray stonewares, and an unglazed red coarse earthenware of probable colonial origin. In addition, a sherd of yellow glazed grey bodied stoneware was recovered from the surface of the site. Similar ceramics have been recovered on other sites in the Chesapeake region in contexts datable to approximately 1650 to 1700 A.D. (Noel Hume 1982; Miller 1983; King and Pogue 1985). A minimum of six vessels are present based upon the assignment of one vessel to each ware type present, and comparison of distinctive sherds within the coarse red earthenware category.

A total of 68 terra-cotta pipe fragments was recovered from the site. All were untempered, with a compact, smooth paste, and none showed any evidence of being produced in molds. Twenty-five of the 46 pipe bowl fragments were decorated. Twenty-four of these had fragments of roulette decoration, while one was decorated with circular punctates filled with white clay. One of the

fragments with roulette decoration is apparently a portion of an unfinished pipe either broken or abandoned in the process of manufacture. Twenty-two stem fragments were also recovered. One of these was triangular in cross section, while the remainder were round or oval. Twelve had fragmentary roulette decoration, and the others were plain or eroded.

Twenty-three white clay pipe fragments are in the collection from the 1985 investigation. These consisted of twelve undecorated bowl fragments, one bowl fragment with a section of roulette-impressed decoration, five stem fragments with no measurable diameter, three 8/64" diameter bore stem fragments, and one 7/64" diameter bore stem fragment. In addition, a single heeled bowl fragment was recovered. Although small sample size prevents definitive dating on the basis of bore diameter, the 7/64" and 8/64" diameter stems suggest a date range between 1620 and 1680. The form of the heeled pipe bowl fragment indicates an origin in the third or fourth quarter of the 17th century (Ed Chaney, personal communication, 3/1/96).

Eleven fragments of glass were also recovered from the site in 1985, all from the eight unit excavation block. The glass is heavily patinated, and no temporal or functionally diagnostic features were present on any of the fragments. Several of the fragments are curved, but whether they are part of a bottle or partially melted cannot be determined.

Twenty-two wrought nails or nail fragments were recovered in 1985. Thirteen of these artifacts were recovered from within the excavation block. Both rose and T-head types are present. Eight nail fragments without heads were also collected. A single copper alloy furniture tack with a rounded head is also present, as well as seventeen fragments of unidentified ferrous sheet metal. Four fragments of brass or copper alloy were also recovered from the site in 1985. One of these artifacts is a small, circular ribbon clinch or other clothing fastener. The remaining three are small triangular forms. One of these triangles has a hole drilled or punched through it. Although originally identified as projectile points, it is possible that these artifacts are ornaments, either made to be attached to clothing or strung as pendants. The final constituent of the metal assemblage is a single fragment of sheet lead weighing 0.45 grams.

Unmodified faunal material recovered from the site included a total of 73 shell fragments comprised primarily of clam or mussel species (total weight = 43.55 grams), although a single oyster shell valve weighing 20.9 grams was also present. Fragments of turkey, unidentified rodent, unidentified small mammal, and a single fish scale were also recovered from within the block. Identified species present in the faunal assemblage included fragments of white-tailed deer, black bear, eastern gray squirrel, eastern box turtle, and wild turkey. Non-terrestrial fauna, including suckers, catfish, and gar, were also present (Clark 1985). The faunal materials indicate resource procurement in adjacent estuarine and woodland environments. No non-indigenous fauna, domestic or otherwise, was reported by either Barse (1985) or Clark (1985).

Section 5: Research Design and Project Methodologies


The data collection effort planned for the fieldwork portion of the investigation was designed to address goals outlined in the scope of work (King 1995). The purpose of the fieldwork was to collect spatial data about the horizontal and vertical extent of the deposits that comprise the Posey Site and 18CH282, and to determine more accurately their respective periods of occupation.

The goals for the project were as follows:

1. Identify the spatial and chronological boundaries as precisely as possible at both sites;
2. Using data collected during the 1985 investigation and as part of the current project, interpret site-specific activities (e.g., refuse disposal, housing, subsistence, etc.) and their spatial and temporal locations;
3. Compare earlier period deposits with later period deposits (if determined to be present) to assess what, if any, change is evident in the archaeological record and to link this change to contemporary cultural and historical processes;
4. Test the possible cemetery area to determine if any graves are indeed present;
5. Locate and inventory a collection of materials from 18CH281 in the possession of Mr. Calvert Posey.

A substantial quantity of archaeological data was recovered from the Posey Site and 18CH282 during this project. Although the precise number of similar sites is hard to calculate in the absence of comprehensive survey coverage, there are few known parallels to the Posey Site, in terms of both age and quality of preservation, in southern Maryland. The current investigation offers a unique opportunity to construct a typological description of the material culture of the people who lived at Indian Head during the latter part of the 17th century, and this information forms the bulk of the results section presented below.

In addition to the descriptive data presented in this report, several interpretive hypotheses for the site are presented in the results section. This portion of the report was written in response to the research goals delineated in the scope of work for the investigation (King 1995). All fieldwork performed for the project was done in compliance with the revised *Guidelines for Archeological Investigations in Maryland* (Shaffer and Cole 1994). All field records, maps, and other project-related materials, including photographs, are filed at Jefferson Patterson Park and Museum in St. Leonard, Maryland. The scope of work for the project contained an overview of methods that were to be utilized during the project; the following section contains a detailed summary of all methods that were used during the course of the investigation.



Two laboratory facilities were used for the processing and analysis of artifacts and samples recovered during the project. The Naval Surface Warfare Center's Nature Center at Bullit Neck was used for processing and initial cataloging of recovered artifacts from May 29 to July 29, 1996. After the end of July, all recovered material was processed at the laboratory facilities of the Jefferson Patterson Park and Museum's Research Department.

Section 5.1: Fieldwork Methods

All shovel test pits and excavation units opened during this investigation were placed on an arbitrary cartesian grid to control horizontal provenience. A unified grid system was overlaid across the entire project area to ensure standardization of results for possible comparative analysis.

Two-foot lengths of one-half inch diameter steel reinforcing bar were used to establish two permanent datum points in the core area of the site. The first of these points, designated N400 E400, was placed [REDACTED]

[REDACTED] Grid north was defined as parallel to the axis [REDACTED], an actual angle of 296.5 degrees east of magnetic north. The second datum was placed 32 meters from the first at N432 E400. These points were left in place at the conclusion of the investigation. The location of the two datum points is depicted on the large scale topographic map attached to this report. The arbitrary baseline established by the points was used to control the horizontal provenience for all subsequent testing.

Vertical provenience for the investigation was controlled from the site datum at N400 E400. The elevation for this point is 9.219 meters above mean sea level. Opening and closing elevations for each stratum in each unit were surveyed from this point, with the exception of Unit 15911, which was controlled from a grid datum established at coordinates N344 E368. Elevation of this point is 9.949 meters above mean sea level.

A transit and survey chains were used to lay out all additional grid points. These points were marked with an eight inch gutter spike with an attached flasher where possible. [REDACTED]

All shovel test pits were designated by North and East coordinates defined through use of the control grid described above. Excavation units were also placed on the grid, but an arbitrary numbering system was overlaid in order to provide a unique designation for each unit. This numbering system was established by dividing the entire area potentially subject to testing into a series of 1.5 by 1.5 meter squares. A total of 173 rows, each with 189 spaces, was thus defined, yielding a total of 32,697 potential excavation units. The first square at the southwestern corner of this sampling universe was designated as Unit 1, and numbers were assigned from west to east within rows. The arbitrary number for each unit was calculated by determining the row in which the unit was located, multiplying the number of complete rows south of the unit location by 189, and then adding the count of squares to the west in the unit's row to the total. The numbers assigned to excavation units during this project ranged between 15911 and 29392. The grid coordinates of the southwest corner of each unit and the assigned unit numbers are indicated in Table 5.

UNIT NUMBER	GRID COORDINATES	SITE AREA
	(SOUTHWEST CORNER)	
25805	N405.5 E391.5	SITE CORE
27120	N416 E379.5	SITE CORE
27123	N416 E384	SITE CORE
27126	N416 E388.5	SITE CORE
27129	N416 E393	SITE CORE
27695	N420.5 E391.5	SITE CORE
27879	N422 E384	SITE CORE
27887	N422 E396	SITE CORE
28068	5423.5 E384	SITE CORE
28071	N423.5 E388.5	SITE CORE
28257	N425 E384	SITE CORE
28260	N425 E388.5	SITE CORE
28268	N425 E400.5	SITE CORE
28449	N426.5 E388.5	SITE CORE
29011	N431 E381	SITE CORE
29018	N431 E391.5	SITE CORE
29392	N434 E385.5	SITE CORE
20897	N366.5 E400.5	CENTRAL KNOLL
22223	N377 E405	CENTRAL KNOLL
22610	N380 E418.5	CENTRAL KNOLL
22615	N380 E427.5	CENTRAL KNOLL
15911	N327.5 E292.5	SOUTHWEST EDGE
19165	N353 E354	SOUTHWEST EDGE
20866	N366.5 E354	SOUTHWEST EDGE
21061	N368 E363	SOUTHWEST EDGE
27687	N420.5 E376.5	FEATURE BLOCK
27688	N420.5 E378	FEATURE BLOCK
27874	N422 E376.5	FEATURE BLOCK
27875	N422 E378	FEATURE BLOCK
28063	N423.5 E376.5	FEATURE BLOCK
28064	N423.5 E378	FEATURE BLOCK
28065	N423.5 E379.5	FEATURE BLOCK
28252	N425 E376.5	FEATURE BLOCK
28253	N425 E378	FEATURE BLOCK
28254	N425 E379.5	FEATURE BLOCK
28442	N426.5 E378	FEATURE BLOCK
28443	N426.5 E379.5	FEATURE BLOCK

Table 5: 1996 Investigation Excavation Unit Numbers, Coordinates, and Site Locations.

Section 5.1.1 Shovel Test Pit Methods

All 510 shovel test pits excavated were placed at eight meter intervals, yielding a total tested area of 400,012 square meters (9.89 acres). [REDACTED], areas with slopes greater than 15%, [REDACTED] were excluded from shovel testing during this project.

Each shovel test pit measured approximately 40 cms in diameter, and was excavated with a round shovel into culturally sterile subsoils or one meter in depth. Selected pits were deepened with a split spoon probe and/or bucket auger to further assess stratigraphy and to search for buried A soil horizons beyond the reach of hand excavation.

All soils removed from shovel test pits were screened through 1/4-inch mesh hardware cloth. All cultural material recovered was retained regardless of age or perceived interpretive potential. All artifacts were placed in plastic bags labeled with pertinent provenience information, and transported to the Bullit Neck Nature Center for processing.

Section 5.1.2 Excavation Unit Methods

Excavation unit size for this project was 1.5 by 1.5 meters. Where possible, units were excavated in natural stratigraphic layers down to undisturbed, culturally sterile subsoils. The exceptions were units that contained cultural features that were not entirely excavated, or areas where modern construction-related disturbance extended beneath the level of the archaeological deposits that comprised the site. Primary excavation tools were flat shovels, trowels, and dustpans, but round-nosed shovels and breaker bars were used in units that contained fill or mechanically compacted soil layers. Soils were screened through 1/4-inch mesh hardware cloth

Standardized forms were used to record elevations, soil characteristics, artifacts recovered, disturbance, and any other relevant information observed by the excavators while work was in progress. These forms were supplemented by scale drawings, photographs, and entries in a daily field journal for the project as a whole. Copies of all forms used, and the original field records, are on file at the Research Department of the Jefferson Patterson Park and Museum.

A 25 by 25 cm column sample was taken from each excavation unit that contained a plowzone stratum that had not been redeposited or extensively disturbed by the construction that has occurred in the area. In general, these column samples were taken from the northeast corner of the excavation units; however, extensive root disturbance or other conditions dictated sample locations at alternative corners in some units. The location of each sample was recorded on the standardized forms completed for each unit during and after excavation.

During processing (see below) of the initial column samples taken from the 12 unit block excavation at the western edge of the core area of the site, a large number of shell beads were noted. Subsequently, 2 column samples were retained from opposite corners in each of these units in order to recover a larger sample of these artifacts.

All column samples were initially processed on-site by water screening through 1/32-inch mesh window screen. The samples were then dried and rebagged prior to transportation to one of the two laboratory facilities used during the project. At the lab, the samples were sorted and all cultural material was retained. This material was classified and analyzed using the methods discussed below.

At the conclusion of the fieldwork phase of the project, all excavation units were lined with heavy gauge black plastic and backfilled with previously screened soil. After restoration to the original ground surface contour, each unit was covered with a mixture of straw and grass seed to

retard erosion. A grid spike with a flasher labeled with the coordinates and the number of each unit was left in place at the southwest corner of excavation units in the core area of the site.

Section 5.1.3 Feature Excavation Methods

Several discrete sub-plowzone or sub-disturbance features were discovered during the testing at the Posey Site. In addition, a large, intact midden feature was found in a series of 12 adjacent units excavated at the western edge of the core area of the site). All of the features discovered were initially located at the base of plowzone or disturbed soil strata, and were found to intrude into undisturbed subsoil. All feature excavation was preceded by the preparation of scale plan view drawings of the exposed interface between the base of the plowzone or other strata and the subsoil. Black and white print and color slide photographs of each feature were also taken prior to excavation.

The majority of the features identified at the Posey Site were post molds. They were excavated by removing half of the feature along a section line which bisected the maximum diameter of the post mold. Soil from sectioned post molds was retained in bulk for either water screening through 1/32-inch mesh screen or flotation. After sectioning, a scale profile of the exposed face of the feature was prepared and additional photographs were taken. The remaining half of the feature was either left *in-situ*, or, in one case, removed for flotation.

The second type of feature consisted of a disturbed pit with intrusive post or root molds. This feature was excavated stratigraphically, with each separate component of the deposit sectioned, profiled, and photographed prior to complete excavation. Feature fill was retained in bulk for water screening, and a 50% sample of the probable pit fill was retained for flotation.

The final feature discovered at the site consisted of a large, intact midden deposit that was located in 12 adjacent excavation units. Due to time limitations and preservation concerns, the entire horizontal expression of this deposit was not exposed, and the feature was sampled rather than excavated in its entirety. Seven 25 cm wide sections were removed from this feature in order to determine its depth and profile. Five of these sections were removed from a single unit in order to expose a large section of the subsoil at the base of the deposit in an effort to locate post molds or other architectural components. Scale profiles and planviews were prepared for each section removed, and the entire deposit was extensively photographed. Fill removed from the feature was retained in bulk for water screening and/or flotation. Point-provenienced carbon and ceramic samples were taken from the surface of the exposed portion of the feature in several areas. Finally, the excavated 25 cm sections of the feature were lined with plastic and hand backfilled. The excavation units were then lined with heavy gauge plastic and the entire block excavation was backfilled.

Section 5.2: Laboratory and Analysis Methods

All artifacts recovered from shovel test pits and excavation units were washed and rebagged in standard curation quality bags. Where necessary, acid-free boxes and other packaging were used to protect artifacts from damage during storage. Following analysis, all artifacts were labeled and packaged according to the revised *Standards and Guidelines for Archeological Investigations in Maryland* (Shaffer and Cole 1994). Artifact labels included both the site number and the lot number assigned to each provenience. Lot numbers used during the 1996 excavations began with #38 and continued sequentially (Lots #1-37 were previously assigned to the 1985 investigations). All

artifacts and catalogue forms are filed at the Jefferson Patterson Park and Museum. A complete catalog of all artifacts is attached as Appendix D.

Materials usually classified as "prehistoric" or "historic" were recovered from the Posey Site, but the nomenclature and typologies ordinarily used by archaeologists to classify such artifacts were found to be inadequate due to the temporal span of the occupation. The following section discusses the classification system used during the project, and presents the specific analytical criteria used to interpret the recovered materials.

Insofar as was possible, artifacts were classified according to type or material of manufacture in order to avoid making assumptions concerning the identity and ethnicity of the occupants of the Posey Site. For example, terms such as lithic, glass, ceramic, metal, shell, and bone were used without qualifiers such as prehistoric or historic. All artifact types were then further defined by various morphological characteristics and function (where possible).

Ceramic sherds were classified by ware type, and decorative elements and techniques were noted. The authorities for ware type identifications are cited within each applicable portion of the results section. If diagnostic characteristics were present, ceramic sherds were further classified by portion of vessel and vessel type. The term "fragment" was used to classify ceramic artifacts missing their original interior or exterior surfaces. Fragments were either placed within a ware type based on the characteristics of the paste, or were classified as undifferentiated where distinguishing characteristics were not present. Visual comparisons of rim decorative motif, thickness, and profile were used to estimate minimum number of vessels.

Other classes of ceramic artifacts in the collection included smoking pipes, forms apparently broken or discarded in the process of manufacture, and fired clay nodules. Pipes were separated by clay type, then into bowl and stem categories. Decorative elements were noted where present, and stem bores were measured for white clay specimens. Other forms were described, and a functional interpretation was made where possible. Nodules were counted and weighed.

Glass was classified by fragment type, color, decorative elements, and manufacturing techniques where possible. If diagnostic characteristics were present, glass fragments were then classified by portion of vessel and vessel type.

Metals were classified by type of metal (if identifiable), function, and manufacturing technique if diagnostic characteristics were present. Calipers for lead ball and slug ammunition were measured to the nearest hundredth of an inch, and noted where applicable.

Large numbers of faunal remains were recovered from the site. These artifacts were separated into burned and unburned categories, weighed and counted. Faunal remains were further separated at the order level where possible. Shell fragments were classified to species level where possible. A sample of recovered bone fragments was analyzed by a zooarchaeologist and the results are recorded in Appendix E.

Lithic artifacts recovered from the Posey Site consisted primarily of waste flakes, or debitage, that are the by-product of stone tool manufacture, but several finished or broken tools were also recovered. Lithic debitage recovered during the survey was initially separated by material type. Following this process, the debitage was classified according to a linear model of reduction assuming that different flake types represent different steps in the manufacture of a desired end product (Crabtree 1975). Inferences concerning the different steps in the manufacturing process can be drawn from patterns discernible within the debitage assemblage.

Collins (1975) proposes a generalized model of lithic reduction based on a five-step process in which end products (tools or projectile points) are produced through a series of specific tasks. The

first step in this process consists of the acquisition of raw material. No evidence of this step in the process would be present on a site without sources of lithic raw material; however, the step would have taken place in order to begin the process. The second step in the process consists of core preparation and initial reduction. This step would be evidenced in an assemblage by the presence of cores, primary flakes, and angular debris. The third step consists of primary trimming. This step would be represented by the presence of secondary flakes. The fourth step consists of secondary trimming, which would result in the presence of late secondary flakes within the debitage assemblage. The two trimming steps may not be necessary, dependent on the type of tool desired. The fifth and final step in the manufacturing process takes place following completion of the desired tool. This step consists of maintenance (curation) and modification of the finished tool, and would be evidenced by the presence of tertiary flakes within the debitage assemblage.

In order to apply the model outlined above, the lithic assemblage (including debitage, tools, and projectile points) was visually separated on the basis of a set of standardized physical attributes. These attributes are influenced by many factors, such as material type, hammer type, and the skill of the individual, and must be standardized in order to consistently classify debitage (Crabtree 1975).

Primary, or initial reduction, flakes were defined by the presence of dorsal cortex and a high thickness to length ratio. Secondary, or bifacial thinning flakes, were defined by a lack of dorsal cortex, multiple flake scars, and a low thickness to length ratio. Tertiary, or retouch/sharpening flakes, were defined by small size, lack of cortex, and a roughly equal width to length ratio (maximum thickness measured perpendicular to the cleavage plane). Angular debris consisted of chunks or shatter associated with rough reduction. For the purposes of this investigation, lithic tools were defined as retouched flakes, bifaces, or other artifacts that showed evidence of utilization. Projectile points consisted of finished bifaces with a recognizable morphology. Gunflint types were identified by comparison with previously published descriptions and/or illustrations.

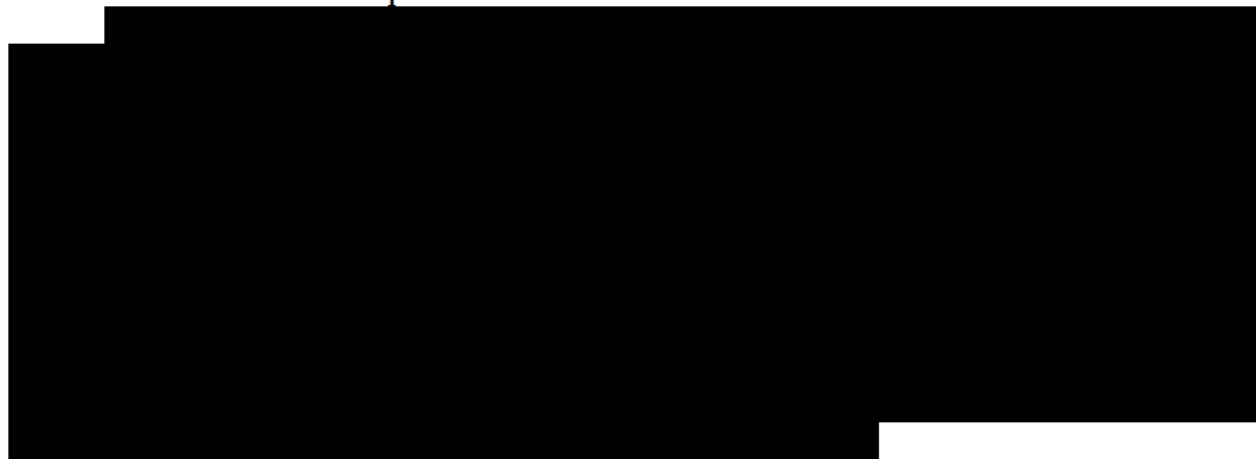
An important analytical method used for interpretation of the Posey Site was the creation of distribution maps of the various artifact classes recovered. This technique was used following the shovel test pit phase of the investigation to locate the spatial and chronological boundaries of the site and to plan the location of excavation units. Following the excavation units phase, distribution maps were used to identify functionally and/or temporally discrete areas within the core area of the site. Units that contained soils which were mechanically redeposited in recent times were not included on the distribution maps, but artifacts from plow-disturbed areas were included. The plowing of fields for agricultural purposes destroys the original vertical depositional context of the artifacts, but replication studies have demonstrated that original horizontal patterns in artifact deposits are not entirely obscured by this disturbance (cf. Redman and Watson 1970; Roper 1976; Ammerman 1985; King 1990). Twenty-one units excavated in the core area of the site were found to be suitable for the plotting of artifact densities. The location within the site grid and the number of each unit is indicated in Figure 15. Specific maps used to support discussion points within the results section are included.

Section 6: Archaeological Fieldwork Results

The fieldwork for the investigation was conducted in three phases. Following layout of the horizontal control grid, the first phase consisted of systematic shovel test pitting of the site and the surrounding area. The second phase consisted of the excavation of twenty-five 1.5 by 1.5 meter test units. Due to safety concerns, the mechanical stripping of disturbed topsoils that had been planned as the final phase of the investigation was not performed. Instead, an additional twelve 1.5 by 1.5 meter units were excavated within the core area of the site to expose intact sub-plowzone features prior to the completion of fieldwork.

Section 6.1 Shovel Test Pit Phase

A total of 510 shovel test pits was excavated within and around the Posey Site, 18CH282, and the adjacent area. An area of approximately 400,012 square meters (9.98 acres) was tested during the project. The boundary of the tested area is indicated on the large scale topographic map attached to the back of this report.



Several different stratigraphic profiles were revealed within the shovel test pits. A great deal of local variation was present in pits that were located in areas that had been disturbed by road and building construction during the Navy's ownership of the property. In addition, the 4 by 2 meter block excavated during the 1985 investigations was re-located by shovel test pits in the small cluster of trees [redacted].

One hundred eighty-nine of the 510 shovel test pits excavated contained cultural material. Table 6 summarizes the artifacts recovered from these shovel test pits. The bulk of recovered material consisted of slag fragments used in the construction and maintenance of roads in the area, and building materials scattered throughout the area following an explosion in the late 1950s. Tables 7 and 8 summarize all non-modern lithic and ceramic artifacts recovered. Artifact recovery and stratigraphy within each areal division is further discussed below. The results of the shovel test pit program as a whole are summarized at the conclusion of this section.

The East and South Woods were initially tested as two separate areas, but were found to contain soils with similar stratigraphic profiles and artifact contents. A total of 214 shovel test pits

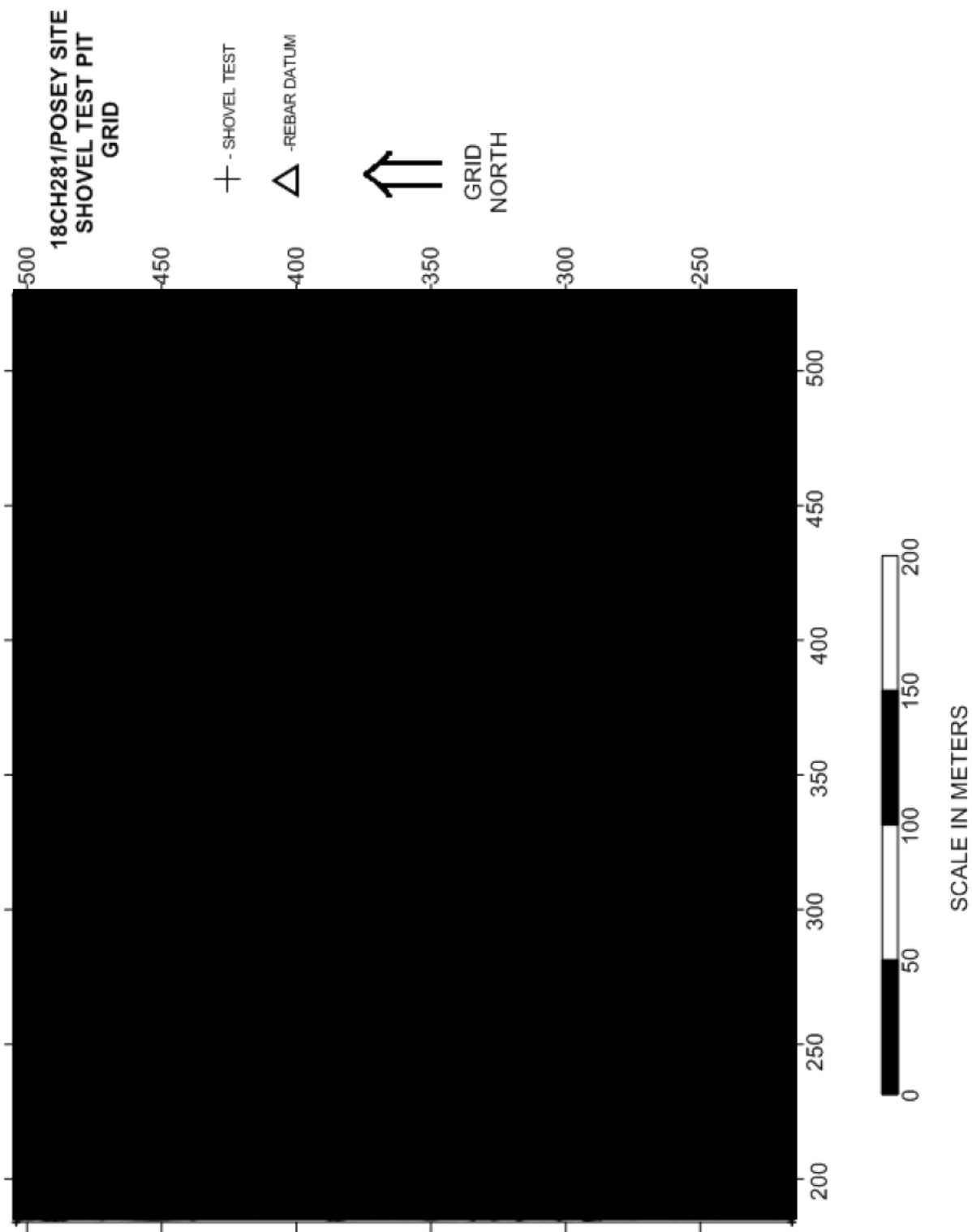


Figure 16: 1996 Shovel Test Pit Grid.

was excavated in these areas, 38 of which contained cultural material. Fourteen of these shovel test pits contained only slag or modern building materials.

In general, the soil profile in the North and South Woods consisted of a layer of dark brown to dark yellowish brown (10YR3/3 to 3/6) friable to moderately compact silty loam plowzone soil over yellowish brown (10YR5/6 to 5/8) moderately compact sand to sandy clay subsoil. Plowzone soils had been impacted by tree root disturbance, and in some cases were overlain by a 5 to 10 cm thick layer of organic duff. Plowzone thickness ranged between 10 and 21 cms in the shovel test pits excavated in these wooded areas, and sandy subsoils were present to at least one meter below the ground surface. Disturbed soils were present along the roadways at the margins of the wooded areas, and profiles in these areas were characterized by truncated, mottled topsoils, a greater density of slag and modern material, and greater degree of compaction. A portion of the northwest quadrant of the East Woods area had been used as a dump for topsoil and other fill collected from an unknown location. Modern building material, Potomac Creek ceramics, and lithic artifacts were recovered from sandy fill soils that extended to at least one meter below the ground surface in some shovel test pits. A low density of lithic artifacts and a single Potomac Creek Plain body sherd were recovered from pits located near the southeast corner of the South Woods area. These finds are discussed in greater detail in the summary at the end of this section.

The landform that comprised the Central Knoll area was similar to that of the East and South Woods, and soil profiles in undisturbed portions of the area were also similar. A total of 60 shovel test pits was excavated here. Twenty-one contained cultural material, five of which contained only slag or modern building material. Portions of two drainages bisect the Central Knoll, and profiles on the edges and bottoms of these topographic features consisted of thin layers of redeposited dark brown to dark yellowish brown (10YR3/3 to 3/6) silty or sandy loams over yellowish brown (10YR5/6 to 5/8) undisturbed sand or sandy clay subsoils. Variation in undisturbed soil profiles from those described above consisted of thicker plowzones, with strata of this type present to a total of 25 cms below the current ground surface in some pits. Also, as in the East and South Woods, shovel test pits excavated along the road margins revealed disturbed soils. Fill deposits were discovered around a buried culvert at the southeastern corner of the area.

Different soil profiles, and the extent of disturbance, distinguished the shovel test pits excavated [REDACTED] north of the N400 baseline from those to the east and south. This area was designated the North Side, and 83 shovel test pits were excavated there. Fifty-six of these pits contained cultural material, although 35 contained only slag or other modern building material.

Profiles of the shovel test pits excavated in the North Side area fell into three basic categories: undisturbed, truncated, and disturbed. Plowzone soils were found in all pits where such stratigraphy had not been obscured by disturbance [REDACTED]. In this area, the undisturbed pits contained a 10 to 25 cm thick layer of friable to moderately compact, dark brown to dark yellowish brown (10YR3/3 to 3/6) sandy loam plowzone soil over yellowish brown (10YR5/6 to 5/8) compact sand subsoil. Truncated profiles were comprised of the same general soils, but plowzone thicknesses ranged from 5 to 15 cms in these pits.

Disturbed soil profiles revealed in North Side shovel test pits exhibited considerable variation. A layer of redeposited dark brown sandy loam, either redeposited topsoil or plowzone, was present over undisturbed subsoils adjacent to the undisturbed shovel test pits [REDACTED]. These pits tended to yield a moderate density of cultural material associated with the archaeological deposits in the area, as well as quantities of slag and other modern artifacts. Further west, the soil profiles were truncated, with a very thin layer of often redeposited topsoil over disturbed subsoil distinguishable on the basis

of mottling and lack of clear transition zones from topsoil layers. These disturbed soils extended across the low hill to the edge of the tested area.

Eighty-seven shovel test pits were excavated in the area south of the N400 baseline [REDACTED]. This area was designated the South Side, and included the site area previously designated 18CH282. Of the 87 shovel test pits excavated, a total of 45 contained cultural material. Twenty-two of these 45 pits contained only modern building material, slag, or plastic fragments.

Soil profiles from the shovel test pits excavated in the South Side area were similar in color and texture to those in the North Side division, but undisturbed plowzones tended to be thinner, ranging between 5 and 25 cms in thickness, with an average thickness of approximately 15 cms. Some of this variation may have been due to erosion, but mechanical truncation of soils at road margins and adjacent to structures also accounted for some topsoil loss in the area. Disturbed soil profiles were consistent with those described above for the North Side. Disturbed soils tended to be concentrated around the margins of the landforms available for testing in this area.

The project's final major areal division consisted of a narrow strip of land [REDACTED]. A total of 55 shovel test pits was excavated in this area, 25 of which contained cultural material. Fifteen contained only modern building material, plastic, asphalt, or slag. This portion of the project area was found to have been heavily impacted [REDACTED].

The stratigraphy in the shovel test pits [REDACTED] differed markedly from those further north. [REDACTED]

[REDACTED] no totally undisturbed profiles were present. Some topsoil had been redeposited in the area, [REDACTED].

Redeposited or disturbed topsoils contained all cultural material recovered from this area. These soils consisted of friable to compact sandy or silty loams with a wide range of color. The topsoils tended to exhibit a much greater degree of mottling than undisturbed soil profiles in other areas. Subsoil, both disturbed and undisturbed, differed from subsoils to the north. Undisturbed subsoil consisted of yellowish brown (10YR5/6 to 5/8) compact sandy clay mottled with varying amounts of light brownish gray (10YR6/2) clay. Disturbed subsoils were distinguishable by the presence of topsoil mottles and a less compact texture. It is probable that these clayey subsoils were exposed as a result of the lower topographic position of this area relative to the elevated terrace to the north.

A total of 447 artifacts and 6116.2 grams of slag was recovered from the 189 shovel test pits that contained cultural material (Table 6). Other than slag, the largest artifact class consisted of fragments of building material associated with the various episodes of construction and destruction [REDACTED]. Artifact types present in this class consisted of concrete, asbestos tiles, asphalt fragments, metal hardware, and miscellaneous materials such as welding rod fragments. Other modern materials, primarily plastic, rubber fragments, and recent bottle glass, comprised a second large component of the assemblage. Taken together, these artifacts totalled 274 pieces, or 61.29% of the shovel test pit assemblage. Building material was dispersed throughout the tested area, and there is some correlation between the distributions of artifacts in this class and the locations of disturbed soil profiles (Figures 17 and 18).

TYPE	COUNT
CERAMIC-VESSEL	91
CERAMIC-PIPE	3

LITHIC DEBITAGE	55
LITHIC TOOL	0
FCR	5
BONE/SHELL	16
GLASS	24
NAILS-HW-UID	3
METAL-OTHER	26
BLDG. MAT.	210
MODERN MAT.	14
SLAG	6116.2 g
TOTAL:	447

Table 6: Artifact Summary, 1996 Shovel Test Pit Program.

The second largest artifact class present in the shovel test pits consisted of ceramic vessel sherds (Table 7). Ninety-one artifacts of this type were recovered. Potomac Creek Plain ware comprised the vast majority of sherds ($n = 79$, 97.53%). Minority wares present included Yeocomico, Camden, undecorated whiteware, undecorated ironstone, and two sherds of undecorated porcelain.

	BODY	RIM	FRAG.	BOWL	STEM	Total
POTOMAC CREEK WARE	71	3	3	0	0	77
YECOMICO WARE	3	0	0	0	0	3
CAMDEN WARE	1	0	0	0	0	1
WHITEWARE	4	1	0	0	0	5
IRONSTONE	3	0	0	0	0	3
PORCELAIN	2	0	0	0	0	2
TERRA-COTTA PIPE	0	0	0	1	1	2
WHITE CLAY PIPE	0	0	0	0	1	1
TOTAL COUNT	84	4	3	1	2	
TOTAL COUNT =						94

Table 7: Ceramic Artifacts, 1996 Shovel Test Pit Program.

Figure 19 presents the distribution of Potomac Creek, Camden, and Yeocomico ware ceramics recovered from shovel test pits.

Ceramic artifacts of these types are also present at 18CH282, and on the terrace remnant between the two sites. The typological similarity and continuous spatial distribution of these artifacts

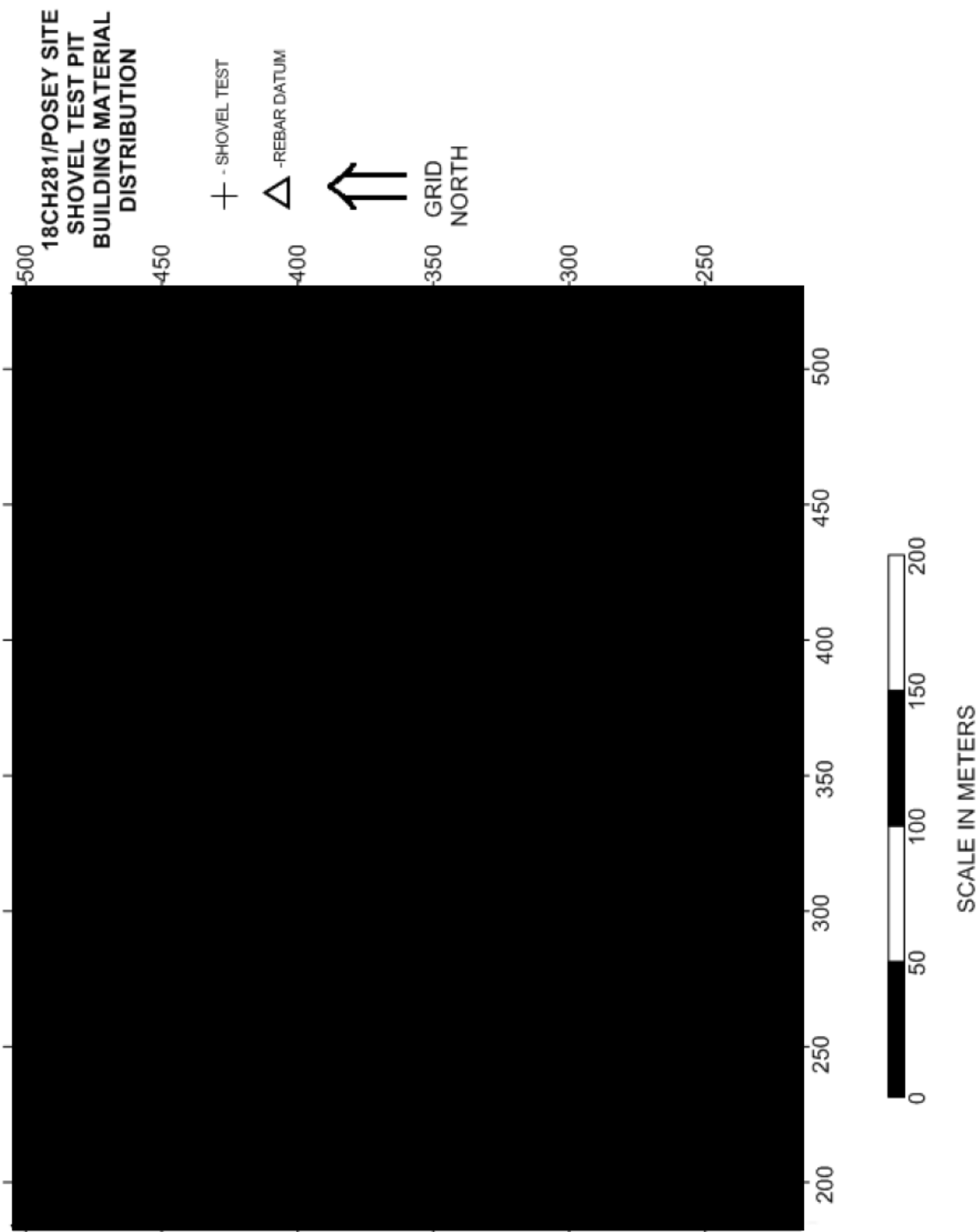


Figure 17: Distribution of Building Material from Shovel Test Pits.

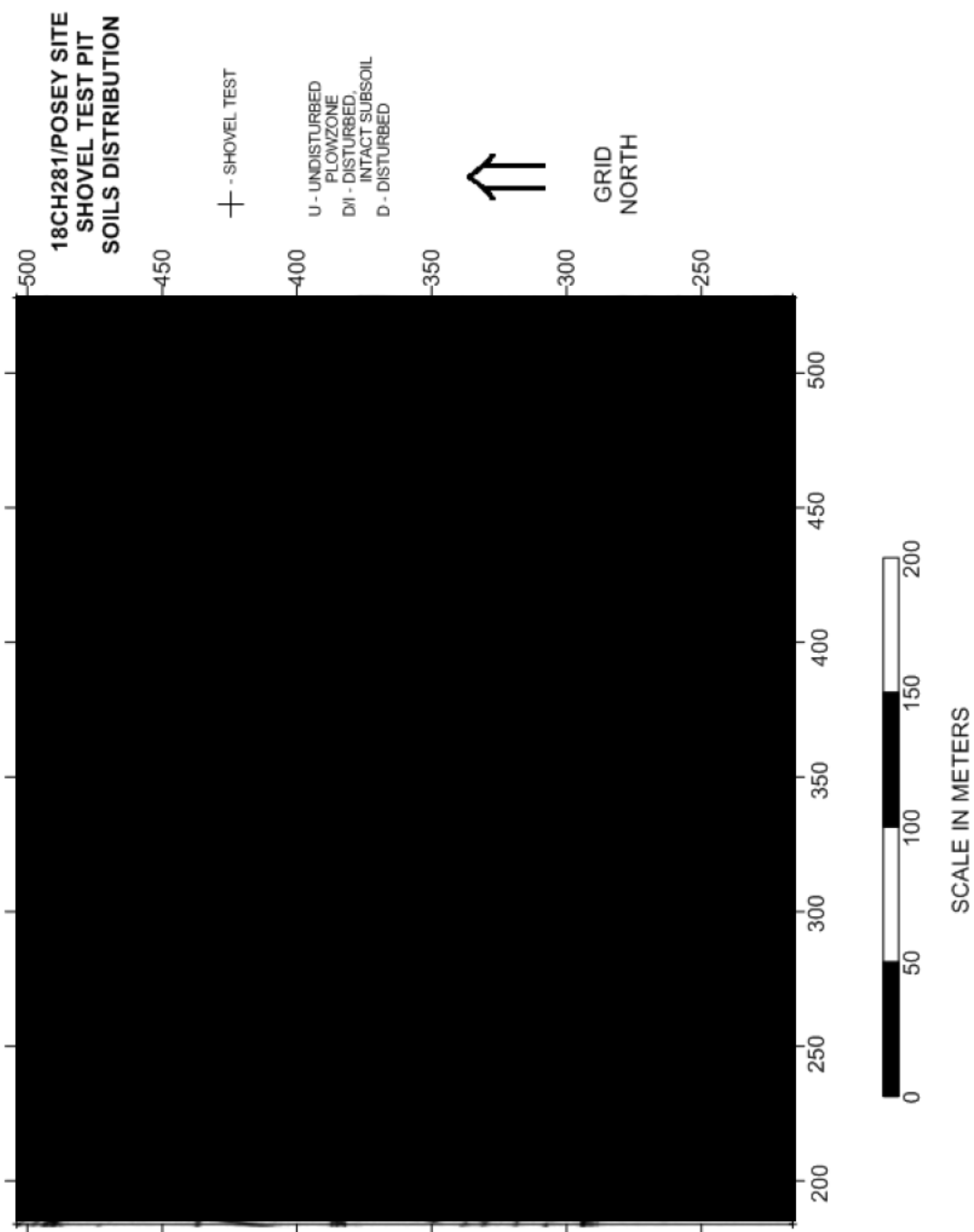


Figure 18: Distribution of Soil in Shovel Test Pits.

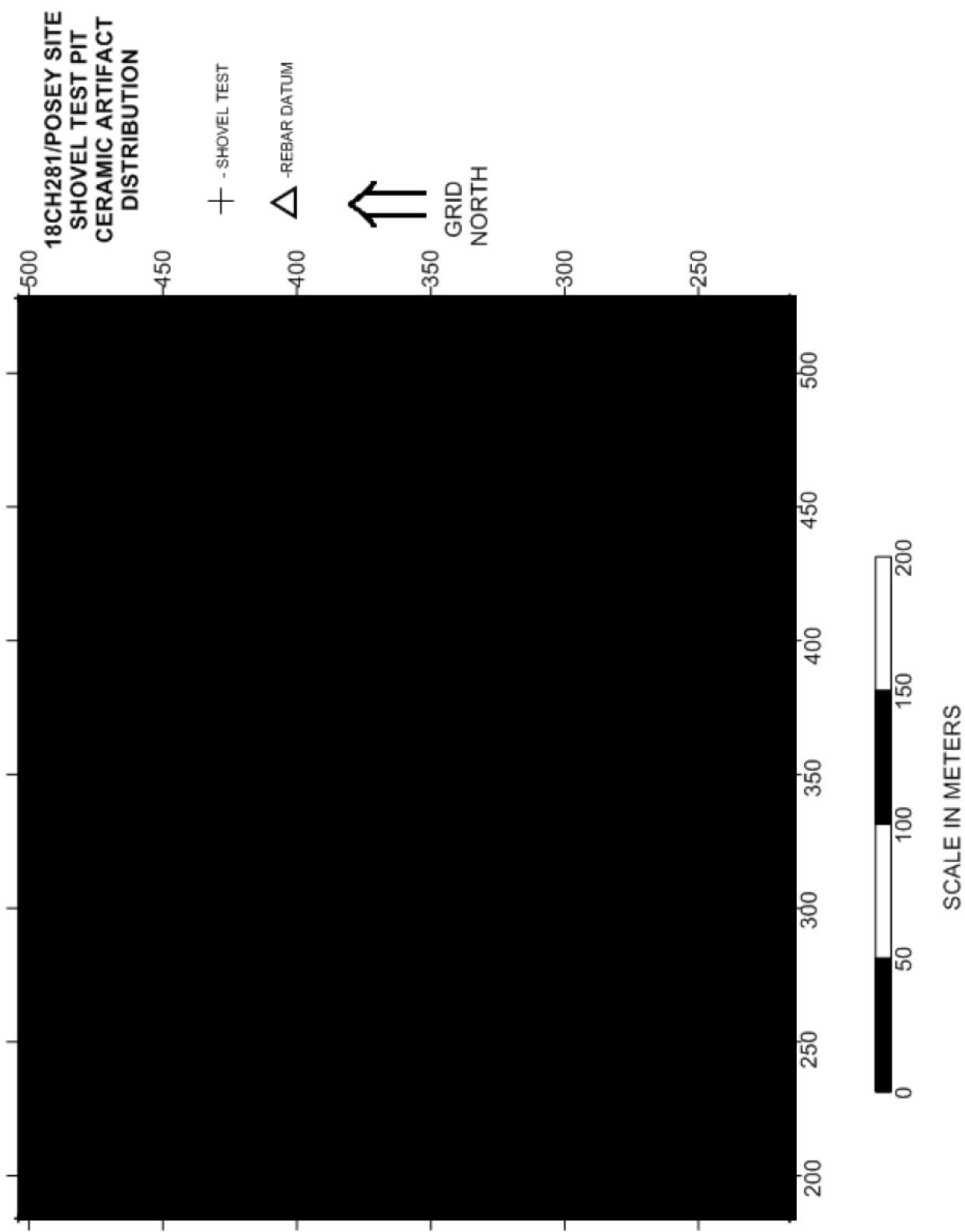


Figure 19: Distribution of Locally-Made Ceramic Artifacts from Shovel Test Pits.

indicates that the sites are probably part of the same deposit. All five sherds of undecorated whiteware were recovered from two widely separated pits in the East Woods area, while porcelain and ironstone sherds were recovered from redeposited or disturbed soils [REDACTED].

The second category of ceramic artifact recovered from the shovel test pits consisted of smoking pipe fragments. Two pieces of terra-cotta clay, one bowl and one stem fragment, were found. The remaining pipe fragment was a white clay stem with a bore diameter of 7/64". All pipe fragments were undecorated. [REDACTED]

Lithic debitage and fire-cracked rock formed the remaining significant component of the shovel test pit assemblage (Figure 20). Table 8 provides a breakdown of this assemblage. The majority of the material was quartz, followed by quartzite. The remainder consisted of three artifacts of untyped chert. The collection was weighted toward primary reduction debitage, with approximately 63% of the debitage from primary or secondary reduction. All fire-cracked rock (n = 5) was quartzite. No lithic tools of any kind were recovered from the shovel test pits. [REDACTED]

<i>MATERIAL</i>	<i>CORE</i>	<i>PRI</i>	<i>SEC</i>	<i>LSC</i>	<i>TER</i>	<i>AD</i>	<i>FCR</i>	<i>TOOL</i>	<i>TOTAL</i>
QUARTZ	2	8	12	0	0	11	0	0	33
QUARTZITE	2	8	6	0	0	3	5	0	24
CHERT	0	1	0	0	1	1	0	0	3
<i>TOTAL COUNT</i>	<i>4</i>	<i>17</i>	<i>18</i>	<i>0</i>	<i>1</i>	<i>15</i>	<i>5</i>	<i>0</i>	<i>60</i>

Table 8: Lithic Artifacts, 1996 Shovel Test Pit Program.

Eight bone and eight shell fragments were recovered from the shovel test pits. Twelve of the faunal fragments were recovered from a single pit, N424 E384, [REDACTED]. All recovered shell consisted of clam or mussel species, while the bone fragments were turtle species or unidentifiable.

Three wrought nails were recovered from three widely dispersed shovel test pits, one each in the South Woods, the Central Knoll, and the eastern edge of the North Side areas. Two of the nails had rose-type heads, while the third had a very corroded, possibly rectangular, head. No inference concerning the presence or location of possible structures can be made due to the very limited sample of nails recovered.

The final component of the shovel test pit assemblage consisted of slag. This material was recovered in relatively large quantities from shovel test pits located along the margins of roadways and drainages, [REDACTED]. The origin of this material is unknown, but it was reported to have been used for roadbeds and to line drainage ditches as a method of weed control throughout the Naval Surface Warfare Center. A coal-fired power plant was in use until recent years at the facility, and this may have been the source of the slag. A total of 6116.2 grams of this material was recovered.

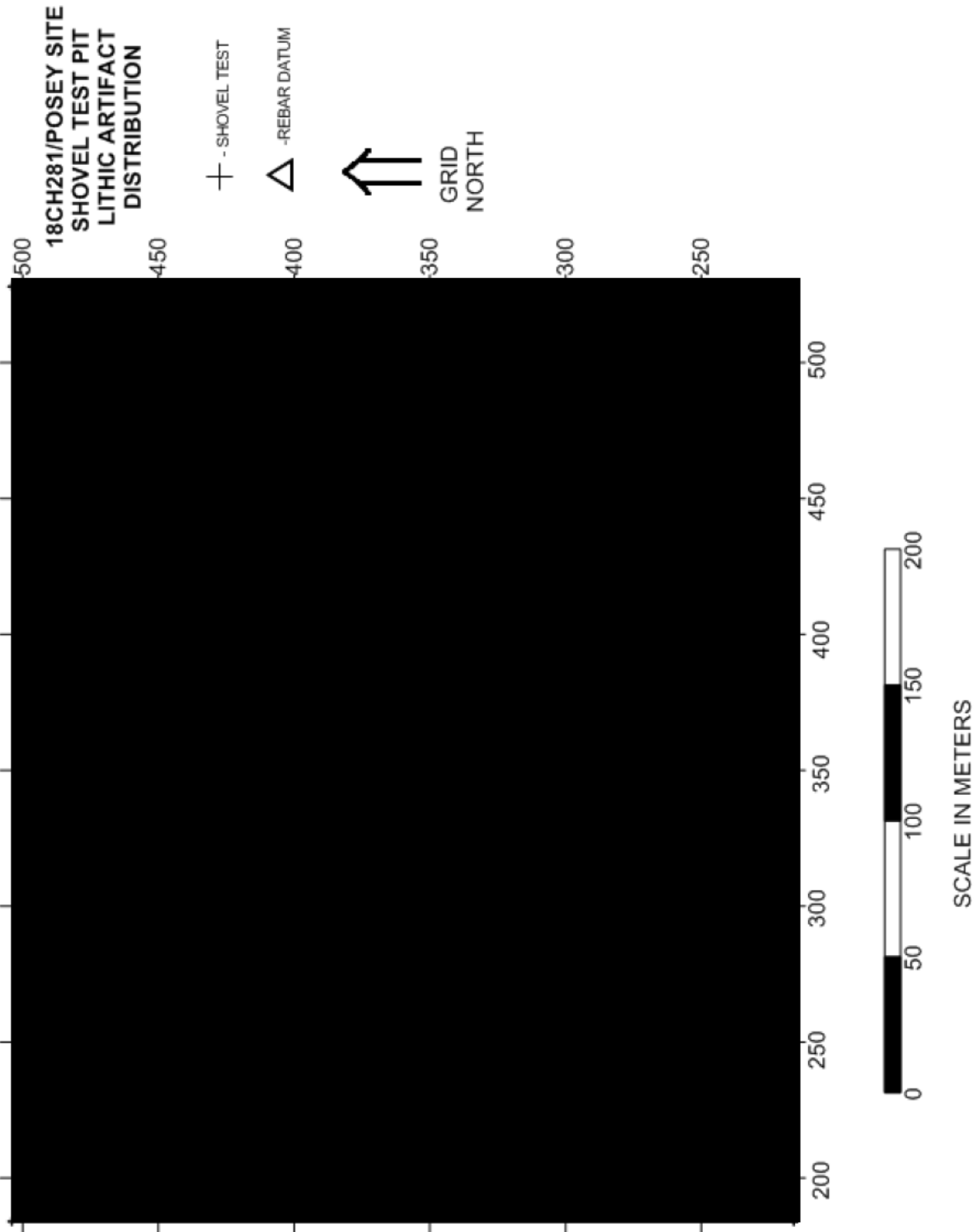


Figure 20: Distribution of Lithic Artifacts from Shovel Test Pits.

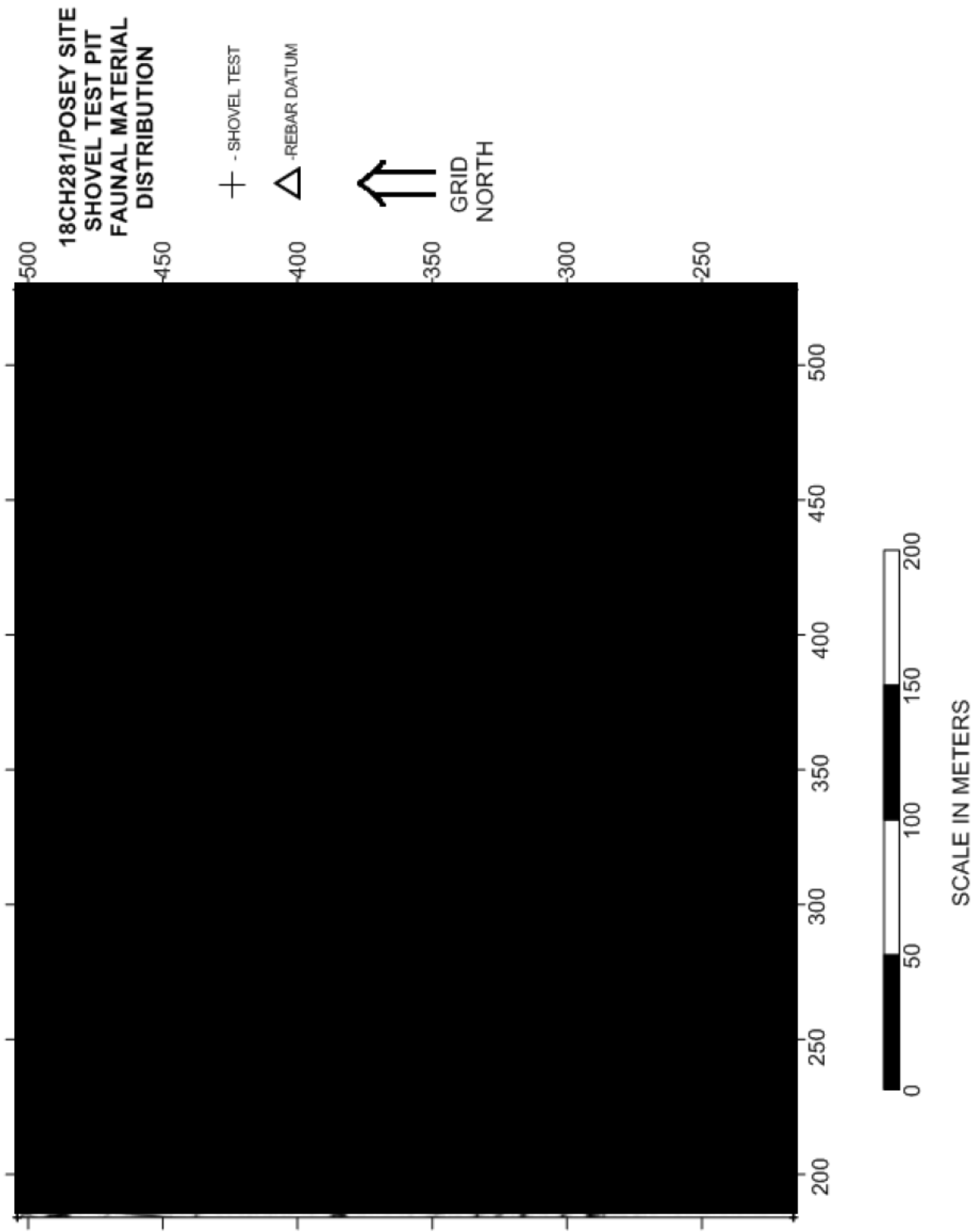


Figure 21: Distribution of Unmodified Bone from Shovel Test Pits.

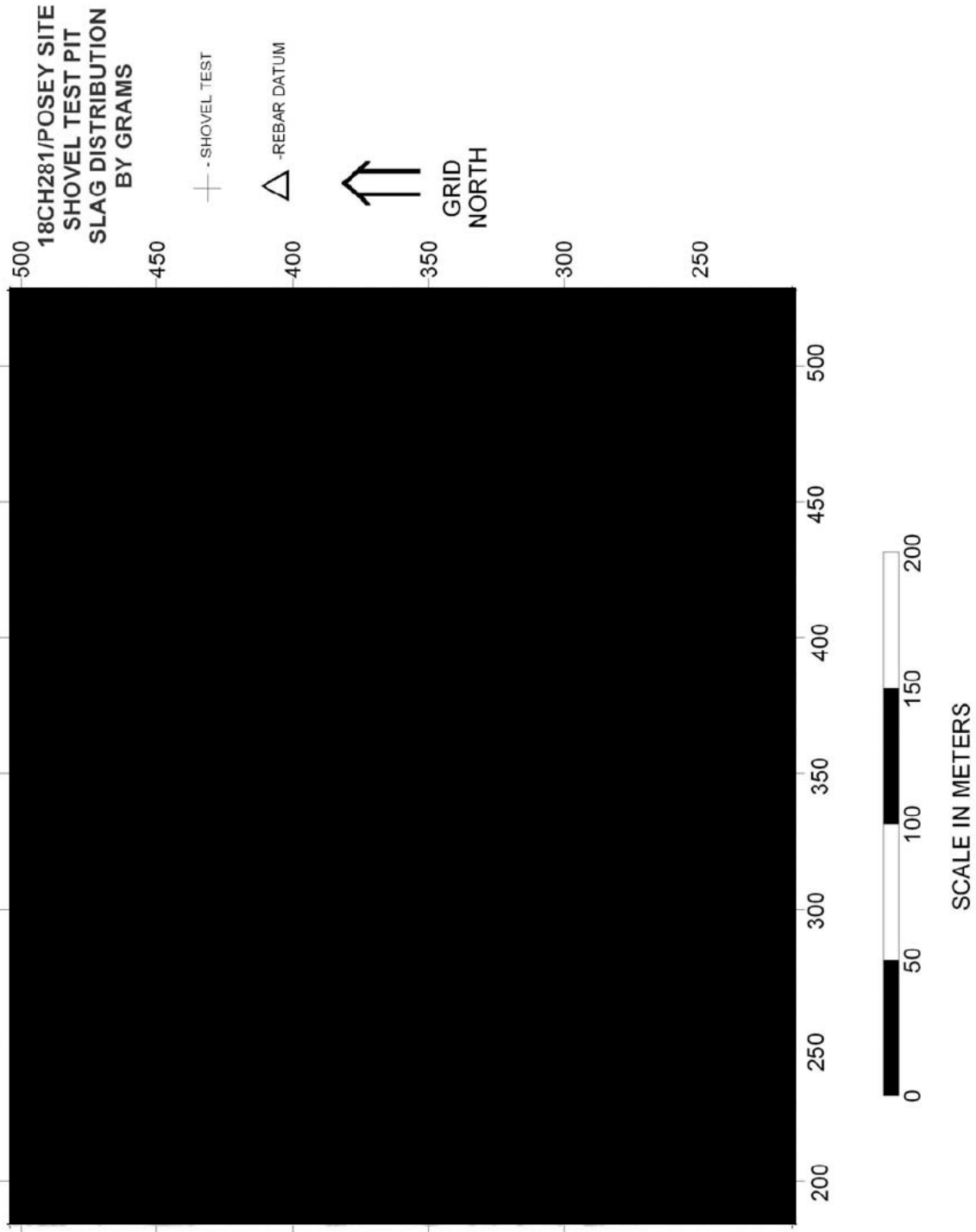


Figure 22: Distribution of Slag from Shovel Test Pits.


An important goal of the shovel test pit program was to collect data that would identify the spatial characteristics of the Posey Site and 18CH282. In addition, the shovel test pits provided information concerning the temporal and functional relationships between the sites. Figures 17 through 22 represent the distributions of artifacts and soils recovered during the shovel test pit program. These distributions indicate the presence of a high density core area at the northeast edge of the site, which is surrounded on the south and west by temporally and typologically related artifacts in low to very low densities. The distributions of all artifact classes in these peripheral areas have been spatially interrupted by road and building construction, but a relatively continuous deposit of artifacts is present within surviving soils [REDACTED] to the northern edge of the Central Knoll area, and west and south across the disturbed remnants of the terrace that comprises 18CH282.

One ceramic and eleven lithic artifacts were recovered from several adjacent pits at the southeastern corner of the South Woods area. The ceramic artifact was a Potomac Creek Plain body sherd, and the lithics were all quartz or quartzite debitage. It is possible that this deposit was an activity area associated with the Posey Site, but the low density of recovered material prevents a more precise determination of association.

Figure 18 presents a distribution map of generalized soil profiles from the shovel test pits. As shown, disturbed soils are present throughout the southwestern portion of the site area, but several pockets of undisturbed deposits are also present. Areas of disturbed soils correspond well with the distribution of modern building materials and slag. Also of note is the presence of undisturbed subsoils beneath disturbed topsoils [REDACTED]. These pits, and the undisturbed pits along the E384-400 transects, contained the highest average density of artifacts in both topsoil and plowzone contexts. It is possible that undisturbed deposits or features beyond those explored during the excavation unit phase of this project are present beneath the disturbed soils in this area.

In summary, the boundary between 18CH282 and the Posey Site was found to be primarily a result of construction-related disturbance and/or grading of the area. Variation in artifact density indicates a possible functional difference, but typologically and temporally similar ceramic and lithic artifacts were located in both areas. Taken as a whole, the Posey Site and 18CH282 consist of a small core area containing a very high density of artifacts in plowzone or truncated plowzone context over relatively undisturbed subsoils. This portion of the site comprises approximately 200 square meters. The site core is bordered on the west and south by an area of disturbed, truncated, or redeposited topsoils that also contain a high density of artifacts over undisturbed subsoils. Surface area of this portion of the site is approximately 600 square meters. Finally, a low-density scatter of ceramic and lithic artifacts extends to the south and southwest of the central portion of the site. Construction related disturbance is extensive in this area of the site. Together, the two areas previously defined as the Posey Site and 18CH282 total approximately 10000 square meters, divisible into an 800 square meter very high to high-density core area and 9200 square meters of related low to very low-density deposits.

[REDACTED]



Section 6.2 Excavation Unit Phase

A total of thirty-seven 1.5 by 1.5 meter units was excavated during the investigation. This section details the results of this phase of the project, with an emphasis on the stratigraphy of the site and the plowzone and/or topsoil artifact assemblage. The results of the column sampling program and feature excavations are presented in separate sections below.

The shovel test pit program determined that the site consisted of two distinct spatial components, a core area and the surrounding low-density periphery, that were separable on the basis of stratigraphic profile data and relative artifact densities. Six of the excavation units were placed in the site's core, an area that contained a high density of artifacts in an undisturbed plowzone context. Twelve contiguous units were excavated as a block over a feature which was overlain by a truncated plowzone, and an additional eleven units were excavated on the periphery of the site's core. The remaining eight units were dispersed throughout the area of low-density deposits surrounding the site's core.

Taken together, the 37 units excavated during this project represent a sample of less than 1% of the entire site area. However, the 29 units excavated in the core of the site comprise a sample of 8.15% of this area. An additional eight square meters in the core was excavated by Barse during the 1985 investigation. Including these units, a total of 9.15% of the high-density core area of the site has been excavated.

Section 6.3 Excavation Unit Stratigraphy

Seven distinct stratigraphic profiles were revealed in the units excavated at the Posey Site. Four of these profile types were present in units excavated in the core area of the site. The remaining types were dispersed throughout the remainder of the site. All topsoil strata were found to have been impacted by plowing of the site, and the episodic cycles of construction and destruction in the area also had an impact on the site's soil profiles. A representative profile for each type is described below. Table 9 correlates excavation unit numbers and locations with profile type descriptions.

Figure 23 depicts the stratigraphic profile of the west wall of Unit 28260. Similar profiles were revealed in eight other units excavated in the core area of the site, and in one of the units excavated on the Central Knoll. This profile, designated Type 1, consisted of a layer of dark grayish brown to brown (10YR4/2 to 4/3) friable fine-grained sandy loam over a more compact dark brown to brown (10YR3/3 to 4/3) sandy loam plowzone. The uppermost soil layer contained a very high content of organic material, primarily roots and rootlets. This layer was interpreted as an Ao horizon that had developed since the last episode of plowing. The Ao horizon and the plowzone were underlain by a yellowish brown (10YR5/6 to 5/8) compact sand subsoil. Thickness of the combined Ao horizon and plowzone ranged between 16.5 and 33.5 cms. The interface between the plowzone and underlying subsoil ranged between 5 and 10 cms in thickness, and had been extensively disturbed by tree roots. This profile was similar to that described by Barse within the 1985 excavation block (Barse 1985:154).

The second profile type consisted of a truncated plowzone over undisturbed subsoils. This profile was similar to the Type 1 profile; however, variation was present in the thickness of the plowzone, and the Ao horizon was absent. Plowzone thickness in these units ranged between 4.5 and 22.5 cms, and tended to contain a larger amount of slag and imported gravel than units with the Type 1 profile. The method of truncation is unknown, but it was probably due to grading associated with one of the episodes of construction in the area. This profile was present in the twelve units excavated as a block on the western edge of the site's core, in one of the units excavated on the Central Knoll, and in the single unit (Unit 15911) excavated at 18CH282. Figure 24 depicts the south wall of Unit 28065, one of the 14 units that exhibited this stratigraphic profile.

A third distinctive profile was present in five units excavated along the southern periphery of the site's core area. This profile consisted of redeposited plowzone soil over the yellowish brown subsoil typical of other units excavated in the site core. The redeposited plowzone was distinguishable by a slightly platy structure, and by variation in color and degree of compaction through the layers above undisturbed subsoil. The redeposited topsoil ranged between 22 and 25 cms in thickness. The representative profile of this type is from Unit 27120, which also contained a possible pit feature (Figure 25). This profile is similar to the second type discussed by Barse (Barse 1985:154).

Two excavation units located on the Central Knoll area of the site contained a fourth profile type that consisted of a layer of redeposited topsoil over an Ao horizon and plowzone similar to that discussed above as Type 1. Figure 26 depicts the east wall of Unit 20897. As indicated, the uppermost 8-10 cms is comprised of brown (10YR4/3) silty to sandy loam mottled with 5-10% yellowish brown (10YR5/8) sand. A thin layer of dark brown (10YR3/3) sand was present beneath the redeposited layer, identified by its color and high organic content as a buried Ao horizon. Plowzone and undisturbed subsoil were present beneath the buried Ao in both units. Total thickness of all strata over the subsoil averaged 31.75 cms.

The fifth profile type on the site consisted of several varieties of disturbed and/or redeposited soils. Three units excavated at the edges of the core area contained layers of redeposited topsoil over clay fill over subsoil. Two of these units contained remnant plowzones in areas not covered by the

UNIT NUMBER	SITE AREA	PROFILE TYPE
27879	SITE CORE	TYPE 1
28068	SITE CORE	TYPE 1
28071	SITE CORE	TYPE 1
28257	SITE CORE	TYPE 1
28260	SITE CORE	TYPE 1
28449	SITE CORE	TYPE 1
29011	SITE CORE	TYPE 1
29018	SITE CORE	TYPE 1
29392	SITE CORE	TYPE 1
22615	CENTRAL KNOLL	TYPE 1
22610	CENTRAL KNOLL	TYPE 2
15911	SOUTHWEST EDGE	TYPE 2
27687	FEATURE BLOCK	TYPE 2
27688	FEATURE BLOCK	TYPE 2
27874	FEATURE BLOCK	TYPE 2
27875	FEATURE BLOCK	TYPE 2
28063	FEATURE BLOCK	TYPE 2
28064	FEATURE BLOCK	TYPE 2
28065	FEATURE BLOCK	TYPE 2
28252	FEATURE BLOCK	TYPE 2
28253	FEATURE BLOCK	TYPE 2
28254	FEATURE BLOCK	TYPE 2
28442	FEATURE BLOCK	TYPE 2
28443	FEATURE BLOCK	TYPE 2
25805	SITE CORE	TYPE 3
27120	SITE CORE	TYPE 3
27123	SITE CORE	TYPE 3
27126	SITE CORE	TYPE 3
27129	SITE CORE	TYPE 3
20897	CENTRAL KNOLL	TYPE 4
22223	CENTRAL KNOLL	TYPE 4
27695	SITE CORE	TYPE 5
27887	SITE CORE	TYPE 5
28268	SITE CORE	TYPE 5
19165	SOUTHWEST EDGE	TYPE 5
20866	SOUTHWEST EDGE	TYPE 5
21061	SOUTHWEST EDGE	TYPE 5

TYPE 1: Ao over Plowzone

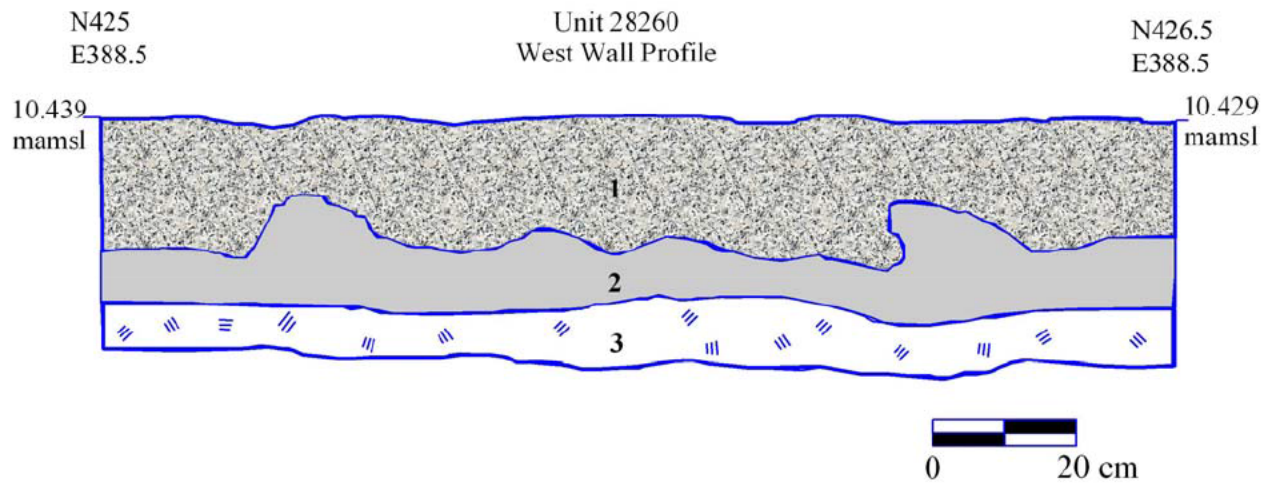
TYPE 2: Truncated Plowzone

TYPE 3: Redeposited Plowzone

TYPE 4: Redeposited Topsoil over Ao/Plowzone

TYPE 5: Disturbed

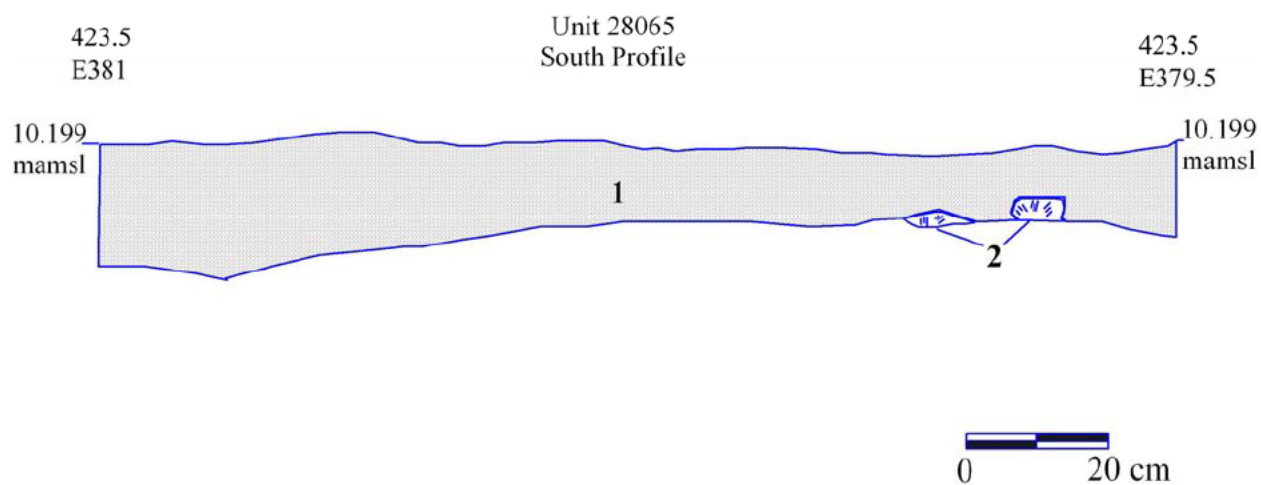
Table 9: Excavation Unit Profile Types.



SOIL DESCRIPTION

- 1** Dark grayish brown to brown (10YR4/2 to 4/3) friable fine grain sandy loam. Homogeneous, many roots and rootlets throughout. Many insect burrows, very high organic content. Interface with underlying is wavy and diffuse. [Ao horizon developing out of underlying Ap].
- 2** Dark brown to brown (10YR3/3 to 4/3). Moderately compact fine sandy loam. Roots and rootlets throughout. Moderate organic content, decreases with depth. Interface with underlying subsoil is 5-10 cm thick and contains 50-70% mottles of underlying soil [Plowzone].
- 3** Yellowish Brown (10YR5/6 to 5/8) compact medium grain sand. Few large roots, rootlets scarce. Upper 5-10 cm mottled with overlying Ap [Subsoil, B horizon].

Figure 23: West Wall Profile, Unit 28260.

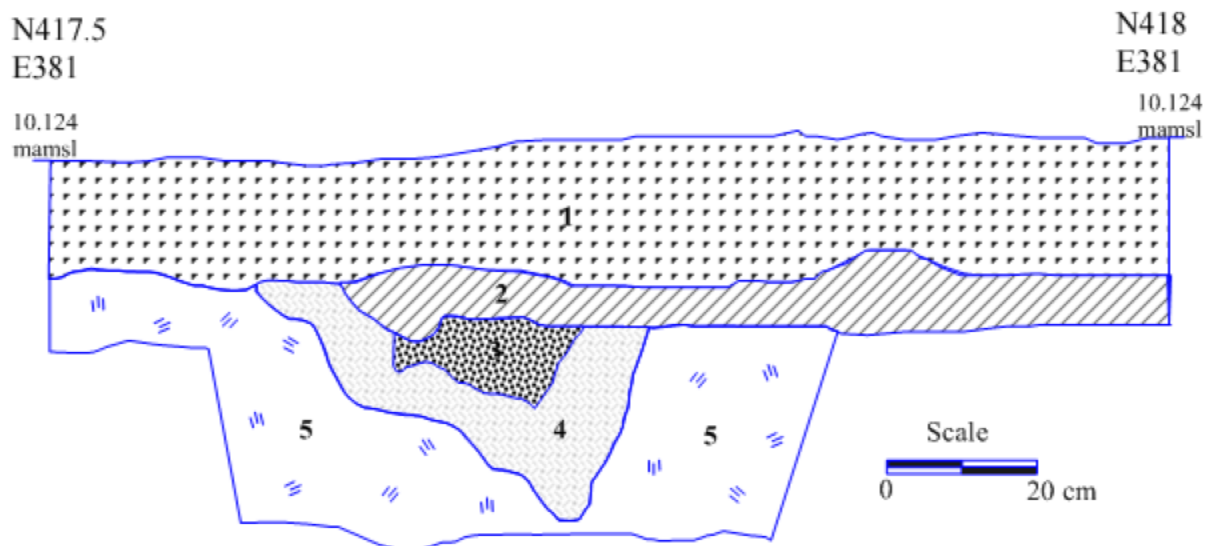


SOIL DESCRIPTION

- 1** Very dark gray brown to dark brown (10YR3/2 to 3/3) moderately compact sandy loam [Disturbed plowzone].
- 2** 75% dark yellowish brown (10YR4/6) compact sand mottled with 25% dark brown (10YR3/3) moderately compact sand [Subsoil].

Figure 24: South Wall Profile, Unit 28065.

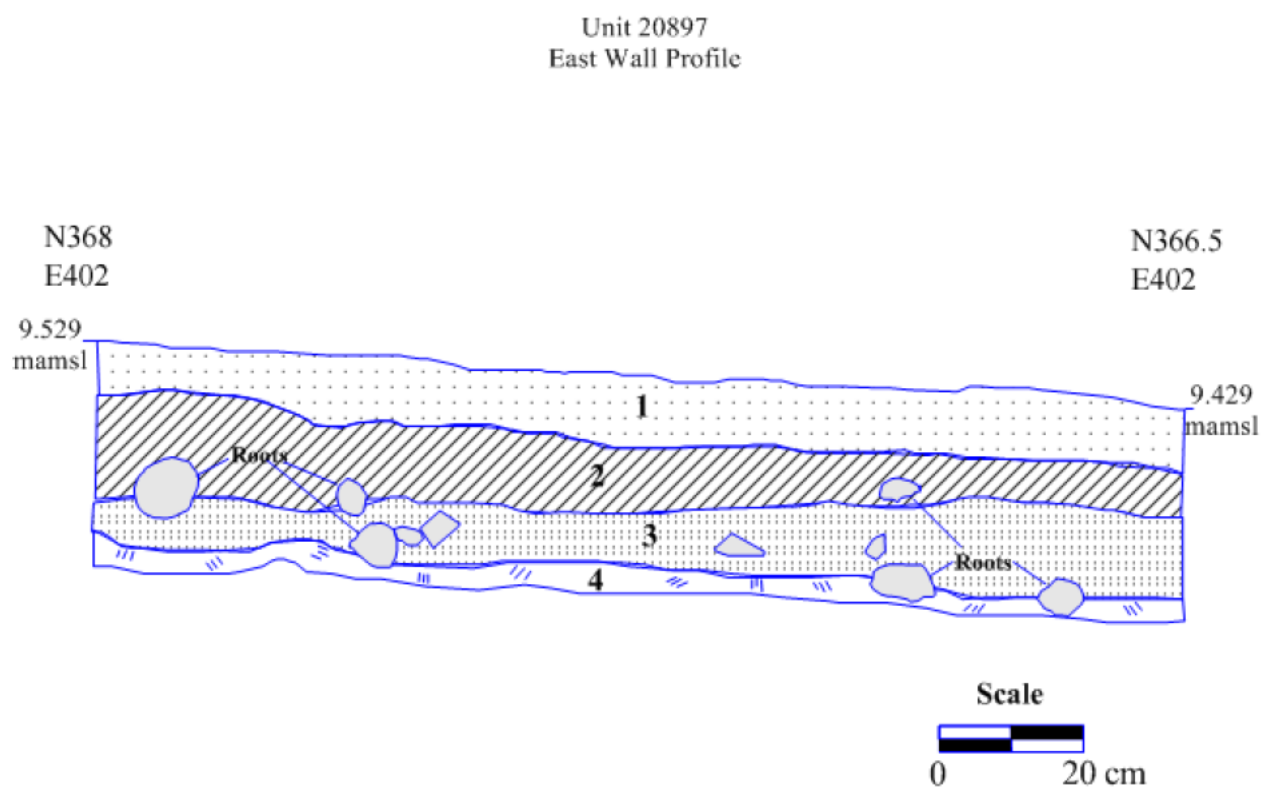
Unit 27120
Profile, East Wall



- 1 Dark brown (10YR3/3) friable sandy loam [Disturbed/redeposited plowzone].
- 2 Dark yellowish brown (10YR4/6) compact sand [Redeposited topsoil].
- 3 Light brownish gray (10YR6/2) moderately compactive clay mottled with 30% yellowish brown (10YR5/8) compact silty clay and 10% dark yellowish brown (10YR4/4) compact silty clay [Feature fill].
- 4 Yellowish brown (10YR5/8) compact sand mottled with 10% dark brown (10YR3/3) friable loamy sand [Mottling beneath feature].
- 5 Yellowish brown (10YR5/6) homogeneous compact sand [Subsoil].

Figure 25: East Wall Profile, Unit 27120.

Insert figure 24, s wall 28065



SOIL DESCRIPTION

- 1** Brown (10YR4/3) silty to sandy loam mottled with 5-10% yellowish-brown (10YR5/8) sand. Friable, high organic content [Redeposited topsoil/subsoil mixture].
- 2** Dark brown (10YR3/3) sandy loam. Friable, very high organic content, homogeneous [Buried Ao horizon].
- 3** Dark yellowish brown (10YR3/6 to 4/6) sandy loam, moderately compact [Buried plowzone].
- 4** Yellowish brown (10YR5/8) compact sand mottled with 10% dark yellowish brown (10YR3/6) sandy loam [subsoil].

Figure 26: East Wall Profile, Unit 20897.

clay fill. Figure 27 depicts the west wall of Unit 27887. This unit contained both the clay fill and a remnant plowzone. Thicknesses of topsoil and other strata over subsoil ranged between 23 and 32.5 cms in these units.

Three units in the southwestern portion of the site contained mixtures of clay fill, sandy loam topsoils, or redeposited plowzone. The locations of two of these units had been disturbed by utility trenches, while the remaining unit had apparently been impacted during construction-related grading. Depth of disturbed soil to undisturbed subsoil ranged between 17 and 31 cms below ground surface.

Soils were removed from the 37 units excavated during this project in natural stratigraphic layers. The cultural deposits outside of features were found to be confined to either plowzone or disturbed and/or redeposited topsoils. Although not quantified, it appeared that the majority of artifacts recovered were present at or near the bottom of plowzone strata. Similar patterns have been linked to bioturbative mechanisms, such as rodent or insect burrowing (Wood and Johnson 1978; Stein 1983; Erlandson 1984), although the accumulation of loess deposits and organic material may have also contributed to this depositional phenomenon.

Subsoils beneath the plowzone and disturbed topsoil layers were found to be culturally sterile outside of root molds, rodent burrows, or other natural intrusions. Cultural intrusions into subsoils in the form of features and intact midden deposits were noted in several units, and are discussed in Section 6.7 below.

Section 6.4 Excavation Unit Artifact Assemblage

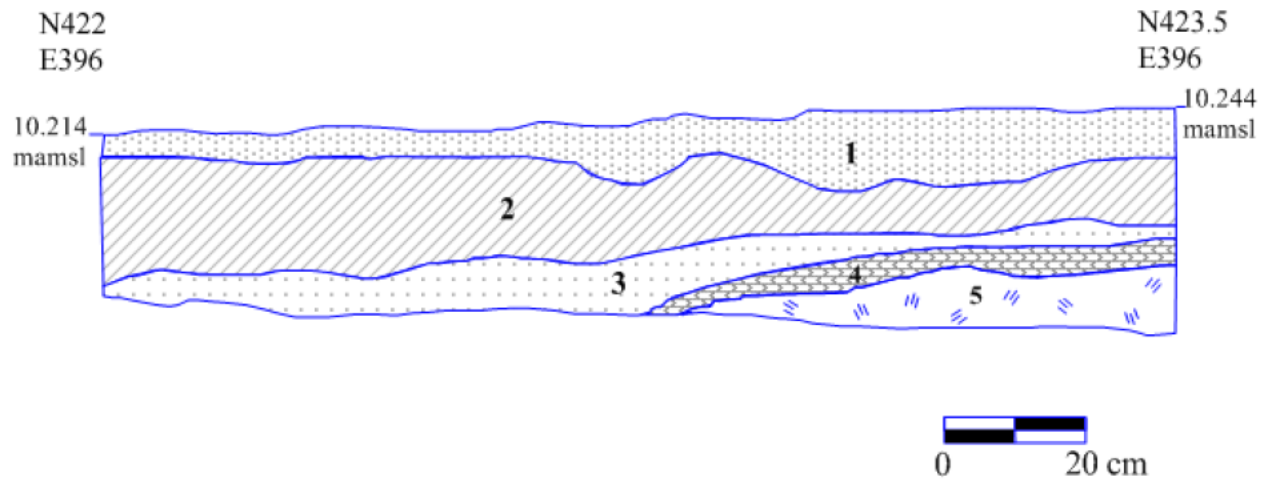
A total of 7510 artifacts and 3668 fragments of faunal material was recovered from the 37 units excavated during this project. All units contained some artifacts, although density was found to vary from very high to low across the site. In addition, all units contained at least some modern material, usually slag within the strata immediately beneath the ground surface. Table 10 presents a summary of artifact classes present, and counts or weights as appropriate for all materials recovered from soils screened through 1/4 inch mesh. Artifacts and faunal materials recovered from column samples and features are discussed in Sections 6.6 and 6.7 below.

Section 6.4.1 Modern Building Material and Slag

Modern building material, slag, and other modern artifacts or trash were recovered from all 37 of the units excavated during this project. A total of 773 artifacts (10.28% of the assemblage) was assigned to this class.

The largest component of the building material assemblage consisted of fragments of asbestos tile, followed by concrete, metal (including wire nails), flat glass, and other hardware.

Unit 27887
West Wall Profile



SOIL DESCRIPTION

- 1** Brown (10YR5/3) friable silty loam with roots and rootlets [Organic horizon].
- 2** Dark brown (10YR3/3) moderately compact sandy loam [Redistributed topsoil].
- 3** Brownish yellow (10YR6/6) mottled with 5% light brownish gray (10YR6/2) and 5% yellow (10YR8/6) compact clay [Clay fill].
- 4** Dark yellowish brown (10YR3/4) compact sandy loam [Remnant plowzone].
- 5** Dark yellowish brown (10YR4/6) compact homogeneous sand [Subsoil].

Figure 27: West Wall Profile, Unit 27887.

ARTIFACT TYPE	PLOWZONE UNITS	OTHER UNITS	SITE TOTAL
	(N = 21)	(N = 16)	
MODERN MATERIAL	264	509	773
CERAMIC-VESSEL	2074	817	2891
CERAMIC-OTHER	31	2	33
WHITE CLAY PIPE	86	29	115
TERRA-COTTA PIPE	213	44	257
LITHIC DEBITAGE	219	296	515
LITHIC TOOL	9	2	11
FCR	79 (2989.05g)	127 (3650 g)	206 (6639.05g)
BONE/SHELL-MOD	15	0	15
GLASS	15	8	23
NAILS-HW-ROSE	35	8	43
NAILS-HW-T-HEAD	8	8	16
NAILS-HW-FRAG	15	5	20
METAL-OTHER	63	5	68
SLAG	1189 (3081.41g)	1341 (3317.0 g)	2530 (6398.41 g)
<i>SUBTOTAL</i>	<i>4315</i>	<i>3201</i>	<i>7516</i>
FAUNAL MATERIAL			
SHELL-CLAM/MUSSEL	818 (301.99g)	39 (17.45g)	857 (319.44g)
SHELL-OYSTER	23 (87.7g)	1 (5.65g)	24 (93.35g)
SHELL-SNAIL	17 (7.35g)	0	17 (7.35g)
BONE-UNBURNED	1612	38	1650 (410.96g)
BONE-BURNED	954	64	1018 (287.85g)
<i>SUBTOTAL</i>	<i>3424</i>	<i>142</i>	<i>3566</i>

Table 10: Excavation Unit Artifact Summary.

Other modern materials found at the site included plastic wrappers, bottle glass, aluminum beverage cans, bottle caps, and other trash. A glass marble was recovered from Unit 25805, located at the southern edge of the site's core area. These artifacts tended to be concentrated in the uppermost 10 cms of plowzone.

Figure 28 presents distributions of modern artifacts, including building material, in the 21 units with intact plowzones excavated in the core area of the site.

The other major class of modern material found in the excavation units consisted of slag. A total of 2530 slag fragments weighing 6398.41 grams was recovered. This material was used as fill in drainage ditches along road margins, and as road bedding, for an unknown period during the earlier years of the Surface Warfare facility. A coal-fired power plant that formerly operated on the facility was probably the source of this material. Figure 29 presents distributions of this material in the core area of the site.

Section 6.4.2 Ceramic Artifacts

Excluding slag and other modern materials, various types of ceramic artifacts formed the largest component of the assemblage from the excavation units. A total of 2891 vessel sherds, 372 white clay and terra-cotta pipe fragments, and 33 "other" ceramic artifacts was recovered from contexts outside of features and column samples. The following section includes a discussion of vessel ware types, followed by summaries of the terra-cotta pipes, white clay pipes, and other ceramic artifacts recovered.

A summary of vessel ceramic types recovered from the excavation units is presented in Table 11. A total of twelve ware types was present. The majority of ceramic artifacts from the site were Potomac Creek vessel sherds. Approximately 89% of all vessel sherds present were assignable to this type. In general, Potomac Creek ceramics were identified on the basis of quartz grit temper and a relatively hard, compact paste (Egloff and Potter 1982:112; Potter 1993:123-125; Stewart 1982:39-47). A variety of decorative motifs on both body and rim sherds are known for Potomac Creek ceramics, several of which were represented on the sherds recovered from the Posey Site.

	BODY	BASE	RIM	FRAG.	TOTAL
POTOMAC CREEK WARE	2197	1	86	287	2571
YECOMICO WARE	134	0	2	0	136
CAMDEN WARE	86	1	5	0	92
MOYAONE WARE	11	0	1	0	12
ACCOKEEK WARE	7	0	0	0	7
UID HYBRID WARE	5	0	0	0	5
UID RED EARTHENWARE	21	0	3	0	24
TIN GLAZE EARTHENWARE	19	1	1	0	21
BLACK GLAZED EARTHENWARE	6	0	1	3	10
CHALLIS-LIKE EARTHENWARE	4	0	1	0	5
RHENISH BLUE AND GRAY	5	0	0	0	5
GERMAN BROWN STONEWARE	3	0	0	0	3
			SITE TOTAL =		2891

Table 11: Excavation Unit Ceramic Vessel Types.

A total of 2197 Potomac Creek body sherds was recovered. Only 115 of these sherds (5.2%) were surface treated. The remaining sherds were all of the plain, smoothed or scraped variety identified as the dominant type in assemblages dating to the early 17th century and later (Egloff and Potter 1982:112). Surface treatments on the 115 decorated sherds consisted of direct cord-marking (n = 60, 52.17%), smoothed-over cord-markings (n = 41, 35.65%), and cord-wrapped stick impressions (n = 14, 12.17%). In general, there was considerable variation in degree of compaction, paste color, and amount of temper within the body sherds. Two hundred and eighty-seven body fragments missing one or both surfaces were also recovered.

Decorative motifs on the 86 Potomac Creek rim sherds recovered are summarized in Table 12. Like the body sherds, the largest component of the rim sherd assemblage was plain and smoothed on both interior and exterior surfaces ($n = 36$, 41.86%). The remaining motifs broke down into two general categories, direct cord-marked and cord-wrapped stick-impressed. The majority of decoration within these categories was simple, and was primarily placed parallel to the rim of the vessel. Several sherds with punctate or fingernail impressions were also recovered. Based upon a visual comparison of the design motifs and finishes of the 86 rim sherds, portions of 47 individual vessels were recovered from the site. Sixteen very small rim fragments were not used to identify individual vessels in this portion of the analysis.

A single Potomac Creek base sherd was recovered from Unit 28071, located at the southern end of a three unit trench placed within the core area of the site. Interestingly, this sherd was from a flat bottomed vessel, atypical for Potomac Creek ceramics from pre-Contact contexts (Figure 30). This artifact is discussed further in the following summary section.

Potomac Creek ceramic was present throughout the site in relatively high densities, although it was concentrated in the core area. At least some Potomac Creek was recovered from 36 of the 37 units excavated, the exception being Unit 21061, located in the southwestern portion of the site. Figure 31 represents the distribution of all Potomac Creek within the 21 units in the core area of the site that were used for distribution plotting. As indicated, density ranged from as few as 6 sherds to 235 sherds per unit, with highest concentrations present at the eastern edge of the core area.

Potomac Creek-type ceramic has been recovered from contexts dating as early as ca. 1160 A.D (Dent 1995:246), although the origin of the Potomac Creek complex is placed at 1300 A.D. (Clark 1980:8). As cited above, the plain variety of this ceramic is dominant in assemblages post-dating the turn of the 17th century, and more than 90% of all Potomac Creek sherds recovered from the Posey Site were of the plain variety. One hundred and thirty-six sherds of Yeocomico ware were also recovered from the excavation units. This ceramic type was defined by Egloff and Potter (1982:113-114) as a crushed shell-tempered ware with a compact silty clay paste, and the sherds from the Posey Site are consistent with this description. All exhibit relatively fine crushed shell temper, and are undecorated, with smoothed or scraped surfaces. Shell temper has eroded from many of the sherds, leaving a pitted or eroded surface. Only two rim sherds were found, both from different vessels. The distribution of Yeocomico ware is presented in Figure 32. One hundred six of the 136 sherds were recovered from plowzone context in the core area of the site. Within that area, densities ranged from 0 to 23 sherds per unit. A concentration was present in Unit 28071, but this ware distributed in a relatively even pattern across the site core.

An untempered, relatively hard clayey-pasted ceramic identified as Camden ware was recovered from several units (Figure 33). Although only 92 sherds were present, three different



Figure 30. Photoplate of Base Sherd from Flat Bottomed Potomac Creek Vessel.

RIM SHERD TYPE	PROFILE/ THICKNESS	SHERD COUNT	TOTAL VESSELS
TYPE 1: PLAIN SMOOTHED, EVERTED TO SLIGHTLY INVERTED PROFILE	VARIES VARIES	36	7
TYPE 2: 3 ROWS DIRECT CORD IMPRESSIONS PARALLEL TO RIM	EVERTED THICK	9	6
TYPE 3: PLAIN WITH FOLDED OR APPLIED STRIP ON EXTERIOR OF VESSEL	STRAIGHT MED. THICK	5	3
TYPE 4: 1 ROW DIRECT CORD IMPRESSION AT RIM	STRAIGHT MED. THICK	5	4
TYPE 5: 1-2 ROWS PUNCTATE OR FINGERNAIL IMPRESSIONS PARALLEL TO RIM	STRAIGHT THICK	5	5
TYPE 6: 2 ROWS DIRECT CORD IMPRESSIONS PARALLEL TO RIM	STRAIGHT MED. THICK	5	4
TYPE 7: 1 ROW DIRECT CORD IMPRESSIONS PARALLEL AND BELOW RIM	STRAIGHT MED. THICK	5	4
TYPE 8: TWO ROWS CORD WRAPPED STICK IMPRESSIONS PARALLEL TO RIM	STRAIGHT VARIES	4	3
TYPE9: SMOOTHED CORD MARKS TO TOP OF RIM	STRAIGHT THIN	2	1
TYPE 10: 4 ROWS DIRECT CORD IMPRESSIONS PARALLEL TO RIM	STRAIGHT THICK	2	2
TYPE 11: 2 ROWS CORD WRAPPED STICK IMPRESSIONS PARALLEL TO RIM	EVERTED THICK	2	2
TYPE 12: DIRECT CORD IMPRESSIONS PARALLEL AND DIAGONAL TO RIM	STRAIGHT MED. THICK	2	2
TYPE 13: PLAIN SMOOTHED, SHARPLY EVERTED PROFILE	MED. THICK	2	2
TYPE 14: MULTIPLE CORD IMPRESSIONS PERPENDICULAR TO RIM	STRAIGHT THIN	1	1
TYPE 15: MULTIPLE CORD IMPRESSIONS PARALLEL TO RIM	STRAIGHT THIN	1	1
<i>NOTE VARIATION IS PRESENT AMONG SPECIMENS IN PROFILE AND THICKNESS THIS IS A GENERALIZED OBSERVATION</i>			

Table 12: Potomac Creek Rim Sherd Decorative Motifs.

vessels were represented by the five rim sherds recovered. Two of the vessels had plain rims with a straight profile, while one had a folded or applied strip on the exterior surface of the rim. All body sherds were undecorated, with scraped or burnished exterior surfaces. One base sherd was recovered from Unit 29011, located on the northern edge of the core area. This sherd was sharply everted, and was from a vessel that apparently had a flat base. Like the Yeocomico ware, Camden is thought to be a post-Contact development, in this case originating from earlier sand or grit-tempered wares. Camden ware produced at the type site was dated to the last quarter of the 17th century, and continued to be produced at least through the colonial period (MacCord 1969:18).

Twenty-four sherds from two minority and one unidentified ware types were present among the hand-constructed earthenware assemblage. Seven sherds of Accokeek ware, a cord-marked ceramic tempered with a mixture of coarse quartz grit and sand, were recovered from two units. Three of the sherds were recovered from the core area (Figure 34), while the remainder were split between Units 22610 and Unit 20866, both located on the southwestern edge of the site. No rim sherds of this ware were recovered, but based on the presence of the body sherds at least one vessel is represented. On sites in the lower Potomac River area, Accokeek ware dates range between 800 and 300 B.C. (Egloff and Potter 1982:99), and dates from other areas range between approximately 1070 B.C. to as late as 80 A.D. (Dent 1995:226). These sherds represent a component considerably earlier than the bulk of the deposit at the Posey Site. The extremely low density of this ceramic type and the absence of corroborating diagnostics probably indicates occasional or short-term use of the area during the Early Woodland Period.

Another minor type from the site was Moyaone ware, which was represented by twelve sherds. This ceramic's primary diagnostic characteristic is the presence of micaceous sand as a tempering agent and as a component of its silty clay paste (Egloff and Potter 1982:112). Moyaone was originally identified as Potomac Creek Sand Tempered by Carl Schmitt (1965) at the Potomac Creek Site (see Stewart 1989:40-46 and Part IV for discussion of this nomenclature). Eleven of the Posey Site sherds were plain body fragments, while the other was a rim sherd with two rows of direct cord impressions parallel to the lip of the vessel. Eleven of the sherds were recovered from units in the core area of the site, while the remaining sherd was recovered from Unit 22615 at the northeastern corner of the Central Knoll area. Eight of the sherds were recovered from the twelve unit block at the western edge of the site's core (Figure 35). Two examples of Moyaone ware from the White Oak Point Site on Virginia's coastal plain have been dated to 1310 and 1460 A.D. (Dent 1995:246). Like the Accokeek ware, the low density of this ceramic suggests some earlier use of the area, but probably does not indicate an extended occupation of the Posey Site at that time. Five sherds of an unidentified ceramic, comprised of a compact silty clay paste tempered with a mixture of finely crushed shell and quartz grit, were also recovered. The surfaces of these sherds are slightly eroded, and all are pitted from the dissolution of the shell temper. The age of this ware is unknown. All of these sherds were recovered from Unit 22615, located at the southeastern corner of the Central Knoll.

Sixty-eight sherds not assignable to the ware types discussed above were recovered from the site. These sherds were all wheel-thrown, and were probably not produced by Native American potters. Country or area of origin for these artifacts, if determinable, is indicated below. All of these sherds were recovered from excavation units in the core area of the site, and 50 were from units that had intact plowzones. Distributions of these 50 sherds are indicated in the figures cited below. The largest element ($n = 24$, 40%) of this component of the ceramic assemblage is comprised of sherds

of coarse red or orange-bodied earthenwares that cannot be further identified as to type. The paste that comprises these sherds is relatively soft, and most sherds are slightly micaceous. A few small nodules of reddish or buff clay are also present in some sherds. Three rim sherds were present, while the remainder were body sherds. Three sherds exhibit remnants of lead glaze, and many of the remaining unglazed body sherds are slightly to very eroded.

At least two vessels are present, based upon the three rim sherds. One rim is slightly everted, and appears to have finger impressions on its exterior surface. Although the two remaining rims do not refit, they are of similar thickness and profile. Other vessels may be present, but no other distinctive rim sherds were recovered. It is possible that some of these sherds are from vessels that were produced locally, but the origin of these vessels has not been determined more precisely. Earthenwares of this type have been recovered from colonial sites in the region in contexts dating to the second half of the 17th century (Miller 1983:90; King and Pogue 1985:10).

All the coarse red earthenwares were recovered from the core area of the site, at densities ranging from zero to three sherds per unit (Figure 36). Minor concentrations were present at the northern end of the twelve unit block, and at the eastern edge of the core area.

Eleven sherds of undecorated, white tin-glazed earthenware were recovered from the site. All were recovered from the core area, although one was in a redeposited topsoil context. Figure 37 presents the distribution of those sherds recovered from plowzone. Ten of the sherds are very small body fragments. The remaining sherd is probably from a plate or other flatware vessel. None of the sherds refit. Tin-glazed earthenware was produced throughout the 17th and 18th centuries, and in Maryland it was most commonly imported from England and Holland. Unfortunately, the age of the Posey Site sherds cannot be more closely identified.

An additional ten sherds of unglazed buff-pasted earthenware were recovered from units in the core area of the site. Based upon comparison of the pastes of these sherds with the tin-glazed earthenware discussed above, it is probable that these sherds were also formerly tin-glazed. All of these artifacts were very small, and are untypable as other than vessel body sherds.

Seven sherds of a black lead-glazed, red-bodied earthenware with very occasional small nodules and/or streaks of yellow clay in the paste were also recovered. An additional three body fragments with no intact surfaces were assigned to this ware type based on the characteristics of the paste. The majority of these sherds were recovered from the core area of the site (Figure 38). One rim sherd is a portion of a butter pot, while the remainder appear to be body fragments of utilitarian vessels. This ceramic type has been recovered from post-1680 contexts at St. Mary's City, where it is identified as Black Glazed Red Earthenware. It resembles Buckley or Buckley-like earthenware (except that it lacks large amounts of yellow clay in the paste), and may be an early variant of Buckley ware (Miller 1983:91). However, the name "Buckley" is somewhat problematic, in that it implies a place of manufacture rather than a specific ware. Although these ceramics were manufactured in Buckley, England in the 17th and early 18th centuries, other local centers that produced the same wares included Rainford, Clywd, and Burslem in Staffordshire (Philpott 1985:88).

One rim sherd and four body sherds of Challis-like earthenware were recovered. None of these sherds refit, but it is probable that only one vessel, possibly a cup, is present. The rim sherd is small, and has a slightly everted profile. This ware type was recovered from contexts dating between approximately 1675 and 1700 at the Van Sweringen Site in St. Mary's City (Hurly and Miller 1989), and at the Patuxent Point Site in Calvert County, which was occupied between the late 1650s and

the 1680s (King and Ubelaker 1996:31). These sherds were all recovered from the site's core area, with most coming from its western edge.

Five sherds of Rhenish blue and gray stoneware were recovered from four units excavated in the core area (Figure 39). All are small body sherds, possibly from a bottle or similar form. Although none refit, two exhibit a similar molded floral decoration, and their coloration is similar. The sherds are generally thin, and thickness variation is within the range that may be present in one vessel. Two of the five sherds have some purple elements in addition to the cobalt blue decoration. This purple color first appeared on Rhenish stonewares as early as 1660, but did not become common until the last quarter of the 17th century (Noel Hume 1982:281).

Three sherds of Rhenish brown stoneware were recovered from the core area of the site, although only one was present in a unit with intact plowzone (Figure 40). All are small body sherds, and at least two vessels are represented. One of the sherd's exterior is molded, and may be a portion of a bellarmine-type bottle. Miller states that this ceramic "was available in America throughout the 17th century and into the early 18th century" (Miller 1983:85).

A total of 257 fragments of terra-cotta smoking pipes was recovered from the excavation units. They included 165 bowl fragments and 96 stem fragments. The majority of these artifacts were very small, with an approximate average maximum dimension of less than 2 cms. None of the bowl or stem fragments show any evidence of being produced in molds.

No decoration was noted on any of the stem fragments, but 74 of the bowl fragments exhibited impressed roulette decoration. This figure represents 28.79% of the total terra-cotta pipe assemblage, and 44.84% of the bowl fragments. It is probable that the actual proportion of decorated to undecorated bowls is higher than these figures, due to the small size of the fragments. The rouletting on the decorated bowl fragments consisted of fairly regular, closely spaced rectangular impressions, although some variation in the size and depth of impressions was noted. The roulette decoration appeared to be in the form of either geometric patterns or individual line elements. No positively identifiable motifs (e.g., running deer, star) were present, but the small size of the fragments may have prevented recognition of these elements.

The terra-cotta pipe fragments were recovered primarily from units placed within the core area of the site. Two stem fragments were recovered from the Central Knoll area, and one each from Units 22610 and 22615. Of the remaining 255 fragments, 213 were recovered from excavation units with intact plowzones. Distributions of the three classes of pipe fragments discussed above are presented in Figures 41 through 43. There does not appear to be any significant difference in the distribution of the decorated versus undecorated bowl fragments, although minor concentrations are present in the western and southern edges of the core area. The distributions of stem fragments tend to correlate with the presence of bowl fragments, suggesting the deposition of larger fragments or whole pipes. Unit 27687 at the southwestern corner of the twelve unit block contained 29 fragments of all types, 11.28% of all terra-cotta pipe fragments recovered. White clay pipe fragments were also recovered primarily from the core area of the site. A total of 29 stem and 74 bowl fragments was recovered. Interestingly, the same two units outside of the core area that yielded terra-cotta pipe fragments also contained white clay pipe fragments. Five fragments, 1 bowl and 4 stem, were recovered from Unit 22615, while Unit 22610 yielded one bowl and one stem fragment. These seven artifacts represent 6.79% of the total white clay pipe assemblage.

Twelve of the 29 stem fragments were split, and thus did not have a measurable bore diameter. The remainder consisted of thirteen 7/64" diameter fragments (76.47%), three 8/64" diameter fragments (17.64%), and one 6/64" diameter fragment (5.88%). The seriation method developed by Harrington (1978:64) indicates a date range of approximately 1650-1680 A.D. for these artifacts. The small size of the sample prevents precise dating; however, the seventeen fragments yield a mean date of 1664.03 using the Binford regression method (Binford 1978:66-67).

Five of the pipe bowl fragments were decorated with a single band of rouletting around the rim, and one had a single incised line, also around the exterior of the bowl immediately beneath the rim. All of these fragments were recovered from the southwestern edge of the site's core area, with five found in the twelve unit block and one in Unit 27879. The remaining bowl fragments were all undecorated.

Two bowl fragments were large enough to be temporally diagnostic on the basis of morphology. One of these is similar to Noel Hume's Type 9, which is identified as dating from the period between 1645 and 1665 A.D (Noel Hume 1982:303) The bore hole at the heel of this specimen has a diameter of 8/64". This bowl is also similar to a type designated Type A, Variety 4 from the St. John's Site in St Mary's City (Hurry and Keeler 1991:40), but has a slightly taller, less bulbous bowl. This artifact was recovered from remnant plowzone in Unit 27887, in the core area of the site.

The second bowl fragment is much less complete. The bowl has a small, slightly developed heel, but not enough of the bowl itself is present to determine its size and shape. The heel and fragment of bowl is similar to Hurry and Keeler's (1991:38-39) Type A, Variety 2, dating between 1640 and 1675. Due to the fragmentary nature of this specimen, this identification is tenuous at best. The artifact was recovered from Unit 25805, at the southern edge of the site's core area.

Two additional bowl fragments were also temporally diagnostic. One of these was impressed with the letters "LE", while the other had a complete "L" and a fragment of an "E" (Figure 44). These bowls were from pipes that have been identified as manufactured by Llewellyn Evans in the period between approximately 1661 and 1689 (Pogue 1991:22).

The distributions of white clay pipe fragments are indicated in Figures 45 through 47. There are concentrations of pipe fragments at the northern end of the twelve unit block, and at Unit 29392. The total fragments per unit averages less than five, with a maximum of eight fragments.

Twenty-seven small clay nodules were recovered from three excavation units at the western edge of the site's core area. These artifacts had been fired, but whether they were deliberately burned as a result of human action or impacted by a post-depositional brush or forest fire is unknown. None exhibited flat surfaces or impressions suggestive of daub, and none appeared to be fragments of vessels or other forms. It is possible that they are associated with the manufacture of either vessels or pipes at the site, but this is conjectural. Similar lumps or wads of clay from other late Native American sites have been identified as evidence of ceramic manufacture (Henry 1992:152).



Figure 44. Photoplate of Llewellyn Evans Pipe bowls.



Figure 48. Photoplate of "Other" Ceramic Artifacts.

Seven artifacts were assigned to the "Other" category along with the clay nodules described above (Figure 48). They consisted of several different forms, including three fired lumps of clay similar to that used in the terra-cotta pipes discussed above. These clay lumps appeared to be unformed, and their origin or intended use remains unknown. Similar to the clay lumps was a short section of a terra-cotta pipe stem that was not perforated prior to being either lost or broken. All four of these artifacts were recovered from two units, 28071 and 28260, in the core area of the site.

Two of the three remaining artifacts consisted of fired clay cylinders. These artifacts had a compact paste, and a low density of quartz grit temper. One, recovered from Unit 28449, was approximately 2.34 cms long by 1.34 cms in diameter, and exhibited flattened, angled ends. The second was smaller, 1.38 cms long by 1.44 cms in diameter, and did not have the flattened angled ends like the first. These artifacts were recovered from Units 28449 and 27120, respectively. Although their exact function is unknown, their form is highly suggestive of a foot for

a European-style vessel, such as a pipkin or other plumbate (footed) type. It is also interesting to note that the larger of the two was recovered from the same unit as two of the artifacts identified as possible incomplete pipes.

The final ceramic artifact from the excavation units was a possible spoon or ladle broken either in the process of being made or after firing (see Figure 48, lower left). It was small, 2.68 cms in length, and the "handle" diameter was less than 2 cms. The surface of this artifact was not burnished or highly smoothed like many of the vessel body sherds in the assemblage, but it did contain a small amount of quartz grit temper and the paste was similar to that of many of the Potomac Creek sherds from the site. The artifact was recovered from Unit 27126, in the core area of the site. A very similar artifact, in both size and shape, was recovered by MacCord from the Camden Site in Caroline County, Virginia (MacCord 1969:18-19, see also Figure 8a and 9).

The recovery of the seven artifacts discussed above, and possibly the 27 clay nodules, creates a variety of implications for the ceramic assemblage as a whole. Several of the artifacts appear to be incomplete forms either broken or discarded in the process of manufacture. This would suggest the use of portions of the site for the production of ceramic vessels and/or pipes. Furthermore, these forms are not typical of earlier Potomac Creek ceramic vessels, and with the base sherd from the flat bottomed vessel described previously, may indicate a significant morphological shift in the types of ceramic vessels being produced by local Native Americans at the time the site was occupied.

Section 6.4.3 Lithic Artifacts

The lithic assemblage recovered from the excavation units consisted of 515 pieces of debitage, 15 tools, and 206 fragments of fire-cracked rock (Table 13). In addition, three fragments of unmodified steatite and graphite were recovered. All units contained some lithic artifacts, although densities varied across the site. In general, lithic artifacts, both debitage and tools, were present only in low to very low densities throughout the site.

<i>MATERIAL</i>	<i>PRI</i>	<i>SEC</i>	<i>LSC</i>	<i>TER</i>	<i>AD</i>	<i>FF</i>	<i>FCR</i>	<i>TOOL</i>	<i>CORE</i>	<i>OTHER</i>	<i>TOTAL</i>
QUARTZ	71	129	21	6	87	8	0	4	0	0	326
QUARTZITE	21	34	4	0	13	5	206	4	1	0	288
CHERT	5	6	4	0	2	3	0	2	1	0	23
FLINT	6	47	23	1	11	3	0	4	1	0	96
RHYOLITE	0	1	0	0	0	0	0	0	0	0	1
STEATITE	0	0	0	0	0	0	0	0	0	2	2
OTHER	1	0	0	0	0	0	0	1	0	1	3
<i>TOTAL COUNT</i>	<i>104</i>	<i>217</i>	<i>52</i>	<i>7</i>	<i>113</i>	<i>19</i>	<i>206</i>	<i>15</i>	<i>3</i>	<i>3</i>	<i>739</i>

Table 13: Excavation Unit Lithic Artifact Summary

<i>MATERIAL</i>	<i>PRI</i>	<i>SEC</i>	<i>LSC</i>	<i>TER</i>	<i>AD</i>	<i>FF</i>	<i>CORE</i>	<i>COUNT</i>	<i>TOTAL %/MATERIAL</i>
QUARTZ	71	129	21	6	87	8	0	322	62.52%
FLINT	6	47	23	1	11	3	1	92	17.86%
QUARTZITE	21	34	4	0	13	5	1	78	15.15%
CHERT	5	6	4	0	2	3	1	21	4.08%
RHYOLITE	0	1	0	0	0	0	0	1	0.19%
OTHER	1	0	0	0	0	0	0	1	0.19%
<i>COUNT</i>	<i>104</i>	<i>217</i>	<i>52</i>	<i>7</i>	<i>113</i>	<i>19</i>	<i>3</i>	<i>515</i>	
<i>TOTAL %/TYPE</i>	<i>20.19%</i>	<i>42.14%</i>	<i>10.10%</i>	<i>1.36%</i>	<i>21.94%</i>	<i>3.69%</i>	<i>0.58%</i>		<i>100%</i>

Table 14: Excavation Unit Lithic Debitage Type/Material Summary

The majority (n=322, 62.52%) of debitage recovered was quartz (Table 14). Quartzite, both fine and coarse grained, and untyped cherts comprised 19.23% (n = 99) of the debitage assemblage. The source of the raw material for these artifacts was probably gravel deposits exposed along the shores of Mattawoman Creek or other erosional features (e.g., drainages) in the area of the site. Pebble cortex was present on many of the primary and secondary flakes recovered. No evidence of tabular cortex or other characteristics indicative of primary source material were observed on any of the specimens within the collection.

A significant proportion of the debitage consisted of European flint. A total of 92 pieces of flint debitage, representing 17.86% of the assemblage, was recovered. The proportions of flake types of this material were similar to those of the assemblage as a whole, with an emphasis on secondary and late secondary reduction. The way in which this material found its way to the site remains unknown; however, it is possible that it originated either as discarded ship's ballast or as a direct trade good. The relatively shallow depth of Mattawoman Creek, both currently and in historic times, may have dictated the use of small, unballasted boats in the immediate area of the site, although larger vessels would have had access to the main channel of the Potomac, also in close proximity to the site. It is possible that the flint was exchanged as a trade good among Native Americans, or was traded by colonists to the Native Americans, but this remains conjectural.

The distributions of the lithic debitage by material type within the 21 plowzone units at the site's core are presented in Figures 49 through 52. These figures indicate a relatively even distribution of material within this portion of the site. A distributional trend not presented in these figures is the presence of greater proportions of quartzite debitage in comparison to flint and chert outside of the core area of the site. Seventy-eight (84.78%) of the 92 pieces of flint debitage, and 12 (54.55%) of 22 chert debitage fragments, were recovered from the 21 core units. It is unknown if this differential is related to temporal or functional shifts within the site as a whole.

The overall proportions of the lithic debitage assemblage are weighted toward secondary reduction associated with the production of pebble or bifacial tools (Table 14). This portion of the collection was recovered from plowzone or disturbed topsoil using 1/4" mesh dry screens. Tertiary flakes were recovered in much lower amounts when compared to primary and secondary materials, but were found to be present both in floated feature fill and water-screened column samples (see below). The presence of these artifacts indicates probable maintenance and use of lithic tools on the site, as well as the initial production evidenced by the primary, secondary, and late secondary debitage.

Excluding the flint debitage, the vast majority of the lithic artifacts recovered from the site were made of locally available secondary source or cobble materials. A single rhyolite secondary flake and a primary flake of an unidentified granitic material were recovered, but the association of these artifacts with the bulk of the deposit is unknown. It is possible that they were present as a result of incidental earlier use of the area, or through the reuse of tools by the occupants of the Posey Site.

Three cores were recovered from the site during the project. Two were found in the twelve unit block excavated at the western edge of the site core area. One was a portion of a flint cobble that exhibited multiple flake removals, and had been reduced to less than 5 cms in maximum diameter. The second core was a quartzite cobble, also with multiple flake removals. This artifact exhibited evidence of battering on its edges, possible indicating secondary use as a hammerstone. The final core was recovered from redeposited topsoil in Unit 27695, on the periphery of the site's core.

This artifact was a chert pebble that had been reduced to less than 5 cms in diameter through multiple flake removals.

All fire-cracked rock recovered from the site was of quartzite. Grain size within individual fragments tended to be small; however, there was some variation in this pattern. A total of 206 fragments weighing 6787.05 grams was recovered from all excavation units. Average fragment size was approximately 33 grams, with a range from approximately 1 to 70 grams. Figure 53 represents the distribution of fire-cracked rock from units with undisturbed plowzone in the core area of the site. A total of 79 fragments weighing 3137.05 grams was recovered from these units. Although minor concentrations of fire-cracked rock were present in these units, no features associated with this material were found, and overall concentrations within the core area of the site were low. The remaining fire-cracked rock was distributed throughout the site, but a concentration was present in Unit 15911, located at 18CH282. A total of 65 fragments (1512 grams), representing 31.55% (22.22% by weight) of all fire-cracked rock recovered, was found in this unit. No hearth or other burning-related feature was present in this unit.

The final component of the non-tool lithic assemblage consisted of two unmodified steatite fragments, each weighing less than 1.0 gram, and one unmodified graphite or shale fragment, also less than 1.0 gram in weight. All three of these artifacts were recovered from the core area of the site.

Fifteen lithic tools were recovered from excavation units during the project. Twelve of these tools were found in the core area of the site, with six from units that were used in plotting the distributions of plowzone artifacts. Three tools were recovered from the Central Knoll area. The location of each tool is indicated in the following discussion.

Three of the tools can be described as utilized pebbles that were not reduced through percussion or pressure flaking techniques. Two are fine grained quartzite or sandstone pebble fragments that have been battered along their edges, probably through use as hammerstones. One of these artifacts, recovered from Unit 28063, has had several flakes removed from it either deliberately or incidentally to other use.

The third pebble-type tool was recovered from Unit 20897, at the western edge of the Central Knoll area. This artifact is a flat, elongate, argillaceous shale pebble with minor edge damage and some evidence of grinding on surfaces adjacent to the edges. The function of this tool is unknown.

Two chert artifacts classified as tools were also recovered, one from Unit 27874 and one from Unit 27123. The artifact from Unit 27123 is a small nodule, unflaked, but with edge damage on two surfaces. This artifact possibly functioned as a strike-a-light or scraper, but precise determination has not been made. The other chert artifact is a retouched and utilized primary flake. All cortical surfaces have been removed from the artifact, but the material is of a non-local oolitic variety.

Three flint tools were recovered from the core area of the site. One of these is a relatively large secondary flake with minor use wear along one edge (Unit 27874). This artifact may have functioned as a cutting tool. Both of the remaining flint tools are gunflints (Figure 54). One specimen, recovered from Unit 28257, is a roughly rectangular, bifacially-worked pistol flint diagnostic of the second half of the 17th century (Brown 1980:79, 118). The morphology of this flint suggests that it is not of Native American manufacture, but was brought to the site in its finished

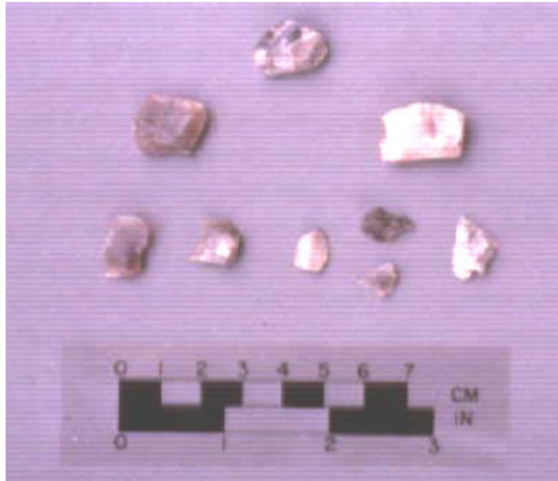


Figure 54. Photoplate of Gunflints from Excavation Unit Plowzones.

form. The other gunflint, recovered from Unit 29392, is less diagnostic, but its morphology is similar to locally produced, bifacially- worked chip flints from the Little Marsh Creek site in Fairfax County, Virginia (Moore 1990, illustrated in Potter 1993:204). Although not conclusively demonstrated, these flints are probably of Native American manufacture. Similar flints have also been reported from Susquehannock sites dating to the 17th century (Kent 1984:249).

A single Orient Fishtail projectile point of very fine-grained quartzite, and a large utilized flake of a more coarse grained quartzite, were recovered from Unit 22615 at the northeastern corner of the Central Knoll area. Orient Fishtail points are probable

derivatives of earlier Archaic broad blade projectile forms, and may therefore be placed in the latter portion of the Late Archaic Period, approximately 3500 to 2750 years before the present (Steponaitis 1983; Dent 1995:178-180). Post-Contact diagnostics including metal, ceramic, and glass were also recovered from this unit, and it remains unknown if the lithic tools are temporally associated either with each other or with the other cultural material recovered. On its own, the utilized quartzite flake is not temporally diagnostic, and both tools were recovered from plow-disturbed soils.

Quartz tools consisted of a retouched and probably utilized primary flake, a biface tip, a whole triangular projectile point, and an elongated triangular projectile point. All of these artifacts were recovered from the core area of the site.

One of the triangular points has roughly equivalent side lengths. Points of this shape are usually described as Levanna points. The elongate triangular point is usually typed as Madison, but a variety of regional names exist for projectile points of both of these forms. These triangular points are diagnostic of the Late Woodland Period, and they continued to be produced by Native Americans through the 17th century. Recently published radiocarbon dates for these point types range from approximately 860 to 1690 A.D. (Dent 1995:248). One of the equilateral points is relatively crudely made in comparison to the other two; whether this is a temporal variation or simply qualitative remains unknown.

A noteworthy characteristic of the lithic tool assemblage recovered from the site is its very low relative density. Less than one tool per unit was recovered, and in only one case was more than one tool recovered from a unit. This pattern may be related to site function, but it may also be an effect of an acculturative process wherein lithic tools were replaced by other raw materials such as brass or iron, or imported finished items such as knives were supplanting the need for chipped stone tools. In addition, the ratio of gunflints to projectile points from the site is 2:3. This may also be reflective of a shift from traditional projectile technology to the use of guns.

Section 6.4.4 Metal

Seventy-nine wrought nails and 68 other metal artifacts were recovered from the excavation units. This total does not include metal artifacts and wire nails that were classified with modern building materials. Types of metal present included brass or copper alloys, lead or pewter, iron, and one unidentifiable alloy fragment.

The largest component of the metal from the site consisted of fragments of brass or other copper alloys (n = 38, 55.88% of all metal artifacts). These artifacts came in three general forms: scraps or fragments, triangles of sheet metal, and rolled sheet cones. In addition, a compound triangular projectile point and a clasp or hook from a book or manuscript cover were recovered.

Thirty-seven of the 38 brass artifacts were found in the core area of the site. The single exception consisted of a fragment of sheet metal recovered from Unit 22610 in the Central Knoll area. The distribution of the 31 brass artifacts recovered from plowzone is indicated on Figure 55. Counts of brass artifacts in this part of the site range from 0 to 4 per unit, with no significant concentrations present.

The majority of the brass assemblage consisted of fragments of sheet metal. A total of 25 artifacts in this class was present. Several of these fragments exhibited cut marks along their edges, and one was a crushed fragment that had apparently been discarded in the process of cutting out a triangle (Figure 56). Both sides of the triangle were visible as cut marks on the surface of the artifact, which was recovered from Unit 28064 in the twelve unit feature block. The method by which the cut marks were scored into the metal is unknown, but it is apparent that sheet brass was remanufactured into a variety of forms on the site.

One of these was an unusual brass triangular projectile point. It had a flat cross section and was made of two layers of sheet metal folded before being cut. The point had a deep basal notch terminating in a round perforation near the center of the artifact. The double thickness of the point may have been designed to provide extra rigidity to the projectile, since the sheet brass was of a fairly thin gauge that might not have withstood repeated use. Kent (1984:192) reported a bifurcate-base brass point from a Susquehannock site, but no parallels to the Posey Site point's compound manufacturing technique have been located.

The most common brass forms found at the site were flat, elongated triangles, five of which were recovered (see Figure 56). All were less than 5 cms in length, and two were perforated somewhat below their center. Their edges were flat, not beveled. All five of these artifacts were recovered in the core area of the site. It is unknown whether these triangles were a finished form, or would have been combined into compound projectile points or otherwise modified. Typically, flat triangular brass pieces are described as arrowheads, and dozens of hafted examples have been found on sites in the Middle Atlantic region. They come in two general forms: small equilaterals and longer isoseles triangles. Both perforated and unperforated triangles were used as points. Generally, they have beveled edges, but hafted flat-edged examples are known. Points of this type are present on a range of 17th-century sites in the Susquehanna River Valley, and are thought to have become more common in proportion to brass ornaments later in the century.

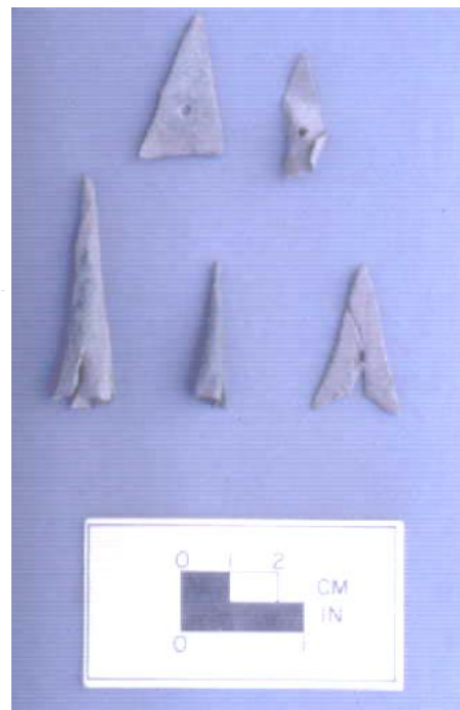


Figure 56. Photoplate of Brass Artifacts from Excavation Unit Plowzones.

(Kent 1984:190-192, 203-207). Similar points were reported to have been used by the Nanticoke and other Native Americans on Maryland's Eastern Shore until at least 1742 (Archives XXVIII:260-25).

The triangles from the Posey Site may have been arrowheads, but the relatively thin gauge of their brass suggests the possibility that they could have served another, possibly ornamental, function. It is also possible that the unperforated triangles were an intermediate step in the production of brass cones. Two such cones were recovered. Both were made of rolled sheet metal of similar gauge to the triangles, and were triangular prior to being rolled into their finished shape. Additional brass forms at the site included a flattened spiral strip of sheet metal, and a leather strap ornament. Similar spiral-shaped artifacts have been identified on sites in the Susquehanna River Valley dating throughout the 17th century (Kent 1984:203-207). The leather ornament is a crenellated object of European origin, approximately 2.22 cms in length, constructed of brass with two folded prongs extending from the back surface.

The eleven lead or pewter artifacts recovered included several musket balls or other shot, a single .22 caliber bullet, a pewter or lead hemispherical button, and a tongue-shaped piece of lead sheet identified as a pad to protect a gunflint within the lock of a musket or other firearm. A small fragment of possible lead mold sprue, and a small lead cylindrical object of unknown age and function, were also recovered.

Six lead shot were found, with calibers ranging from .29 to .60. Excluding the one .60 caliber ball, the calibers of the shot ranged between .29 to .36. The variability in calibers among 17th-century guns makes identification of the type of weapon for which these shot were made difficult; however, the relatively consistent caliber of the majority of the ammunition suggests the presence of only a few, if more than one, weapon at the site. All of the shot were battered to some degree, and all showed sprue marks or lines from the molds in which they were produced.

The pewter or lead button is hemispherical in form, and has a rounded loop attached to its back side. The artifact is 1.13 cms in diameter, and the body of the button is 0.43 cms thick. The loop is crushed into the body, but would have extended approximately .69 cms from the back when undamaged. The surface of the artifact is battered, and its temporal origin is unknown. This button was recovered from Unit 28071 in the central portion of the site's core area. All of the lead or pewter artifacts were located within the core area of the site. Ten of these artifacts were recovered in units used for plotting artifact distributions. However, maximum recovery from any one unit was two artifacts (Figure 57).

Iron artifacts consisted primarily of small unidentifiable fragments. All 18 of these fragments were found in the core area of the site. It is unknown whether the less disturbed condition of these units aided in preservation, or if this distribution actually reflects a cultural pattern. Sixteen of the artifacts are small, flat fragments of unidentifiable form and function. It is possible that they are sheet metal fragments that were cut into other forms, but their size and condition makes further identification impossible. Another distinctive, but also unidentified, artifact is a small, square, flat metal tab with an attached square shaft (Figure 58). This artifact was recovered from Unit 28449 in the central portion of the site core area. It may be a furniture part, or an architectural element such as a latch or shutter holder. The only identifiable iron artifact (other than nails) is a knife blade fragment



Figure 58: Photoplate of Iron Artifacts from Units 28449 and 29011.

and tang. This artifact was recovered from Unit 29011. The condition of this artifact makes further temporal or functional identification impossible.

Seventy-nine wrought nails or nail fragments were recovered from excavation units. Seventy-eight were recovered from the core area of the site, and 54 of these were present in units that were used for distribution plotting. Unit 20866, located in the southwestern portion of the site, contained the only wrought nail recovered outside of the core area.

Eighteen (22.8%) of the nails were fragments with no identifiable heads. Of the remainder, 43 (54.4%) had roseheads, while the rest had a rectangular or T-head ($n = 18$, 22.8%). Seven of the T-head nails had measurable lengths, ranging between 2.96 and 6.07 cms, with an average of 4.78 cms. Fourteen rosehead nails were measurable, ranging from 2.78 to 7.8 cms, with an average length of 4.85 cms. Excluding the 2.78 cm long specimen, the range was 3.26 to 7.8 cms, with an average of 5.02 cms. Two of the rosehead type nails appeared to have been deliberately clinched, which on colonial sites is generally an indication that the nails were driven into exposed boards and then folded for extra holding power and safety. The unevenness in the amount of corrosion on the shafts of some of the Posey Site specimens indicates possible burning either before or after the destruction of any structure that may have been present. The number of nails recovered suggests that a building with at least some European elements was present on the site, but nails which had non-architectural functions have been recovered from Native American sites in the Chesapeake region (Smolek n.d.).

The distribution of all wrought nails is indicated in Figure 59. Nail densities ranged from 0 to 7 in these units, and although no concentration that definitely marks a structure is present, the highest densities are present in two units (Nos. 29011 and 29018) at the northern edge of the site core. Nails are relatively evenly distributed across the remainder of the units, with a second minor concentration present at the northern end of the twelve unit block.

The final metal artifact in the collection was recovered from Unit 28442, at the northern end of the twelve unit excavation block. It appears to be a fragment of the tongue of a buckle or other clothing part, made of an unidentified alloy that possibly contains some lead. Its extremely small size ($>.5$ cm) prevents further identification as to function or material.

Section 6.4.5 Glass

Glass artifacts included several heavily patinated fragments of probable bottles, as well as four hemispherical buttons with remnant metallic shanks. Three of the four buttons were recovered from the core area of the site, with two present in Unit 29011 and one in Unit 28260. The fourth specimen was recovered from Unit 22610 in the Central Knoll area. Two of the four buttons are whole, and are made of plain black glass. The other two buttons are half fragments. One is made

of plain black glass, with a corroded iron wire shank attached. The other, also black glass, has a star-shaped white glass inlay on its upper surface (Figure 60). Diameters of the whole buttons are 1.41 and 1.125 cms, and thicknesses of the four specimens ranges between .77 and .80 cms, with an average thickness of .7875 cms. Overall, the buttons are very similar in morphology, size, and material. Three of the four buttons show evidence of a remnant iron wire shank, while the fourth, from Unit 28260, had a corroded iron wire shank with a loop in the end that extends 0.86 cms from the bottom of the artifact. Similar buttons have been recovered at the Burle's Town Land Site in Anne Arundel County from contexts dating between ca. 1650 and 1676 (Luckenbach 1995:8, 14-15). A portrait of an English woman painted in the mid-16th century was used by Luckenbach to associate the decorated glass button from the Anne Arundel County site with women's clothing, but it is unknown if this same reasoning can be applied to the specimens recovered from the Posey Site.

Twenty-three fragments of probable bottle glass were also recovered from the site. These fragments all were heavily patinated, friable, and all were at least slightly curved. Color, where discernible, ranged from green to very dark green. The original color of most pieces could not be determined because of the thick patina that coated them.

No glass identifiable as neck or finish fragments were recovered. Two nearly complete case bottle kick-ups were found in the core area of the site. One was recovered from disturbed soil in Unit 25805, while the other was found in the truncated plowzone of Unit 28442, at the northern end of the twelve unit block. As with the glass fragments, the advanced state of patination make these artifacts diagnostic only of the colonial period.

There was no evidence of glass artifacts being reworked into tools, or of their use as other than containers. However, the advanced patination and small size of most fragments may have obscured this evidence. Twelve of the glass fragments were located in the excavation units with plowzone strata suitable for density plotting (Figure 61). As indicated, concentrations were very low, with no more than two fragments in any given unit. Eight additional glass fragments were recovered from other units in the core area of the site. The remaining three fragments were recovered from disturbed context in Unit 20866, located in the southwestern portion of the site.



Figure 60: Photoplate of Glass Buttons from Units 22610 and 29011.

Section 6.4.6 Bone and Shell Artifacts

Worked bone or shell artifacts from plowzone or redeposited topsoil consisted of one tubular and eight disk shell beads, five fragments of a bone comb, and a bone needle fragment. Additional shell beads were recovered during this investigation from column samples processed by water-screening through 1/32" mesh window screen. These artifacts are described in the following section.

The five bone comb fragments were all recovered from Unit 27879 in the core area of the site. All of the fragments refit, and together comprise a portion of the center of a comb that originally had both fine and coarse-toothed sides. Several teeth survive on the coarse toothed side, but all of

of the fine teeth have either broken off or decayed. Although bone combs of this sort have been recovered from both colonial and Native American sites in the Chesapeake region, and are known to have been manufactured by both groups, the origin of this specimen is unknown.

The only other worked bone object recovered was a fragment of a highly polished needle similar to one recovered by Barse in 1985. Like the earlier find, this needle was broken along an axis that bisected the eye. It was made from a highly polished splinter of unidentifiable cortical bone, and, like the comb, was recovered from Unit 27879.

Nine shell beads were recovered from the excavation units, but this total was as much a reflection of the recovery methods as it was of the presence of these artifacts in the plowzone. The use of 1/4" mesh screen made the recovery of this class of artifact more a matter of chance than of systematic sampling. A primary goal of the column sampling program was to recover small artifacts such as beads, and a substantial number were recovered through this method (see Section 6.5)

Seven small, flat disk beads were recovered from five different units in the core area of the site during plowzone excavation (Figure 62). These beads ranged from 2.8 to 4.5 mm in diameter (average = 3.64 mm), and were 0.8 to 1.8 mm thick (average = 1.35 mm). String bore holes were regular in diameter and form, ranging between 1.05 and 1.75 mm, with an average of 1.35 mm. All of the beads had been edge ground to a relatively consistent circular form, although several were eroded. This flattened disk bead form has been identified as the roanoke type discussed in colonial-era documents (Miller et al. 1983:128, 134).

Two tube-shaped shell beads were recovered, one each from Unit 27879 and Unit 28064. One was 4.7 mm and the other 6.5 mm in length, and 3.5 and 4.3 mm in diameter, respectively. Like the disk beads, the holes drilled through these were regular and consistent in diameter, and both had smoothly ground surfaces. These beads are probably the wompompeag, peke, or peag type discussed by Miller et al (1983). The anonymous 1635 "Relation of Maryland" (Hall 1910) identifies wompompeag as the greater of the two bead types being produced by Native Americans at the time, although whether this reflects the value or the size of the bead is unclear. Further discussion of these bead types is presented in the column sample section below.

Section 6.4.7 Faunal Remains

A high density of both burned and unburned bone fragments was found in the 37 excavation units. Large amounts of terrestrial animal bone were recovered, as well as numerous fish vertebra, scales, and other elements. Turtle bone appears to form a relatively large proportion of the assemblage, with deer, rodent, and other small mammal also present. No conclusive evidence of non-indigenous fauna has been observed among the faunal remains recovered, although currently on-going analysis of this material may reveal the presence of additional species. Table 15 presents a count and weight summary of recovered bone by unit throughout the site. More than half of the bone recovered (n = 1650, 61.84%) was unburned. The remaining burned bone was probably a by-product of food processing, although other causes of the burning are possible.

The average size of the bone fragments was quite small, with weights of approximately 0.25 grams for unburned and 0.28 grams for burned fragments. Knife or other metal tool cut marks were observed on a cortical long bone fragment from a large mammal, probably deer, recovered from Unit 27879 in the core area of the site. No saw cuts or other butchering marks were observed on any of the other bone fragments, burned or unburned, that were recovered.

UNIT NUMBER		SITE AREA		UNBURNED BONE		BURNED BONE
25805		SITE CORE		0		5/0.75g
27120		SITE CORE		29/8.20g		19/17.90g
27123		SITE CORE		3/0.10g		22/6.50g
27126		SITE CORE		0		1/0.20g
27129		SITE CORE		1/0.30g		0
27695		SITE CORE		1/0.10g		4/1.30g
27879		SITE CORE		286/48.89g		47/12.95g
27887		SITE CORE		0		5/3.10g
28068		SITE CORE		121/29.80g		58/14.65g
28071		SITE CORE		109/26.20g		95/25.50g
28257		SITE CORE		125/28.95g		19/3.80g
28260		SITE CORE		205/54.30g		121/25.10g
28268		SITE CORE		1/0.40g		7/1.70g
28449		SITE CORE		92/23.0g		115/27.2g
29011		SITE CORE		14/10.0g		34/13.15g
29018		SITE CORE		0		0
29392		SITE CORE		0		7/2.70g
20897		CENTRAL KNOLL		0		0
22223		CENTRAL KNOLL		0		0
22610		CENTRAL KNOLL		0		1/0.10g
22615		CENTRAL KNOLL		3/0.40g		0
15911		SOUTHWEST EDGE		0		0
19165		SOUTHWEST EDGE		0		0
20866		SOUTHWEST EDGE		0		0
21061		SOUTHWEST EDGE		0		0
27687		FEATURE BLOCK		90/15.30g		74/16.80g
27688		FEATURE BLOCK		67/16.10g		30/7.45g
27874		FEATURE BLOCK		43/13.60g		20/5.90g
27875		FEATURE BLOCK		76/15.57g		60/12.90g
28063		FEATURE BLOCK		67/14.50g		69/15.50g
28064		FEATURE BLOCK		77/27.90g		44/10.10g
28065		FEATURE BLOCK		34/7.60g		12/3.60g
28252		FEATURE BLOCK		51/16.60g		40/9.10g
28253		FEATURE BLOCK		41/12.30g		25/8.10g
28254		FEATURE BLOCK		2/0.20g		6/7.10g
28442		FEATURE BLOCK		121/30.20g		125/31.40g
28443		FEATURE BLOCK		29/10.45g		17/3.30g
		TOTAL =		1650/410.96g	TOTAL =	1018/287.85g

Table 15: Excavation Unit Bone Count/Weight Summary.

Figures 63 and 64 indicate distributions by count of burned and unburned bone. The vast majority of bone was recovered from the core of the site, with only one unidentified burned bone fragment present outside of that area. This fragment was recovered from Unit 22610, located on. A relatively small quantity of unmodified shell was also recovered from the site. This material was primarily from freshwater clam or mussel species, ($n = 857$, 95.43%), although oyster ($n = 24$, 2.67%) and unidentified snail species (1.89%) were also present. The amount of oyster shell by weight is 22.21%, with clam and mussel shell representing 76.03%. Overall, individual fragments of oyster shell were much larger than clam or mussel shell, and several whole or nearly whole valves contributed to the higher proportion by weight for this type of shell.

Distributions of shell from the site are presented in Figures 65 through 67. Shell was also concentrated in the core area, especially in the area of the twelve unit feature block. As with the bone artifacts, it is not known if the variation in shell distribution is a cultural pattern or a result of differential preservation. Overall, a very low density of unmodified shell was recovered from the site. Gathering and processing of shellfish as a food resource was probably not an important activity during the period when the site was occupied.

A sample of the bone recovered from plowzone and/or topsoil, along with bone from features and column samples, has been submitted for specialized analysis. The analysis was performed under the Direction of David Landon of Michigan Technological University (Appendix E). A subset of the site faunal collection was chosen for analysis, consisting of material from the core area of the site (Figure 2, Appendix E). The significant amount of fragmentation of the material, much of which is likely the result of post depositional plowing, placed limitations on the faunal analysis (Appendix E). Nonetheless, the analysis demonstrated a wide range of wild animal species, with an emphasis on deer exploitation. This suggests a continuation of traditional Native American subsistence practices (Appendix E). This is consistent with research results from historical and archaeological data which suggest that the Piscataway held onto their traditional lifeways well into the late seventeenth century. This is evidenced from burial practices, material culture, and settlement patterns (Galke 1999, Merrell 1979:549-550, 560, 568; Stephenson and Ferguson 1963:195, 200-201).

Section 6.4.8: Soil Core Analysis

Two soil cores were collected along Mattawoman Creek and submitted for pollen analysis. Grace Brush, of the Department of Geography and Environmental Engineering, The Johns Hopkins University performed the analysis (Appendix D). Each core was radiocarbon dated, and Core 1 dated to 640 ± 60 years before present and Core 2 dated to $630 \pm$ years before present (Appendix D). The cores were dominated by pine and wetland species. Surprisingly, no distinct way of distinguishing pre-colonial from post-colonial vegetation was found. No evidence for effects deforestation or agriculture upon wetland plant species was discovered (Appendix D). The pollen within the core samples reflected normal variability with regard to water level change through time. The absence of evidence for deforestation may indicate that the landscape remained relatively stable over several centuries. The area surrounding the Posey site was apparently not impacted by the intensive agricultural activities which typified most colonial and post-colonial land use.

UNIT NUMBER		SITE AREA	SAMPLE LOCATION	VOLUME (CUBIC CM.)
25805		SITE CORE	NE CORNER	14312.5
27120		SITE CORE	NE CORNER	15625
27123		SITE CORE	NE CORNER	15312.5
27126		SITE CORE	NE CORNER	17187.5
27129		SITE CORE	NE CORNER	15625
27879		SITE CORE	NE CORNER	16250
28068		SITE CORE	NE CORNER	10625
28071		SITE CORE	NE CORNER	19937.5
28257		SITE CORE	NE CORNER	15937.5
28260		SITE CORE	NE CORNER	20937.5
28449		SITE CORE	NE CORNER	19062.5
29011		SITE CORE	NE CORNER	18125
29018		SITE CORE	NE CORNER	20312.5
29392		SITE CORE	NE CORNER	22187.5
20897		CENTRAL KNOLL	NW CORNER	20312.5
22223		CENTRAL KNOLL	NW CORNER	19375
22610		CENTRAL KNOLL	NW CORNER	10312.5
22615		CENTRAL KNOLL	NE CORNER	14062.5
15911		SOUTHWEST EDGE	NW CORNER	14062.5
27687		FEATURE BLOCK	NE CORNER	10937.5
27687		FEATURE BLOCK	SW CORNER	8125
27688		FEATURE BLOCK	NE CORNER	9687.5
27688		FEATURE BLOCK	SW CORNER	9375
27874		FEATURE BLOCK	NE CORNER	8437.5
27874		FEATURE BLOCK	SW CORNER	5000
27875		FEATURE BLOCK	NE CORNER	6250
27875		FEATURE BLOCK	SW CORNER	7187.5
28063		FEATURE BLOCK	NE CORNER	8750
28063		FEATURE BLOCK	SW CORNER	9375
28064		FEATURE BLOCK	NE CORNER	5625
28064		FEATURE BLOCK	SW CORNER	8125
28065		FEATURE BLOCK	NW CORNER	7500
28065		FEATURE BLOCK	SW CORNER	6562.5
28252		FEATURE BLOCK	NE CORNER	4687.5
28252		FEATURE BLOCK	SW CORNER	9687.5
28253		FEATURE BLOCK	NE CORNER	2812.5
28253		FEATURE BLOCK	SW CORNER	6250
28254		FEATURE BLOCK	NW CORNER	7500
28442		FEATURE BLOCK	NW CORNER	9687.5
28443		FEATURE BLOCK	NE CORNER	10937.5
28443		FEATURE BLOCK	SW CORNER	5937.5

Table 16: Column Sample Volumes by Excavation Unit.

Section 6.5 Column Samples

As discussed in the fieldwork methods section above, a column sample or samples of plowzone soil were taken from all excavation units that had an undisturbed stratigraphic profile. These samples were water-screened through 1/32" mesh screen to retain small artifacts that would not be recovered using standard 1/4" mesh dry screens. This section presents a summary of the results of this sampling program.

A total of 41 samples was taken from 31 units. In general, column samples were not taken from units with disturbed or redeposited topsoil stratum. However, samples were taken from six units that were later determined to have either disturbed or redeposited topsoil present. These samples were excluded from further analysis, but were retained. Two samples were retained from 10 of the 12 units which were excavated to determine the extent of the large midden feature discussed in the following section. Water-screening of single samples from the first two units placed in this area revealed the presence of relatively large numbers of small shell beads, as well as numerous small fragments of bone and unmodified shell. The column sampling program was therefore intensified in this area in order to retain a larger number of these materials. Each column sample was excavated with a surface area of 625 square cms (25 by 25 cms). Variation in the depths of the plowzone stratum yielded a different volume for each sample. The calculated volume and the location of each sample is presented in Table 16. Time limitations have prevented complete analysis of all samples retained. The primary focus of column sample analysis for this report has been the shell and glass beads that were recovered from the samples.

Artifacts larger than 1/4" in diameter were present in the column samples in approximately the same types, numbers, and proportions as in the plowzone from the excavation units. Recovered material less than 1/4" in diameter included large numbers of small bone fragments (both burned and unburned), tertiary flakes and flake fragments of the same materials as those represented in the 1/4" sample, and many small fragments of unglazed ceramic. Metal, glass, and glazed ceramic artifacts were also present in the column samples, as well as slag fragments and other modern materials.

A total of 39 beads was recovered from the column samples. Thirty-six were shell, and the remaining three were glass. Shell beads consisted of two types: small flat disks and larger tubular forms. These two types have been identified as roanoke and peake (wompompeag or peag), respectively, in the Chesapeake region (Miller et al. 1983:128, 134).

Five of the 36 shell beads were tubular in form. These beads averaged 5.5 mm in length, with a standard deviation of 1 mm. The diameters averaged 3.74 mm, with a standard deviation of .46 mm. On average, approximately 41% of each bead's total diameter consisted of the central string hole, which tended to be well centered and consistent in size throughout the length of the bead. Hole diameters averaged 1.53 mm, with a standard deviation of .14 mm. All five of the tube beads were slightly purple in color, although post-depositional processes and the acidic soil matrix from which they were recovered probably had some impact on their original colors.

This tubular form of shell bead is also known as wampum or proto-wampum in other parts of the Northeast, where chronological and other data has been used to identify a variety of sub-types (Ceci 1986). Wampum is, in general, used to denote post-Contact, metal tool drilled, purple or white beads less than 20 mm in length, and the sample from the Posey Site conforms to this description. The small size and standard deviation in the hole diameters, and the consistent overall size of these beads, seems to indicate production over a relatively short period of time. The type of tool used to

drill the Posey Site beads has not been determined precisely, but hole size is consistent through the length of the bead.

The shell disk beads ($n = 31$) were also relatively homogeneous in size. They averaged 3.41 mm in diameter by 1.17 mm in thickness, with standard deviations of 0.52 mm and 0.39 mm, respectively. Hole diameters were very consistent, with an average size of 1.38 mm and a standard deviation of 0.2 mm.

Four of these beads were black or gray in color, and the remainder were white. Again, it is unknown if these are the original colors of the beads or if they have been bleached or otherwise affected by post-depositional processes.

Of note among the shell disk beads was the presence of six beads that had irregular forms and rough edges. The remaining beads had all been ground smooth on both face and edge. These irregular bead blanks, along with the presence of unmodified shell fragments, probably indicate that disk beads were manufactured at the site.

All of the shell beads recovered from the column samples were from units in the core area of the site, and beads were recovered at consistently higher rates from the twelve unit block at the western edge. The distribution of disk and tube type beads overlapped, and no differential in pattern was discernible. Incomplete beads classified as blanks were entirely confined to the twelve unit block.

Three glass beads were recovered. Two were oval to round white glass beads found in Units 28257 and 28071 in the central portion of the core area. The bead from Unit 28257 was 3.5 mm in diameter and 2.15 mm thick, and had a hole diameter of 1.35 mm. The bead from Unit 28071 had a smaller diameter (3.0 mm), but a larger hole diameter and thickness, 1.4 mm and 2.45 mm, respectively. These beads correspond to Kidd and Kidd's Type IIa13 (Fogelman 1991:15). These beads are also similar to Kent's Type C8 and C9, but are slightly smaller in diameter (Kent 1984:216-217). Kent (1984:219-222) reports Type IIa13 beads on Susquehannock sites dating from the 1630s to the 1740s, and Type C8 and C9 beads on sites dating from 1600 to the 1740s.

The remaining glass bead was recovered from Unit 15911 at 18CH282. This bead was a black flattened oval, with a diameter of 2.3 mm, a thickness of 1.2 mm, and a hole diameter 1.2 mm. It corresponds to Kidd and Kidd's Type IIa6, and is also similar to Kent's Type F15, one of the more popular bead types on 17th and 18th century Susquehannock sites (Fogelman 1991:15, Kent 1984:217).

The column sampling program was useful in providing examples of material culture classes that were absent or under-represented in the 1/4" mesh screen samples. The recovery of the bead samples has enabled additional interpretation of the site on both functional and spatial levels, and unanalyzed material may yield future benefits. However, the methodology is labor intensive. Washing and sorting of each sample took approximately 3 hours of labor, and the analysis of the large numbers of artifacts other than beads in the samples was prevented by time constraints. In summary, the method should be used with care in order to enable the recovery of information along with the cultural material present in the samples.

Section 6.6: Sub-Plowzone and Sub-Disturbance Features

Seven discrete sub-plowzone or sub-disturbance features and one large midden feature were uncovered at the Posey Site during this investigation. These deposits were all located within the core area of the site, and were overlain by soils that had been disturbed by plowing as well as more recent construction activities. Most of the features were located in a series of excavation units placed along

the N416 baseline; however, the large midden feature was discovered near the western periphery of the site core. Each of these features is discussed below, by type and in the context of the excavation units in which they were discovered.

Five of the features excavated at the site were the molds of posts placed directly in the ground without the excavation of a post hole. All were located at the southern edge of the site's high density core area: one in Unit 27123, two in Unit 27126, and two in Unit 27129. Summary data and plans and profiles for these features is presented in Table 17 and Figure 68. Because only five post molds were exposed, determination of function and possible association with a structure is problematic.

The contents of the post molds were limited (Table 17). A post mold in Unit 27129 that was excavated as Stratum B contained three slag fragments weighing 0.35 grams. This was the only intrusive material identified in the post molds. (The small amount of slag, and the size and shape of the post mold, suggest that this was a Native American post with later intrusive materials). Only one post mold, excavated as Stratum C in Unit 27129, contained more than trace amounts of cultural material. It was excavated in two halves following the discovery of a plain terra-cotta pipe stem in the southern half during initial sectioning. In all, the post mold yielded three quartz flakes, six ceramic vessel sherds, including a cord-impressed Potomac Creek body sherd, and the terra-cotta pipe stem. Wood charcoal fragments totaling 0.45 grams were also recovered.

MORPHOLOGY				
DESIGNATION	DIAMETER	LENGTH	COMMENT	
27123F	7.5 cm	21.5 cm	REGULAR PROFILE, POINTED END	
27126B	11.5 cm	34 cm	REGULAR PROFILE, POINTED END	
27126C	14 cm	9 cm	SHALLOW, IRREGULAR PROFILE	
27129B	10 cm	16 cm	REGULAR PROFILE, POINTED END	
27129C	9 cm	30 cm	SLIGHTLY IRREGULAR PROFILE, POINTED END. HIGH CONTENT CULTURAL MATERIAL	
CONTENTS				
DESIGNATION	CERAMIC	LITHICS	FAUNAL	CHARCOAL
27123F	0	0	0	0.40g
27126B	0	1 (FCR)	4 @ 1.0 g	> .1g
27126C	0	0	5 @ >.1g	> .1g
27129B*	0	0	3 @ .1g	.25g
27129C	7	3	1 @ .1g	.45g

Table 17: Posthole Features Summary Data.

A probable disturbed pit with intrusive post molds or root casts was located in Unit 27123. This unit was situated at the southern edge of the site's core area, and contained a redeposited topsoil stratum over undisturbed subsoil. A planview and representative section profiles for the feature are presented in Figures 68 and 69. In general, the feature fill consisted of moderately compact loamy sand to sand, with color ranging from dark brown to dark yellowish brown (10YR3/3 to 10YR4/6). The fill was relatively homogenous in color and texture, and contained pockets of cultural material that were observed during excavation.

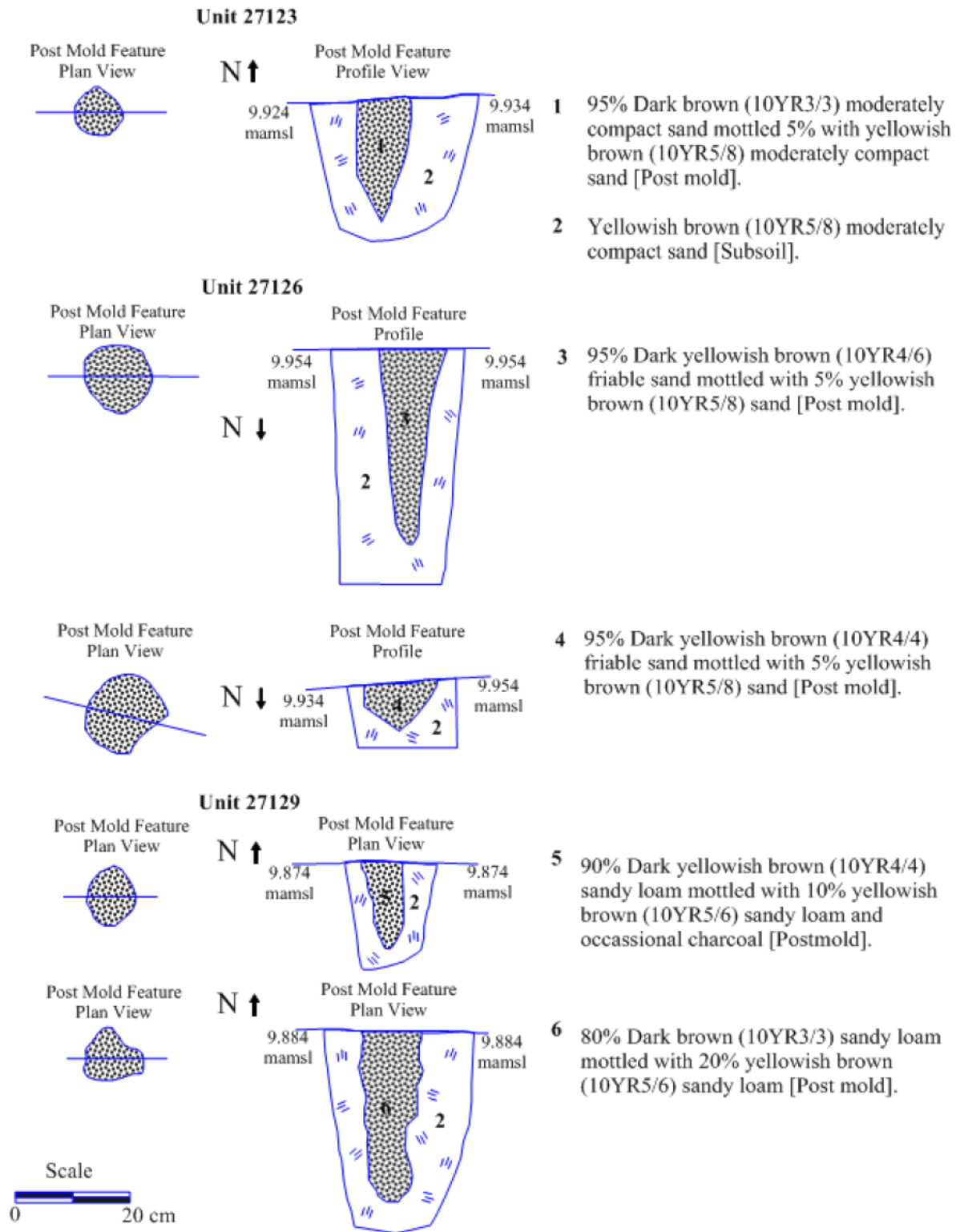


Figure 68: Postmold Features Planviews and Profiles.

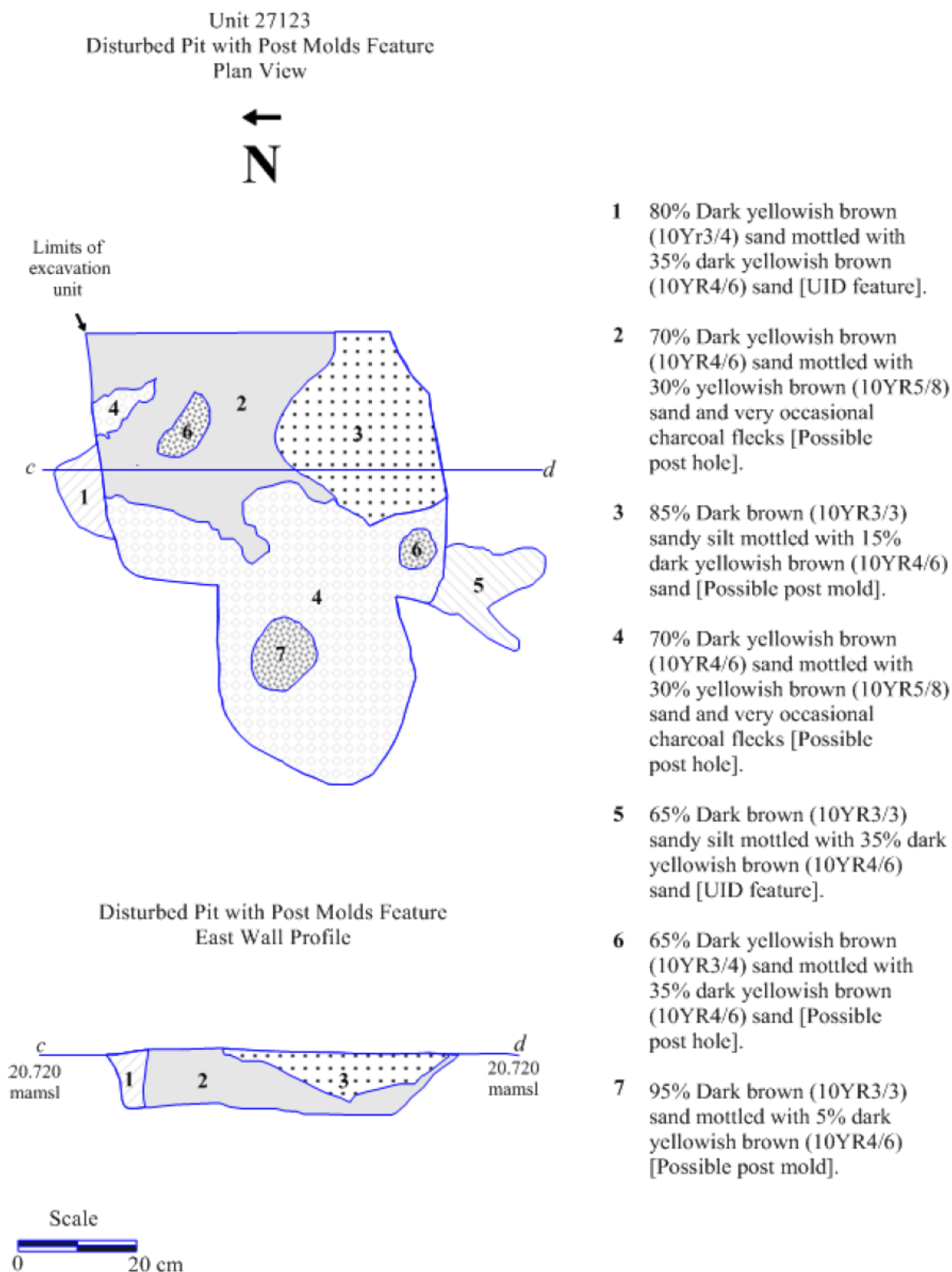


Figure 69: Pit Feature in Unit 27123, Plan and Profile.

The cultural contents of the pit feature in Unit 27123 included faunal remains, ceramic artifacts, lithic debitage, and untyped wood charcoal. Twenty-six bone fragments, primarily of unidentified fish species, and seven unidentified snail shell fragments weighing 0.35 grams, were recovered. Ceramic artifacts consisted of five probable Potomac Creek fragments, three probable Yeocomico fragments, one micaceous sand-tempered body sherd (probable Moyaone ware), and one possible terra-cotta pipe fragment. Lithic artifacts consisted of two quartz tertiary flakes. A single wrought nail fragment with a square or T-head was also present. Intrusive material consisted of one slag fragment of less than 0.1 gram. One hundred twenty-six charcoal fragments weighing 1.05 grams were also recovered. Heavy and light fractions from three flotation samples taken from the feature fill have not been analyzed. In addition to the artifacts described above, a large fire-cracked quartzite fragment (265.0 grams) and a large, fine-grained quartzite or sandstone elongate pebble tool were present at the top of the subsoil immediately adjacent to the feature. The elongate tool is slightly battered on its ends, and its form is suggestive of short-term use as a pestle, muller, or other grinding or crushing tool.

The plan and profile views of the feature in Unit 27123 indicate a relatively complicated depositional history for this deposit. It appears probable that a pit was excavated, used for an unknown purpose, then allowed to fill over a relatively extended period of time. Evidence for at least two possible post molds was found beneath the pit fill. However, it did not appear that the pit was deliberately excavated to support the posts, as there was no evidence of deliberate backfilling (e.g., mottled fill with platy structure) that would indicate a short construction sequence. It may be that the possible post molds are actually the casts of tree roots that penetrated the less compact fill of the pit feature after it was originally abandoned.

A feature of unknown function and origin was discovered in Unit 27120, located at the southwestern edge of the core area of the site. This feature consisted of a deposit of sandy clay embedded in a matrix of undisturbed sandy subsoil typical for this portion of the site (see Figure 25). The contents of this feature were limited to less than 0.5 grams of bone (two fragments), less than 0.1 gram of charcoal, and a single Potomac Creek Plain body sherd. In addition, three small slag fragments weighing less than 0.1 gram were recovered. A fragment of Potomac Creek ceramic was found in subsoil excavated around the feature during sectioning.

The function of the feature in Unit 27120 remains unknown, and although its temporal origin may be contemporary with the single Potomac Creek sherd recovered from the fill, it is possible that this feature was created by construction-related disturbance or represents a non-cultural soil anomaly. Unit 27120 contained redeposited topsoils, but the subsoil surrounding the feature was undisturbed.

Twelve individual excavation units were excavated as a single block to expose a large feature located at the western edge of the core area of the site. The entire horizontal expression of this feature was not uncovered due to time constraints and preservation concerns, but a plan view of the exposed portion is presented in Figure 70. The feature consisted of both linear and amorphous elements comprised of dark colored fill interspersed with, and surrounded by, undisturbed subsoil. The feature fill was very dark in color, ranging from very dark gray to very dark brown (10YR3/1 to 10YR2/2), with occasional pockets of black (10YR2/1). The fill was comprised of moderately compact to friable sand with a very high content of cultural material. The color, texture, and structure of the fill was relatively homogeneous. Some pockets of charcoal flecking were observed at the top of the feature. In addition, several artifacts were found protruding from the feature fill.

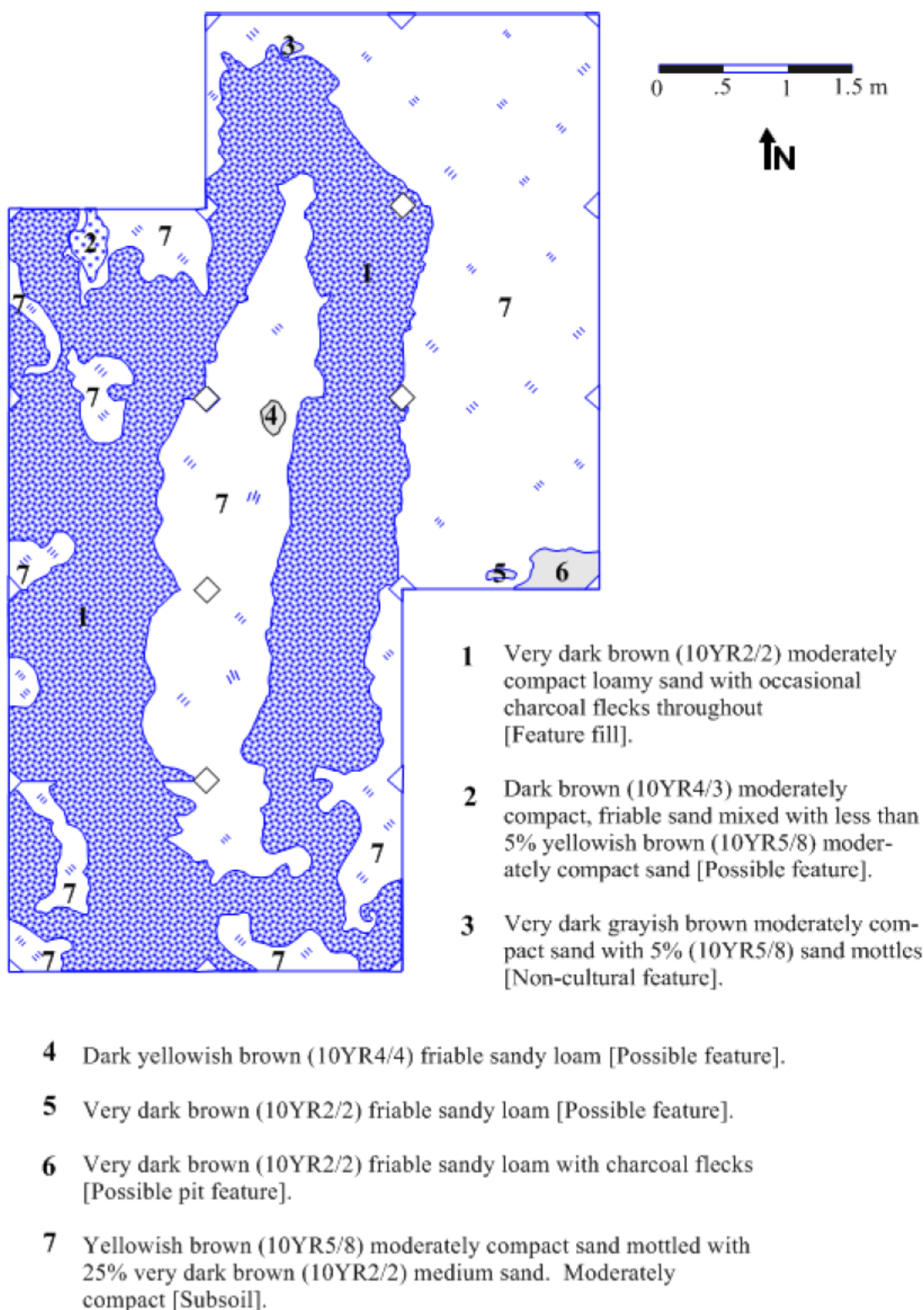


Figure 70: Block Excavation, Planview of Midden Feature.

A total of eight sections was removed from the feature. Seven of these sections consisted of 25 cm segments of fill, while the remaining section was placed across the northern end of the feature to bisect a discrete linear segment. Six sections were excavated from one 1.5 by 1.5 meter unit (28253) in order to expose a relatively large segment of the base of the feature, while the last section was excavated from Unit 27875, near the southern end of the feature, in order to test the fill for consistency in contents and structure. Profiles of representative sections of the feature are presented in Figure 71. The sections exposed a relatively shallow trough with a smooth, curving base. No evidence of structural elements such as post molds were located in the undisturbed subsoil beneath the feature fill.

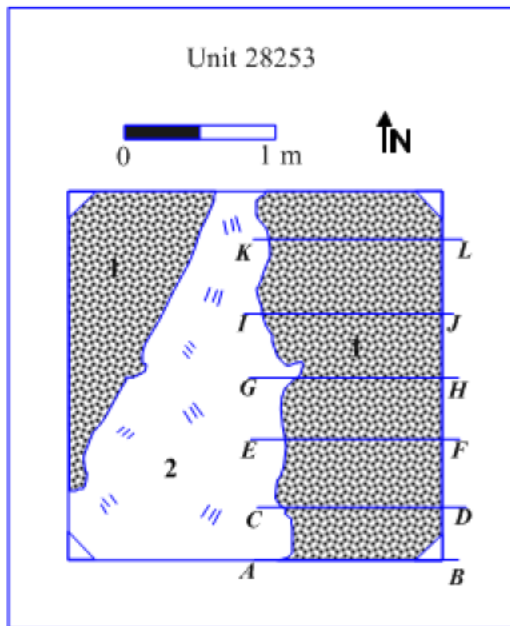
The fill from all sections of the feature contained a very rich assemblage of cultural material. Five of the eight feature sections were water-screened through 1/32" mesh screen, while the remainder were retained in bulk for flotation. The five water-screened sections were completely analyzed, but time constraints has prevented complete analysis of all floated material. Table 18 presents a summary of artifact counts by class from the feature sections, and each class is discussed in more detail below. The heavy fraction from one of the floated samples was analyzed for comparative purposes. Summaries of the artifacts recovered from this section are included in Table 19, and this sample is discussed briefly below.

Most of the artifacts recovered from this feature consisted of ceramic in various forms. One hundred eighteen sherds of vessel ceramic, 45 pipe fragments, and 917 unidentifiable vessel or pipe

<i>ARTIFACT TYPE</i>	27875B	28253B	28253B	28253B	28442B
	NORTH OF A-B (N423.25-423.50)	NORTH OF A-B (N425-425.25)	NORTH OF E-F (N425.5-425.75)	NORTH OF I-J (N426-426.25)	NORTH OF A-B (NO COORDS.)
CERAMIC-VESSEL	13	30	24	42	9
CERAMIC-OTHER	9	3	12	18	3
CERAMIC-FRAGMENT	114	249	219	239	96
LITHICS	4	7	14	9	4
SHELL BEADS	11	10	5	8	2
METAL	3	1	2	0	0
GLASS	0	0	3	0	0
BURNED BONE	15.0g	9.0g	12.35g	16.55g	1.25g
UNBURNED BONE	28.10g	23.40g	22.70g	20.10g	5.80g
UNMOD. SHELL	8.15g	3.60g	7.0g	18.80g	0.20g
CHARCOAL	2.90g	1.60g	2.10g	5.10g	1.00g

Table 18: Midden Feature Section Samples Artifact Counts by Type.

fragments were recovered from the five water-screened feature sections. Table 20 presents a ware and sherd type analysis for the 118 vessel sherds. As indicated, the majority was Potomac Creek Plain, but sherds of Camden, Yeocomico, tin-glazed earthenware, black lead-glazed red earthenware, and Rhenish brown stoneware were also recovered. At least two vessels were represented by the two Potomac Creek rim sherds recovered. One had multiple rows of cord-wrapped stick impressions



- 1 Very dark brown (10YR2/2) moderately compact loam sand with infrequent charcoal flecks [Feature fill].
- 2 Yellowish brown (10YR5/8) moderately compact sand, 25% mottled with very dark brown (10YR2/2) medium sand moderately compact [Subsoil].

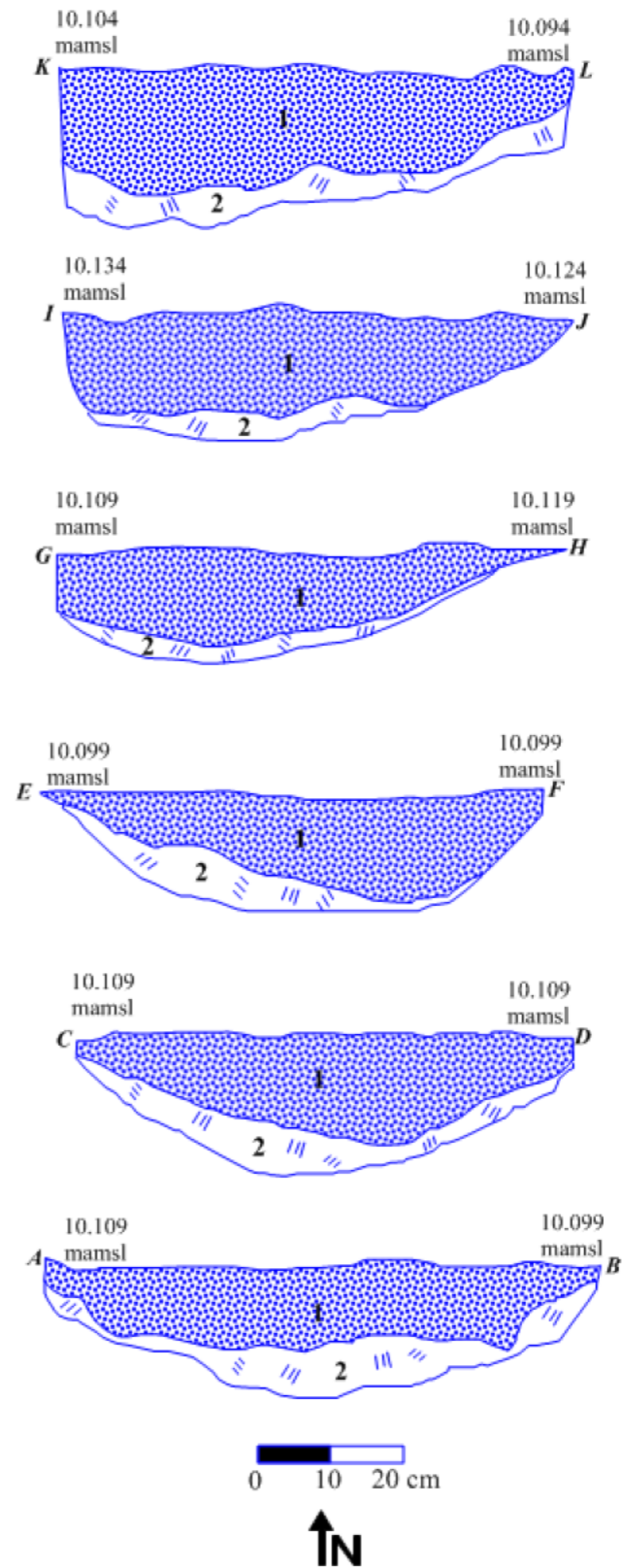


Figure 71: Representative Section Profiles, Midden Feature.

ARTIFACT TYPE	28253B NORTH OF G-H (N425.75-426.0)
CERAMIC-VESSEL	31
CERAMIC-OTHER	13
CERAMIC- FRAGMENT	230
LITHICS	11
SHELL BEADS	13
GLASS BEADS	1
METAL	2
GLASS	0
BURNED BONE	15.80g
UNBURNED BONE	23.05g
UNMOD. SHELL	20.45g
CHARCOAL	2.10g

Table 19: Midden Feature Section Heavy Flotation Fraction Artifact Summary.

placed parallel to the rim, while the other had two rows of direct cord impressions parallel to the rim. Both rims were flat-topped and had straight profiles.

	BODY	BASE	RIM	FRAG.	TOTAL
POTOMAC CREEK WARE	54	0	2	38	94
YECOMICO WARE	5	0	0	8	13
CAMDEN WARE	4	0	1	3	8
TIN GLAZE EARTHENWARE	1	0	0	0	1
BLACK GLAZED EARTHENWARE	1	0	0	0	1
GERMAN BROWN STONEWARE	0	0	0	1	1
WATER SCREENED SAMPLE TOTAL =					118

Table 20: Midden Feature Section Samples Ceramic Analysis.

A total of 37 terra-cotta pipe fragments and 8 white clay pipe fragments was recovered from the feature sections. Twenty-one of the terra-cotta pipe fragments were plain, undecorated bowl pieces, while the remainder consisted of six bowl fragments with linear or geometric roulette decoration and ten plain stem fragments. The white clay pipes included six undecorated bowl fragments, one bowl fragment with a linear roulette decoration, and stem fragment with a partial bowl. This pipe was partially split, but the whole bore was present; it measured 7/64" in diameter.

The final class of ceramic artifact recovered from the five water-screened sections consisted of clay fragments and nodules too small to identify as either portions of finished artifacts or manufacturing waste. A total of 2801 artifacts was assigned to this class.

Thirty-eight lithic artifacts were recovered from the feature sections. These included six fragments of fire-cracked quartzite weighing 251.8 grams, one quartz core with multiple flake removals, and 31 flakes or flake fragments. The results of the debitage analysis are presented in Table 21. Flint comprises the majority of debitage recovered, and the assemblage as a whole is weighted toward retouch and maintenance of tools rather than production. No finished lithic tools were recovered from the feature.

	PRI	SEC	LSC	TER	FF	FCR	CORE	TOTAL
QUARTZ	1	1	0	2	5	0	1	10
QUARTZITE	1	0	0	1	0	6	0	8
CHERT	0	1	0	0	0	0	0	1
FLINT	2	2	1	7	7	0	0	19
TOTAL COUNT	4	4	1	10	12	6	1	38

Table 21: Midden Feature Section Samples Lithic Artifacts.

Thirty-four disk and two tubular shell beads were recovered from the water-screened feature sections. One of the two tubular beads was split, but had a total length of 5.6 mm. The other was 4.95 mm long, 3.1 mm thick, with a bore diameter of 1.5 mm. The whole bead was white, and was recovered from the section in Unit 27687, at the southern end of the feature. The broken bead was purple, and was from Unit 28253, north of the A-B section line (N425 and N425.25)

Like the disk beads from the column samples, those recovered from the feature fill were consistent in size, with an average total diameter of 3.65 mm and a median of 3.42 mm. Standard deviation in the total diameters was 1.0 mm. String hole bore diameters averaged 1.3 mm, with a median of 1.4 mm and a standard deviation of 0.2 mm. Disk bead thickness was very consistent, with an average of 1.1 mm and a standard deviation of 0.4 mm. Five of the beads were gray or black in color, while the remainder were white.

Also like the beads recovered from the column samples, 9 of the 34 disk beads appeared to be incomplete. They were either squared or irregular in form, and had not been ground flat on their sides. This was also observed among the beads recovered from the column samples, and these incomplete forms were all recovered from within the twelve unit block. This pattern probably indicates the use of this portion of the site for the production of the disk beads.

Six metal and three glass artifacts were recovered from the feature. The only identifiable metal artifact was a rosehead wrought nail 4.06 cm in length. The remaining artifacts consisted of four small iron fragments, all unidentifiable, and a lead pellet .36 cm in diameter. The origin of this lead artifact is unknown. It does not appear to be hand-cast like the other lead shot recovered, and may be an intrusive element. The three glass artifacts were all recovered from the same 25 cm feature section (28253B North of E-F, N425.5-425.75). All were heavily patinated and friable, but were apparently dark green in color originally. They are probably bottle fragments.

Large amounts of faunal remains were recovered from the water-screened sections. A total of 54.15 grams of burned bone fragments, 100.1 grams of unburned bone, and 37.75 grams of shell was found. Fish, turtle, and mammal bone were all present. The dominant shell type was clam or mussels species, followed by unidentified snail. No oyster shell was recovered from the feature. In general, the fragments of faunal material were very small, and literally thousands were recovered.

Floral remains recovered from the water-screened sections consisted of 12.7 grams of unidentified wood charcoal. The final component of the assemblage was three fragments of slag weighing 0.4 grams. No other modern or potentially intrusive material was recovered, although the plowzone stratum that overlay the feature contained relatively large amounts of such material.

The heavy fraction from one of the three floated sections of the feature, 28253B north of the G-H section line (N425.75-426.00), was analyzed to compare with the water-screened samples. The heavy fraction contained the same general classes of artifacts, in similar or slightly higher densities (Table 21). The flotation recovery method appeared to result in the retention of smaller fragments of faunal remains and more small, unidentifiable ceramic fragments. Several unique or temporally diagnostic artifacts were present in this portion of the feature. A white clay pipe stem fragment with a piece of a heeled bowl was most notable. Its stem bore diameter was 7/64", and the top of the stem had an incised 'V' at its intersection with the bowl. This incising may represent a portion of an unknown makers mark, but it may also be simple stem decoration. A 2.48 cm by 1.1 cm sheet brass triangle and a .35 caliber lead ball were also recovered from this portion of the feature.

Thirteen additional beads were recovered from the heavy float fraction. Ten were complete flat shell disks ranging between 2.9 mm and 3.85 mm in diameter. Bore diameter ranged between 1.10 mm and 1.75 mm, and thickness from 0.8 mm to 1.65 mm. Two incomplete beads were also present, with diameters of 3.85 mm and 6.0 mm, thicknesses of 1.65 mm and 1.5 mm, and bore diameters of 1.65 mm and 1.0 mm.

The final bead in the heavy float fraction was a white, oval-to-round glass bead 3.15 mm in diameter and 2.2 mm thick, with a bore diameter of 1.3 mm. This bead was very similar to the two recovered from column samples from Units 28257 and 28071 in the central portion of the site's core area, but was the only non-shell bead in the twelve unit block. This bead corresponds to Kidd and Kidd's Type IIa13, and is similar to Kent's Types C8 and C9 (Kent 1984:216-217; Fogelman 1991: 15).

In summary, the feature was found to be a filled, trough-shaped depression. No evidence of deliberate excavation of the depression, such as shovel cut marks, a flat bottom, or steep sides, was found. Lack of mottling and the contents of the fill seem to suggest accumulation of refuse in a natural depression as a formative mechanism for the feature. The fill was homogeneous in texture and color but varied in density of cultural material, also suggesting accumulation of midden type deposits through time. The small size of many of the artifacts, and the presence of large numbers of ceramic fragments, suggests that the area was trampled at least periodically following deposition of the cultural material, although more recent use of heavy equipment in the area has probably enhanced this characteristic. Post-depositional plowing of the site mixed the upper portions of the feature into the topsoil/plowzone horizons, but the midden deposits within the depression were protected from disturbance by their lower stratigraphic position.

The origin of the original feature depression may be explained by other topographic elements of the site area.

The midden probably originated in an erosional feature associated with a springhead or other natural water source, remnants of which are still present south of the block excavation.

The recovery of incomplete shell beads, faunal materials, lithic debitage, and partially completed brass artifacts from the feature fill indicates a multi-purpose function for this area of the site, beyond the simple discard of refuse. Similar materials were recovered in high densities from the shallow, truncated plowzone that covered the feature and from the column samples collected from each of the twelve units excavated there, but were less abundant elsewhere on the site. The production of stone tools and objects of both shell and metal, and the probable processing of faunal resources, were all conducted in the area, and probably helped in the development of the midden feature.

The ceramics recovered from the feature were of the same types and temporal span as those recovered from the plowzone elsewhere in the core area. In general, these artifacts date to the latter half of the 17th century, particularly the period between approximately 1660 and 1680. The presence of two white clay pipe stems with 7/64" bore diameters is consistent with the sample recovered from the remainder of the site, and further serves to confirm the temporal span of, and strengthen the association between, this feature and the remainder of the plowzone deposits within the core area of the site.

Another important associative aspect of the midden feature is the recovery of Potomac Creek Plain body sherds, the decorated Potomac Creek rim sherd, and both Yeocomico and Camden ware sherds in an undisturbed context with black lead-glazed red earthenware, tin-glazed earthenware, and Rhenish brown stoneware. In addition, metal artifacts, including the brass triangle and other brass scraps, lead shot, the wrought nail, and other unidentified iron fragments were also recovered from the feature, as well as the white clay pipe fragments discussed above. The association of these artifacts firmly places the Potomac Creek Plain ceramic and other hand-built earthenwares recovered from the site in a late 17th-century context.

Section 7: Summary and Interpretation

Precise identification of the spatial and chronological boundaries of the Posey Site and 18CH282 was a primary goal of this investigation. The spatial layout of the site is discussed in detail in the portion of Section 6 that presents the results of the shovel test pit program. In summary, the site was found to consist of an 800 square meter core area surrounded by approximately 9200 square meters of associated low to very low-density deposits of contemporary ceramic and lithic artifacts.

The internal structure of the site is characterized by the presence of a small, high-density core area originally delineated on the north and east by a freshwater drainage, which has since been extensively modified. The western and southern edges of the site were not topographically constrained, and the archaeological deposit in these areas consists of a relatively low density of ceramic and lithic artifacts. These spatial characteristics of the site--a small core area marked by a very high density of artifacts, surrounded by an area of few artifacts--may represent evidence of the presence of a single household. Evidence for multiple structures, such as temporally or spatially discrete features or several high-density artifact deposits, is absent.

The earliest evidence of human use of the Posey Site area recovered during this project was the single Orient Fishtail projectile point. This point type is diagnostic of the latter portion of the Late Archaic Period, between approximately 3500 and 2750 years before the present. Although this point was recovered from within the site boundaries, it does not indicate an occupation dating to that period. Given the absence of corroborating diagnostics, it is more probable that this artifact represents an incidental use of the area during the Late Archaic. It is also possible that the point was brought to the site by someone during the later occupation of the area.

Small amounts of two ceramic wares also indicated some earlier use of the area that eventually became the Posey Site. Seven sherds of Accokeek ware dating to the Early Woodland Period were recovered. This period was defined by Steponaitis (1983, 1986) as ranging between approximately 1000 and 400 years B.C. Accokeek ware from sites in the lower Potomac River area dates between 800 and 300 B.C. (Egloff and Potter 1982:99). The other minor ware type recovered was twelve sherds of Moyaone, previously dated to 1310 and 1460 years A.D. at the White Oak Point site in Virginia (Dent 1995:246). Moyaone ware is somewhat problematic, and its age and defining characteristics are not well understood. The ware type was originally defined as Potomac Creek Sand Tempered (Stewart 1989:40-46 and Part IV), and the micaceous sand temper that is its defining characteristic may actually represent a local variant within the Potomac Creek type. The decorative motif on the single vessel present at the Posey Site consisted of two rows of direct cord impressions parallel to the rim of the vessel; this same motif was present on five grit-tempered Potomac Creek sherds from four separate vessels.

The majority of the ceramic assemblage (78%, $n = 2571$ sherds) was identified as Potomac Creek. Over 90% ($n = 2082$) of these artifacts were plain body sherds. Potomac Creek Plain is the dominant type within the ware after the turn of the 17th century (Egloff and Potter 1982:112). The 115 cord-marked or otherwise decorated body sherds recovered may indicate some time depth within the assemblage; however, the preponderance of evidence from the Posey Site suggests that the types were coeval.

Both the Yeocomico and Camden ware sherds have been dated to 17th-century contexts at other sites in the Potomac region. Radiocarbon dates on Yeocomico ware range between approximately 1510 and 1690 A.D. (Potter 1993:65, 87). Camden Ware dates to approximately 1660

A.D. and later, and developed out of proto-historic and late prehistoric wares (Egloff and Potter 1982:114; Potter 1993:246).

Other ceramic wares recovered can be used to narrow the range of occupation of the Posey Site. Two types of stoneware and four types of earthenware were recovered, all of which have been found in contexts dating to the second half of the 17th century on colonial sites in the Chesapeake region. Rhenish stoneware with manganese decoration was available as early as 1660, but did not become common until the last quarter of the century (Noel Hume 1982:281). Challis-like earthenware and black lead-glazed red earthenware are also present at sites dating to the last quarter of the century (Miller 1983:85, 91; Hurry and Miller 1989). The Rhenish brown stoneware, tin-glazed earthenware, and unglazed coarse red earthenwares recovered are less specifically datable, but all were available throughout the 17th century.

The five hemispherical glass buttons recovered from the Posey Site are similar in size and shape to other specimens recovered from the Burle's Town Land Site in Anne Arundel County from contexts that date between ca. 1650 and 1676 (Luckenbach 1995:8, 14-15). However, similar buttons were also identified on a portrait painted in the mid-16th century. The association of the buttons with other 17th-century artifacts on the Posey Site, and their recovery from temporally similar contexts from the Anne Arundel County site, suggests a second half of the 17th century date for these artifacts.

The temporal diagnostics with the shortest date range that have been recovered from the Posey Site are the two white clay pipe bowls that bear the makers mark of Llewellyn Evans. As noted above, these pipes were produced between approximately 1661 and 1689 (Pogue 1991:22).

Twenty white clay pipe stems with measurable bore diameters have also been recovered from the Posey Site. Four were recovered in 1985, while the remainder were found during the current project (one from a shovel test pit, and fifteen from excavation unit or feature proveniences). Three of these stem fragments had 8/64" bores, sixteen had 7/64", and one had a 6/64" bore. Although small sample size renders use of the Binford (1978) method problematic, calculation of a mean occupation date based on these artifacts yields a result of 1656.07 A.D. Harrington's (1978) seriation method does not yield as specific a date, but the pipe stems recovered fall between 1650 and 1700 A.D. Stem fragments with a bore diameter of 7/64" make up 70.83% of the total recovered, indicating the most likely period of occupation was between 1650 and 1680. Two of the 7/64" bore stem fragments were recovered from unplowed context in the large midden feature at the western edge of the core area of the site.

Unlike the features excavated in 1996, the pit excavated by Barse (1985) did not contain any artifacts of definitive post-Contact Period origin. The pit did yield a charcoal sample that was radiocarbon dated to 1575 A.D. +/- 90 years. This feature may predate much of the remainder of the Posey Site deposit, indicating the presence of an earlier Potomac Creek component, but there are several other possible explanations for the pit's lack of post-Contact diagnostics and its relatively early date. The feature may represent a functionally discrete element within the site. Barse reported the presence of two fill strata in the pit, the uppermost of which contained all the cultural material recovered (Barse 1985:155). The stratigraphic position of the charcoal sample was not reported, and no field records for the testing are in the public domain. The underlying stratum may be earlier, and there were post-Contact diagnostics recovered from the plowzone immediately above the feature. Given all the information available, it is possible that the artifact-bearing fill was deposited in a natural depression that already contained the lower stratum, and that the age of this stratum is represented by the radiocarbon date. In any event, the 90 year variation range of the radiocarbon date

places the pit feature in potentially the same time period indicated by the bulk of the artifacts recovered from the site.

The absence of several types of artifacts also sheds some light on the time of abandonment of the Posey Site. Staffordshire-type slipware generally dates after 1680 on sites in North America, and is commonly found in late 17th and 18th-century deposits (Noel Hume 1982:136; Miller 1983:87). No sherds of this ware have been recovered from the Posey Site. English brown stoneware, which was developed in the late 17th century and was in wide use after 1690, is also not present (Noel Hume 1982:112-114; Miller 1983:87). Early 18th-century ceramics, such as "classic" Buckley ware and white salt-glazed stoneware (which became common by the 1720s), are absent as well (Noel Hume 1982:114, 133). Close clustering among the pipe stem bore diameters and the lack of bores smaller than 6/64" also suggests a short-term occupation that terminated by the beginning of the 18th century.

As currently understood, the Posey Site area was periodically utilized by Native Americans during the Late Archaic and Early Woodland periods, between approximately 3500 and 2400 years before the present, as evidenced by the Orient Fishtail projectile point and the sherds of Accokeek ware. Sherds from a single Moyaone ware vessel indicate the possibility of another period of incidental use sometime during the latter portion of the Late Woodland. The primary occupation of the site dates between approximately 1650 and 1700 A.D., with an emphasis on the years from 1650 to 1680. The site apparently represents a single component occupation. The small size of the artifacts, and their concentration within the core area, reflects an intensive, possibly year-round, use of the site. The temporal clustering of artifacts recovered from plowzone and the midden feature also supports interpretation of the site as a single component occupation. The results of on-going faunal analysis may shed additional light on the seasonality of occupation at the site.

The 1996 investigations were also intended to define and interpret the spatial and temporal locations of site-specific activities (e.g. refuse disposal, housing, subsistence, etc.). The artifact classes discussed previously all represent specific activities that were carried out at the site; however, interpretation of the overall function of the site is more problematic.

The majority of activities at the site were performed within the core area, and there is not a lot of evidence for other than incidental use of the area to the south and southwest. However, extensive disturbance and construction in this area may have obscured evidence of activities not represented in the artifacts and features present at the core of the site. The amount of lithic debitage and fire-cracked rock recovered from Unit 15911, located on the terrace remnant at 18CH282, may indicate specialized use of this area for tool production and resource processing. The Potomac Creek and Camden ceramics recovered from the excavation unit and shovel test pits at 18CH282 are contemporary with those recovered from the core area of the Posey Site, so it is probable that the areas were simultaneously used.

There is some evidence for distinct activity areas within the core of the site, although the patterns have been partially obscured by modern construction. Artifact concentrations tend to be highest in units excavated over the large midden feature, and in the central portion of the site adjacent to the 4 by 2 meter block excavated by Barse in 1985. Some patterning in artifact density was discernible, with higher amounts of lithic debitage, incomplete shell beads, and brass ornament fragments found near the western edge of the site's core area.

The large midden deposit exposed during this project indicates that the western edge of the core area was used for refuse disposal. The presence of high densities of unmodified faunal remains, both burned and unburned, and a diversity of other artifact types in a dark soil matrix containing

large amounts of charcoal, supports this interpretation. However, relatively large amounts of shell were recovered from this area, and shell bead blanks were also present. Lithic debitage and cut brass fragments were recovered, along with a high concentration of ceramic sherds, clay nodules, and pipe fragments. These artifacts indicate that a variety of activities related to the production of tools, ceramic artifacts, and ornaments were also performed in this area.

The post molds excavated during the current project and by Barse in 1985 are probable evidence of a structure on the site, although of what type and function remains unclear. The presence of a structure is corroborated to a degree by the recovery of 100 wrought nails from the site (78 during the current project, 22 in 1985). In general, the combination of rosehead and T-head type nails of various lengths seems to indicate the presence of a framed structure of some sort (Nelson 1963:8). It is possible that these nails were used for a non-architectural purpose, but the fact that some are burned or clinched, and the variety of nail types and sizes present, all seem to indicate a structural support function. If interpreted as structural elements, these nails could be associated with a ground-laid frame building which has left no other archaeological traces, or with an earthfast structure whose post holes have not yet been uncovered. The post molds found at the site were of the type characteristic of Native American-style architecture. It is possible, although not conclusively demonstrated, that there was a structure on the site that combined elements of both colonial and Native American architecture. Alternatively, the post molds may represent elements of a fenceline or other feature not related to a structure.

The recovery of 2668 fragments of bone weighing close to 700 grams (not including material from features), indicates that food resources procured in adjacent riverine, estuarine, and terrestrial environments were processed, and probably consumed, on the site. Cut marks probably associated with the use of metal tools were observed on one fragment of large mammal long bone. The relatively high density of faunal materials recovered from all areas of the site may indicate a degree of residential stability during the period in which the site was occupied.

Another activity associated with the faunal remains is the production of shell beads, apparently at the western edge of the site's core. Snail, clam, mussel, and a few oyster shells were recovered from this area in quantities too low to indicate intensive exploitation of shellfish as a food resource, but the amount is too high to represent incidental inclusion in the archaeological deposit. Both blanks and finished beads were recovered in relatively high quantities, and their presence indicates use of this area for the production of these artifacts.

The tools that were used to drill the holes in the shell beads have not been recovered from the site. The two bone needles found at the site (one in 1985, one during the current investigation) may have been used for this purpose, but this is speculative in the absence of experimental data. The average bore hole diameter for all beads recovered was relatively low, and the hole sizes within the disk beads were consistent. Eighty-five disk beads were recovered, with bore hole sizes ranging between 0.60 mm and 1.75 mm and averaging 1.34 mm. The standard deviation of the bore diameters was 0.2 mm. Olivella shell beads produced by Chumash Indians in southern California show a shift from larger, inconsistent bore diameters to smaller, more uniform holes concurrent with a late prehistoric to Contact Period transition from the use of stone bladelet drills to metal needles in production (C.King 1982; Arnold 1985). Use of metal tools may have produced the observed consistency in bore diameters in both the tubular and disk beads recovered from the Posey Site.

Seventeen of the 85 disk beads from the site were classified as incomplete forms or blanks. An interesting aspect of the shell bead production at the Posey Site is the presence of finished bore holes in all of these specimens, while their outer edges are irregular and rough. It appears that a

stepped process was used to manufacture the beads, and that the holes were drilled as an intermediate step prior to finishing. Again turning to the California analogy, ethnohistoric accounts from there describe the drilling and stringing of large numbers of beads prior to grinding the entire strand at once, thus ensuring the production of similar size beads while facilitating the finishing process. It is possible that the Posey Site beads were produced in a similar fashion, and that the incomplete beads represent a stage in the manufacturing process.

The production of brass artifacts in the form of triangles and cones also constituted an important activity at the site, and like bead making, evidence for this activity is concentrated at the western edge of the core area. The presence of cut marks on the brass fragments found throughout the core area, and the partially cut triangular form recovered from Unit 28064 in the twelve unit block, provides evidence for the production of brass triangles. The brass cones were simple rolled triangles, and these, as well as the brass compound projectile point, may have been made at the site. Like lithic projectiles, finished points and ornaments are the least likely artifacts to remain at a site following manufacture, and the 25 brass scraps or fragments recovered may be a cognate of lithic flakes in the manufacture of stone tools.

The debitage assemblages recovered during both the 1985 testing and the current investigation indicate the production and maintenance of lithic tools on the site. It is probable, but not conclusively demonstrable, that such tools were also actively used on the site. It is possible that some of the faunal remains recovered were initially processed with lithic tools, and these resources may also have been procured through the use stone projectile points.

The glazed and unglazed coarse earthenwares, tin-glazed earthenware, and Rhenish stoneware recovered from the site include both utilitarian forms and tablewares. Most of the sherds were too small to allow definitive identification of specific vessel types, but at least one tin-glazed earthenware plate, a black lead-glazed red earthenware butter crock, and two stoneware bottles were probably present. On European colonial sites, these ware types and vessel forms would indicate a probable domestic occupation. However, the frontier location of the Posey Site, and its probable occupation by Native Americans, may render this characterization invalid. The cultural role of these ceramic vessels may not have been equivalent to that on colonial sites of the time. Therefore, the characterization of the site as a domestic occupation on the basis of the presence of these wares is problematic, because they may have fulfilled a different function at the Posey Site. For example, they could have served as display items or status indicators, or had other unknown functions.

An interpretation of the function of the Potomac Creek, Camden, and Yeocomico ceramics may be constructed through the consideration of the archaeological record and contemporary documentary evidence. Archaeological data from the site includes the large number of sherds recovered, the evidence for production on the site, and the changes in both decorative style and vessel morphology in comparison to earlier period deposits. Primary documentary sources indicate the production of Native American ceramics and pipes for trade in the Chesapeake as early as the first half of the 17th century and continuing through the middle of the 18th century (Mouer et al. in press:11-13). Potter (1993:226) and Henry (1992:20) report evidence of Algonquians on Virginia's Northern Neck making both pots and pipes for sale and/or exchange as late as 1686. Closer to the site, two "indian bowls" were reported by Walsh in the inventories of two separate mixed-race quarters in Charles County that were occupied between 1658 and 1711 (Walsh 1977:205). The high density of the Potomac Creek, Camden, and Yeocomico ceramic assemblage, and the presence of incomplete forms, may be a result of the production of ceramic on the site for use as trade goods. Henry suggests that at least some Native Americans manufactured Colono ware, and given the

association of the Camden ware from the Posey Site with large quantities of Potomac Creek ware known to have been manufactured by Native Americans, it is probable that the Camden was also manufactured by Native Americans.

Ceramic produced for trade is of a fundamentally different function than ceramic produced for on-site cooking or storage, and the decline in complexity of design elements cannot be interpreted as a correlate of social boundary maintenance in this context. The Native Americans at the Posey Site participated in a trade system that was probably in part based upon a modified version of their own ceramic technology. This economic interaction functioned on an adaptive level beyond the simple replacement of aboriginal technology with superior introduced goods and materials.

Change in ceramic vessel morphology and other attributes as an indicator of cultural change among Native American groups was a topic explored by Susan Henry in her study of Colono wares in the Chesapeake. In this work, the extent of morphological change in ceramic made by historic period Native American groups was argued to be an indicator of the degree and extent of acculturation among its producers (Henry 1992:166). Of course, change in Native American material culture had been occurring for thousands of years, and can not always be attributed to the adoption of elements of a dominant culture by a subject culture. The production of Colono wares may reflect acculturation as generally defined, but it could also be an attempt to exploit a colonial market without concurrent change in traditional lifeways.

At the Posey Site, several artifacts were recovered which indicated a shift in the form of vessels being produced. These included a basal sherd from a flat bottomed vessel, several everted rim sherds, and ceramic pieces that may have functioned as vessel legs. Assuming that the degree of change observed correlates to a degree of acculturation, several qualitative statements concerning the Posey Site assemblage can be made. First, there was some shift in ceramic forms, and therefore some acculturative process may have been at work, unless the vessels were intended exclusively for trade. However, the vast majority of ceramic sherds were associated with more traditional vessel forms, suggesting that this element of Native American life was still relatively stable.

The Posey Site was found to consist of a small, high-density core area with an associated low-density apron of temporally-related artifacts. No evidence of a palisade or other defensive architecture was present. There was also no evidence of clustering within the high density area to indicate the locations of multiple houses or other structures. The wide variety of artifact classes points to some residential stability by the occupants of the site, but the deposits do not strongly support interpretation of the site as a village. The term "hamlet" may be most appropriate for the site, based upon its relatively small size, lack of evidence of multiple structures, and possible single household occupation, but the evidence does not suggest it was an isolated residential locus primarily functioning for resource production and procurement. The reprocessing of goods acquired through trade, and the production of trade materials, are important aspects of site function as indicated by the artifact assemblage. The Posey Site may represent a locus for the production of trade goods by Native Americans, and the reprocessing of introduced materials acquired through the same mechanism. The actual conduct of trade would probably remain archaeologically invisible, but the proximity of the Posey Site to Mattawoman Creek and the main channel of the Potomac may have facilitated the exchange of goods.

Documentary evidence presented in Section 3 indicated that there was probably some colonial occupation on the south bank of Mattawoman Creek by 1670, and on the north bank by 1685 (Figure 7 and MDHR Liber T, Folio 281-282). Although speculative, the Posey Site may represent an effort to exploit the trade opportunities presented by the proximity of the colonial

settlements. It is also possible that this interaction worked in the opposite direction, with the fields and habitation sites cleared by Native Americans being an attraction for settlers who needed open land to begin farming. The Posey Site may also have served as a buffer between the colonists and the Native American populations in the "Old Pomunky Town" and other villages to the north and west, providing a shield against direct contact while facilitating economic interaction. However, in the absence of further historical and archaeological research, the nature of Native American settlement patterns in the 17th century will not be well understood.

The third goal of this project was to compare earlier deposits with later deposits to assess what, if any, change was evident in the archaeological record and to link this change to contemporary cultural and historical processes. Although the site has been determined to be a single component deposit, change is represented by the use of imported materials in both traditional and new technologies, shifts in the forms and type of ceramic vessels produced at the site, and in the function of the site itself.

One of the major differences in the earlier and later period deposits discovered at the Posey Site are their relative densities. Far less than 1% of the artifacts recovered from the site date to periods other than the second half of the 17th century. The Orient Fishtail projectile point, and the Accokeek and Moyaone ceramics, indicate a transition from the use of the area for occasional resource procurement and/or processing to the intensive, probably sedentary, occupation indicated by the approximately 8000 artifacts and 4000 fragments of faunal remains that make up the bulk of the deposit. This change in site use may be due to factors related to resource procurement strategies or site function. The horticultural production of maize or other cultigens may have contributed to this shift. The date of the development of horticulture in the area is difficult to precisely determine, but production of maize, beans, and squash was widespread by 1300 A.D., well before the Posey Site was occupied intensively (Dent 1995:268). As discussed above, the Matawan loamy sands of the site are suitable for the cultivation of maize, which may have some predictive value in determining site location (Potter 1993:34-40).

The location of the Posey Site in relation to earlier deposits in the area may have also been influenced by factors associated with Native American-colonial interactions. The proximity of the site to Mattawoman Creek and the Potomac River would have made it accessible to waterways for the transportation of trade goods. The evidence for the production and transformation of such goods on the site supports this interpretation. The role of trade routes in determining post-Contact Native American site locations is not well understood, and additional data will be necessary to assess the importance of this factor.

The interpretation of change in the earlier and later period deposits at the site is related to the ethnicity of those who occupied the Posey Site and made the objects recovered there. The abundance of probable Native American ceramic in the deposit, the remanufacture of metal artifacts into forms known to have been used by Native Americans, and absence of non-indigenous fauna at the site all seem to indicate occupation by Native Americans undergoing a process of cultural change. However, the presence of wheel-thrown ceramics, metal artifacts including lead shot, and other imported materials indicate contact with colonists or other people who had access to goods of European origin. The earliest figures available for Charles County indicate a non-Native American population of approximately 400 by 1658. There were at least two free blacks, and several African slaves, in the county at that time (Walsh 1977:19-22, 192-194). This population gradually increased throughout the time the Posey Site was occupied, reaching close to 3000 individuals by 1704. In conjunction with this population increase, the Native Americans in the county were under increasing

pressure to give up their land, through sale or otherwise, for use in the production of tobacco. These processes all had an effect on the material culture of the inhabitants of the site, and probably helped to determine its location as well. Although the majority of the archaeological evidence from the site indicates occupations by Native Americans, the presence of Europeans, second-generation colonists, or even Africans at the site cannot be conclusively ruled out. Although the area in which the site is situated has been identified as the territory of the Mattawoman Indians (Clark and Rountree 1993:114), precise identification of the particular group of Native Americans who occupied the site is also impossible at the current level of understanding. The predominance of Potomac Creek ceramic and the identified period of occupation makes it probable that the people who were at the site were associated with the Piscataway Paramount Chiefdom; however, other scholars have used linguistic evidence to argue for occupation of the site by Dogue Indians (Moore 1991, 1993). The disruption of Native American populations throughout the Chesapeake that occurred as a result of colonization during the 17th century makes identification of the ethnicity of the occupants of a particular site, beyond association with an identified archaeological culture, very difficult.

A minority ware type at the site was shell-tempered Yeocomico ware. Clark has argued for the displacement of the shell-tempered ceramic-producing people of the Townsend culture in the Potomac coastal plain area between ca. 1200 and 1600 A.D. (Clark 1980:14). Shell-tempered ceramic continued to be produced in the Patuxent drainage, the estuarine portions of the Potomac River, and other areas in relatively close proximity to the Posey Site until historic times. The mechanism by which this ceramic was incorporated into the larger Potomac Creek assemblage at the Posey Site is unknown, but it may be present as a result of trade among Native American groups, intermarriage, or the coalescence of Native Americans from different ethnic backgrounds into a single group that subsequently occupied the Posey Site. However, the recovery of only three vessels of this type from the site (two from the current investigation, one from the 1985 testing) seems to indicate one of the former hypotheses rather than the latter.

An aspect of the lithic tool and debitage assemblage that distinguishes the Posey Site from earlier deposits is the relative low density of these materials on the site. Comparative data is difficult to access, but a feature of the core area of the site is its relatively high overall artifact density, yet with only 17 lithic tools recovered from the 29 1.5 by 1.5 meter units and one 4 by 2 meter excavation block in this area. It is apparent that chipped stone technology continued to be used, but it is also apparent that lithic tools were declining in importance in the tool kit of the occupants of the Posey Site. It is possible that lithic tools were being replaced by iron or brass tools at the site. However, the possible use of chipped stone technology in the production of gunflints also indicates a transition in both the materials utilized and the eventual function of completed tools. The presence of these artifacts is evidence of both cultural continuity and of the adaptation of traditional technology toward the production of non-traditional forms. Although identification of a single causal mechanism in this process is impossible, the increase in the non-Native American population of Charles County through the period of the site's occupation probably resulted in more access to, and more widespread use of, tools that were not locally produced by Native Americans from lithic materials.

The manufacture of brass artifacts from sheet metal has further implications for cultural change among the Native Americans who occupied the Posey Site. Metal in the form of ornaments, originally native copper but later European copper and brass, was important as an indicator of status within the rank-differentiated societies of the Algonquin Indians of the Chesapeake (Potter 1989:153; Clark and Rountree 1993:120). Some scholars hypothesize that the easy availability of

European metals after the settlement of Jamestown in 1608 and the founding of Maryland in 1634 further destabilized traditional Native American societies already impacted by the loss of population and territory (Potter 1989:166). The use of the Posey Site for the manufacture of brass artifacts in the form of both triangles and cones may have served to weaken the political authority of the Piscataway Tayac and subsidiary chiefs in the period between approximately 1650 and 1700. Presumably, earlier sites would have had a much lower amount of brass artifacts, and their distribution may have been limited to sites where a Werowance or other traditional authority figure resided.

Pieces of metal trade vessels were often used in the manufacture of both projectile points and ornaments of brass, although no bails or lug handles from kettles were recovered from the site, and no fragments were large enough to identify as pieces of other forms. It is possible that much of the brass from the site was originally sheet metal, and this may in itself be a temporally-sensitive characteristic. However, additional comparative data is needed to make a more definitive statement.

A general decline in the proportion of brass ornaments to projectile points, and an increase in the proportion of brass to stone projectile points through time, has been observed by Kent (1984: 203-205) on 17th-century Susquehannock sites in Pennsylvania. The relatively small sample of brass artifacts recovered from the Posey Site may render comparison to Pennsylvania invalid, especially since, unlike most of the sites discussed by Kent, these items were manufactured at the Posey Site, probably for trade elsewhere. Other factors, such as the availability of raw materials for the production of these artifacts, or access to guns, may have also influenced the relative frequency of brass ornaments to projectiles in the various assemblages. Uncertainty about the function of the Posey Site artifacts also complicates their interpretation. However, if we assume that the production of brass artifacts reflected market demands, then the recovery of five triangles, one compound triangle, and two cones parallels the Susquehannock pattern, whatever the function of these items. The recovery of only two lithic arrowheads also matches the pattern reported by Kent.

The presence of ceramic vessels at the Posey Site in forms not typical of pre-Contact Native Americans may be another indicator of change in response to a new demographic and economic environment. It was argued above that the amount and types of ceramic from the site represent functional change, in that they were produced for trade. The evidence of transitions in vessel forms observed in the Posey Site assemblage--the production of flat bottom vessels, (possibly the "indian bowls" noted in contemporary documents), and the presence of probable feet from pipkin-like or other plumbate forms--may be a result of efforts to exploit trade opportunities created by the expansion of colonial settlement in Charles County. In the context of the loss of traditional hunting grounds and control of land, the transformation of Native American ceramic to forms that would be valuable as trade items may have been a survival mechanism, as well as material evidence of cultural change.

Miller, et al (1983) hypothesize that the few references to glass beads in trader inventories, and the descriptions of simple monochrome types, may indicate a relative lack of importance of glass beads as trade items. In addition, the use of these beads in trade apparently declined over time. Conversely, the persistence of colonial references to shell beads of Native American manufacture indicates both their use and retention of value until late in the 17th century (Miller et al. 1983:130). Four glass beads, all simple, monochrome types, and 94 shell beads were recovered from the Posey Site, a ratio of nearly 1:24. There was also substantial evidence for the production of disk shell beads at the site. This seems to confirm the pattern observed in the documents cited above. The greater quantity of shell beads may be a reflection of their retained value through the 17th century, and of their use as currency by both Native Americans and the colonists who traded with them. However,

this observation does not necessarily confirm the insignificance of glass trade beads during the latter portion of the century. Although relatively few glass beads have been recovered outside of grave or ossuary contexts on Native American sites along the Potomac, large numbers have been recovered from burials at sites such as Patowemeke, Piscataway, and Port Tobacco (Graham 1935: 30; Miller et al. 1983:136; Stewart 1989:76; Potter 1993:213). All of these sites are situated on or near the Potomac River, in relatively close proximity to the Posey Site.

A second issue in the tracking of bead choices and change through time is the type of recovery methods used. Less than 10% (n=9) of the beads found during the current investigation were retained in 1/4" mesh screens, and none of these specimens were larger than 1/4" in diameter, so their recovery was more fortuitous than systematic. All of the remaining specimens were recovered from proveniences that were water-screened through 1/32" mesh or were floated. In the absence of the use of similar methods, all but the most basic of comparisons between sites may be invalid. Generalizations concerning the relative value of glass versus shell beads, or change through time in the proportions of such artifacts on Native American sites, cannot be conclusively made based upon the data recovered from the Posey Site alone.

All analysis to date of the faunal materials recovered from the Posey Site has failed to reveal the presence of non-indigenous species at the site. This may be evidence of the persistence of Native American food resource procurement patterns at the site. Cattle, swine, and fowl were raised by colonists on the settlement frontier (Carr et al. 1991:Chapters 2 and 4). The distribution of these animals across the landscape is difficult to track, but with the exception of swine most were not free-roaming, so they presumably spread across Charles County with the colonial settlers.

Native Americans living south of the Posey Site trafficked in swine at least as early as 1660, when several individuals, including the King of Choptico, were accused of killing hogs, possessing pork, and raising piglets rightfully owned by St. Clements Manor, located between the Wicomico River and St. Clements Bay in present-day St. Mary's County (Archives LIII:630; Carr et al. 1991:5). At that time, the complainant thought that Native Americans "ought not to keep hogges, for under pretence of them they could destroy all the hoggs belonging to the Mannor." Seventy-six years later, the case of George Williams discussed previously provides evidence that Native Americans in the area of Mattawoman Neck were by then keeping and presumably eating swine. Despite the presence of pigs, and presumably cows, chickens, and sheep, in Charles County during the second half of the 17th century, none of these animals were incorporated into the diet of the Posey Site occupants. The results of on-going analysis of the faunal remains from the site may provide additional information on this topic.

The evidence from the Posey Site suggests that the Native Americans who lived in the area into the 18th century had developed strategies for survival based upon the integration of elements of traditional lifeways with colonial ones, and the production of goods and/or resource surpluses for use in a developing market economy. The archaeological record at the Posey Site reflects a shift in the focus of both production and material culture function through time. Modification of aboriginal technology for use in trade, and the survival of aspects of traditional lifeways in resource procurement, suggests a complex pattern of both interaction and isolation controlled to a certain extent from within by the surviving Native American population, in response to a rapidly changing economic, political, and demographic environment.

As a whole, the Posey Site represents an aspect of the process of cultural change that the Native Americans in Maryland underwent in the years between approximately 1650 and 1700. The geographical position of the site at, and eventually behind, the settlement frontier, the interactions

between Native American groups and the colonists, and the relationships among Native American groups themselves all had an effect on the material culture of the site. The culture of the Native Americans who lived at the site was fundamentally different from that of their pre-Contact ancestors, and transitions in their lifeways continued through the 18th, 19th, and 20th centuries.

A complete explanation of this process of cultural change observed at the Posey Site is beyond the scope of this investigation, and may indeed be impossible given the nature of the evidence available. However, the data reported here constitute an important part of what is an emerging understanding of this process. Use of this information in comparative research will enable the development of a more complete model of cultural change among Native American groups during the Contact and early historic periods in Southern Maryland.



The final goal of this project was to locate and inventory a collection of materials from 18CH281 in the possession of Mr. Calvert Posey. Access to Mr. Posey's collection is currently being negotiated by personnel of the Natural Resources Division, Indian Head Naval Surface Warfare Center. The results of any analysis of this collection will be reported under separate cover when they become available.

Section 8: Management Recommendations

The shovel test pits used to define the boundary of the Posey Site during this project were placed at 8 meter intervals. The high-density core area of the site was found to incorporate 800 square meters, with a maximum linear dimension of 40 meters. Even with the use of the 8 meter interval, only ten shovel test pits would fall in an area the size of the site's core. Given this, the use of close interval shovel test pits as a survey methodology should be considered essential for locating small sites like the 18CH281.

The Posey Site was determined to be eligible for inclusion on the National Register of Historic Places prior to this investigation (Gary Shaffer, personal communication 7/18/96), based on Barse's (1985) assessment that the site could contribute important information about culture change after European contact. Therefore, determination of Register eligibility was not a primary goal of the current investigation, but new data concerning the contents and integrity of the site can be used to support this determination.

The significance of archaeological sites is usually determined by their National Register eligibility, with two criteria being critical. The first of these is the integrity of deposit. Integrity is an assessment of natural or mechanical disturbances to the archaeological remains on a site. In some cases, sites that have been partially disturbed can remain eligible for the National Register, and are therefore significant (Talmage and Chesler 1977). The presence of stratified deposits, intact features, and temporally diagnostic artifacts or other datable material would all serve to increase the potential significance of an archaeological site.

[REDACTED]

Plowzone deposits that contain varying amounts of temporally diagnostic cultural materials are also present at the site's core, on the northern margin of the Central Knoll area, and in the central portion of 18CH282. As indicated in the introductory portion of the results section, only approximately 10% of the intact core area of the site has been excavated to date.

The potential of an archaeological site to provide important data for developing a better understanding of history or prehistory is the second of the primary criteria for determining significance. Other qualities that may render a site significant include association with important past events or persons, or embodiment of the distinctive characteristics of a type, period, or method of construction for historic period resources.

The Posey Site has the potential to yield information that will enhance our understanding of the changes in Native American life during the period between approximately 1650 and 1700 A.D. It also retains integrity, as shown by the presence of sub-disturbance features and cultural deposits. On this basis, the Posey Site is significant, and eligible for inclusion on the National Register of Historic Places. Although this report has presented the results of the current investigation, the research value of these artifacts and records, as well as those generated during the 1985 excavations, is not exhausted.

Under Section 106 of the National Historic Preservation Act, federal agencies such as the Navy must consider the effect that their actions will have on cultural resources, including archaeological sites. Depending on the scope and type of any work proposed or planned, sections of

the National Environmental Protection Act may also require the consideration of the effect such activities would have on archaeological deposits. Because the Posey Site has been determined to be significant, or eligible for the National Register, any disturbance to the archaeological deposit will have an adverse impact. Therefore, it is recommended that the site area, as defined during this project, be left undisturbed by any future construction or other activities that will affect the ground surface or underlying soils. If such improvements become necessary within the site area, it is recommended that a full excavation designed to achieve maximum data recovery be performed in all areas that will be impacted. A scope of work for any such investigation should be developed following review of information generated during this investigation, to determine the extent of factors such as localized disturbances that may effect the amount of new excavation necessary to achieve project goals.

Section 110 of the NHPA requires that federal agencies establish a program for the identification, evaluation, and subsequent management of cultural resources within their control. This report contributes to compliance with that requirement by the Indian Head Division of the Naval Surface Warfare Center. Copies of records relating to these aspects of the investigation should be curated at the Jefferson Patterson Park and Museum, along with the records generated during this project.

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APPENDIX A:

Scope of Work



APPENDIX B:
Safety Document

APPENDIX C:
Artifact Catalog

18CH281

Test Units

Lot 38 sq. 19165A

- 2 Potomac Creek plain body sherds
- 2 quartz primary flakes
- 1 quartz angular debris
- 9 slag fragments - 31.9 g. 20th century
- 1 strap band, copper alloy 20th century
- 1 copper wire 20th century
- 1 welding rod, copper alloy 20th century
- 2 deformed lumps of lead 20th century
- 1 red hard fired brick, 20th century
- 5 concrete fragments, 20th century
- 8 asbestos tile fragments, 20th century
- 2 wire nail fragments with common heads
- 1 large iron re-bar fragment (.5x20 inches), 20th century

Lot 39 sq. 20866A

- 17 Potomac Creek plain body sherds, 2 sherds with smoothed over cord marks
- 1 Potomac Creek plain body sherd, very worn/eroded
- 1 Potomac Creek plain sherd, possible rim
- 3 quartz primary flakes
- 3 quartz secondary flakes
- 1 rhyolite secondary flake
- 3 quartz angular debris fragments
- 1 quartzite FCR -12.0 g
- 3 dark green glass bottle body sherds, heavily patinated and friable
- 1 wrought or cut nail fragment with head
- 1 oyster shell fragment -0.2 g
- 1 colorless glass bottle body sherd -20th century
- 1 light aqua glass body sherd -20th century
- 34 slag fragments - 80.7 g - 20th century
- 6 concrete fragments - 20th century
- 24 asbestos tile fragments - 20th century
- 1 steel hex nut with threaded bolt - 20th century
- 1 gray paste, red glazed, hard fired sewer pipe sherd - 20th century
- 1 red paste hard fired brick sherd, - 20th century

Lot 40 sq.20866B

- 1 Pope's/Accokeek plain body sherd
- 2 Pope's/Accokeek body sherds, cord marked, mend
- 1 quartzite possible secondary flake, may be due to fire cracking
- 1 quartzite fire cracked rock fragments -335.1 g.

Lot 41 sq. 21061A

- 1 quartz primary flake
- 1 quartz secondary flake

- 2 quartz angular debris fragments
- 1 quartzite primary flake
- 1 quartzite secondary flake
- 1 quartzite FCR - 22.5 g.
- 1 sandstone possible FCR - 4.0 g.
- 1 green glass bottle body sherd, - 20th century
- 296 slag fragments - 803.8 g. - 20th century
- 16 concrete fragments - 20th century
- 30 asbestos tile fragments - 20th century
- 2 wire nails with common heads, 23/4 inches- 20th century
- 1 wire nail fragment with common head -20th century
- 1 UID iron fragment - 20th century

Lot 42 sq. 21061B

- 1 quartz angular debris
- 1 dark chert angular debris
- 1 quartzite possible FCR fragment - 25.0 g.
- 1 red paste hard fired brick - 20th century
- 33 slag fragments - 281.5 g. - 20th century
- 7 asbestos tile fragments - 20th century
- 13 orange synthetic tape/flagging fragments, 20th century

Lot 43 sq. 27879A

- 1 slightly everted Potomac Creek plain rim sherd
- 1 straight, flat Potomac Creek plain rim sherd
- 1 slightly everted Potomac Creek pseudo-cord wrapped, stick marked rim sherd
- 1 Potomac Creek pseudo cord wrapped, stick marked rim sherd fragment, very eroded , 2 pieces mend
- 1 Camden folded-in rim sherd (bottle?)
- 2 Potomac Creek cord marked body sherds
- 3 Potomac Creek body sherds with smoothed over cord marks
- 55 Potomac Creek plain body sherds (variations in temper and thickness)
- 23 Potomac Creek plain body sherds/ fragments- very eroded
- 2 Camden body sherds
- 7 Yeocomico body sherds
- 2 Potomac Creek plain body sherds with white painted band
- 1 terra cotta pipe stem fragment
- 1 terra cotta pipe bowl sherd
- 2 terra cotta pipe bowl sherds with rouletted decoration
- 1 terra cotta pipe bowl sherd with indented/rouletted decoration
- 2 terra cotta pipe bowl rim sherds with rouletted decoration, 2 separate pipes
- 2 white clay pipe stems - 7/64 inch bore
- 1 white clay pipe stem fragment
- 1 white clay pipe bowl rim sherd with rouletted band
- 1 tubular white shell bead, .340 cm. diameter, .470 cm. length, .115 cm. bore diameter
- 1 flint secondary flake
- 4 quartz secondary flakes
- 2 chert/flint secondary flakes
- 1 flint angular debris fragment
- 3 quartz angular debris fragments
- 3 quartzite possible FCR - 44.0 grams
- 2 quartzite FCR - 137.0 g.
- 1 UID steatite fragment - .6 g.

- 2 dark green glass bottle fragments
- 3 pieces of sheet brass
- 4 pieces UID iron
- 3 wrought nails
- 5 worked bone fragments, refit to form 1 large comb fragment with coarse and fine toothed sides, all fine side teeth missing
- 1 polished bone needle fragment, 2.4 cm length, partial drilled hole at broken end, tip intact
- 3 crab claw shell fragments
- 101 fish scales
- 1 fish mandible with teeth
- 15 unidentified fish remains - various are identifiable
- 8 possible fish vertebra - identifiable
- 27 turtle bone /shell fragments
- 59 unidentified bone fragments -identifiable
- 1 bird, turtle, small mammal
- 63 bone fragments - at least 3 birds, small mammal, turtle
- 9 tooth fragments - med. mammal
- 7 identifiable burned bone fragments – small mammal, possible turtle
- 40 unidentifiable burned bone fragments -some small mammal, bird, possible turtle
- 4 oyster shell fragments - 10.8 g.
- 16 clam shell fragments - 22.3 g.
- 14 mussel shell fragments - 8.9 g.
- 82 UID shell fragments - 10.9 g.
- 1 land snail fragment - > 0.1 g.
- 3 colorless glass bottle fragments - 20th century
- 21 slag fragments - 46.4 g.
- 1 black plastic storage pallet body fragment 20th century
- 1 UID white plastic fragment - 20th century

Lot 44 sq. 28068A

- 82 Potomac Creek plain body sherds
- 2 smoothed over cord impressed body sherds, Potomac Creek
- 3 Potomac Creek body sherds with one row cord impressed decoration
- 1 Potomac Creek plain rim sherd
- 5 Yeocomico body sherds, plain, shell tempered
- 5 untempered Camden ware sherds, very eroded
- 1 Rhenish blue and gray stoneware sherd
- 1 UID earthenware sherd, buff paste, eroded
- 4 Potomac Creek pipe bowl fragments with fragmentary roulette decoration
- 2 Potomac Creek pipe bowl fragments, plain, eroded
- 8 Potomac Creek pipe stem fragments, plain, eroded
- 1 UID terra cotta pipe bowl fragment with punctate decoration
- 1 white clay pipe stem 7/64 inch bore
- 1 UID shell disk bead, white, .410 cm. diameter, .125 cm. length, .145 cm bore diameter
- 1 quartz secondary flake
- 1 quartz angular debris
- 1 quartzite primary flake
- 2 quartzite secondary flakes
- 1 flint primary flake
- 2 flint secondary flakes
- 3 flint late secondary flakes
- 1 flint angular debris

- 3 quartzite FCR fragments - 82.3 g.
- 1 hand wrought nail fragment, rosehead, tip missing
- 1 nail fragment, probably hand wrought, possible rosehead, shaft missing
- 1 UID small mammal jaw/tooth fragment
- 3 UID teeth fragments
- 1 possible human tooth , pre-molar
- 58 UID burned bone fragments
- 91 UID unburned bone fragments
- 21 UID fish scales (Gar?)
- 3 UID fish bone fragments
- 1 crab claw fragment
- 60 clam/mussel shell fragments - 15.2 g.
- 4 land snail fragments - .4 g.
- 4 concrete fragments - 13.9 g. 20th century
- 1 brick fragment - 1.40 g. 20th century
- 1 fragment zinc plumbers tape - 46.65 g. 20th century
- 1 iron eyelet screw - 20th century
- 2 lead solder fragments - 6.5 g. 20th century
- 1 UID iron fragment - 5.9 g. 20th century
- 1 UID colorless plastic fragment - 20th century
- 1 plastic electrical plug plate, white, 20th century
- 2 red plastic headlight lens fragments - 20th century
- 1 UID black plastic fragment
- 4 slag fragments - 2.3 g.

Lot 45 sq. 28071A

- 1 Potomac Creek plain basal sherd, possible European form
- 4 Potomac Creek body sherds with smoothed over cord marks
- 2 Potomac Creek body sherds with pseudo cord wrapped stick marks
- 2 Potomac Creek plain rim sherds, straight and flat
- 13 Yeocomico body sherds - some very eroded
- 8 Camden body sherds - one very eroded
- 97 Potomac Creek plain body sherds
- 19 Potomac Creek body sherd fragments
- 1 probable Rhenish gray paste stoneware body fragment
- 1 Rhenish gray paste stoneware with molding and blue decoration
- 2 Euro-American red paste earthenware body fragments
- 1 possible Euro-American buff-red paste earthenware body fragment
- 5 terra cotta pipe stem fragments
- 2 terra cotta pipe bowl fragments
- 1 terra cotta pipe bowl fragment with roulette decoration
- 2 terra cotta pipe bowl rim fragments with roulette band, 2 separate pipes
- 1 terra cotta pipe bowl rim fragment with possible punctate decoration
- 2 terra cotta pipe waster fragments
- 1 white clay pipe bowl rim sherd
- 4 flint secondary flakes
- 4 quartz secondary flake fragments
- 1 quartzite secondary flake
- 1 flint angular debris
- 2 quartz possible angular debris
- 5 quartzite FCR - 248.0 g.
- 1 dark green glass bottle fragment, very paterinated and friable

- 1 hemispherical lead button, 1.13 x .43 cm, attached loop
- 1 rolled sheet brass cone, 2.83 cm length, light gauge
- 2 sheet brass fragments, 1 with cut mark
- 1 UID iron object, possible tang or knife blade fragment
- 1 deformed lead lump fragment - 3.2 g.
- 1 wrought nail shank fragment with "T" head
- 3 wrought nail shank fragments with heads,
- 2 possible roseheads
- 10 fish scales
- 7 fish elements (various identifiable elements)
- 1 rodent incisor
- 4 tooth fragments, various sm-med mammal, 1 possible lg mammal
- 1 small mammal vertebra
- 3 unidentifiable mammal bone fragments
- 35 unidentifiable bone fragments, 5 bird, med. mammal, turtle
- 38 identifiable bone fragments, sm/med mammal, turtle
- 10 turtle bone/shell fragments
- 6 turtle bone/shell fragments, burned
- 27 identifiable bone fragments, burned, med. mammal, turtle, possible bird
- 12 oyster shell fragments -29.3 grams
- 12 clam/mussel shell fragments - 20.8 g.
- 22 UID shell fragments - 4.5 g.
- 1 burned glass fragment - possible 20th century
- 17 slag fragments 11.9 g.- 20th century
- 1 asbestos tile fragment - 20th century
- 3 styrofoam fragments

Lot 46 sq 28257A

- 12 Potomac Creek plain body sherds, very worn/eroded
- 38 Potomac Creek plain body sherds
- 2 Potomac Creek plain body sherds with scraped over cord marks
- 1 Potomac Creek body sherd with cord decoration
- 2 Potomac Creek rim sherds with cord decoration, straight, flat rims; not the same vessel
- 3 Yeocomico body sherds
- 1 probable/possible camden body sherd (possible Euro-American form)
- 1 Potomac Creek pipe stem fragment
- 1 Potomac Creek pipe bowl fragment with rouletted decoration
- 1 Potomac Creek pipe bowl rim bowl and stem fragment, shallow wide bowl
- 3 Potomac Creek pipe rims with rouletted decoration, 3 separate pipes
- 1 white clay pipe bowl fragment
- 1 unidentified graphite/shale fragment
- 1 quartz primary flake fragment
- 1 quartz secondary flake
- 2 quartzite secondary flakes
- 1 black chert secondary flake
- 1 brown chert secondary flake
- 1 white (burned) flint secondary flake
- 3 flint secondary flakes
- 1 quartz angular debris
- 1 quartzite FCR - 10.05 g.
- 1 UID iron object
- 2 brass sheet metal fragments

- 1 brass triangular projectile point
- 1 flint utilized gun flint
- 1 wrought nail shank with head
- 1 UID iron fragment , possible nail shaft
- 13 fish scale fragments
- 27 turtle bone fragments, identifiable
- 22 probable turtle bone fragments, identifiable
- 5 unidentified bone fragments, unidentifiable
- 29 unidentified bone fragments (mammal?), identifiable
- 17 unidentifiable burned bone fragments, very crushed, (mammal?)
- 2 probable turtle burned bone fragments
- 37 probable mussel shell fragments - 11.69 g.
- 1 probable snail shell fragment - 1.09 g.
- 1 green glass bottle body sherd 19th/20th century
- 31 slag fragments - 32.0 g., 20th century
- 1 concrete fragment - 21.2 g., 20th century
- 2 mortar fragments - 0.6 g., 20th century
- 1 nitro glycerin bag seal, iron and lead, 20th century
- 2 black plastic storage pallet rim fragments
- 5 black plastic storage pallet body fragments
- 5 colorless plastic/cellophane fragments

Lot 47 sq. 28260A

- 1 Yeocomico rim sherd
- 2 Camden rim sherds
- 5 Potomac Creek body sherds with cord mark decoration or pseudo cord wrapped stick marks, not same vessel
- 3 Potomac Creek body sherds with smoothed over cord marks
- 3 Accokeek Creek cord marked body sherds
- 32 Potomac Creek plain body sherd fragments
- 126 Potomac Creek plain body sherds, great variations in temper and thickness, some possible Camden
- 19 Yeocomico body sherds, some very eroded
- 1 Potomac Creek plain body sherd with white painted band
- 1 Potomac Creek rim sherd with pseudo cord wrapped stick marks, mends with sherd from lot 45
- 5 Potomac Creek rim sherds with pseudo cord wrapped stick marks, 5 separate vessels
- 1 Rhenish gray stoneware body sherd, molded, cobalt blue and manganese purple
- 1 UID coarse earthenware, manganese glaze on one side, dark wash on one side, hard red paste
- 1 red paste coarse earthenware body sherd, clear lead glaze
- 1 Potomac Creek pipe bowl rim sherd with rouletted decoration
- 2 Potomac Creek pipe bowl sherds with rouletted decoration
- 2 Potomac Creek pipe stem sherds
- 3 Potomac Creek pipe bowl sherd fragments
- 2 Potomac Creek pipe stem sherd fragments
- 4 possible Potomac Creek pipe fragments
- 3 white clay tobacco pipe bowl fragments
- 1 white clay tobacco pipe stem fragment
- 4 quartz secondary flakes
- 1 quartzite secondary flake
- 4 white flint secondary flakes
- 3 brown flint secondary flakes
- 1 reddish burned flint secondary flake
- 2 gray flint angular debris fragments

- 3 quartzite angular debris fragments
- 5 quartzite FCR 236.0 g.
- 1 black glass button with iron shank, half complete
- 1 ammunition, lead ball, .95mm
- 4 brass sheet metal fragments
- 2 wrought nail fragments with heads (possible roseheads)
- 1 possible wrought nail shank fragment
- 1 burned clay lump
- 3 UID fish scales (Gar ?)
- 9 UID teeth fragments
- 181 UID unburned bone fragments
- 119 UID burned bone fragments
- 39 clam/mussel shell fragments - 16.5 g.
- 1 oyster shell fragment 4.0 g.
- 2 snail shell fragments 1.0 g.
- 67 slag fragments 92.6 g. 20th century
- 5 Styrofoam fragments, 20th century

Lot 48 sq. 28449A

- 210 Potomac Creek plain body sherds
- 3 Potomac Creek smoothed over cord marked body sherds
- 2 Potomac Creek cord impressed body sherds
- 16 Potomac Creek fragments
- 1 Potomac Creek plain rim sherd, straight
- 1 Potomac Creek rim sherd with one row cord impressions, straight
- 1 Potomac Creek rim sherd with 2 rows cord impression, straight
- 1 Potomac Creek rim sherd with 3 rows cord impression, straight
- 23 Yeocomico ware body sherds, smoothed
- 8 untempered Camden ware body sherds
- 1 possible Moyaone plain body sherd
- 1 untempered possible foot from European style pot (pipkin?), similar to Camden ware
- 1 plain, unglazed red earthenware body sherd
- 1 plain, unglazed red earthenware rim sherd possibly hand formed
- 1 lead glazed (2 sides) red earthenware body sherd
- 1 possible redware fragment, yellow clay inclusions
- 8 Potomac Creek pipe bowl fragments with roulette decoration
- 4 Potomac Creek pipe bowl fragments with no decoration
- 1 Potomac Creek pipe stem fragment with partial bowl, undecorated
- 2 Potomac Creek pipe stem fragments, both ends missing, undecorated
- 7 white clay pipe bowl fragments, undecorated
- 4 white clay pipe stem fragments, undecorated and non diagnostic
- 6 quartz primary flakes
- 5 quartz secondary flakes
- 2 quartz late secondary flakes
- 4 quartz angular debris
- 1 UID granitic material primary flake
- 1 chert (jasper?) angular debris
- 1 chert (jasper?) flake fragment
- 1 white chert primary flake
- 2 flint secondary flakes
- 2 flint angular debris
- 14 quartzite FCR 744.8 g.

- 2 curved glass fragments, dark green, heavily patinated, probable bottle
- 2 brass fragments, roughly triangular, one with cut marks on one edge
- 1 lead shot .84mm
- 1 lead bullet approx. .22 caliber, possibly modern
- 1 iron hand wrought nail, UID head, 5.2 cm length, very corroded
- 4 hand wrought nail fragments, probable roseheads, very corroded
- 1 nail/flasher, function unknown, hand wrought
- 2 UID iron fragments 0.8 g.
- 114 UID burned bone frags.
- 92 UID unburned bone fragments
- 42 clam/mussel shell fragments 19.65 g.
- 6 concrete fragments 18.1 g. 20th century
- 1 alloy welding rod 20th century
- 1 Styrofoam cup fragment 20th century
- 1 slag fragment 50.0 g.

Lot 50 sq. 20897A

- 3 Potomac Creek plain body sherd fragments
- 20 Potomac Creek plain body sherds
- 1 Potomac Creek body sherd with brushed over cord marks
- 1 Potomac Creek body sherd with pseudo cord wrapped stick marks
- 2 Potomac Creek cord marked/decorated body sherds
- 1 Potomac Creek plain rim sherd
- 4 quartz secondary flake fragments
- 1 quartz possible secondary flake
- 1 quartzite possible secondary flake
- 2 quartz angular debris fragments
- 1 argillite flake/tool? - possibly non-cultural
- 1 brown glass bottle body fragment, 20th century
- 1 aqua glass bottle body fragment, 20th century, embossed "...R[E}..."
- 66 slag fragments 106.0 g., 20th century
- 1 concrete fragment 5.9 g., 20th century
- 4 asbestos tile fragments, 20th century
- 1 deformed/melted lead lump, 20th century

Lot 51 sq. 22610A

- 2 Potomac Creek plain rim sherds, straight, flat
- 2 Potomac Creek cord marked body sherds, possibly pseudo cord wrapped stick, sherds are very small
- 1 Accokeek/Pope's Creek cord marked sherd, (fairly good sherd for Accokeek or Pope's Creek or sloppy Potomac Creek with smoothed over cord marks)
- 17 Potomac Creek plain body sherds, various tempers and thicknesses
- 7 Potomac Creek plain body sherd fragments
- 2 Potomac Creek plain body sherds, mend, possibly neck/edge of everted rim
- 2 Yeocomico body sherds
- 1 fine grained quartzite projectile point lanceolate form, weakly shouldered, base snapped. Probable orient fishtail, late Archaic
- 3 quartz possible tertiary flakes
- 3 quartz secondary flake fragments
- 1 quartz possible secondary flake fragment
- 4 quartz angular debris fragments
- 1 large quartzite primary flake, edges re-touched and/or utilized
- 3 quartzite FCR fragments 96.1 g.

- 1 white clay tobacco pipe stem with mouth-piece end, 8/64 bore diameter
- 1 white clay tobacco pipe bowl fragment, plain, undecorated
- 1 black glass shank button fragment
- 1 brass sheet metal fragment
- 1 unidentifiable burned bone fragment, probable med. mammal
- 4 slag fragments 6.9 g. 20th century

Lot 52 sq. 22615A

- 3 Potomac Creek rim sherds with pseudo cord wrapped stick marking, 3 different vessels, all straight, flat, one slightly everted
- 1 Yeocomico rim sherd, straight, flat
- 1 Potomac Creek body sherd with smoothed over cord marks
- 1 Potomac Creek body sherd with pseudo cord wrapped stick marking
- 1 Potomac Creek body sherd with cord marks/smoothed over cord marks
- 1 Potomac Creek body sherd with pseudo cord wrapped stick marking, in two pieces that mend, burned
- 40 Potomac Creek plain body sherds
- 11 Potomac Creek plain body sherd fragments
- 5 unidentified sherds with shell and grit temper, no surface decoration/treatment
- 6 Yeocomico body sherds
- 1 Moyaone body sherd
- 1 terra cotta tobacco pipe stem sherd
- 1 white clay tobacco pipe stem sherd, 6/64 inch bore diameter
- 3 white clay tobacco pipe stem fragments
- 1 white clay tobacco pipe bowl sherd
- 1 dark chert/flint secondary flake
- 2 quartz primary flake fragments
- 15 quartz secondary flake fragments
- 1 quartzite secondary flake fragment
- 12 quartz angular debris fragments
- 8 quartzite FCR 226.4 g.
- 3 crab claw fragments, 20th century
- 20 slag fragments 45.0 g. 20th century
- 3 asbestos tile fragments, 20th century
- 1 lead tag/seal- nitroglycerin bag seal, 20th century

Lot 53 sq. 25805A

- 25 Potomac Creek plain body sherds
- 2 Potomac Creek body sherds with one row cord wrapped stick decoration
- 1 Potomac Creek plain body sherd with four rows cord wrapped stick decoration
- 1 Potomac Creek plain rim sherd, slightly everted
- 2 Yeocomico ware body sherds, eroded
- 1 unglazed redware rim sherd, undecorated
- 2 unglazed redware body sherd fragments, undecorated
- 1 white clay pipe bowl fragment with incised line decoration at rim
- 1 white clay pipe bowl fragment with heel
- 3 quartz primary flakes
- 2 quartz angular debris
- 1 quartzite primary flake
- 1 quartzite flake fragment
- 1 quartzite possible FCR 10.6 g.
- 1 dark green glass bottle kick-up fragment with partial pontil mark, heavily patinated
- 5 UID burned bone fragments

- 1 clam/mussel shell fragment 0.45 g.
- 3 asbestos tile fragments, 20th century
- 9 concrete fragments 194.7 g., 20th century
- 180 slag fragments 235.6 g., 20th century
- 1 glass marble
- 1 wire nail, 9.2 cm length, 20th century
- 2 probable wire nail fragments, 20th century

Lot 54 sq 22223A

- 1 Potomac Creek cord marked body sherd
- 1 Potomac Creek plain rim sherd, straight, flat
- 3 Potomac Creek body sherds with smoothed over cord marks
- 9 Potomac Creek plain body sherds
- 2 Potomac Creek plain body sherd fragments
- 1 quartz secondary flake fragment
- 1 quartzite primary flake
- 1 quartz angular debris fragment
- 6 quartzite FCR 140.90 g.
- 2 slag fragments 1.4 g. 20th century
- 1 hacksaw blade fragment, probably iron, 20th century

Lot 55 sq. 27120A

- 130 Potomac Creek plain body sherds, undecorated
- 3 Potomac Creek body sherds with three rows cord impressed decoration
- 2 Potomac Creek body sherds with one row cord impressed decoration, eroded
- 1 Potomac Creek body sherd with two rows cord impressed decoration, slightly everted near rim
- 2 Potomac Creek body sherds with two rows cord impressed decorations, very deep impressions, possibly from same vessel
- 4 Potomac Creek body sherds with overall exterior cord impressions
- 2 Potomac Creek rim sherds with single row cord impression, straight, not from same vessel
- 2 Potomac Creek rim sherds with two rows cord impressed decoration, straight profile (not from same vessel)
- 1 Potomac Creek rim sherd with single row cord impressed decoration diagonal to top of rim, straight profile
- 1 Potomac Creek plain rim sherd, straight profile, eroded
- 27 Potomac Creek type ceramic fragments
- 7 plain untempered body sherds- Camden ware
- 2 plain shell tempered sherds, Yeocomico ware
- 1 plain untempered clay cylinder 13.8 x 12.5 mm., possible vessel foot or waster
- 3 undecorated Potomac Creek pipe stem fragments
- 2 undecorated Potomac Creek pipe bowl fragments
- 3 Potomac Creek pipe bowl fragments with fragments of roulette decoration
- 1 Potomac Creek pipe bowl fragment with rim, fragment of possible star motif in roulette form
- 5 white clay tobacco pipe bowl fragments, undecorated
- 1 white clay tobacco pipe stem fragment, 7/64 inch bore diameter
- 2 white clay tobacco pipe stem fragments, 8/64 inch bore diameter
- 1 quartz projectile point fragment, base and tip missing, probably triangular form
- 3 quartz primary flakes
- 6 quartz secondary flakes
- 1 quartz late secondary flake
- 2 quartz flake fragments
- 4 quartz angular debris

- 1 quartzite secondary flake
- 1 flint secondary flake
- 1 flint late secondary flake, burned
- 2 quartzite FCR 43.2 g.
- 3 probable bottle glass fragments, very heavily patinated, dark green, slightly curved body fragments
- 1 bronze or brass possible book clasp
- 3 hand wrought nail fragments with possible T heads
- 1 hand wrought nail fragment with rose head, shaft/tip missing
- 1 hand wrought nail shaft fragment
- 2 UID tooth fragments, probably deer
- 27 UID unburned bone fragments (mammalian?)
- 19 UID burned bone fragments (med. Mammal)
- 24 clam/mussel shell fragments 7.7 g.
- 1 oyster shell fragment 5.65 g.
- 1 asbestos tile fragment, 20th century
- 3 concrete fragments 11.0 g. 20th century
- 3 black plastic pallet fragments 20th century
- 1 black plastic electrical tape fragment 20th century
- 1 UID white plastic fragment 20th century
- 2 styrofoam cup fragments, 20th century
- 79 slag fragments, 108.6 g. 20th century
- 1 wire nail 8.9cm. length, 20th century
- 4 wire nails 7.7cm. length, 20th century
- 2 wire nails 6.8cm. length

Lot 56 sq. 29392A

- 41 Potomac Creek plain body sherds, undecorated
- 1 Potomac Creek body sherd with two rows cord marked decoration, near rim, straight
- 1 Potomac Creek plain rim sherd, folded, straight
- 1 Potomac Creek rim sherd with two parallel rows cord impressions
- 11 Potomac Creek ceramic fragments
- 1 micaceous sand tempered rim sherd with two parallel rows cord impressed decoration probable Moyaone ware
- 3 untempered plain body sherds, Camden ware
- 2 shell tempered body sherd fragments, Yeocomico ware
- 1 unglazed reddish earthenware body sherd, undecorated, paste slightly micaceous
- 2 buff to orange paste coarse earthenware body sherds with green lead glaze on one surface
- 1 probable red earthenware body fragment
- 1 Potomac Creek pipe stem fragment, plain, eroded
- 5 Potomac Creek pipe bowl fragments, plain, eroded
- 1 Potomac Creek pipe bowl fragment with fragmentary roulette decoration
- 5 white clay pipe bowl fragments, plain
- 1 white clay pipe bowl fragment with embossed "LE" makers mark. (Lewellin Evans 1661-1689 Bristol, England)
- 1 white clay pipe stem fragment 7/64 inch bore diameter
- 1 quartz primary flake
- 1 quartz secondary flake fragment
- 3 quartz angular debris
- 1 quartzite secondary flake
- 2 quartzite late secondary flakes
- 1 quartzite flake fragment
- 2 quartzite primary flakes

- 2 flint late secondary flakes
- 1 retouched flint primary flake, possible gunflint or strike-a-light
- 2 quartzite FCR 114.9 g.
- 1 rolled brass cone, 4.85cm length, rolled sheet brass, heavy gauge
- 1 UID tooth fragment, burned, probable deer
- 6 UID burned bone fragments, probable mammal
- 3 clam/mussel shell fragments, 0.9 g.
- 29 slag fragments 93.25 g. 20th century

Lot 57 sq. 28254

- 5 Potomac Creek plain body sherds, various tempers and thicknesses
- 1 Potomac Creek body sherd with pseudo cord wrapped stick marks
- 1 Yeocomico body sherd
- 1 tin glazed earthenware sherd
- 1 chert primary flake, burned
- 1 quartzite secondary flake
- 1 quartz angular debris
- 1 fish scale
- 3 probable turtle shell/bone fragments, burned
- 1 med. mammal identifiable burned bone fragment
- 2 unidentifiable burned bone fragments
- 25 freshwater mussel/clam shell fragments 4.1 g.
- 1 colorless glass bottle fragment with traces of red paint/enamel, 20th century
- 23 slag fragments, 330.7 g., 20th century
- 2 black plastic storage pallet rim fragments 20th century
- 3 black plastic storage pallet body fragments, 20th century
- 1 styrofoam fragment, 20th century
- 1 concrete fragment 23.4 g. 20th century
- 9 mortar/concrete fragments, 13.1 g., 20th century
- 1 unidentifiable material, burned

Lot 58 sq. 29011A

- 94 Potomac Creek plain body sherds
- 4 Potomac Creek body sherds with one row cord impressions, all are near rim, straight
- 2 Potomac Creek rim sherd fragments with one row cord impressions
- 1 Potomac Creek rim sherd with three rows cord impression, straight
- 1 Potomac Creek rim sherd with two rows cord impression, straight
- 1 potomac Creek plain rim sherd, too small to determine profile
- 19 Potomac Creek ceramic fragments
- 8 plain shell tempered body sherds, Yeocomico ware
- 3 plain untempered body sherds, Camden ware
- 1 plain untempered base sherd from a flat bottomed vessel, probable Camden
- 1 plain untempered rim sherd, slightly everted, eroded
- 1 micaceous red coarse earthenware rim sherd, possible Merida
- 1 UID buff earthenware fragment, no surfaces
- 3 Potomac Creek plain pipe stem fragments, undecorated
- 2 Potomac Creek plain pipe bowl fragments, undecorated
- 6 Potomac Creek pipe bowl fragments with fragmentary geometric roulette decoration
- 1 White clay pipe bowl fragment, undecorated
- 1 white clay pipe stem fragment, 7/64 inch bore diameter
- 3 quartz primary flakes
- 3 quartz secondary flakes

- 3 quartz late secondary flakes
- 1 quartzite primary flakes
- 1 quartzite secondary flake
- 1 quartzite flake fragment
- 3 flint secondary flakes
- 1 flint flake fragment
- 1 unmodified steatite fragment, possibly non-cultural
- 1 quartzite FCR, 71.8 g.
- 2 curved glass fragments, probable bottle, heavily patinated, color undetectable
- 1 patinated black glass hemispheric button, ferrule missing, 1.38 (D) x .78 (T) cm.
- 1 black glass hemispheric button, fragment of iron ferrule on flat side, 1.14 (d) x .88 (T) cm.
- 1 iron knife blade and tang, majority of blade missing
- 1 sheet iron fragment, function and age undetermined
- 1 lead cylinder, 1.4 cm. length, function and age undetermined
- 4 sheet brass fragments, historic, precise age undetermined, one has possible cut mark
- 1 UID iron fragment, probable nail
- 3 hand wrought rose head nails, missing portions of shaft and tips
- 1 hand wrought rose head nail, 4.48 cm length
- 1 hand wrought nail with possible rose head, clinched, 6.32 cm. length
- 1 hand wrought T head nail, portion of tip and shaft missing
- 1 UID fish vertebra
- 1 turtle plastron fragment
- 12 UID unburned bone fragments, probably terrestrial mammal
- 34 UID burned bone fragments, probably terrestrial mammal
- 13 clam/ mussel shell fragments, 9.8 g.
- 2 land snail shell fragments 0.10 g.
- 1 iron lag bolt fragment, 20th century
- 8 colorless curved glass fragments (bottle body), 20th century
- 24 slag fragments, 116.7 g., 20th century
- 14 concrete fragments, 133.2 g., 20th century

Lot 59 Sq. 27123A

- 79 Potomac Creek plain body sherds
- 2 Potomac Creek body sherds with single row cord impressed decoration
- 7 Potomac Creek ceramic fragments
- 4 Yeocomico ware plain shell tempered body sherds
- 5 Camden ware, plain untempered ceramic body sherds
- 1 unglazed micaceous redware sherd, possible Merida, plain body sherd, exterior missing
- 1 manganese glazed earthenware body sherd, paste is reddish with few yellow inclusion, proto buckley?
- 1 brown stoneware body sherd with molded exterior decoration, bellarmine fragment
- 9 Potomac Creek pipe bowl fragments, plain, eroded
- 5 Potomac Creek pipe bowl fragments with fragmentary roulette decoration, geometric forms
- 1 Potomac Creek pipe bowl fragment with geometric roulette decoration, rim sherd
- 5 white clay pipe bowl fragments, undecorated
- 1 white clay pipe stem fragment, split
- 4 quartz primary flakes
- 1 quartz secondary flake
- 3 quartz tertiary flakes
- 1 quartzite primary flake
- 2 quartzite secondary flakes
- 2 flint secondary flakes
- 2 flint late secondary flakes

1 utilized flint or chert nodule, edges damaged, possible strike-a-light
 14 quartzite FCR 428.0 g.
 1 whole hand wrought nail with rose head, clinched, total length 6.83 cm, very good condition - burned?
 2 hand wrought nails with rose heads, portion of shaft and tips missing
 2 hand wrought nail shaft fragments
 2 UID fish scales, probably Gar species
 22 UID burned bone fragments, mammal or turtle
 1 UID unburned bone fragment
 7 clam/mussel shell fragment 5.6 g.
 1 colorless bottle glass body fragment, 20th century
 1 styrofoam cup fragment, 20th century
 1 large paint or putty fragment, white, 157.9 g., 20th century
 128 slag fragments, 359.5 g. 20th century
 1 wire nail, 8.35 cm. length, 20th century

Lot 60 sq. 27126A 64 Potomac Creek plain body sherds
 3 Potomac body sherds with single row cord impressed decoration
 2 Potomac Creek body sherds with smoothed over cord impressed decoration
 1 Potomac Creek plain sherd fragment, probable straight profile
 9 Potomac Creek ceramic fragments
 2 Yeocomico ware ,plain, shell tempered body sherds
 1 Moyaone ware, micaceous sand tempered plain body sherd
1 Potomac Creek ? lug handle or ladle fragment, bowl end missing
 2 red earthenware body sherds, very eroded, surfaces missing
 1 German brown stoneware sherd, one surface missing, probable body sherd
 6 Potomac Creek pipe bowl fragments, plain and eroded

 4 Potomac Creek pipe bowl fragments with fragments of roulette decoration, geometric forms
 2 Potomac Creek pipe stem fragments, undecorated
 1 white clay pipe bowl fragments, undecorated, non-diagnostic
 6 quartz primary flakes
 6 quartz secondary flakes
 2 quartz late secondary flakes
 6 quartz angular debris
 1 jasper primary flake
 1 jasper secondary flake
 1 jasper flake fragment
 1 black chert primary flake
 2 flint late secondary flakes

- 1 flint flake fragment
- 8 quartzite FCR, 269.3 g.
- 2 brass or copper sheet metal fragments,
function unknown, historic
- 1 hand wrought nail with rose head, portion
of shaft/tip missing
- 1 hand wrought nail with T head, portion of
shaft/tip missing
- 1 hand wrought nail with T head, 5.64 cm
length
- 2 hand wrought nail shaft fragments
- 1 burned turtle shell fragment
- 5 clam/mussel shell fragments, 3.2 g.
- 1 amber bottle glass body fragment, 20th
century
- 1 styrofoam cup fragment, 20th century
- 5 asbestos tile fragments, 20th century
- 16 concrete fragments, 110.0 g. 20th
century
- 1 large brick fragment with yellow inclu-
sions and attached mortar, machine made,

Lot 61 sq. 27129A 52 Potomac Creek plain body sherds, undec-
orated

- 4 Potomac Creek body sherds with smoothed
over cord impressed decoration on exterior
interior plain
- 3 Potomac Creek pipe stem fragments, plain,
eroded
- 2 white clay pipe bowl fragments, undec-
orated
- 1 quartz primary flake, utilized edges on
two sides
- 1 battered sandstone cobble, 436.0 g.,
possible hammerstone

- 1 quartz primary flake
- 4 quartz secondary flakes
- 4 quartz angular debris
- 2 quartzite secondary flakes
- 1 black chert secondary flake
- 2 quartzite FCR, 475.0 g.
- 1 hand cast lead shot with **mold tree mark,**
7.5 mm,
- 1 hand wrought nail with rose head, 5.9 cm.
length
- 1 probable hand wrought nail with T head,
5.14 cm. length
- 1 UID bone fragment, probable med. mammal
long bone shaft, unburned

1 light green curved glass fragment,
 probable bottle body, 20th century
 1 amber curved glass fragment, probable
 bottle body, 20th century
 1 bottle crown cap, post 1892
 1 UID lead solder fragment, 20th century
 1 black plastic insulated battery cable
 20th century
 1 iron lock washer, 20th century
 1 .5 inch iron rebar fragment, 13.25 cm.
 length, 1.22 cm. diameter, 20th century
 2 UID iron wire fragments, 20th century
 1 UID sheet iron fragment " "
 173 slag fragments, 518.3 g. " "
 1 UID iron concretion, possible nail
 11 modern wire nails, 9.11 cm. length
 14 modern wire nails, 5.34 cm. length
 13 modern wire nails, 6.68 cm. length
 4 possible wood screws, 3.88 cm. length
 8 asbestos tile fragments
 21 concrete fragments, 668.1 g.
 3 machine-made brick fragments, 120.0 g.

Lot 62 sq. 28268A

23 Potomac Creek plain body sherds
 1 Potomac Creek body sherd with smoothed cord impressions on exterior
 1 Potomac Creek body sherd with 2 rows parallel cord impressions near rim
 1 Potomac Creek rim sherd with single row cord impressions, slightly everted
 1 Potomac Creek rim sherd with folded lip, plain
 3 Potomac Creek ceramic fragments
 4 Yeocomico ware plain shell tempered body sherds
 1 Camden ware plain, untempered body sherd
 1 Potomac Creek pipe stem fragment, plain, slightly eroded
 1 quartz triangular point, tip snapped, crudely made
 4 quartz primary flakes
 5 quartz secondary flakes
 4 quartz angular debris
 1 quartzite primary flake
 1 flint primary flake
 4 quartzite FCR, 32.95 g.
 3 UID burned bone fragments, probable mammal long bone
 1 UID unburned bone fragment
 1 clam/mussel shell fragment 0.3 g.
 1 amber curved glass fragment, probable bottle, 20th century
 1 UID black plastic fragment, 20th century
 98 slag fragments, 242.40 g., 20th century
 1 asbestos tile fragment, 20th century
 14 concrete fragments, 190.65 g., 20th century
 1 concrete fragment, 2015.76 g., 20th century
 1 machine made brick fragment, 0.3 g.

Lot 63 sq. 28268B

- 9 Potomac Creek plain body sherds
- 1 Potomac Creek body sherd with fragment of cord impression
- 1 Yeocomico ware, plain, shell tempered body sherd
- 1 quartzite secondary flake
- 1 gray chert late secondary flake, burned
- 2 turtle burned bone fragments, probable shell or plastron
- 2 UID burned bone fragments

Lot 64 sq. 27887A

- 33 Potomac Creek plain body sherds
- 1 Potomac Creek rim sherd, plain, undecorated, straight
- 1 Potomac Creek rim sherd, plain undecorated sharply everted
- 1 Potomac Creek ceramic fragment
- 1 Camden ware, plain untempered body sherd, very hard paste
- 1 black lead glaze coarse earthenware base sherd from a shallow pan or plate, paste is reddish with yellow streaks and clasts, Buckley ware
- 1 tin glazed coarse earthenware body sherd, burned
- 1 Potomac Creek pipe bowl/rim fragment with roulette impressed line decoration
- 4 quartz primary flakes
- 5 quartz secondary flakes
- 3 quartz angular debris
- 10 quartzite primary flakes
- 11 quartzite secondary flakes
- 2 quartzite late secondary flakes
- 10 quartzite angular debris
- 1 jasper late secondary flake
- 1 flint late secondary flake
- 1 quartzite FCR, 14.9 g.
- 1 hand wrought nail with probable rose head 7.80 cm. length
- 1 hand wrought nail with T head, 2.96 cm. length
- 2 UID burned bone fragments
- 2 light green curved glass fragments, probable bottle, 20th century
- 1 amber curved glass fragment with embossed letters "...PE...", probable bottle, 20th century
- 1 colorless curved glass fragment, probable test tube fragment, 20th century
- 1 colorless glass stopper fragment, laboratory glassware, 20th century
- 1 opaque white cup lid fragment, 20th century
- 1 UID sheet iron fragment, 20th century
- 1 iron lock washer, 20th century
- 1 iron bar fragment, slightly corroded, 20th century
- 3 asphalt fragments, 45.7 g., 20th century
- 122 slag fragments, 280.5 g., 20th century
- 2 asbestos tile fragments, 20th century
- 4 concrete fragments, 68.6 g., 20th century

Lot 65 sq. 27887B

- 1 Yeocomico ware plain shell tempered body sherd
- 1 white clay pipe bowl and heel, almost whole, rouletted line around rim, pronounced heel, 8/64 inch bore, probable second half 17th century, diagnostic, see type C in Hurry & Keeler in Davey & Pogue
- 1 white clay pipe bowl fragment, mends with artifact above
- 1 quartz secondary flake
- 6 UID unburned mammal bone fragments

Lot 66 sq. 27887C

- 4 Potomac Creek plain body sherds
- 1 Camden ware plain, untempered body sherd, slightly micaceous, hard paste
- 2 quartz primary flakes
- 1 quartz angular debris
- 1 quartz late secondary flake
- 3 burned UID terrestrial mammal bone fragments
- 1 slot head wood or sheet metal screw, 20th century
- 11 slag fragments, 37.7 g., 20th century
- 1 asphalt fragment 3.5 g., 20th century
- 1 concrete fragment, 13.45 g., 20th century
- 2 machine-made brick fragments, 8.9 g., 20th century

Lot 67 sq. 29018A

- 59 Potomac Creek plain body sherds
- 2 Potomac Creek body sherds with smoothed-over cord impressions on exterior
- 2 Potomac Creek rim sherds with 2 rows cord impressed decoration, slightly everted, not from same vessel
- 3 Potomac Creek rim sherds with single row cord impressed decoration, straight profile, not from same vessel
- 2 Potomac Creek plain rim sherd fragments
- 21 Potomac Creek ceramic fragments
- 4 Yeocomico plain shell tempered body sherds
- 7 Yeocomico ware ceramic fragments
- 1 buff paste earthenware body sherd with fragments of tin glaze on both surfaces, possible plate or flatware vessel
- 1 micaceous red paste earthenware body sherd wheel marks on interior, hollowware vessel
- 1 burned earthenware body sherd with brown lead glaze on both surfaces
- 2 burned earthenware body sherds with green glaze on one surface, other surface missing, from same vessel, mend
- 2 red paste earthenware fragments, paste contains yellow clay inclusions, possibly from same vessel as lot 64 and S.C.#7
- 1 Potomac Creek pipe stem fragment, plain, ends snapped
- 3 Potomac Creek pipe stem fragments, plain, eroded split fragments
- 3 Potomac Creek pipe bowl fragments, plain, eroded
- 1 Potomac Creek pipe bowl fragment with rim, linear roulette decoration parallel to rim
- 1 quartz primary flake
- 1 quartz secondary flake
- 1 quartz angular debris
- 1 quartz flake fragment
- 1 flint secondary flake
- 1 quartzite FCR 5.3 g.
- 1 hand cast lead shot, mold mark visible, .76 cm. diameter, .29 cal.
- 1 UID sheet brass or copper fragment, thin gauge
- 1 hand wrought nail with rose head, 4.88 cm. length, clinched
- 1 hand wrought nail with rose head, 4.93 cm. length
- 1 hand wrought nail with rose head, portion of shaft/tip missing
- 1 hand wrought nail with T head, 3.64 cm. length
- 1 hand wrought nail shaft fragment
- 1 clam/mussel shell fragment, 1.1 g.
- 4 colorless curved glass fragments, probable bottle body, 20th century
- 2 slag fragments 4.6 g., 20th century

Lot 68 sq. 27695A

- 22 Potomac Creek plain body sherds
- 1 Potomac Creek body sherd with smoothed over cord impressions on exterior
- 1 Potomac Creek body sherd with single row cord impression, probably near rim
- 2 Potomac Creek Plain rim sherds, mend, one surface missing, straight profile
- 1 Potomac Creek rim sherd with single row cord impressions parallel to rim, straight profile
- 1 Potomac Creek rim sherd with multiple cord impressions diagonal to rim, slightly everted profile
- 2 Potomac Creek ceramic fragments
- 4 Yeocomico ware plain, shell tempered ceramic body sherds, slightly micaceous paste
- 2 Camden ware plain, untempered, hard paste body sherds
- 1 Camden ware plain, untempered, slightly everted rim sherd
- 1 Potomac Creek pipe bowl fragment, plain, eroded
- 1 quartz primary flake
- 5 quartz secondary flakes
- 2 quartz late secondary flakes
- 1 quartz flake fragment
- 1 chert core fragment, multiple flake removals, exhausted
- 2 quartzite FCR, 2.05 g.
- 1 unburned turtle shell fragment
- 2 burned turtle plastron or shell fragments
- 2 burned UID mammal bone fragments
- 1 sheet lead fragment, explosion shrapnel, 20th century
- 4 cellophane wrapper fragments, 20th century
- 28 asphalt fragments, 12.8 g., 20th century
- 81 slag fragments, 172.4 g., 20th century
- 1 wire nail 9.08 cm. length, 20th century
- 1 wire nail 6.51 cm. length, 20th century
- 1 wire nail 4.98 cm. length, 20th century
- 6 asbestos tile fragments
- 8 concrete fragments, 183.7 g.

Lot 69 sq. 27695B

- 10 Potomac Creek plain body sherds
- 1 Potomac Creek rim sherd with single row cord impressed decoration, straight profile
- 1 Potomac Creek plain rim sherd, sharply everted, undecorated
- 2 quartz primary flakes
- 1 hand wrought nail with rose head, 4.12 cm. length
- 1 light green curved glass fragment, probable bottle, 20th century
- 1 black plastic threaded cap, 20th century
- 1 zinc strap fragment, nitroglycerine bag seal, 20th century
- 1 UID iron fragment, possible lag bolt, 20th century
- 1 UID sheet iron fragment, 20th century
- 5 slag fragments 5.3 g., 20th century
- 1 wire nail, 9.18 cm. length, 20th century
- 1 wire nail, 6.59 cm. length, " "
- 5 wire nails, 5.15 cm. length, " "
- 3 UID iron fragments, probable nails, 20th century
- 1 asbestos tile fragment, 20th century
- 15 concrete fragments 908.0 g., 20th century
- 1 machine made brick fragment, 2.2 g., 20th century

Lot 70 sq. 28442A

64 Potomac Creek plain body sherds

- 1 Potomac Creek body sherd with smoothed over cord marks on exterior
- 1 Potomac Creek body sherd with two rows cord impressions, near rim
- 1 Potomac Creek body sherd with two rows cord impressions, possibly diagonal to rim
- 1 Potomac Creek body sherd with single row cord impression
- 1 Potomac Creek body sherd with punctuate decoration, micaceous paste, grit temper
- 2 plain Potomac Creek rim sherds, straight profiles, not from same vessel
- 1 Potomac Creek rim sherd with single row punctate decoration, straight profile
- 1 Potomac Creek rim sherd with single row cord impressed decoration, straight profile
- 1 Potomac Creek rim sherd with three rows cord impressions, straight profile
- 11 Potomac Creek ceramic fragments
- 6 Yeocomico ware, plain, shell tempered ceramic body sherds
- 5 Camden ware, plain, untempered, hard paste body sherds
- 1 orange paste coarse earthenware body sherd, wheel thrown, no decoration
- 2 reddish orange paste earthenware fragments probable body sherds
- 1 buff paste tin glazed earthenware body sherd, no decoration
- 2 tin glazed fragments with small amount of buff earthenware paste adhering
- 1 buff paste tin glazed earthenware body sherd, no glaze, form unknown
- 1 Rhenish blue and gray stoneware body sherd
- 2 Potomac Creek pipe stem fragment, plain, eroded
- 3 Potomac Creek pipe bowl fragments, plain, eroded
- 1 Potomac Creek pipe bowl fragment with geometric roulette decoration, possible star of running deer motif
- 2 Potomac Creek pipe bowl fragments with fragments of roulette decoration, possibly linear
- 3 white clay pipe stem fragments, plain undecorated, 7/64 inch bore
- 6 white clay pipe stem fragments, all plain, undecorated, split
- 4 white clay pipe bowl fragments, plain, undecorated
- 1 white shell disc bead, .125cm. long, .420 cm. total diameter, .135 cm. bore diameter
- 3 quartz primary flakes
- 4 quartz secondary flakes
- 2 quartz late secondary flakes
- 5 quartz angular debris
- 1 quartzite secondary flakes
- 3 flint secondary flakes
- 3 flint late secondary flakes
- 3 quartzite FCR, 222.5 g.
- 1 dark green glass bottle kick-up with pontil scar, heavily patinated
- 1 lead strip or tab, possible gunflint holder, flat end slightly curved
- 1 UID metal alloy strip or tab, function unknown, (possible clothing part)
- 3 hand wrought nails with rose heads, portion of shaft/tip missing
- 1 UID material fragment, possible slag with brick adhering to it, function unknown
- 120 UID burned bone fragments
- 118 UID unburned bone fragments
- 42 clam/mussel shell fragments, 14.3 g.
- 3 oyster shell fragments, 15.35 g.
- 1 nut shell, <.1 g.
- 1 charcoal fragment, <.1 g.
- 2 opaque white plastic fragments, function unknown, 20th century
- 1 black plastic pallet fragment, 20th century
- 1 black plastic strip, function unknown, 20th century
- 1 wood screw fragment, slot head, 20th century
- 48 slag fragments, 277.4 g. 20th century
- 1 concrete fragment, 2.6 g., 20th century

Lot 71 sq. 28443A

- 20 Potomac Creek plain body sherds
- 1 Potomac Creek body sherd with smoothed over cord impressions on exterior surface
- 1 Potomac Creek body sherd with three punctate marks on exterior
- 1 Potomac Creek plain rim sherd fragment, interior only
- 5 Potomac Creek ceramic fragments
- 2 Yeocomico ware, plain, smoothed, shell tempered ceramic body sherds
- 1 Potomac Creek pipe stem and partial bowl fragment, plain, undecorated, slightly eroded
- 2 Potomac Creek pipe stem fragments, split, plain undecorated, eroded
- 3 white clay pipe bowl fragments, plain, undecorated, non diagnostic
- 1 quartz primary flake
- 3 quartz secondary flakes
- 1 flint secondary flake
- 1 flint flake fragment
- 1 quartzite primary flake
- 1 quartzite FCR 5.7 g.
- 2 dark green glass fragments, heavily patinated, probable case bottle
- 1 hand wrought nail with rose head, clinched, portion of shaft/tip missing
- 3 UID fish scales, probable Gar sp.
- 1 UID fish vertebrae
- 16 UID burned bone fragments
- 29 UID unburned bone fragments
- 40 clam/ mussel shell fragments 17.55 g.
- 1 light green glass fragment, probable bottle, 20th century
- 1 black plastic pallet fragment, plug shaped, 20th century
- 106 slag fragments, 296.95 g., 20th century

Lot 72 sq. 28252A

- 42 Potomac Creek plain body sherds
- 1 Potomac Creek body sherd with cord marked exterior
- 1 Potomac Creek body sherd with double row of cord impressions on exterior
- 2 Potomac Creek body sherds with single row of cord impressions on exterior, not from same vessel
- 1 Potomac Creek body sherd with single row punctate decoration on exterior
- 1 Potomac Creek rim sherd with three rows cord impressions on exterior, straight profile
- 1 Potomac Creek plain rim fragment
- 11 Potomac Creek ceramic fragment
- 3 Yeocomico plain shell tempered body sherds
- 2 shell tempered ceramic fragments, probable Yeocomico body sherds
- 2 buff paste earthenware fragments, surfaces missing, possible tin glazed earthenware with out the glaze
- 1 earthenware body fragment, slightly micaceous paste
- 3 Potomac Creek pipe stems, all with both ends missing, plain, slightly eroded
- 4 Potomac Creek pipe stem fragments, plain, all split and eroded
- 2 Potomac Creek pipe bowl fragments with geometric roulette decorations
- 5 Potomac Creek pipe bowl fragments, all plain, eroded
- 8 white clay pipe bowl fragments, all undecorated, eroded
- 1 white clay pipe bowl fragment with embossed "L" and partial "E", probable Lewellin Evans makers mark (ca.1661-1689)
- 1 white clay pipe stem, tapers to beveled end, 7/64 inch bore diameter
- 2 quartz primary flakes
- 2 quartz secondary flakes
- 1 quartz flake fragment

- 2 quartzite secondary flakes
- 1 quartzite flake fragment
- 1 flint primary flake
- 1 flint secondary flake
- 3 flint late secondary flakes
- 6 quartzite FCR 258.3 g.
- 1 brass or copper alloy fragment, coiled spiral form, possible ornament?
- 1 UID iron fragment
- 1 hand wrought nail with T head, 5.81 cm. length
- 1 hand wrought nail with probable rose head, clinched, 4.34 cm. length
- 1 hand wrought nail with rose head, portion of shaft/tip missing
- 1 hand wrought nail with rose head, large, portion of shaft/tip missing
- 1 hand wrought nail with possible rose head, portion of shaft/tip missing
- 4 UID fish scales, probable Gar
- 1 UID fish vertebra, species unknown
- 39 UID burned bone fragments
- 46 UID unburned bone fragments
- 63 clam/mussel shell fragments 15.6 g.
- 1 aquatic snail shell, .25 g.
- 5 colorless cellophane wrapper fragments, 20th century
- 1 aluminum can fragment, red paint on exterior, 20th century
- 50 slag fragments, 206.2 g., 20th century

Lot 73 sq. 28253A

- 49 Potomac Creek plain body sherds
 - 1 Potomac Creek body sherd with two rows punctate decoration, near rim
 - 2 Potomac Creek plain rim sherds, both with straight profile, not from same vessel
 - 2 Potomac Creek rim sherds with single row cord impressed decoration on exterior, straight profiles
- 5 Potomac Creek ceramic fragments
- 4 Yeocomico ware, plain, shell tempered ceramic body sherds
 - 1 probable Yeocomico ware, shell tempered ceramic fragment
- 2 Camden ware, untempered, hard paste, undecorated body sherds
- 2 Moyaone ware, micaceous, sand tempered, undecorated body sherds
- 1 buff paste coarse earthenware body sherd, reduced core, thick walled vessel
- 1 buff paste earthenware sherd with fragment of tin glaze adhering to one surface
- 2 buff paste earthenware fragments, possibly missing tin glaze, surfaces eroded
- 2 gray paste earthenware fragments, one with smoothed interior surface, remaining surfaces eroded
- 1 Potomac creek pipe stem, both ends missing plain, undecorated
- 4 Potomac Creek pipe stem fragments, split, eroded
- 2 Potomac Creek pipe bowl fragments, plain, eroded
 - 1 Potomac Creek pipe bowl fragment with fragment of geometric roulette decoration, slightly eroded
- 1 white clay pipe bowl fragment with rim, incised line parallel to rim, no other decoration
- 3 white clay pipe bowl fragments, plain, undecorated, non-diagnostic
- 1 flint late secondary flake
- 4 quartzite FCR, 166.2 g.
- 12 untempered burned clay nodules, possible daub, may be non-cultural
- 3 UID animal teeth fragments, deer?
- 25 UID burned bone fragments
- 38 UID unburned bone fragments
- 34 clam/ mussel shell fragments, 11.35 g.
- 1 square iron spring with two fragments of fiberglass strip adhering, function unknown, 20th century
- 1 light green curved glass fragment, probable lens fragment from a pair of safety glasses, 20th century

22 slag fragments, 205.4 g., 20th century
1 concrete fragment, 7.0 g., 20th century

Lot 74 sq. 28063A

91 Potomac Creek plain body sherds
2 Potomac Creek body sherds with smoothed over cord impressions on exterior surface, not from same vessel
1 Potomac Creek body sherd with two rows of cord impressions on exterior, not from same vessel
1 Potomac Creek body sherd with two rows punctate decoration on exterior
1 Potomac Creek rim sherd with two rows pseudo cord impressed decoration, straight profile
1 Potomac Creek rim sherd with two rows cord impressed decoration, straight profile
1 Potomac Creek rim sherd with one row cord impressed decoration, everted profile
1 Potomac Creek rim sherd with one row cord impressed decoration, straight profile
12 Potomac Creek ceramic fragments
2 Yeocomico ware plain, shell tempered, ceramic body sherds
5 Camden ware plain, untempered, hard paste ceramic body sherds
2 Moyaone ware, micaceous, snad tempered, undecorated body sherd
1 Potomac Creek pipe stem, both ends missing plain, undecorated
1 Potomac Creek pipe stem fragment, split, eroded
3 Potomac Creek pipe bowl fragments, all plain, undecorated, eroded
1 white clay pipe bowl fragment with fragment of roulette line decoration, probably near rim
3 white clay pipe bowl fragments, plain, undecorated
2 quartz primary flakes
2 quartz secondary flakes
1 quartz late secondary flake
1 burned chert late secondary flake
1 flint secondary flake
1 flint tertiary flake
1 quartzite cobble core, multiple flake removals, battered on one edge
3 quartzite FCR, 110.6 g.
1 heavily patinated curved glass fragment, probable bottle body
1 lead musket ball, battered, 1.74 cm. diameter, approx. .60 cal.
1 hand wrought rose head nail, 3.26 cm. length
1 hand wrought rose head nail, 4.81 cm. length
1 untempered burned clay nodule, 2.25 g., daub like, may be non-cultural
5 UID fish scales, probable Gar species
1 UID otolith fragment
2 burned fish vertebrae, UID species
3 UID tooth fragments, probable mammalian
69 UID burned bone fragments
64 UID unburned bone fragments
28 clam/mussel shell fragments, 12.5 g.
1 green glass chip, probable bottle, 20th century
1 colorless cellophane wrapper fragment 20th century
2 black plastic pallet fragments, 20th century
50 asphalt fragments, 15.80 g., 20th century
346 slag fragments, 543.70 g., 20th century
2 concrete fragments, 27.2 g., 20th century

Lot 75 sq. 28064A

58 Potomac Creek plain body sherds
1 Potomac Creek body sherd with two rows cord impressions, probably from near vessel rim

- 1 Potomac Creek plain rim sherd, straight profile
- 8 Potomac Creek ceramic fragments
- 6 Yeocomico ware plain, shell tempered ceramic body sherds
- 3 Camden ware plain, untempered, hard paste body sherds
- 1 black glazed red paste earthenware body sherd, paste has streaks of yellow clay, exterior is black glazed, interior is dark lead glazed
- 1 green lead glaze, gray paste earthenware rim sherd, same glaze interior and exterior, may match sherds from sq. 28253B float samples
- 1 orange paste earthenware fragment, surfaces missing
- 1 red paste earthenware fragment, surfaces missing
- 1 Green brown stoneware body sherd, exterior speckled, interior plain
- 6 Potomac Creek pipe stem fragments, all split and eroded, no decoration
- 2 Potomac Creek pipe bowl fragments, all plain and eroded, one appears to be harder fired and yellower than the other piece, more in the style of terra cotta pipe found on colonial sites
- 2 white clay pipe bowl fragments, plain, undecorated
- 1 purple shell tube bead, .630 cm. length, .43 cm. total diameter, .135 cm. bore diameter
- 1 white shell disc bead, .430 cm. diameter, .17 cm. thick, .630 cm. length, .145 cm. bore diameter
- 2 quartz angular debris
- 2 flint secondary flakes
- 1 flint late secondary flake
- 1 white chert secondary flake, possibly burned
- 1 flint angular debris
- 3 quartzite FCR, 41.1 g.
- 1 heavily patinated curved glass fragment, possible dark green bottle
- 1 sheet brass alloy fragment, crushed, two cut marks parallel on both sides, apparent triangle blank
- 1 brass alloy triangle, crushed. Hole punched through base end. approx. length 2.58 cm.
- 2 hand wrought nails with rose heads, portion of shaft/tip missing
- 1 hand wrought nail with T head, 6.07 cm.
- 1 hand wrought nail shaft fragment
- 15 untempered burned clay nodules, 9.95 g., daub-like, possibly non-cultural
- 4 UID fish scales, probable Gar species
- 1 UID fish vertebra fragment
- 4 tooth fragments, probable mammal species
- 44 UID burned bone fragments
- 68 UID unburned bone fragments
- 78 clam/mussel shell fragments, 28.9 g.
- 3 land snail shell fragments, .02 g.
- 1 colorless glass chip, probable bottle glass, 20th century
- 3 black plastic pallet fragments, 20th century
- 64 slag fragments, 119.8 g., 20th century
- 1 concrete fragment, .5 g., 20th century

Lot 76 sq. 28065A

- 27 Potomac Creek plain body sherds
- 1 Potomac Creek ceramic fragment
- 2 probable Yeocomico ware, plain, shell tempered ceramic fragments
- 2 buff paste earthenware body sherds with fragments of tin glaze adhering to both surfaces, too small to ID vessel type
- 1 dark brown earthenware fragment with fragments of clear glaze on one surface, burned
- 1 Potomac Creek pipe stem fragment, one end missing, one end flat/smoothed, plain, undecorated
- 2 Potomac Creek pipe stem fragments, split eroded
- 3 Potomac Creek pipe bowl fragments, all with linear roulette decoration

1 white clay pipe bowl fragment with fragment of linear roulette decoration, probably near rim
 1 white clay pipe bowl fragment, plain, undecorated
 1 white clay pipe stem fragment, both ends missing, 7/64 inch bore
 1 quartz primary flake
 2 quartz secondary flakes
 1 quartz angular debris
 1 white chert late secondary flake
 1 brown chert flake fragment
 1 quartzite FCR, 68.4 g.
 1 small sheet brass triangle, 2.07 cm. length
 1 hand wrought nail with square T head, 4.2 cm. length
 1 hand wrought nail with rose head, 4.4 cm. length
 9 UID fish scales, probable Gar species
 1 UID tooth fragment, mammalian species
 12 UID burned bone fragments
 24 UID unburned bone fragments
 61 clam/mussel shell fragments, 14.8 g.
 1 oyster shell fragment, 14.8 g.
 1 land snail shell fragment, 0.2 g.
 8 black plastic pallet fragments, 20th century
 1 aluminum rivet, 20th century
 18 slag fragments, 87.45 g., 20th century
 1 wire nail, 7.86 cm. length, 20th century

Lot 77 sq. 27874A

46 Potomac Creek plain body sherds
 1 Potomac Creek rim sherd with two lines cord impressions, 1 diagonal and 1 horizontal to vessel rim, straight profile
 1 Potomac Creek plain rim fragment, probable straight profile
 8 Potomac Creek ceramic fragments
 3 Yeocomico ware, plain, shell tempered body sherds
 1 probable Camden ware, slightly micaceous paste, plain, untempered body sherd
 1 orange paste coarse earthenware body sherd one surface missing, i surface burnished, possible clay wash finish
 1 brown-buff paste coarse earthenware sherd grit tempered, eroded, possible North Devon gravel tempered ware
 2 small Potomac Creek pipe stem fragments, split, eroded
 3 Potomac Creek pipe bowl fragments, all plain and eroded
 3 Potomac Creek pipe bowl fragments with fragmentary linear roulette decoration, all eroded
 1 white clay pipe bowl fragment, plain, undecorated
 1 white clay pipe bowl fragment, plain, undecorated, asphalt or tar adhering to outside surface
 2 quartz primary flakes
 3 quartz secondary flakes
 1 quartz flake fragment
 1 quartz angular debris
 1 flint secondary flake
 1 flint secondary flake, possibly utilized
 1 white oolitic chert primary flake fragment edges retouched and utilized
 4 quartzite FCR, 69.10 g.
 2 brass alloy sheet metal fragments, both with possible cut marks, both crushed
 1 brass alloy triangle, 3.43 cm. long x 1.95 cm. wide at base, battered
 1 hand wrought nail with rose head, 2.78 cm. length

- 1 hand wrought nail with probable rose head, 4.87 cm. length
- 6 burned clay nodules, 6.8 g., daub-like, may be non-cultural
- 5 UID fish scales, probable Gar species
- 2 UID fish vertebrae fragments
- 1 UID mandible fragment with tooth, probable rodent
- 20 UID burned bone fragments
- 35 UID unburned bone fragments
- 20 clam/mussel shell fragments, 7.90 g.
- 1 aquatic snail shell, 1.7 g.
- 1 black plastic pallet fragment, 20th century
- 1 white sheet plastic fragment, 20th century
- 1 UID black plastic fragment, 20th century
- 1 aluminum pop-top fragment from beverage can, 20th century
- 1 probable brass wood screw fragment, 20th century
- 39 slag fragment, 106.05 g., 20th century

Lot 78 sq. 27875A

- 51 Potomac Creek plain body sherds
- 2 Potomac Creek body sherds with one row cord impressed decoration on exterior surface
- 1 Potomac Creek rim sherd fragment, plain, undecorated, too small to determine profile
- 7 Potomac Creek ceramic fragments
- 3 Yeocomico ware, plain, shell tempered ceramic body sherds
- 4 Camden ware, plain, untempered, hard paste, ceramic body sherds
- 1 Moyaone ware, micaceous sand tempered body sherd with cord impressed exterior
- 3 micaceous sand tempered ceramic fragments- Moyaone ware?
- 1 buff paste earthenware sherd with fragment of tin glaze adhering to one surface; too small to determine sherd type
- 2 Potomac Creek pipe stem fragments, plain, undecorated, eroded
- 5 Potomac Creek pipe bowl fragments, plain, undecorated, eroded
- 1 Potomac Creek pipe bowl fragment with two parallel lines, roulette decoration
- 1 white clay pipe stem fragment, both ends missing, 7/64 inch bore diameter
- 5 white clay pipe bowl fragments, all plain, undecorated
- 1 white shell disc bead, .145 cm. length, .105 cm. bore diameter, .305 cm. total diameter
- 1 white shell disc bead, .110 cm. length, .125 cm. bore diameter, .340 cm. total diameter
- 2 quartz primary flakes
- 2 quartz secondary flakes
- 1 quartz late secondary flake
- 1 quartz flake fragment
- 1 quartzite primary flake
- 2 quartzite secondary flakes
- 1 white (burned) chert secondary flake
- 1 flint primary flake
- 2 flint secondary flakes
- 6 quartzite FCR, 175.10 g.
- 1 heavily patinated glass fragment, probable bottle, color indeterminate
- 2 brass alloy sheet metal fragments, less than 1 cm., no marks discernable
- 2 hand wrought nail shaft fragments
- 5 UID fish scales, probable Gar species
- 2 UID fish vertebrae
- 60 UID burned bone fragments
- 69 UID unburned bone fragments
- 1 colorless glass fragment, probable bottle body, 20th century

- 1 UID white plastic fragment, 20th century
- 6 black plastic pallet fragments, 20th century
- 3 aluminum beverage can fragments with red paint, 20th century
- 5 iron sheet metal strip fragments, pallet straps, 20th century
- 1 lead nitroglycerine bag seal, 20th century
- 126 slag fragments, 243.50 g., 20th century
- 7 concrete fragments, 10.2 g., 20th century

Lot 79 sq. 27687A

- 115 Potomac Creek plain body sherds
- 3 Potomac Creek body sherds with single row cord impressed decoration
- 1 Potomac Creek body sherd with smoothed over cord impressed decoration on exterior surface
- 2 Potomac Creek plain rim sherds from same vessel, no refit, too small to determine profile
- 1 Potomac Creek plain rim sherd with straight profile, not from same vessel as above
- 1 Potomac Creek rim sherd with two rows cord impressed decoration, straight profile
- 1 Potomac Creek rim sherd with two rows cord impressed decoration, deep impressions, straight profile
- 14 Potomac Creek ceramic fragments
- 3 shell tempered ceramic fragments, probable Yeocomico ware
- 10 Camden ware, plain, untempered, hard paste ceramic body sherds
- 1 probable Moyaone ware, micaceous sand tempered, eroded body sherd
- 1 orange paste coarse earthenware body sherd paste has few clasts and streaks of yellow clay, interior surface black glaze, exterior reddish clay wash, possibly same vessel as lot 64
- 1 orange paste unglazed coarse earthenware body sherd, burnished surfaces, UID type
- 1 buff paste earthenware body sherd with one surface white tin glaze
- 1 buff paste earthenware fragment, surfaces missing
- 1 gray paste earthenware body sherd, grit tempered, surfaces missing, same vessel as sherd in lot 77
- 2 Potomac Creek pipe stem fragments, large outside diameter, probably near bowl, undecorated
- 1 Potomac Creek pipe stem fragment with smoothed end, split, plain undecorated
- 8 Potomac Creek pipe stem fragments, split, eroded
- 11 Potomac Creek pipe bowl fragments, all plain, undecorated, eroded
- 6 Potomac Creek pipe bowl fragments with fragmentary linear decoration
- 1 white clay pipe bowl fragment, undecorated soot on interior
- 1 white clay pipe bowl fragment, undecorated
- 1 white clay pipe stem fragment, unmeasurable
- 2 quartz primary flakes
- 4 quartz secondary flakes
- 3 quartz angular debris
- 1 quartzite primary flake fragment
- 2 flint primary flakes
- 3 flint secondary flakes
- 2 flint angular debris
- 1 flint core, multiple flake removals, exhausted
- 8 quartzite FCR, 157.5 g.
- 1 heavily patinated glass fragment, probable bottle, color indeterminate
- 1 brass alloy sheet metal fragment with cut mark
- 2 brass alloy sheet metal fragments with incised line (probable cut mark), refit, possible triangle preform
- 5 UID sheet iron fragments, function unknown
- 2 possible cast iron fragments from same artifact, function unknown
- 1 lead mold sprue fragment
- 1 lead shot, hand cast, 0.81 cm. diameter, (.34 cal.)
- 2 hand wrought nails with rose heads, portions of shaft/tip missing
- 1 hand wrought nail with T head, portion of shaft/tip missing

- 5 UID fish scales, probable Gar species
- 6 UID fish vertebrae
- 1 UID otolith fragment
- 3 UID tooth fragments, probable mammalian
- 72 UID burned bone fragments
- 75 UID unburned bone fragments
- 16 clam/mussel shell fragments, 4.05 g.
- 3 black plastic pallet fragments, 20th century
- 1 yellow plastic plug, function unknown, 20th century
- 5 opaque white sheet plastic fragments, 20th century
- 1 aluminum beverage can fragment, with red paint one surface, 20th century
- 3 lead solder fragments, 20th century
- 4 iron sheet metal strap fragments with yellow paint on one surface, 20th century
- 1 wire nail, 8.46 cm. length, 20th century
- 1 wire nail, 6.46 cm. length, 20th century
- 1 wire nail, 3.16 cm. length, 20th century
- 123 slag fragments, 180.01 g., 20th century
- 3 concrete fragments, 3.10 g., 20th century

Lot 80 sq. 27688A

- 65 Potomac Creek plain body sherds
- 2 Potomac Creek body sherds with smoothed over cord impressed decoration on exterior
- 1 Potomac Creek body sherd with single row cord impressed decoration, probably near rim
- 1 Potomac Creek rim sherd with three parallel rows cord impressions, straight profile
- 14 Potomac Creek ceramic fragments
- 5 Camden ware, plain, untempered, hard paste ceramic body sherds
- 1 red paste coarse earthenware fragment, all surfaces missing
- 6 Potomac Creek pipe stem fragments, all split, plain, undecorated, eroded
- 1 Potomac Creek pipe bowl with linear incised decoration, near rim
- 2 Potomac Creek pipe bowl fragments with linear roulette decoration, eroded
- 7 Potomac Creek pipe bowl fragments, plain undecorated, eroded
- 1 white clay pipe stem fragment, both ends missing, plain, undecorated, 7/64 inch bore diameter
- 2 white clay pipe bowl fragments with rim, linear incised roulette line at lip on exterior
- 3 white clay pipe bowl fragments, plain undecorated
- 3 quartz secondary flakes
- 1 quartz flake fragment
- 1 quartzite secondary flake
- 1 quartzite secondary flake
- 2 flint secondary flakes
- 4 flint late secondary flakes
- 1 flint angular debris
- 3 quartzite FCR, 186.40 g.
- 1 quartz projectile point, elongate triangle, Madison type, finely flaked, slightly concave base, 3.21 cm. (l), 1.43 cm. (w), 0.55 cm. (t)
- 1 heavily patinated curved glass fragment, probable bottle, dark green
- 1 brass alloy sheet metal triangle with hole punched through center, 2.99 cm. (l), 1.56 (w)
- 1 UID iron fragment, crushed, function unknown
- 1 hand wrought nail with possible T head, portion of shaft/tip missing
- 2 hand wrought nail shaft fragments
- 5 UID fish scales, probable Gar species
- 1 UID fish otolith
- 2 UID fish vertebrae

1 UID tooth fragment, probable mammalian
30 UID burned bone fragments
58 UID unburned bone fragments
25 clam/mussel shell fragments, 3.90 g.
17 black plastic pallet fragments, 20th century
1 aluminum beverage can fragment with red paint, 20th century
1 aluminum pop-top tab, 20th century
1 iron lock washer, 20th century
28 slag fragments, 34.50 g., 20th century
1 wire nail, 8.48 cm. length, 20th century
1 asbestos tile fragment, 20th century
1 concrete fragment, 1.90 g., 20th century

Lot 81 sq. 28253B north of C-D
1 soil sample

Lot 82 sq. 28253B feature section north of G-H soil/flotation sample
15 Potomac Creek plain body sherds
14 Potomac Creek ceramic fragments
1 Camden ware, plain, untempered, hard paste body sherd
1 shell tempered ceramic fragment, probable Yeocomico ware
230 UID ceramic fragments, 3.6 g.
3 terra cotta pipe bowl fragments, all plain undecorated
1 terra cotta pipe stem fragment, plain undecorated
1 white clay pipe stem fragment with piece of heeled bowl, "V" incised on top of stem at interface with bowl, 7/64 inch bore, form not temporally diagnostic
1 quartz late secondary flake
2 quartz tertiary flakes
2 quartz flake fragments
1 flint late secondary flake
3 flint tertiary flakes
2 burned flint tertiary flakes
1 sheet brass triangle, 2.48 cm. x 1.1 cm., cut mark on one long axis
1 lead shot, battered, 0.75 cm., (approx. .35 cal.)
1 fired clay nodule- appears to be pipe clay 3.40 g.
7 fired clay nodules, daub, 5.10 g.
751 UID burned bone fragments, 15.80 g.
1410 UID unburned bone fragments, 23.05 g.
155 clam/mussel shell fragments, 18.05 g.
30 UID snail species shell fragments, 2.40 g.
545 probable wood charcoal fragments, 2.10 g.
1 unprocessed soil sample, 2 liters

Lot 83 sq. 28253B feature section north of K-L
1 flotation sample, not sorted
1 soil sample

Lot 84 sq. 27120B
1 soil sample

Lot 85 sq. 27120C
1 Potomac Creek plain ceramic fragment, probably a body sherd, less than .5 cm.

Lot 86 sq. 27123C post mold, 50% sample, water screened

1 quartzite flake fragment

1 UID burned bone fragment, 0.20 g.

Lot 87 sq. 27123D

1 floatation sample, not sorted

Lot 88 sq. 27123E

1 floatation sample, not sorted

Lot 89 sq. 27129C post hole (north half) floatation sample

1 Potomac Creek plain body sherd, undecorated

1 Potomac Creek body sherd with single row direct cord impression, near rim

4 UID probable wood charcoal fragments, 0.15 g.

Lot 90 sq. 27688B

7 wood charcoal fragments, 6.90 g. charcoal sample

Lot 91 sq. 27875B water screen feature

7 Potomac Creek plain body sherds, smooth, undecorated

1 Potomac Creek body sherd with smoothed over cord impressions on exterior surface

5 Potomac Creek ceramic fragments

1 possible Yeocomico ware, plain, shell tempered fragment

1 Camden ware, plain, compact paste, untempered rim sherd, straight profile, small arc

3 terra cotta pipe bowl fragments, all plain undecorated

2 terra cotta pipe bowl fragments with fragment of roulette decoration

2 terra cotta pipe stem fragments, plain, undecorated

1 white tube shell bead, .495 cm. length, .150 cm. bore diameter, .310 cm. total diameter

1 white shell disk bead, .090 cm. length, .140 cm. bore diameter, .385 cm. total diameter, irregular form

1 white shell disk bead, .140 cm. length, .115 cm. bore diameter, .360 cm. total diameter, irregular form

1 black shell disk bead, .150 cm. length, .155 cm. bore diameter, .410 cm. total diameter

1 white shell disk bead, .090 cm. length, .160 cm. bore diameter, .310 cm. total length

1 white shell disk bead, .035 cm. length, .150 cm. bore diameter, .340 cm. total diameter

1 white shell disk bead, .130 cm. length, .145 cm. bore diameter, .410 cm. total diameter

1 black shell disk bead, .130 cm. length, .135 cm. bore diameter, .340 cm. total diameter

1 white shell disk bead, .095 cm. length, .140 cm bore diameter, .280 cm. total diameter

1 black shell disk bead, .110 cm. length, .110 cm. bore diameter, .455 cm. total diameter

1 white shell disk bead, .180 cm. length, .130 cm. bore diameter, .340 cm. total diameter

1 quartz secondary flake

1 quartz flake fragment

2 flint flake fragments

2 small iron fragments, possible nail?

1 small lead pellet, 0.36 cm. diameter

22 UID clay nodules, fired, 4.25 g., possibly non-cultural

92 small, possible clay fragments, 3.45 g., probably non-cultural

935 UID unburned bone fragments, 28.1 g.

771 UID burned bone fragments, 15.0 g.

1 oyster shell fragment, 5.45 g. approximately 200 clam/mussel species shell fragments, 7.25 g.

59 UID snail shell fragments, 0.90 g.

448 of wood charcoal fragments, 190.0 g.

1 carbon sample for c14 dating, estimated weight 1.0 g.

Surface Collections

- Lot 324 N386 E414 1 Potomac Creek rim sherd with three parallel rows of cord impressions, straight profile, same vessel as in N381 E404
- Lot 325 N387 E413 1 German brown stoneware body sherd
- Lot 326 N385 E413 1 white clay pipe bowl fragment, plain, undecorated
- Lot 327 N379 E401 1 Potomac Creek body sherd with geometric cord impressed decoration, probably near rim
- Lot 328 N383 E399 1 plain, untempered hard paste ceramic rim sherd, burnished surfaces, everted lip, Camden ware
- Lot 329 N366 E397 1 Potomac Creek body sherd with smoothed over cord mark exterior surface
- Lot 330 N360 E399 1 reddish paste coarse earthenware body sherd. Paste has clasts/streaks of yellow clay. Interior is black glaze, exterior is vitrified clay wash.
- Lot 331 N382 E414 1 Potomac Creek body sherd with smoothed over cord impressed surface treatment, probably near rim.
- Lot 332 N383 E411 1 Potomac Creek rim sherd with four rows cord impression decoration, straight profile.
- Lot 333 N381 E411 1 Potomac Creek body sherd with 2 rows deep cord impressions.
- Lot 334 N381 E404 1 Potomac Creek rim sherd with three rows cord impressed decoration, straight profile. Same vessel as N386 E414.
- Lot 335 N378 E401 1 1943 U.S. Nickel coin
- Lot 336 N327 E242 1 argillaceous shale biface preform, possible contracting stem
- Lot 337 N336 E248 1 black chert triangular projectile point

18CH282

Lot 19 sq. 15911A

- 46 Potomac Creek plain body sherds
- 2 Potomac Creek plain fragments
- 1 Potomac Creek body sherd with deeply impressed cord wrapped stick decoration
- 1 Yeocomico ware body, eroded
- 7 quartz primary flakes
- 17 quartz secondary flakes
- 6 quartz late secondary flakes
- 12 quartz angular debris
- 1 chert primary flake
- 65 quartzite FCR fragments 1512 g.

1 colorless glass chip, 20th century
84 asbestos tile fragments, 20th century
4 UID black plastic fragments, 20th century
2 UID iron fragments 29.8 g., 20th century
1 lead solder fragment 3.9 g. 20th century
1 UID iron wire fragment, 20th century
1 wire nail approximately 7cm., 20th century

APPENDIX D:

Pollen Study of Two Sediment Cores from Mattawoman Creek, Maryland

Grace S. Brush



POLLEN STUDY OF TWO SEDIMENT CORES FROM MATTAWOMAN CREEK, MARYLAND

Grace S. Brush

Two sediment cores, Core 1 and Core 2 collected along Mattawoman Creek, a tributary of the Potomac River, Maryland were analyzed for pollen in order to reconstruct a history of wetland vegetation. Core 1 measured 123 cm in length and Core 2 was 93 cm long. Nineteen samples were analyzed from Core 1 and 17 from Core 2.

Methods:

Pollen grain extractions: A measured volume of sediment was washed in hydrochloric acid and hydrofluoric acid, and acetylyzed using a mixture of nitric acid and acetic anhydride to remove carbonates, silicates, and organic material. The residue was washed in glacial acetic acid, distilled water and alcohol, then stored in a measured amount of tertiary butyl alcohol. Aliquots were mounted in silicone oil on microscope slides, and all pollen in an aliquot identified and counted. Counts were converted to percentages based on the total pollen count.

Analyses and graphical representation of data: Pollen percentages are plotted against depth and time (Figs. Core 1 and Core 2), using the "psimpoll" program (Bennett 1998). The method for dividing the cores into zones is optimal splitting by information content (Bennett 1996). A list of all taxa identified in the cores is presented in Table 1.

Table 1. List of taxa alphabetized by scientific name

Scientific Name	Common name
<i>Acer</i>	maple
<i>Alnus</i>	alder
<i>Ambrosia</i>	ragweed
<i>Betula</i>	birch
<i>Carya</i>	hickory
Caryophyllaceae	pink family
<i>Castanea</i>	chestnut
<i>Cheilanthes</i>	lip fern
Chenopodiaceae	pigweed family
<i>Compositae</i>	composites
Cupressaceae	red cedar?
Cyperaceae	sedge family
<i>Dryopteris</i>	wood fern
<i>Fagus</i>	beech
<i>Filicineae</i>	ferns
<i>Fraxinus</i>	ash
<i>Galium</i>	bedstraw

Gramineae	grass family
<i>Ilex</i>	holly
<i>Juglans</i>	walnut
Leguminosae	bean family
<i>Lycopodium</i>	club moss
<i>Magnolia</i>	magnolia
Nymphaeaceae	water-lily family
<i>Nyssa</i>	blackgum
<i>Osmunda</i>	cinnamon fern
<i>Pinus</i>	pine
<i>Platanus</i>	sycamore
<i>Prunus</i>	cherry
<i>Quercus</i>	oak
<i>Sagittaria</i>	arrowhead
<i>Salix</i>	willow
<i>Sambucus</i>	elderberry
<i>Sparganium americanum</i>	burreed
<i>Solidago</i>	goldenrod
<i>Sphagnum</i>	sphagnum moss
<i>Stellaria</i>	chickweed
<i>Thalictrum</i>	meadow-rue
<i>Tsuga</i>	hemlock
<i>Typha</i>	cattail
<i>Ulmus</i>	elm
Umbelliferae	parsley family
<i>Viburnum</i>	viburnum

Dating of cores: A radiocarbon date was obtained from the basal sediment of each core (Beta Analytic Corporation). The basal date for Core 1 is 640±60 years before present (ybp) and for Core 2 630±70 ybp.

Results:

The pollen profiles from both cores are quite similar, with pine being the dominant taxon throughout. Differences between the cores are probably due to some differences in sedimentation rates as well as local variation in plant distributions. Pollen identified through these cores as ragweed may also include pollen of marsh elder (*Iva*), a wetland plant. Ragweed (or marsh elder) is present throughout these cores and therefore is not a signal of agriculture; hence there is no way of distinguishing pre-European from post-European vegetation.

Core 1:

The pollen profile (Fig. Core 1), which spans over 600 years is divided into 5 zones. The dominant taxon is pine. Hemlock is present until about 300 years ago. The oldest zone (M-1) in the core extends from 640 to about 580 ybp. Oak and a group of pollen identified as small tricolpates which represent herbaceous pollen are abundant in this zone. A number of other taxa

are represented including birch, hickory, alder and chickweed (a marsh plant). The next zone (M-2) extends from 580 to about 320 ybp. Pine increases during this time and oak decreases from about 470 years to the top of the zone. Sweet gum is present for a very brief time. Other taxa come and go. This is the only zone in which holly occurs. Walnut is fairly important and burreed, a marsh plant appears. Zone M-3 represents a period of about 20 years. It is characterized by a decrease in pine and an abrupt end to hemlock. There appears to be a sharp break in many of the taxon profiles, which may indicate a change in sedimentation at this location. Zone M-4 extends from 300 to 200 ybp and is characterized by an increase in pine and oak and the first continuous record of sweet gum, which is abundant in this zone. Herbaceous plants are greatly decreased at this time. Zone M-5 extends from 200 ybp to the present. It differs from zone M-4 in that marsh plants like burreed, chickweed and cattail occur during this time. The small tricolpates are also fairly abundant. Except for sweet gum, most of the tree taxa are not present in the top part of the core. Sweet gum, chickweed and cattail are the most abundant components of the vegetation during the last 100 years. Post-European time is represented by the top 50 cm of sediment, but the area appears to not be influenced by human activity.

Core 2:

The pollen profile (Fig. Core 2) is divided into 5 zones as in Core 1, but the zones are somewhat different. The overall vegetation is similar to Core 1 in that pine, oak, herbaceous (small tricolpates) and marsh plants are important taxa. However, walnut is more important and sweet gum less important in this core than in Core 1. There is no evidence of an hiatus in this core as may be the case in zone M-3 of Core 1. Zone M-1 occurs from 630 to about 490 ybp. Pine, maple, walnut and oak are the most abundant taxa. Pigweed is also present in considerable numbers. Water lily is present indicating open water. Zone M-2 extends from about 490 to 250 ybp. Pine continues to increase; hickory is present and walnut drops out at the top of the zone. Marsh plants, bur reed, chickweed and cattail are present through this zone. Zone M-3 occurs from 250 to about 100 ybp. Pine increases and oak remains important. Except for bur reed there are fewer marsh plants at this time. The last 100 years is divided into 2 zones, M-4 and M-5, each of which lasted about 50 years. Pine decreases in Zone M-4 and alder is important at this time as well as walnut and sedges. The succeeding zone, M-5, differs from M-4 in the presence of most of the marsh plants seen in both of these cores with the exception of sedges. As in Core 1, post-European time, represented in this core by at least the top 35 cm of sediment, contains no indicators of human activity.

Discussion and Conclusions:

These two cores collected in close proximity to each other show a pine-dominated wetland vegetation that varies in degree of wetness over time as well as spatially. Tree taxa include walnut, maple and sweetgum along with oak, and hickory characteristic of a mesic vegetation. Herbaceous vegetation includes a number of wetland species.

Differences between the cores reflect local vegetation in a wetland area. The cores are remarkable however in that there is no indication whatsoever of the effect of deforestation and agriculture on the wetland vegetation. Ragweed pollen occurs throughout the cores indicating

that what is identified as ragweed may actually be *Iva* (marsh elder). Pollen of ragweed and marsh elder are difficult to distinguish because of their similarity. Ragweed could also occur throughout the cores because it is a native species but generally it grows most abundantly on open mineral soil; its possible presence in these cores could indicate open marshy soil. Both cores have similar basal carbon-14 dates, each spanning approximately 650 years, but 30 cm more sediment was deposited at the site of Core 1 than Core 2. It is not possible to determine when this sediment was deposited, because of the lack of a ragweed horizon indicating beginning agriculture in the surrounding area.

The record contained in the cores is important in that it provides information with regard to the longevity of a particular wetland and the degree of variability in the wetland over several centuries. The variability observed in these cores indicates normal variability in vegetation related to water levels in existing wetlands throughout the mid-Atlantic region (Hilgartner 1995, Pasternack and Brush 1998 and in preparation).

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APPENDIX E:
Analysis of Faunal Remains from the Posey Site
David B. Landon and Andrea Shapiro

